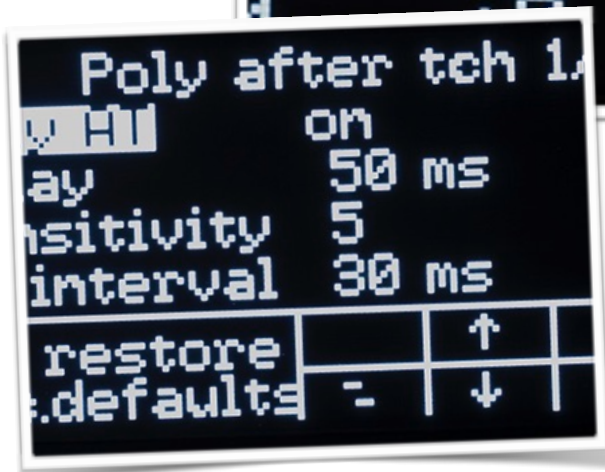


VAXMIDI User Guide



Introduction

VAXMIDI is a MIDI keyboard controller. It does not generate sounds. Rather, it generates messages that control a sound module whether that is a software instrument running on a computer or a hardware synthesizer. It sends messages, such as Note On and Note Off, through a 5 pin DIN MIDI connector or through a USB connection to a host computer.

Power

VAXMIDI receives power through the USB port. If you are connecting to a host computer, that host will supply power across the same USB cable that carries the MIDI messages to the host. If you are controlling a hardware sound module, you will have to supply power to VAXMIDI using a USB cable and a USB wall charger. VAXMIDI draws less than 500 mA so the smallest wall chargers will work fine. There is no power switch on VAXMIDI. Plug or unplug the USB cable to turn it on or off.

Performance Modes

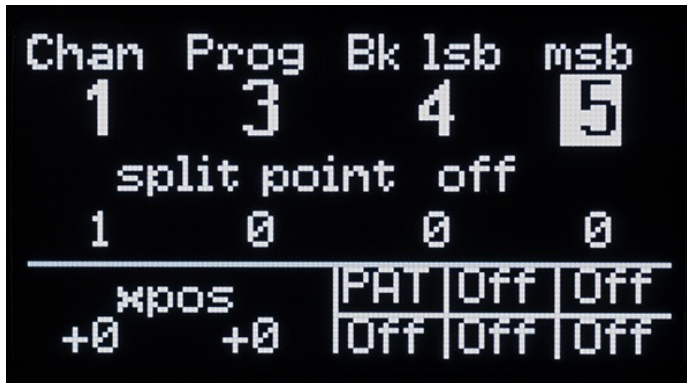
VAXMIDI currently has 3 performance modes, although many more will be added in the future. Direct mode is the simplest way to operate VAXMIDI. When you first turn it on, the screen looks like this:



Direct Mode

It shows the current channel number, program and bank across the top. In this case VAXMIDI has selected program 0 on bank 0 0 and is transmitting on channel 1.

The channel number is highlighted. Press down on the knob below the screen and the highlighted value will blink, indicating that the value can be changed. Rotate the knob to

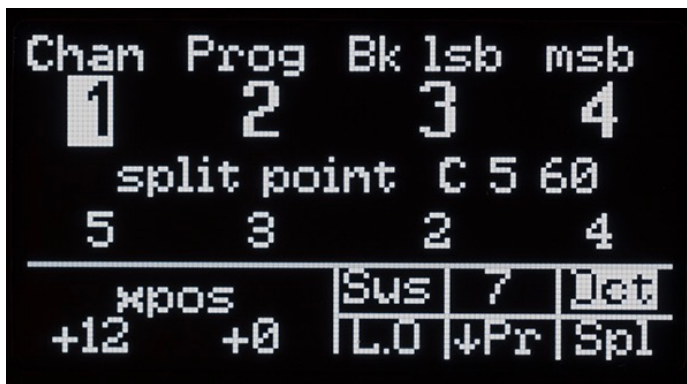


select a different channel and press down on the knob again to lock in your change. Rotate the knob one click to highlight Program Number. Press the knob again and Program Number will blink. Rotate the knob to select a different program and press the knob to lock it in, OR, you can press the RED

button to cancel your changes.

Here, program 3 from bank 4 5 has been selected and it is transmitting on channel 1.

If you turn the knob right one click from here, you will highlight the SPLIT POINT. You can split the keyboard at any note and transmit on a different channel and select a different program/bank.

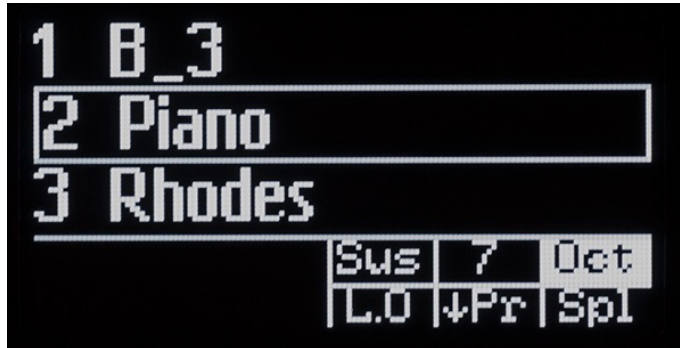


Here, the keyboard is split at C5, which is middle C (note 60). All notes below middle C are transmitted on channel 1 and all note from middle C up are transmitted on channel 5.

At the bottom of the display on the left side are transpose values. You can highlight and change these with the knob also. The number on the left is the transpose value of the entire keyboard when no split is active and the transpose value of the left side of the split when a split is active. The number on the right is the transpose value of the right side of the keyboard when a split is active. The example above shows that the left side of the split has been shifted up by one octave.

The 6 small boxes on the bottom right show the assignments for the 6 buttons below the display. This will be detailed in the SETUP section of the manual.

List Mode



List Mode is a collection of complete keyboard configurations that are stored and retrieved by name. Every button, pedal, and slider assignment along with the program bank and channel selections, as well as every possible setup selection is stored when a List assignment is made. For example, item 1 (B_3) might assign a certain pedal to rotor speed, split the keyboard into 2

manuals, transpose 1 side up and another side down so that the notes overlap, assign sliders to drawbars, and 3 buttons to different levels of percussion. Item 2 (Piano) might turn on hi-res velocity and assign a pedal to sostenuto. The point is that every aspect of the current VAXMIDI configuration is captured and stored for instant recall. You can store 48 configurations in List Mode.

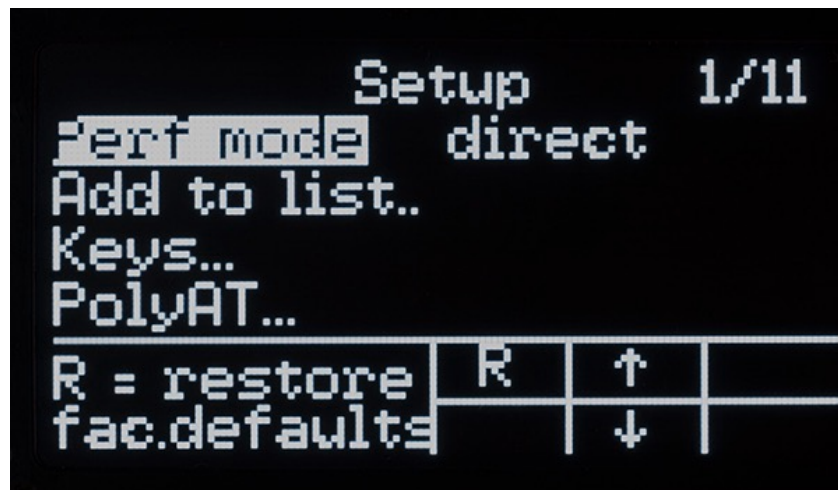
Rotate the knob to select an item from the list. The items will scroll through the box in the center, always showing the previous and next item. When you are ready to recall the next configuration, press the knob.

MainStage Mode

When you connect VAXMIDI to a Mac running MainStage, VAXMIDI initiates a proprietary protocol that downloads the entire concert for presentation on the VAXMIDI display. It operates much like List Mode in that you rotate the knob to select the patch.

Setup Mode

Access and Exit Setup Mode by holding the RED button for 2 seconds. The numbers in the upper right corner show which line number is highlighted and how many lines there are in this menu. Here, item 1 is highlighted and there are 11 items in the menu. Hold the upper left button for 2 seconds to RESTORE FACTORY DEFAULTS. It can take up to 45 seconds to complete the reset of the system. List Mode items will be erased and all parameters will be reset.



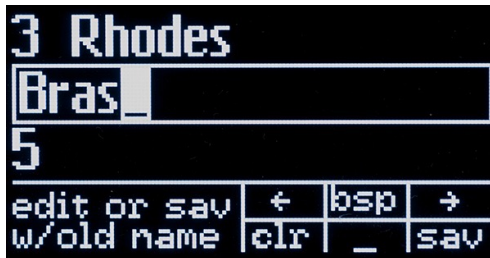
In general, you will use the 2 center buttons to move up and down to highlight an item or sub-menu. The presence of a sub-menu is indicated by an ellipsis (...) after the name.

Performance Mode

Rotate the knob to select Direct Mode, List Mode, or MainStage Mode

Add to list

List Mode lets you store and recall the complete configuration of VAXMIDI. You establish a configuration by entering Direct Mode and setting the MIDI channel, program or patch number, and the bank where that program is located. You also can set a split point and the channel, program and bank that is used for the split side of the keyboard. All notes from the split point up are transmitted on the split channel. Configuration also includes all the options available in Setup Mode, including the settings for poly aftertouch, pedal assignments, button assignments, etc.



Once the configuration is set, select *Add to list* from the menu. The screen will display the slots for storing the configuration under a name. Rotate the knob to select the memory slot (from 1-48) and press the knob. Rotate the knob to select the letters of the name that describes the configuration. Use the buttons to

move the cursor. **Press the knob to save the configuration** under the name just entered.

In addition to the left and right buttons that move the cursor, there is a backspace button between them (bsp). On the bottom row of buttons, (clr) clears the editing, () inserts and underline, and (sav) saves the current configuration under the original name in that slot. This is convenient when making a minor change to a List Mode entry.

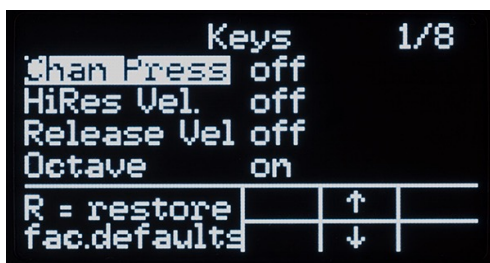
Sorting the List



Add to list lets you sort the list order. When you are not editing a List name, the 2 center buttons can be used to swap the order of list entries. The double up arrows swap the center configuration with the one above it. Double down arrows swap with the one below.

Keys

This menu controls the operation of the key messages. When Channel Pressure is on, the MIDI channel mode message *Channel Pressure* is sent on the primary channel when any key is pressed. The value sent is the aftertouch of the key that is pressed the hardest. Hi Res velocity send the HiRES velocity prefix before every Note On message. This is sent on either the Main Channel or the Split Channel, depending on the note. Release Velocity behaves in a similar manner.



Octave On transposes every note played by the number of semitones specified in the Octave Interval field. If a split is active, it transposes the left side of the split.

Split Rt. Oct. toggles the octave switch for keys on the right side of the split by the number of semitones in Rt Octave Interval.



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Important Note: These octave switches transpose in addition to the XPOS values on the Direct Mode screen. If the right side XPOS value is +12 and the Right Octave Interval is +12, turning on the Right Octave switch will transpose by +24.

Pedal

Rotate the knob to select among the 4 pedal inputs and press the knob.

The Pedal Type adapts to different pedal wiring. Some manufacturers measure the tip of a stereo jack while other measure the middle ring of the plug. VAXMIDI can use both kinds of pedals. Try both settings and see which one works the best for your pedals. There is a mono setting for simple switch type pedals with a 2 conductor plug such as a sustain pedal.

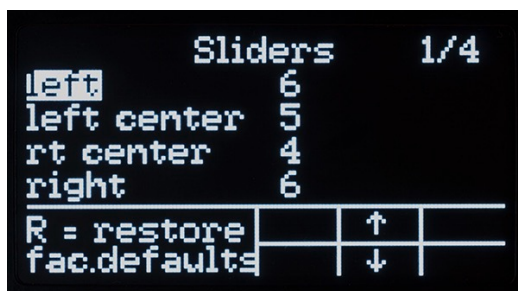
Pedal action offers many options for controlling the keyboard or sending MIDI messages.

Menu selection	Pedal action
off	pedal is ignored
sustain	sends pedal down message, pedal up message when released
sustain half pedal	as above except sends sustain value of 64 when pedal is half down
MIDIcc continuous	sends the current pedal value on the controller number specified in the field below
MIDIcc Toggle	alternately sends value of 0 and 127 on the controller number specified on each pedal press.
MIDIcc invert	sends 127 minus the current pedal value on the controller number specified in the field below
octave both	toggles transposing entire keyboard by the octave Interval. If split is active, the Right Octave interval is used for the right side of the split
right octave	toggles transposing right side of keyboard by the right octave Interval. If split is not active, there is no effect
left octave	toggles transposing left side of keyboard by the octave Interval. If split is not active, the entire keyboard is transposed by the octave interval
next program	In Direct Mode, sends a program change to the next sequential program. In List Mode or MainStage Mode, selects the next program in the List or Concert.

Menu selection	Pedal action
previous program	In Direct Mode, sends a program change to the current program number minus 1. In List Mode or MainStage Mode, selects the previous program in the List or Concert.
polyphonic aftertouch	toggles PAT on and off
release velocity	toggles release velocity on and off
hi res	toggles hi res velocity on and off
split	toggles split on and off
channel pressure	toggles channel pressure on and off
direct mode	changes performance mode to Direct Mode
list mode	changes performance mode to List Mode
MainStage	changes performance mode to MainStage Mode. It also sends a refresh signal to MainStage to download the entire concert again.

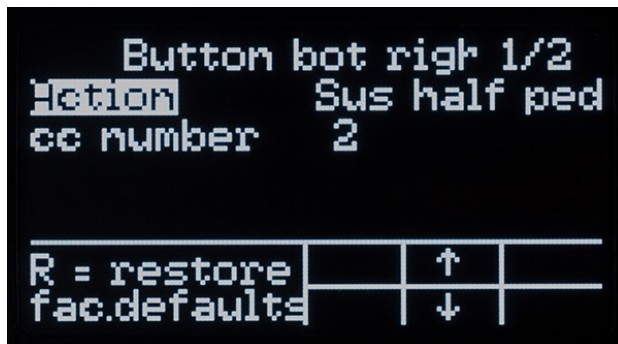
Sliders

Press the knob to assign a MIDI controller numbers to the sliders



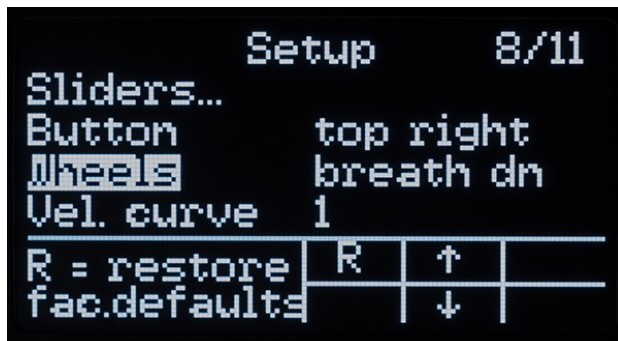
Button

Rotate the knob to select a button.



The actions are identical to the pedal actions although some of them are not very practical for buttons (such as sustain half pedal). The cc number sets the controller for those actions that require a controller number. The cc number is ignored when not applicable.

Wheels



Rotate the knob to select normal pitch bend operation, or to select pitch bending up and breath control down.

You can also select Recalibrate and press the knob. This will reset the pitch and mod wheels to zero. Move both wheels up and down to set the operating range.

Velocity Curve

Setting these values requires a considerable math background and is beyond the scope of this manual. If you decide to change any of the functions, you can always go back to the original settings by holding R for 2 seconds to restore factory defaults. You will lose all your other settings if you restore factory defaults.

LED brightness

Rotate the knob to set the brightness of the LEDs on the sliders. Values can range from 1 to 99.

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Lowest Note

Rotate the knob to set the lowest note on the keyboard. The lowest note must be an F (or a C if you build VAXMIDI with a C to B key guide). For reference, F0 is the f below the lowest note on an 88 key piano.