HS13 and HS13+ Operating Instructions

HS13/HS13+ Controller

The USB based MIDI Controller supports the most often used Arranger functions via MIDI SysEx and CC messages. Button assignments can be changed by modifying the values in a config file saved on the controller's USB drive. The controller supports a base and shift layer, enabling up to 24 functions to be coded on the keys.

Base layer key assignments

The base layer of the controller by default is configured to the following EVM MIDI SysEx or CC messages:

Row 1 (Top Row):

- Intro/End 1 (green)
- Intro/End 2 (green)
- Intro/End 3 (green)
- To End (red)

Row 2:

- Arr.A (blue)
- Arr.B (blue)
- Arr.C (blue)
- Arr.D (blue)

Row 3 (Bottom Row):

- Variation/Shift (blue)
- Fill (green)
- Break (orange)
- Start/End (red)

Note: The base and shift layer key configurations can be changed to any of the MIDI SysEx supported messages supported by the EVM Pedal or Tab lists. It is possible to create and assign a macro to any of the keys. A macro can be configured to contain one or more messages from the aforementioned message lists. Until a configuration application is available, please edit the keymap.cfg file on the USB drive to modify key assignments.

Shift layer key assignments

The shift layer of the controller by default is configured to the following EVM SysEx messages:

Row 1:

- Transpose Up (yellow)
- Transpose Down (yellow)
- Octave Up (teal)
- Octave Down (teal)

Row 2:

- 1/2 Bar (blue)
- Plugged (orange) (drums and bass only macro)
- UnPlugged (orange) (style, real chord and chord only macro)
- Rhythm (blue) (Rhythm only macro)

Row 3:

- Variation/Shift (blue)

- Value Down (violet)
- Value Up (violet)
- Start/End (red)

Activating the Shift Layer

The shift layer operates in two modes - similar to a typical PC keyboard:

- Press the Variation/Shift key, and while holding it in follow up with a second key press for the desired layered function. This combination of keys will transmit the layered MIDI message. This allows for quick activations of e.g. the 1/2 Bar message using the familiar keyboard shift action. More than one layered massage can be sent while the original shift key is held down.
- When you press and hold Variation/Shift for 200ms or longer, the keypad behavior starts activating in a way similar to caps lock on a PC keyboard. The shift layer is activated and keys such as Value Up/Down can be pressed until the Variation/Shift key is pressed again.
- Note: The Variation key continues to support the EVM Arranger Variation function on a quick press (<200ms) and if the above shift conditions are not met.

Controller Primary Encoder Configuration

The Encoder switch is coded to cycle through the following functions when pressed. The rotary encode is used to change the values for the selected function.

- Rotor Fast/Slow (blue) - fast or slow, default
- Tempo Up/Down (yellow) - up or down from current Tempo value
- Master Volume Up/Down (purple)

Notes:

- The colors mentioned for the encoder show on the Variation key. When you press Start/Stop, the EVM will start playing and the Variation button turns yellow to indicate that it is in Tempo adjustment mode. The Tempo and Volume modes once activated or pressed are timed to return to the default Rotor Fast/Slow after 60 seconds of no adjustments.
- For Master Volume to work, you must change the EVM configuration to listen on MIDI channel 16. You can do so by navigating to the EVM MIDI configuration screen, select the receive (RX) option, and then set Global to channel 16. The Controller encoder in Volume mode sends MIDI CC Expression to EVM RX Global channel 16 adjusting the volume of all channels in the EVM - acting

similar to the EVM Master Volume knob. Also note that an attached MIDI keyboard/organ can be configured to send expression pedal messages to the EVM synchronizing volume between the devices in the same manner.

Testing the EVM Controller

Before connecting to the EVM module, you may want to download and install MidiView (https://hautetechnique.com/midi/midiview/). MidiView is useful to inspect and validate the output from any MIDI controller. MidiView allows you to monitor the exchange of MIDI messages between any two devices. In this case you will see the EVM controller output the MIDI SysEx and CC messages associated with keys or the rotary encoder.

Customizing the EVM Controller MIDI messages

Keys are configured by the keymap.cfg file on the USB drive. Modifying the mappings requires you to lookup the exact text for the required SysEW MIDI message from either the Tabs (pedal_midis) or Pedal (tab_midis) lookup tables in the Ketron MIDI documentation, and copy it onto one of the keys of the keys. See the config file for the current configuration. Please be careful with the configuration. It is validating and if an error is encountered during startup, all keys will turn red. The unit continues to function though based on the coded defaults. It is preferred that you keep with the Pedal messages. There are many more Tab messages, and for instance Value Up/Down is very useful, but without context it results in unexpected behaviors in the EVM. Carefully test if you pick a value from Tabs other than VARIATION. Note: The rotary encoder SysEx output is currently hardcoded to tempo up/down, rotary fast/slow or volume up/down on successive encoder button presses. It is not configurable, but could be done in future if requested.

HS13+ (Plus) Controller

The HS13+ is has the same features as the standard HS13. However, it adds four additional encoders that used to adjust the EVM channel volumes via MIDI CC messages.

The additional four encoders and their built-in switches follow the shift state enabled through the Variation key as explained above.

Base layer encoder assignments

Rotary Encoders (left to right):

- Lowers Volume
- Upper/Voice 1 Volume
- Upper/Voice 2 Volume
- Drawbar Volume

Rotary Switches (on each encoder):

- Lowers Volume to 0
- Upper Volumes to 0
- All Volumes to 0

- Manual Volumes to 96

Shift layer encoder assignments

Rotary Encoders (left to right):

- Style Volume
- Drum Volume
- Bass Volumes
- RealChord Volumes

Rotary Switches (on each encoder):

- Bass Volume to 0
- Bass Volumes to 96
- All Style Volumes to 0
- All Style Volumes to 96
- Notes:
    - ‘All Style’ volumes include: Style, Drums, RealChord and Chord
    - Volume settings are adjusted relative to the switches options pressed.