



GARAGEKEY

PAD



MIDI Controller user's manual

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Contents

1. Introduction	2
2. Features	2
3. Getting Started	3
3.1 MIDITECH Garagekey PAD Keyboard Overview	3
3.2 Setup	4
3.3 Connecting to a Computer	4
3.4 Connecting to Mobile Devices	4
3.5 Using as a Standalone MIDI Controller	5
4. Parts and Their Functions	5
4.1 Keyboard	5
4.2 Trigger pads	5
4.3 Knobs	5
4.4 Pitch and Modulation touch strips	5
4.5 OLED Display	5
4.6 Program change +/-button	5
4.7 MENU/ Transpose button	5
4.8 SHIFT button	6
4.9 Arp button	6
4.10 Fixed Chord button	6
4.11 ► Playback button	6
4.12 ● Record button	6
4.13 > Navigation button	6
4.14 Stop/solo/mute/Enter button	6
4.15 Full sized USB connector	6
4.16 Sustain Pedal Jack	6
4.17 3.5mm TRS MIDI Out port	6
5. Basic MIDI Control From Your Garagekey PAD	6
5.1 MIDI Control Messages	6
5.2 Programming the Controls on Your Garagekey PAD	7
5.3 Control assignment	7
5.4 Assignable Knobs	7
5.5 Assignable Pads	8
5.6 Advanced Settings	8
5.7 Other controls	11
6. Using The Garagekey PAD With Your DAW	12
6.1 Using your Garagekey PAD with Ableton Live	12
6.2 Garagekey PAD Working with other Sequencer	20
7. Appendices	21
Appendix A-ASSIGNABLE CONTROLLER PARAMETER LIST	21
Appendix B- Toxic or Hazardous Substances and Elements	23
Appendix C-Note Value and The Corresponding Numerical Number	24
Appendix D- General MIDI Instruments-Program Change Numbers	25
Appendix E - General MIDI Drums-Note assignments	26
8. Specifications	26

Packing list: Garagekey PAD*1
USB cable*1
User manuals*1
MIDI to 3.5 audio cable*1

1. Introduction

Thank you for purchasing the MIDITECH Garagekey PAD USB MIDI controller. Garagekey PAD is a high quality, feature-packed controller which includes all the essentials to start making music. To help you get the most out of your new instrument, please read this manual carefully. Your Garagekey PAD midi controller will not make any sound unless it is connected to a computer or other external MIDI gear. This is because the Garagekey PAD sends MIDI data when you play it and does not produce sound on its own. Instead, it is used to control a virtual instrument on your computer or a MIDI sound module to generate sounds.

In order to use the functions of this product, you'll need to make settings in the application you're using. Make settings as described in the owner's manual for your application.

Garagekey PAD integrates perfectly with DAWs (such as Ableton Live, Bitwig and so on) for both production and performance. You can navigate and control Live's Session View, play and record clips, adjust effects and much more without ever looking at your computer. Garagekey PAD's pads bring your Ableton Session to your fingertips in full RGB colour, so you know exactly which clips you're launching. Also, you can make Garagekey PAD the perfect controller for your studio under common mode, where you can customise knobs and pads using the MENU button.

Garagekey PAD also has a standard 3.5mm TRS MIDI Out jack for connecting to your hardware synths and drum machines. This means you can use many of the Garagekey PAD's functions without a computer.

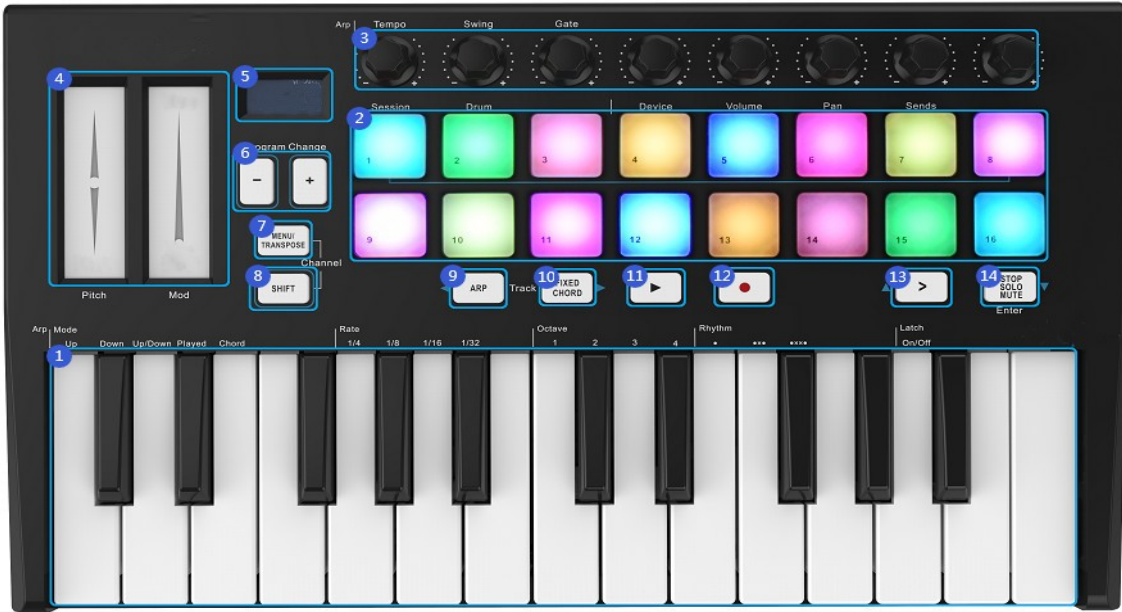
2. Features

- 16 high quality velocity & pressure sensitive performance pads with RGB backlit, can be assigned easily as pads, MIDI notes.
- 25 velocity sensitive mini-keys, with 3 velocity curve and one constant velocity.
- 8 Assignable rotary knobs, each can be edited by user.
- Brilliant OLED display for immediate parameter setting.
- 2 touch sensors of dynamic pitch bend and modulation touch strips.
- Standard sustain pedal jack, compatible with switch pedal.
- Fixed Chord mode.
- Play and record transport control buttons.
- Powerful and creative Arpeggiator for generating ideas quickly.
- Custom modes for user-defined mappings of knobs and pads.
- USB interface, adaptable to USB 2.0(FULL SPEED).
- Connect to your hardware with a standard 3.5mm TRS MIDI Out jack.
- Power supplied by USB.
- Compatible with Win XP/7/8/10/Vista and Mac OSX.
- Compatible with iOS by using the Apple iPad Camera Connection Kit(sold separately).
- Drive free and hot-plug supported.
- Ableton Live integration – Launch clips and scenes, control Live's mixer, play instruments and Drum Racks, capture MIDI, and more.
- Integration with other DAWs (Apple Logic Pro X, Propellerhead's Reason, etc.).

3. Getting Started

3.1 MIDITECH Garagekey PAD Keyboard Overview

3.1.1 Top Panel Overview



3.1.2 Rear Panel Overview



Control Definitions:

- | | |
|-----------------------------------|--------------------------------------|
| 1. Keyboard | 10. Fixed Chord button |
| 2. Trigger Pads(with RGB backlit) | 11. ►Playback button |
| 3. Knobs | 12. ● Record button |
| 4. Pitch/Mod Touch strips | 13. > Navigation button |
| 5. OLED DISPLAY | 14. Stop/solo/mute/Enter button |
| 6. Program change/ +/- button | 15. USB 2.0 port |
| 7. MENU/ Transpose button | 16. Sustain pedal |
| 8. SHIFT button | 17. Standard 3.5mm TRS MIDI Out jack |
| 9. Arp button | 18. Kensington Security Slot |

3.2 Setup

If you intend to connect your Garagekey PAD keyboard to a computer, please read sections 3.2 to 3.4 first. If you only intend to use your Garagekey PAD keyboard to control a sound module or synthesizer using the external MIDI OUT you should skip to section 3.5.

3.2.1 Minimum System Requirements

If you are using your Garagekey PAD with a computer, the following minimum system requirements apply:

Windows	Mac OS
i3 1.2GHz or higher	Macintosh i3*1.2GHz/P4*1.2GHz or higher
(CPU requirement may be higher for laptops)	(CPU requirement may be higher for laptops)
1G RAM	OS X 10.3.9 with 1G RAM,
DirectX 9.0b or higher	OS X 10.4.2 or greater with 1G RAM
Windows XP (SP2) or higher	*G3/G4 accelerator cards are not supported.
(Windows 98, Me, NT or 2000 not supported)	

MIDITECH suggests you also check the minimum system requirements for your software, as they may be greater than the above. USB hubs are not supported. MIDITECH suggests that you connect directly to one of your computer's built in USB ports.

3.2.2 Using The Garagekey PAD With Your Software

When installed, the Garagekey PAD appears as a simple MIDI device with one input port and one output port. You should select the listed USB MIDI Controller input port as the MIDI input device in your software. Once this is set, your software should be able to receive notes and controller data from the Garagekey PAD.
The port name is defined as MIDITECH when connecting to USB port.
It will appear as MIDITECH in the Device Manager.

3.3 Connecting to a Computer

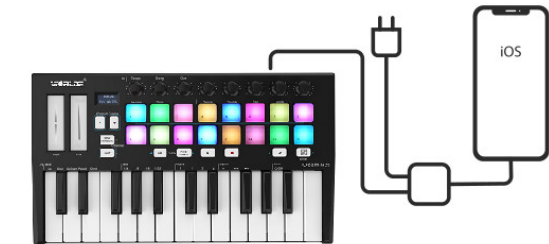
Garagekey PAD is bus-powered, so it turns on as soon as you connect it to your computer with a USB cable.



3.4 Connecting to Mobile Devices

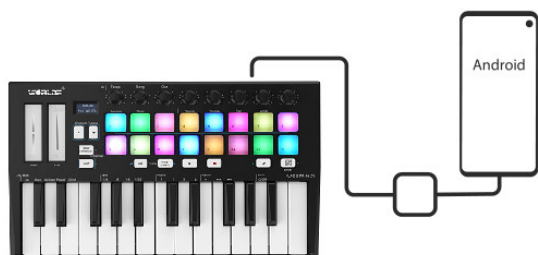
3.4.1 iOS

To operate your Garagekey PAD with an iOS device, use Apple's Lightning to USB 3 Camera Adapter with a separate 2.4A Lightning charger.



3.4.2 Android

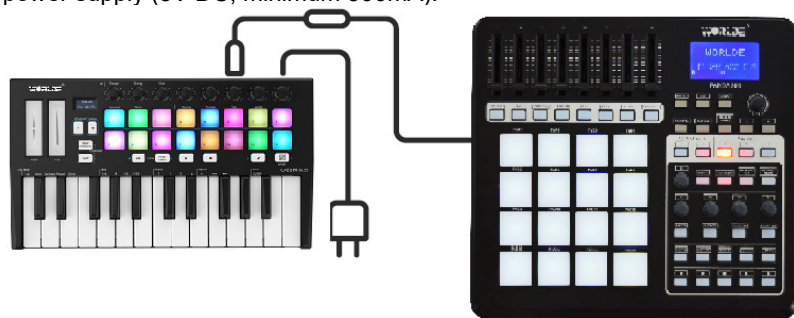
To operate the Garagekey PAD with an Android device we'd like to recommend a USB OTG to USB adapter.



3.5 Using as a Standalone MIDI Controller

The 3.5mm TRS MIDI Out port can be used to connect the Garagekey PAD to a hardware sequencer, an external synthesizer or sound module. 3.5mm TRS MIDI Out to MIDI IN adaptor is not included.

If you want to use the 3.5mm TRS MIDI output on the Garagekey PAD without a computer, you can power the unit with a standard USB power supply (5V DC, minimum 500mA).



4. Parts and Their Functions

4.1 Keyboard

When you play the keyboard, MIDI note messages are sent. These messages are read by your computer software or external MIDI gear and used to generate sound accordingly. The sound played by the keyboard is from your computer software or external MIDI gear. With the MENU and +/- button it's possible to adjust the keyboard velocity curve, octave, transpose, channel, program change etc. More details can be found in section 5.

4.2 Trigger pads

The 16 RGB Pads can transmit MIDI note messages. With the MENU and +/- button it's possible to adjust the pad velocity curve, midi note number, RGB color of the pad backlight etc. More details can be found in section 5.

4.3 Knobs

The 8 knobs can transmit control change messages. It can be assigned to control any editable parameter on the selected device. More details can be found in section 5.

4.4 Pitch and Modulation touch strips

Pitch bend and modulation are activated by pressing the touch strips. If you touch the Pitch bend strip at its center and move your finger forward or backward it will alter the pitch of the played sound.

Similarly, moving your finger along the Modulation strip alters the modulation amount of the played sound.

4.5 OLED Display

OLED display is for immediate parameter setting.

4.6 Program change +/-button

Press Program change button to adjust the voice of current channel. It only works when connected with Ableton Live.

Press +/- buttons to input the value for the selected controller, it's used with the MENU button. Initial setting is for Octave adjustment.

4.7 MENU/ Transpose button

Press MENU button to select the following functions of Garagekey PAD: Octave, Velocity curve, Pad velocity, Store all parameters, Recall all parameters, MIDI channel, Program change, Control assign, Transpose, Pad color R, Pad color G, Pad color B, Reset all.

Press transpose button to change the Pitch up/down by semi-tone.

4.8 SHIFT button

Press Shift and other buttons at the same time to access secondary functions.

Shift is used to select the pads which are great for triggering clips in Ableton Live's Session View and playing drums. Holding Shift button lights up the top row of pads, with the current pad mode lit the brightest. You can then switch between the 2 pad modes:

Session: For triggering clips and navigating Live's Session View.

Drum: For playing drums with the velocity-sensitive pads.

4.9 Arp button

Press the Arp button to activate the Arpeggiator of the Garagekey PAD.

4.10 Fixed Chord button

While holding the Fixed Chord button, press and release the keys that you wish to be part of the stored 'fixed' chord. It only works when connected with Ableton Live.

4.11 ► Playback button

This button controls your DAW's playback.

4.12 ● Record button

The Record button starts the recording process in your DAW.

4.13 ➤ Navigation button

Press shift and the navigation button for prompt navigation selection in Ableton Live. It only works when connected with Ableton Live.

4.14 Stop/solo/mute/Enter button

Stop/solo/mute: Press this button to switch the functionality of the bottom 8 pads. It only works when connected with Ableton Live.

Enter: Use ENTER button to confirm the data in general MIDI control mode. Holding the "Enter" button for 2 seconds to exit the edit mode. and the OLED will display the current parameters of the Garagekey PAD.

4.15 Full sized USB connector

Connect the MIDITECH Garagekey PAD to your computer with a USB cable via this port.

4.16 Sustain Pedal Jack

The footswitch jack functions as sustain pedal interface.

Note: the default setting for footswitch jack is open meaning that pressing the pedal will function as sustain. If it's without sustain function when pressed, it means that the pedal polarity is opposite, so it needs to adjust the polarity by moving the pedal polarity switch to the other end.

4.17 3.5mm TRS MIDI Out port

The 3.5mm TRS MIDI Out port can be used to connect the Garagekey PAD to a hardware sequencer, an external synthesizer or sound module. 3.5mm TRS MIDI Out to MIDI IN adaptor is not included.

5. Basic MIDI Control From Your Garagekey PAD

5.1 MIDI Control Messages

There are 135 MIDI controller messages that are used for controlling the MIDI-adjustable parameters in your software or on your external MIDI gear (0 to 127 is the standard MIDI control parameter, 128 to 134 is the special MIDI control parameter). Examples of these controllable parameters include volume, pan, expression, reverb, chorus and portamento.

The 8 assignable knobs and 16 assignable pads on your Garagekey PAD keyboard is able to send any of the 128 standard MIDI controller messages to control such parameters. Please note that in order for these effects to work, the MIDI device you are sending to must be able to receive these messages. A full list of these control messages is given in Appendix A.

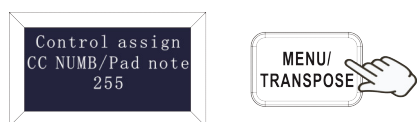
For example, you may want to set the Knob1 to control the channel volume. This is done by assigning controller 7 to the Knob1 (first on the left). Examples of other popular effects are listed in the table below. (Please consult Appendix A for the full list.)

Effect	Control
Modulation	1
Volume	7
Pan	10
Expression	11
Reverb depth	91
Chorus depth	93

There are many different types of virtual instruments available and most of these respond to MIDI controller messages, allowing you to control a variety of parameters from your Garagekey PAD keyboard. Please review the manual that came with your software or external gear to see what these controller numbers are.

5.2 Programming the Controls on Your Garagekey PAD

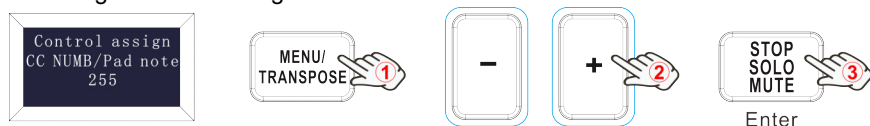
When programming a physical controller on your Garagekey PAD, the controller that was last used will be the first one selected for programming. To select a different physical controller for programming, the method is: Press the MENU button repeatedly until the OLED displays “Control assign CC NUMB/Pad note”, then move the physical controller you wish to program. When control assignment mode works, the OLED displays the following:



5.3 Control assignment

In control assignment mode the 8 assignable knobs and 16 assignable pads can be programmed to any MIDI controller messages that are used for controlling the MIDI-adjustable parameters in your software or on your external MIDI gear.

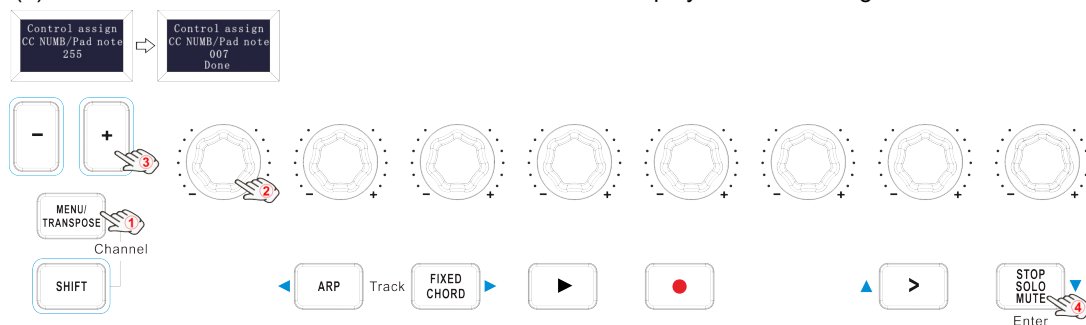
To select a different physical controller for programming, the method is: Press the MENU button repeatedly until the OLED displays “Control assign CC NUMB/Pad note”, then move the physical controller you wish to program. Input the desired controller value with +/- button and confirm the value with “Enter” button. Holding the “Enter” button for 2 seconds to exit the edit mode. The OLED displays the following for control assignment:



5.4 Assignable Knobs

There're 8 sliders that can be assigned as controller No. independently. Press the MENU button repeatedly until the OLED displays “CC NUMB/Pad note”, then rotate the knobs you wish to program. Input the desired controller value with +/- button and confirm the value with “Enter” button. For example, you may want to set the Knob1 to control the channel volume. This is done by assigning controller 7 to the Knob1 (first on the left). The operation steps is shown as below and the OLED displays the following:

- (1) Press the MENU button repeatedly until the OLED displays “Control assign CC NUMB/Pad note”.
- (2) Rotate R1 knob (first on the left).
- (3) Press “+” or “-” button until the OLED displays “007”. The numbers are the controllers.
- (4) Press the “Enter” button to confirm and the OLED will display “Done”. Holding the “Enter” button for 2 seconds to exit the edit mode.

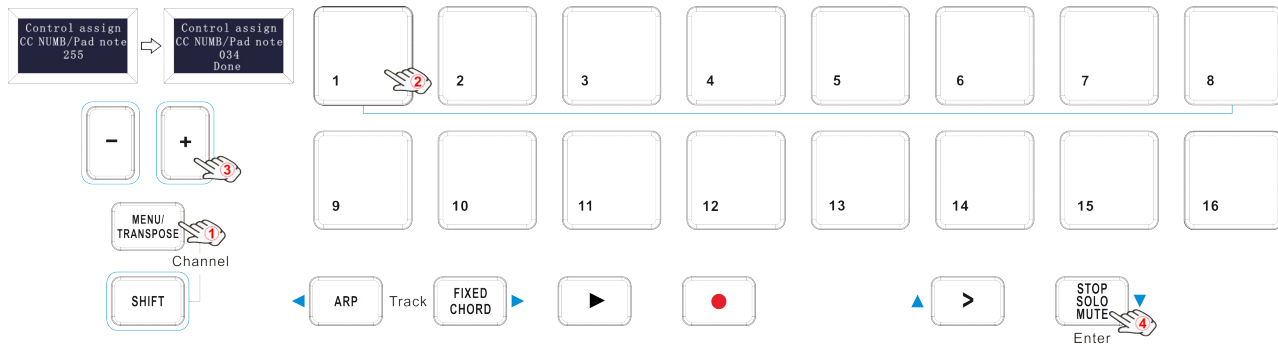


5.5 Assignable Pads

5.5.1 Pad Note Setting

There're 16 pads that can be assigned to transmit MIDI note messages (drums, stabs, bass notes, whatever). Press the MENU button repeatedly until the OLED displays "CC NUMB/Pad note", then trigger the pads you wish to program. Input the desired MIDI note messages with +/- button and confirm the value with "Enter" button. Holding the "Enter" button for 2 seconds to exit the edit mode. For example, you may want to set the Pad1 to transmit note message 34. This is done by assigning controller 34 to the Pad1. The operation steps is shown as below and the OLED displays the following:

- (1) Press the MENU button repeatedly until the OLED displays "Control assign CC NUMB/Pad note".
- (2) Trigger the Pad1.
- (3) Press "+" or "-" button until the OLED displays "34".
- (4) Press the "Enter" button to confirm and the OLED will display "Done". Holding the "Enter" button for 2 seconds to exit the edit mode.

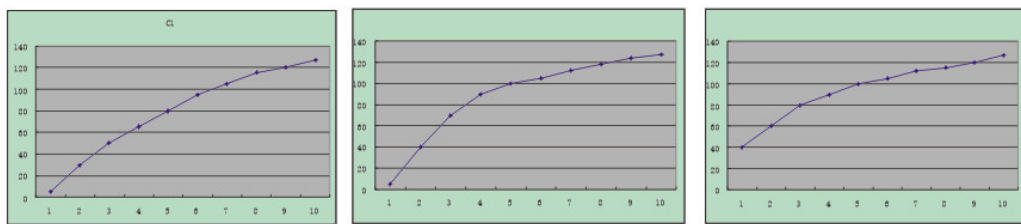


5.6 Advanced Settings

5.6.1 Keyboard Velocity Curve

Every time you press a key, a MIDI note message is sent with a velocity value between 0 and the maximum; this value specifies how hard you pressed the key. Since different people have different playing styles, your Garagekey PAD offers 3 different velocity curves and 1 one constant velocity as shown below. The default is the first one. You should experiment with the different velocity curves to seek the curve that best suits your playing style.

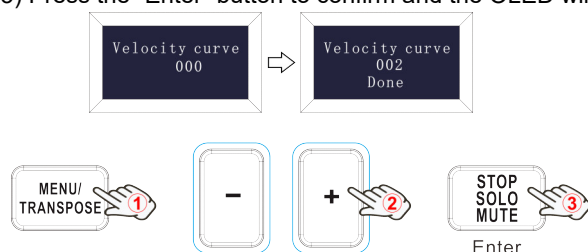
Keyboard Velocity Curves



To change the keyboard velocity curve:

Press the MENU button repeatedly until the OLED displays "Velocity curve" to start the function of selecting keyboard velocity curve. When this function is valid, the OLED displays the "Velocity curve" and the Number of current velocity curve. It can be adjusted by +/- button and confirmed by Enter button. The initial value is 1, adjusting scale is 1~4. The operation steps is shown as below and the OLED displays the following:

- (1) Press the MENU button repeatedly until the OLED displays "Velocity curve".
- (2) Press "+" or "-" button to adjust the keyboard velocity curve, the OLED will display the current selected velocity curve.
- (3) Press the "Enter" button to confirm and the OLED will display "Done". Holding the "Enter" button for 2 seconds to exit the edit mode.

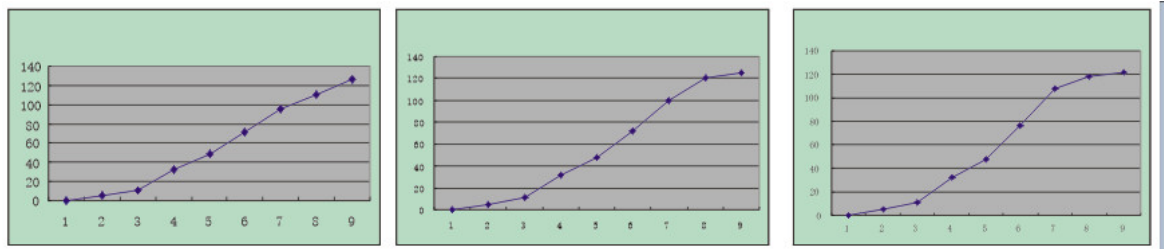


5.6.2 Pad Velocity

The Pad Curve setting is used to set the response curve of all 16 pads. It is not possible to set the response curve of the pads independently.

Your Garagekey PAD offers 3 different pad velocity curves and 1 one constant velocity as shown below. The 3rd one is the constant velocity with the value 127.

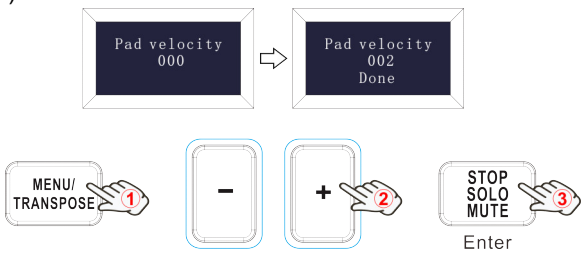
Pad Velocity Curves



To change the pad velocity curve:

Press the MENU button repeatedly until the OLED displays “Pad curve” to start the function of selecting pad velocity curve. When this function is valid, the OLED displays the “Pad velocity” and the Number of current pad velocity curve. It can be adjusted by +/- button and confirmed by Enter button. The initial value is 1, adjusting scale is 1~4. The operation steps is shown as below and the OLED displays the following:

- (1) Press the MENU button repeatedly until the OLED displays “Pad Velocity”.
- (2) Press “+” or “-” button to adjust the pad velocity curve, the OLED will display the current selected velocity curve.
- (3) Press the “Enter” button to confirm and the OLED will display “Done”. Holding the “Enter” button for 2 seconds to exit the edit mode.



5.6.3 Pad Pressure Control

Using the pressure control, the pads give you a different type of performance option on your Garagekey PAD. You can control parameters on your software in a way that would not be possible on a standard dial or slider. The pressure pads can be used to make some very interesting effects.

As we’ve seen above, each pad can be assigned an individual MIDI controller number. As you apply more and more pressure to the pad, the value of the controller you are sending will increase, until the maximum value is reached. On release, the pad will return to the minimum value.

5.6.4 OCTAVE+/- OCTAVE

Press the MENU button repeatedly until the OLED displays “Octave” to start the function of Octave. This function allows the keyboard to change the Pitch up/down by octave. When this function is valid, the OLED displays the “Octave” and the value of current transposition. It can be adjusted by +/- button. The initial value is 0, adjusting scale is -4~4. The operation steps is shown as below and the OLED displays the following:

- (1) Press the MENU button repeatedly until the OLED displays “Octave”.
- (2) Press “+” or “-” button to adjust the keyboard octave, the OLED will display the current octave. Holding the “Enter” button for 2 seconds to exit the edit mode.



5.6.5 Transpose

Press the MENU button repeatedly until the OLED displays “Transpose” to start the function of Transpose. This function allows the keyboard to change the Pitch up/down by semi-tone. When this function is valid, the OLED displays the “Transpose” and the value of current transpose. It can be adjusted by +/- button. The initial value is 0, adjusting scale is -12~12. The operation steps is shown as below and the OLED displays the following:

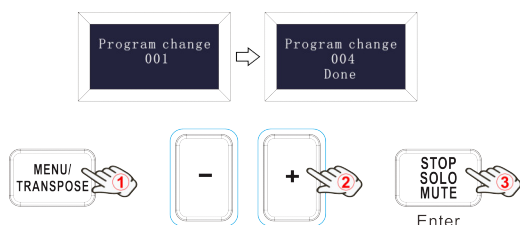
- (1) Press the MENU button repeatedly until the OLED displays “Transpose”.
- (2) Press “+” or “-” button to adjust the keyboard transpose, the OLED will display the current transpose. Holding the “Enter” button for 2 seconds to exit the edit mode.



5.6.6 Program change

Press the MENU button repeatedly until the OLED displays “Program change” to start the function of Program change. Program change is for adjusting the voice of current channel. When this function is valid, the OLED displays the “Program change” and the current voice number. It can be adjusted by +/- button and confirmed by Enter button. The initial value is 1, adjusting scale is 1~128. The operation steps is shown as below and the OLED displays the following:

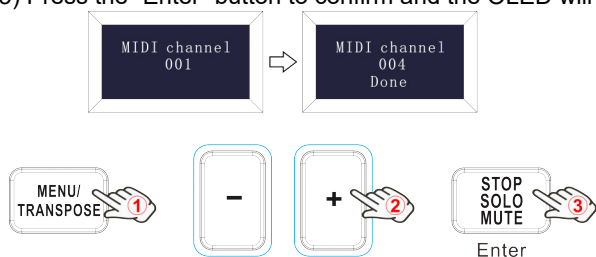
- (1) Press the MENU button repeatedly until the OLED displays “Program change”.
- (2) Press “+” or “-” button to adjust the keyboard program, the OLED will display the current keyboard program.
- (3) Press the “Enter” button to confirm and the OLED will display “Done”. Holding the “Enter” button for 2 seconds to exit the edit mode.



5.6.7 MIDI channel

Press the MENU button repeatedly until the OLED displays “MIDI channel” to start the function of Channel selection. Channel selection is for adjusting the Current MIDI channel. When this function is valid, the OLED displays the “MIDI channel” and the current channel number. It can be adjusted by +/- button and confirmed by Enter button. The initial value is 1, adjusting scale is 1~16. The operation steps is shown as below and the OLED displays the following:

- (1) Press the MENU button repeatedly until the OLED displays “MIDI channel”.
- (2) Press “+” or “-” button to adjust the keyboard program, the OLED will display the current MIDI channel.
- (3) Press the “Enter” button to confirm and the OLED will display “Done”. Holding the “Enter” button for 2 seconds to exit the edit mode.

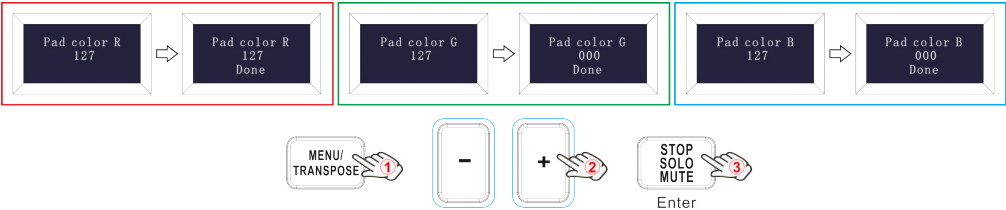


5.6.8 Select the Backlit RGB Color of 16 Pads

Press the MENU button repeatedly until the OLED displays “Pad color R/G/B” to start the function of selecting the Backlit RGB Color of 16 Pads. When this function is valid, the OLED displays the “Pad color R/G/B” and the current RGB color number. R is for red, G is for green and B is for blue. It can be adjusted by +/- button and confirmed by Enter button. The initial value is 127, adjusting scale is 0~255. For example, you may want to set the Pad1 with RED color for the RGB backlight. This is done by setting the Pad color R to 127, Pad color G to 0 and Pad color B to 0 to the Pad1. The operation steps is shown as below and the OLED displays the following:

- (1) Trigger the Pad1.
- (2) Press the MENU button repeatedly until the OLED displays “Pad color R”.
- (3) Press “+” or “-” button until the OLED displays 127.
- (4) Press the “Enter” button to confirm and the OLED will display “Done”.

- (5) Press the MENU button repeatedly until the OLED displays “Pad color G”.
- (6) Press “+” or “-” button until the OLED displays 0.
- (7) Press the “Enter” button to confirm and the OLED will display “Done”.
- (8) Press the MENU button repeatedly until the OLED displays “Pad color B”.
- (9) Press “+” or “-” button until the OLED displays 0.
- (10) Press the “Enter” button to confirm and the OLED will display “Done”. Holding the “Enter” button for 2 seconds to exit the edit mode.



Reference RGB No. for some colors:

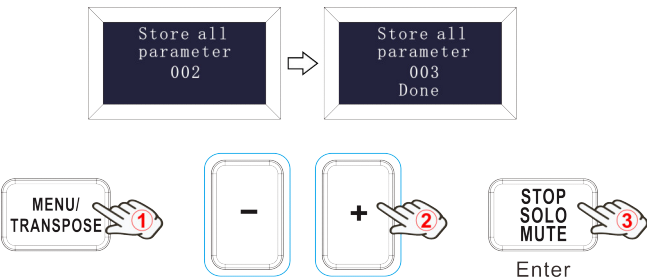
COLOR	R.	G.	B
WHITE	127	127	127
BLACK	0	0	0
RED	127	0	0
GREEN	0	127	0
BLUE	0	0	127
CYAN	0	127	127
MAGENTA	127	0	127
YELLOW	127	127	0
ORANGE	127	82	0

5.7 Other controls

5.7.1 Store all parameters

Press the MENU button repeatedly until the OLED displays “Store all parameters” to start the function of storing parameters. It stores 3 groups setup value. When this function is valid, the OLED displays the “Store all parameter” and the current storage group number. It can be adjusted by +/- button and confirmed by Enter button. The initial value is 1, adjusting scale is 1~3. The operation steps is shown as below and the OLED displays the following:

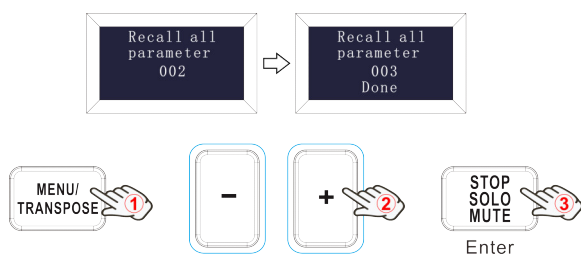
- (1) Press the MENU button repeatedly until the OLED displays “Store all parameter”.
- (2) Press “+” or “-” button to adjust the memory area and the OLED will display the current memory area.
- (3) Press the “Enter” button to confirm and the OLED will display “Done”. Holding the “Enter” button for 2 seconds to exit the edit mode.



5.7.2 Recall all parameters

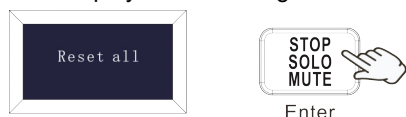
Press the MENU button repeatedly until the OLED displays “Recall all parameter” to start the function of recalling all parameters. When this function is valid, the OLED displays the “Recall all parameter” and the current storage group number. It can be adjusted by +/- button and confirmed by Enter button. The initial value is 1, adjusting scale is 1~3. The operation steps is shown as below and the OLED displays the following:

- (1) Press the MENU button repeatedly until the OLED displays “Recall all parameter”.
- (2) Press “+” or “-” button to select the memory area and the OLED will display the current memory area.
- (3) Press the “Enter” button to confirm and the OLED will display “Done”. Holding the “Enter” button for 2 seconds to exit the edit mode.



5.7.3 RESET

Press the MENU button repeatedly until the OLED displays “Reset all” to reset the system restoring to factory setting, sending system initial setting info at the same time. When this function is valid, the OLED displays the “Reset all”. It can be confirmed by Enter button. The OLED displays the following:



5.7.4 MMC (MIDI MACHINE CONTROL)

There are 2 buttons used for MMC- [>>], [O]. It is common to set the 2 buttons as Sequencer remote control buttons, it needs to be working with sequencer software.



6. Using The Garagekey PAD With Your DAW

6.1 Using your Garagekey PAD with Ableton Live

With Ableton Live installed, get your Garagekey PAD connected to Mac or PC 's USB port with USB cable and it will be automatically detected and enter Session mode. If you press the Shift button on your Garagekey PAD the pads will be lighting as shown in the picture below. The first 3 pads are used to select pad behavior and the next 5 pads to the right are for selecting knob behaviour.



If your Garagekey PAD is not automatically detected in Ableton Live, you'll need to configure Live's Control Surface Preferences. This could be done in the 'Link/MIDI' Preferences menu in Ableton Live:

'Link/MIDI' Preferences:

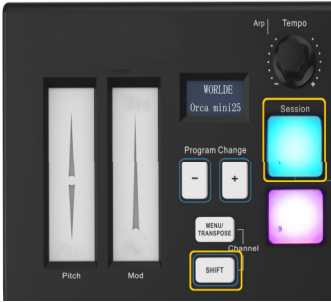
Windows: Options>Preferences>Link/MIDI

Mac: Live>Preferences>Link/MIDI

You need to make settings in the Link/MIDI tab as steps shown below. First, select the Garagekey PAD(Launchkey Mini [MK3]) from the Control Surface menu. Second, select MIDITECH or MIDITECH2(Windows) for Input and Output settings. Finally, match the Track, Sync and Remote settings.

6.1.1 Session Mode

Hold the Shift button and press the Session pad(the top left pad) to enter session mode on your Garagekey PAD.



Session mode is used to control Ableton Live’s Session view. Session View is a grid that consists of clips, tracks and scenes.



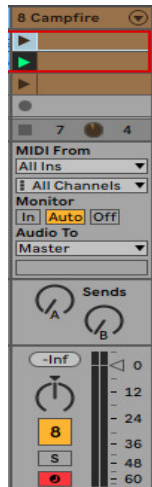
Garagekey PAD's Session mode provides an 8x2 view of the clips in your Session View. Example of Garagekey PAD's pads in Session mode:



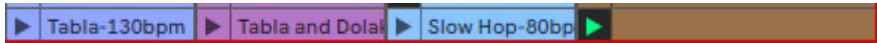
Clips are typically loops that contain MIDI notes or audio.



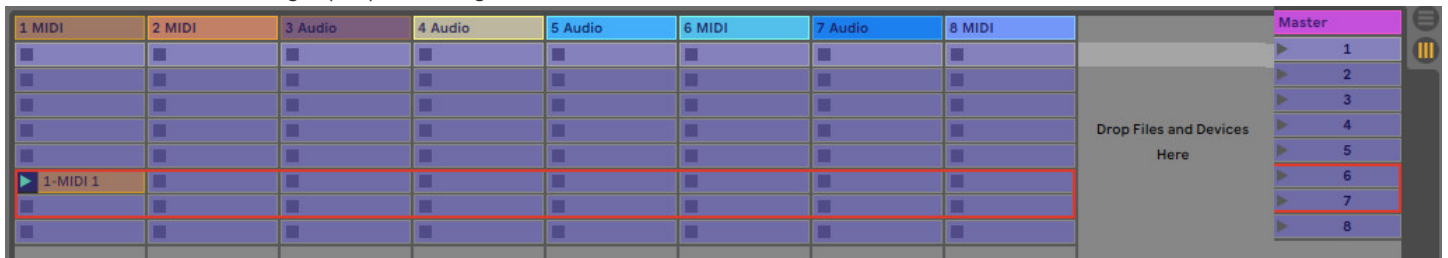
Tracks represent virtual instruments or audio tracks. MIDI clips placed on instrument tracks will play back on the instrument that is assigned to that track.



Scenes are rows of clips. Launching a scene will launch all clips in that row. This means that you can arrange clips into horizontal groups (across tracks) to form a song structure, launching scene after scene to progress through a song.



In Session mode, the pads represent the grid of clips found inside the coloured rectangle in Ableton Live's Session View. The image below shows such a rectangle (red) extending from the left-most track to the Master track:



Any changes you make to clip position or colour within Ableton Live will be represented in the Session mode of Garagekey PAD. Unlit (dark) pads indicate empty clip slots.



You can navigate around Session View by holding Shift and pressing the 4 buttons with arrows as their secondary functions: >, Stop Solo Mute, Arp, and Fixed Chord.



More specifically, you can move the currently selected grid of clips (inside Ableton Live's coloured rectangle) up or down by holding Shift and pressing the following buttons:



Shift + Scene Launch (>) – This moves the grid of clips up one row.



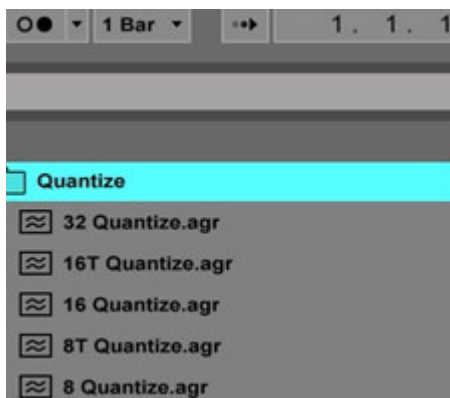
Shift + Stop, Solo, Mute – This moves the grid of clips down one row.



Holding Shift and pressing Arp (left) or Fixed Chord (right) will select the adjacent left or right track. This will automatically arm the track so it is ready to receive MIDI.

6.1.2 Launching Clips

Pressing pads will launch clips in the corresponding location in your Session View. Pads will pulse white to indicate that a clip is playing. Pressing the pad again will relaunch the clip, and pressing an empty pad will stop playback on that track.



How fast clips stop or relaunch is set by Ableton Live's Global Quantisation chooser, located at the top of the Live screen. By default, this is set to 1 bar, but can go as fast as 1/32 notes, or as slow as 8 bars. It can also be set to 'None' so clips react immediately.

6.1.3 Launching Scenes

Pressing the Scene Launch button (>) launches scenes in Ableton Live. This means that all of the clips in a row can either start, stop, record or relaunch together.



6.1.4 Stop, Solo, Mute



While in Session mode, it is possible to switch the functionality of the bottom 8 pads so that they no longer launch clips. This is done with the Stop, Solo, Mute button.

The Stop, Solo, Mute button toggles between four different states which affect tracks in the following ways:
 Stop (Blue) – In this state, pressing pads will stop any clip on the corresponding track. The blue pads will light out if tracks are not playing.



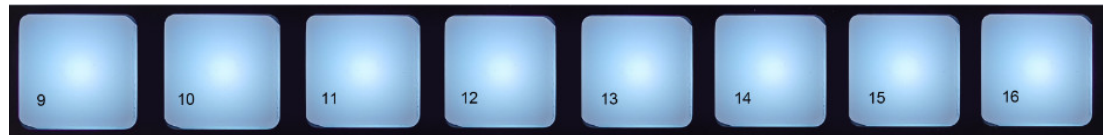
Solo (Yellow green) - Pressing the pads will solo the corresponding tracks, meaning only tracks with Solo on will be heard. The pads will light out if tracks are not soloed (ie they are silent) and if soloed they will be in light yellow.



Mute (Light pink) – Pressing pads will Mute the corresponding tracks. The pads will light out for muted tracks, leaving pads for unmuted tracks at their original brightness and colour.



Clips (White) – the fourth press (after toggling through Stop, Solo and Mute) changes the function of bottom pads back to the default Session mode, where the bottom row of pads will represent clips again . The clips that are playing will be in white color and flickering.



6.1.5 Record / Capture MIDI



Pressing this button triggers Session Record. This will allow you to record what you're playing to new clips as well as overdub existing ones.
 Holding Shift and pressing Record triggers the Capture MIDI function. This allows you to retrospectively capture any recently played MIDI notes in the record-armed track. This means that if you are not recording, but you play something that sounds great, you can use Capture MIDI to send it straight into a clip.

6.1.6 Playing and Recording Drums



Drum mode transforms the Garagekey PAD's pads into velocity-sensitive drum pads.
 Hold Shift and press the Drum pad (2nd from the top left) to enter this mode.
 If a Drum Rack (an Ableton MIDI instrument) is loaded onto the selected Live track, and the Garagekey PAD is in Drum mode, the pads light

up the colour of the track. These pads will play whatever Drum Rack pads are visible on your computer screen, turning blue when played, and red if the track is recording.



Hold Shift and press either the > or Stop, Solo, Mute buttons to scroll up/down a Drum Rack's bank of 128 pads. When using Ableton's Drum Racks, Drum mode will – apart from triggering sounds – select the associated Drum Rack pad within a Drum Rack. This means that on release, the last played Drum Rack pad becomes grey and Ableton Live shows the selected Drum Rack pad on the screen.

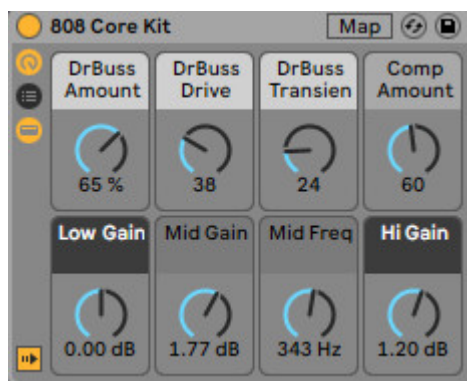


6.1.7 Using Ableton Live Devices

Device mode allows you to control the selected 'device' (Ableton or 3rd-party Instruments and Effects) on a Live track. Hold the Shift button and press the Device pad (4th from top left) to use this mode.



In this mode, knobs control the first 8 parameters of the selected device. This is especially useful for controlling Live's 8 'macro' knobs, available on Instrument and Effect Racks.



The above picture shows an Impulse preset called 'Percussion 1'. Here, the Garagekey PAD knobs control sample volumes, sample start and 'stretch', as well as delay and reverb amounts.

6.1.8 Using Ableton Live's Mixer



The Garagekey PAD 8 knobs give you hands-on control of Live's mixer. Hold Shift, then press either the Volume, Pan or Sends pads to control those respective parameters with the knobs.

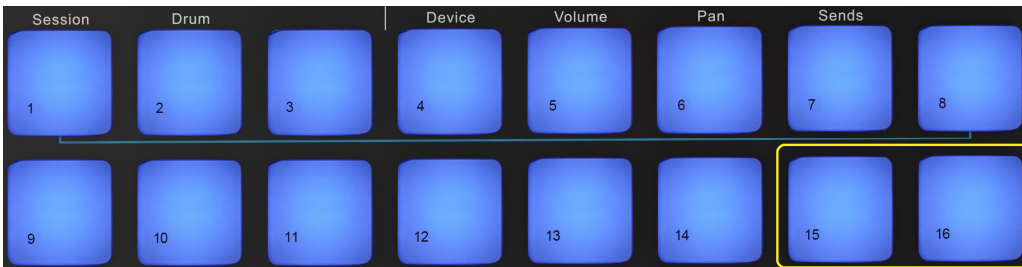
Volume - This mode allows for volume control over the 8 selected tracks currently inside Live's coloured rectangle. Holding the Shift button and pressing the Volume pad (the 4th from the top right) selects this mode.

Pan - This mode allows you to pan the 8 selected tracks currently inside Live's coloured rectangle. Holding the Shift button and pressing the Pan pad (the 3rd from the top right) selects this mode.

Sends - This mode allows you to control the send levels of tracks in Ableton Live. Hold Shift and press the Sends pad (2nd from the top right) to enter this mode.

When in Sends mode two blue pads on the bottom row will switch between Send A or Send B. The left blue pad chooses Send A, and the right blue pad selects Send B.

Sending audio to return tracks is a great way to use fewer audio effects. For example, instead of putting the same reverb on many tracks, you can put one reverb on a return track and send multiple tracks to it.



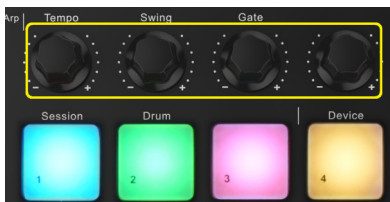
6.1.9 Arp

Pressing the Arp button on Garagekey PAD enables the Arpeggiator. After engaging Arp the Garagekey PAD takes your chords and creates an arpeggio – ie it plays each note of the chord one after another. The Arpeggiator will run as long as keys are held, at the rhythmic value specified by the Arp Rate.

Garagekey PAD's Arp is a great way to come up with interesting melodies and progressions with ease.



Arpeggiator Rotary Knobs



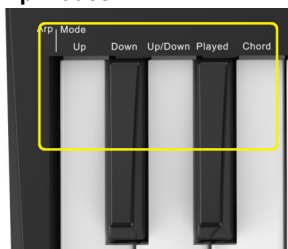
When you hold the Arp button the rotary knobs can transform your arpeggios.

Tempo – This knob speeds up or slows down your arpeggio relative to the Arp Rate. When synced with Ableton Live, this knob will have no effect.

Swing – This knob sets the amount that every other note is delayed, resulting in a swung rhythm. To change the Arpeggiator's Swing, press and hold the Arp button, and then turn the knob labelled Swing. By default (centre position), swing will be set to 50% (meaning no swing), with extremes of 80% (very swung) and 20% (negative swing). Negative swing means every other note is rushed, instead of delayed.

Gate – Adjusting this knob will create longer or shorter MIDI notes, resulting in either a more 'staccato' arpeggio, or a more fluid, 'legato' one. This knob goes from 1% to 200% of the space between notes. For notes that have swing applied, both notes retain the same gate length.

Arp Modes



After turning on Arp you'll be in 1 of 5 Arpeggiator Modes, each resulting in arpeggios of different note orders. To change the Arp Mode, press and hold the Arp button, and then press the key corresponding to your desired mode. After pressing a key, you can see the pad above reflect your changes (as per the previous section).

Up – Here notes are played in ascending order (ie rising in pitch). If notes are added, the number of notes in the sequence will grow but remain in ascending order. For example, you may start by holding down a first note - E3 - then quickly add two more notes - C3 and G3. The resulting arpeggio will be C3, E3 and G3.

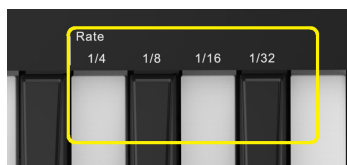
Down – This Mode is similar to Up Mode, but notes play in descending order (eg G3, E3, C3).

Up/Down – This arpeggio Mode starts by playing notes in ascending order. Then, after reaching the highest note, the notes descend towards the lowest note, which plays once before the arpeggio rises again and stop before reaching the lowest note. This means that when the pattern repeats, the lowest note only plays once.

Played – Here notes are kept repeated in whatever order they were played.

Chord – All notes are played back on every rhythmic step (see Arp Rate). This makes playing fast chords very easy.

Arp Rates



These options specify the speed of the arpeggiated notes. Since each note is played immediately after the end of the previous one, a shorter rate (eg 1/32) will play an arpeggio faster than longer one (eg 1/4).

Rate options are common musical note values: quarter ($\frac{1}{4}$), eighth ($\frac{1}{8}$), sixteenth ($\frac{1}{16}$) and thirty-second ($\frac{1}{32}$) notes. To change the Arp Rate, press and hold the Arp button, and then press the key below 1/4, 1/8, 1/16, or 1/32.

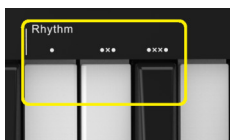
Additionally, you can toggle triplet rhythms on/off for each of the above musical values by clicking the key below 'Triplet'. This turns your arpeggio notes into quarter, eighth, sixteenth and thirty-second note triplets.

Arp Octaves



These 4 keys specify across how many octaves your arpeggio will repeat. To change, press and hold the Arp button, and then press the key below 1, 2, 3 or 4. Choosing an octave higher than 1 will repeat the arpeggio at higher octaves. For example, an arpeggio that was C3, E3, and G3 at 1 octave will become C3, E3, G3, C4, E4, and G4 when set to 2 octaves.

Arp Rhythms



Arp Rhythms add musical rests (silent steps) to your arpeggio's pattern, allowing for greater variations in your arpeggios. Hold Arp then press one of the following, which will turn the pads blue.

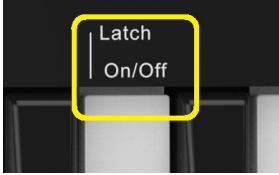
Dots - These three options are rhythmic patterns.

O – The normal Arpeggiator setting, this places a note on every division of the selected Arp rate.

OXO (note - rest - note) – This rhythm adds a rest between every pair of notes.

OXXO (note - rest - rest - note) – This pattern adds two rests between every pair of notes.

Latch



Latch lets you use the Arpeggiator without holding down keys. Any notes you press and release concurrently will form a new arpeggio pattern which the arpeggiator 'latches' onto. The arpeggiator then continues to play as if you never released the keys. When you press a new key, the previous arpeggio erases and a new one forms.

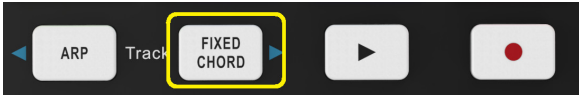
To turn on Latch, press and hold the Arp button, and then press the key below 'Latch'. The pad below Volume will change from light pink to pink when you enable Latch, and you can see this pad whether you're adjusting the Arp Mode, Rate, Octave or Rhythm.

Arp Pads

The pads of the Garagekey PAD help to visually confirm the current Arp state. When the Arp button is held the pads will light up in different colours, indicating these Arp settings: red (Arp Modes), green (Arp Rates), blue (Arp Octaves), light blue (Arp Rhythms), and light pink/pink (Latch).

The top row of pads select the Arp groups: Arp Modes, Arp Rates, Arp Octaves, Arp Rhythms, and Latch (On/Off). The bottom row of pads select the different options within the selected group(from the top row).

6.1.10 Fixed Chord



Fixed Chord lets you play a chord shape and then transpose it by pressing other keys.

Press and hold the Fixed Chord button to set a chord. Then, while still holding the button, press and release the keys that you wish to be part of your chord. The chord is now stored.

Keep in mind that the first note that you input into the chord is considered the 'root note' of the chord, even if you then add notes lower than the first one, like in the example below.

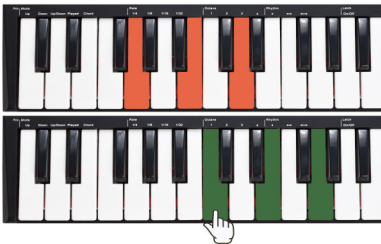
These steps illustrate how to use Fixed Chord:

Press and hold the Fixed Chord button.

Press and release C, then E, and finally G (a C Major chord). Garagekey PAD stores this as the 'fixed chord'.

Release the Fixed Chord button.

Major chords will now sound on whatever key you press. For example, you can now press F to hear an F Major chord (shown below), or Ab to hear an Ab Major chord, etc. Whenever you enter the Fixed Chord settings, the stored chord is erased and a new chord must be entered for Fixed Chord to work again.



6.2 Garagekey PAD Working with other Sequencer

A MIDI sequencer will allow you to record, play back, store and edit MIDI data. Although hardware sequencers exist, we will focus on the more commonly used software sequencers in this manual. Examples of popular DAW are Cubase™, Logic™, Ableton Live™ and so on, although there are many different sequencing applications available for your computer. In order to use your Garagekey PAD with your sequencer, you need to set up the sequencer software so that your Garagekey PAD can be recognized as your DAW's MIDI input device. You need to choose a MIDI output device that is capable of making sound when MIDI data is sent to it. This may be a soundcard on your computer, a VST instrument or a sound module connected to a MIDI port which is in turn connected to your computer. Please consult your sequencer's user manual for more information on how this is done. In this manual, section 3.2.2 "Using The Garagekey PAD With Your software" details how your Garagekey PAD will appear in the device listing of your sequencer.

With your Garagekey PAD set up to communicate with the sequencer, data will go into the sequencer and will be routed to a virtual synthesizer within the sequencer software or sent to an external sound module via a MIDI output port. The virtual synthesizer or external sound module will turn the MIDI data into audible sounds. You can then record the incoming MIDI data and edit your performance using your sequencer. We will have some more detailed MIDI mapping operations for different DAWs provided separately.

7. Appendices

Appendix A-ASSIGNABLE CONTROLLER PARAMETER LIST

CONTROLLER NO.	DEFINITION	INITIAL VALUE	VALUE RANGE
0	Bank Select MSB	0	0-127
1	Modulation MSB	0	0-127
2	Breath MSB	127	0-127
3	Controller	0	0-127
4	Foot Controller MSB	127	0-127
5	Portamento time MSB	0	0-127
6	Data Entry MSB	2	0-127
7	Channel Volume MSB	100	0-127
8	Balance MSB	64	0-127
9	Controller	0	0-127
10	Panpot MSB	64	0-127
11	Expression MSB	127	0-127
12	Effect Control 1 MSB	0	0-127
13	Effect Control 2 MSB	0	0-127
14-31	Controller	0	0-127
32	Bank Select LSB	0	0-127
33	Modulation LSB	0	0-127
34	Breath LSB	127	0-127
35	Controller	0	0-127
36	Foot Controller LSB	127	0-127
37	Portamento time LSB	0	0-127
38	Data Entry LSB	0	0-127
39	Channel Volume LSB	127	0-127
40	Balance LSB	64	0-127
41	Controller	0	0-127
42	Panpot LSB	64	0-127
43	Expression LSB	127	0-127
44-63	Controller	0	0-127
64	Sustain	0	0-127
65	Portamento	0	0-127
66	Sostenuto	0	0-127
67	Soft Pedal	0	0-127
68	Legato FootSwitch	0	0-127
69	Hold 2	0	0-127
70	Sound Controller	64	0-127
71	Resonance	64	0-127
72	Release Time	64	0-127
73	Attack Time	64	0-127
74	Cutoff	64	0-127
75	Decay Time	0	0-127
76	Vibrato Depth	64	0-127

77	Vibrato Depth	64	0-127
78	Vibrato Depth	64	0-127
79	Sound Controller	64	0-127
80-83	Controller	0	0-127
84	Portamento Control	0	0-127
85-90	Controller	0	0-127
91	Reverb	40	0-127
92	Effects	0	0-127
93	Chorus	0	0-127
94	Effects	0	0-127
95	Effects	0	0-127
96	RPN Increment	0	0-127
97	RPN Decrement	0	0-127
98	NRPN LSB	0	0-127
99	NRPN MSB	0	0-127
100	RPN LSB	0	0-127
101	RPN MSB	0	0-127
102-119	Controller	0	0-127
120	All Sound Off	0	0-127
121	Reset All Controllers	0	0-127
122	Local Control	0	0-127
123	All Notes Off	0	0-127
124	OMNI Off	0	0-127
125	OMNI On	0	0-127
126	Mono	0	0-127
127	Poly	0	0-127
128	Pitch Bend Sensitivity (RPN)	2	0-127
129	Channel Fine Tuning (RPN)	64	0-127
130	Channel Coarse Tuning (RPN)	64	0-127

131	Modulation Depth Range (RPN)	64	0-127
132	Vibrato Rate (NRPN)	64	0-127
133	Vibrato Depth (NRPN)	64	0-127
134	Vibrato Delay (NRPN)	64	0-127
135	Filter Cutoff Frequency (NRPN)	64	0-127
136	Filter Resonance (NRPN)	64	0-127
137	EQ Low Gain (NRPN)	64	0-127
138	EQ High Gain (NRPN)	64	0-127
139	EQ Low Frequency (NRPN)	64	0-127
140	EQ High Frequency (NRPN)	64	0-127
141	EG Attack Time (NRPN)	64	0-127
142	EG Decay Time (NRPN)	64	0-127
143	EG Release Time (NRPN)	64	0-127
144	Polyphonic key pressure	100	0-127
145	After touch	100	0-127
146	Pitch Bend	64	0-127
147	Master Volume	100	0-127
148	Start (MTC)	-	-
149	Continue (MTC)	-	-
150	Stop (MTC)	-	-
151	Reset (MTC)	-	-
152	Program	0	0-127
153	Global Channel	0	0-15
154	Octave	0	-3~3
155	Transpose	0	-12~12
156	Tempo	100	20-250
157	Keyboard Curve	0	0-4
158	Pedal A Curve	64	1-127

Appendix B- Toxic or Hazardous Substances and Elements

Part Number, Name and Description	Toxic or Hazardous Substances and Elements					
	Pb	Hg	Cd	Cr(VI))	(PBB)	(PBDE)
PCB	○	○	○	○	○	○
PCBA Welding Spot	○	○	○	○	○	○
Components	○	○	○	○	○	○
Metal Parts	○	○	○	○	○	○
Plastic and Polymeric parts	○	○	○	○	○	○
Paper Accessory	○	○	○	○	○	○
Power Cord	○	○	○	○	○	○

○: Indicates that this toxic or hazardous substance contained in all the homogeneous materials for this part, according to EIP-A, EIP-B, EIP-C is below the limit requirement in SJ/T 11364.
 ×: Indicates that this toxic or hazardous substance contained in all the homogeneous materials for this part, according to EIP-A, EIP-B, EIP-C is above the limit requirement in SJ/T 11364.
 (Enterprises may further provide in this box technical explanation for marking "X" based on their actual conditions.)

Appendix C-Note Value and The Corresponding Numerical Number

Note	NO.	Note	NO.	Note	NO.	Note	NO.	Note	NO.	Note	NO.	Note	NO.	Note	NO.
C-1	0	F0	17	Bb 1	34	Eb 3	51	G#4	68	C#6	85	F#7	102	B8	119
C#-1	1	F#0	18	B1	35	E3	52	A4	69	D6	86	G7	103	C9	120
D-1	2	G0	19	C2	36	F3	53	Bb 4	70	Eb 6	87	G#7	104	C#9	121
Eb-1	3	G#0	20	C#2	37	F#3	54	B4	71	Eb 6	88	A7	105	D9	122
E-1	4	A0	21	D2	38	G3	55	C5	72	F6	89	Bb 7	106	Eb 9	123
F-1	5	Bb 0	22	Eb 2	39	G#3	56	C#5	73	F#6	90	B7	107	E9	124
F#-1	6	B0	23	E2	40	A3	57	D5	74	G6	91	C8	108	F9	125
G-1	7	C1	24	F2	41	Bb 3	58	Eb 5	75	G#6	92	C#8	109	F#9	126
G#-1	8	C#1	25	F#2	42	B3	59	E5	76	A6	93	D8	110	G9	127
A-1	9	D1	26	G2	43	C4	60	F5	77	Bb 6	94	Eb 8	111		
Bb-1	10	Eb 1	27	G#2	44	C#4	61	F#5	78	B6	95	E8	112		
B-1	11	E1	28	A2	45	D4	62	G5	79	C7	96	F8	113		

C0	12	F1	29	Bb 2	46	Eb 4	63	G#5	80	C#7	97	F#8	114		
C#0	13	F#1	30	B2	47	E4	64	A5	81	D7	98	G8	115		
D0	14	G1	31	C3	48	F4	65	Bb 5	82	Eb 7	99	G#8	116		
Eb 0	15	G#1	32	C#3	49	F#4	66	B5	83	E7	100	A8	117		
E0	16	A1	33	D3	50	G4	67	C6	84	F7	101	Bb 8	118		

Appendix D- General MIDI Instruments-Program Change Numbers

Piano	Bass	Reed	Synth Effects
0 Acoustic Grand Piano	32 Acoustic Bass	64 Soprano Sax	96 SFX Rain
1 Bright Acoustic Piano	33 Fingered Bass	65 Alto Sax	97 SFX Soundtrack
2 Electric grand Piano	34 Electric Picked Bass	66 Tenor Sax	98 SFX Crystal
3 Honky Tonk Piano	35 Fretless Bass	67 Baritone Sax	99 SFX Atmosphere
4 Electric Piano 1	36 Slap Bass 1	68 Oboe	100 SFX Brightness
5 Electric Piano 2	37 Slap Bass 2	69 English Horn	101 SFX Goblins
6 Harpsichord	38 Syn Bass 1	70 Bassoon	102 SFX Echoes
7 Clavinet	39 Syn Bass 2	71 Clarinet	103 SFX Sci-Fi
Chromatic Percussion	Strings/Orchestra	Pipe	Ethnic
8 Celesta	40 Violin	72 Piccolo	104 Sitar
9 Glockenspiel	41 Viola	73 Flute	105 Banjo
10 Music Box	42 Cello	74 Recorder	106 Shamisen
11 Vibraphone	43 Contrabass	75 Pan Flute	107 Koto
12 Marimba	44 Tremolo Strings	76 Bottle Blow	108 Kalimba
13 Xylophone	45 Pizzicato Strings	77 Shakuhachi	109 Bag Pipe
14 Tubular bells	46 Orchestral Harp	78 Whistle	110 Fiddle
15 Dulcimer	47 Timpani	79 Ocarina	111 Shanai
Organ	Ensemble	Synth Lead	Percussive
16 Drawbar Organ	48 String Ensemble 1	80 Syn Square Wave	112 Tinkle Bell
17 Percussive Organ	49 String Ensemble 2	81 Syn Sawtooth Wave	113 Agogo
18 Rock Organ	50 Syn Strings 1	82 Syn Calliope	114 Steel Drums
19 Church Organ	51 Syn Strings 2	83 Syn Chiff	115 Woodblock
20 Reed Organ	52 Choir Aahs	84 Syn Charang	116 Taiko Drum
21 Accordion	53 Voice Oohs	85 Syn Voice	117 Melodic Tom
22 Harmonica	54 Syn Choir	86 Syn Sawtooth Wave	118 Syn Drum
23 Tango Accordion	55 Orchestral Hit	87 Syn Brass & Lead	119 Reverse Cymbal
Guitar	Brass	Synth Pad	Sound Effects

24 Nylon Acoustic	56 Trumpet	88 New Age Syn Pad	120 Guitar Fret Noise
25 Steel Acoustic	57 Trombone	89 Warm Syn Pad	121 Breath Noise
26 Jazz Electric	58 Tuba	90 Polysynth Syn Pad	122 Seashore
27 Clean Electric	59 Muted Trumpet	91 Choir Syn Pad	123 Bird Tweet
28 Muted Electric	60 French Horn	92 Bowed Syn Pad	124 Telephone Ring
29 Overdrive	61 Brass Section	93 Metal Syn Pad	125 Helicopter
30 Distorted	61 Syn Brass 1	94 Halo Syn Pad	126 Applause
31 Harmonics	62 Syn Brass 2	95 Sweep Syn Pad	127 Gun Shot

Appendix E - General MIDI Drums-Note assignments

MIDI Note	Drum Sound	MIDI Note	Drum Sound	MIDI Note	Drum Sound
35	Acoustic Bass Drum	52	Chinese Cymbal	69	Cabasa
36	Bass Drum 1	53	Ride Bell	70	Maracas
37	Side Stick	54	Tambourine	71	Short Whistle
38	Acoustic Snare	55	Splash Cymbal	72	Long Whistle
39	Hand Clap	56	Cowbell	73	Short Guiro
40	Electric Snare	57	Crash Cymbal 2	74	Long Guiro
41	Low Floor Tom	58	Vibraslap	75	Claves
42	Closed Hi-Hat	59	Ride Cymbal 2	76	Hi Wood Block
43	High Floor Tom	60	Hi Bongo	77	LowWood Block
44	Pedal Hi-Hat	61	Low Bongo	78	Mute Cuica
45	Low Tom	62	Mute Hi Conga	79	Open Cuica
46	Open Hi-Hat	63	Open Hi Conga	80	Mute Triangle
47	Low-Mid Tom	64	Low Conga	81	Open Triangle
48	Hi-Mid Tom	65	High Timbale		
49	Crash Cymbal 1	66	Low Timbale		
50	High Tom	67	High Agogo		
51	Ride Cymbal 1	68	Low Agogo		

8. Specifications

Connectors: USB connector

Power supply: USB bus power mode

Current consumption: 100 mA or less

Dimensions (W x D x H): 12.6 x 7.6 x 2 inches / 319x193x50mm

Weight: 38.8 oz / 1100 g

Included items: USB cable, Owner's manual, MIDI to 3.5 audio cable

***Specifications and appearance are subject to change without notice.**