



MPK249

User Guide
English

Manual Version 1.0

Table of Contents

(Click a chapter/section to jump to it.)

Introduction	5
Box Contents.....	5
Support.....	5
 Quick Setup / Connection Diagram	 6
 About Modes	 7
 Preset Mode	 8
 Edit Mode.....	 10
Keyboard	11
Pads	12
Assignable Knobs.....	14
Assignable Faders.....	15
Assignable Switches and DAW Control	16
Tap Tempo	18

Transport Controls	19
Note Repeat	19
Arpeggiator.....	20
Pitch-Bend Wheel	21
Modulation Wheel	21
Footswitch Inputs.....	22
Expression Pedal Input	22
Global Mode	23
MIDI Channels	24
Note Display	24
Keyboard	24
Pads	25
Tempo	25
Clock	26
SysEx.....	26
Utilities.....	26
Save Globals	26
OS.....	26

Program Change Mode	27
Program Change	28
Program Change with Bank Change	28
 Features	 29
Top Panel	29
Rear Panel	33
 Appendix	 35
Mode Parameters	35
Technical Specifications	43
Trademarks and Licenses	44

Introduction

Box Contents

MPK249

USB Cable

Quickstart Guide

Safety & Warranty Manual

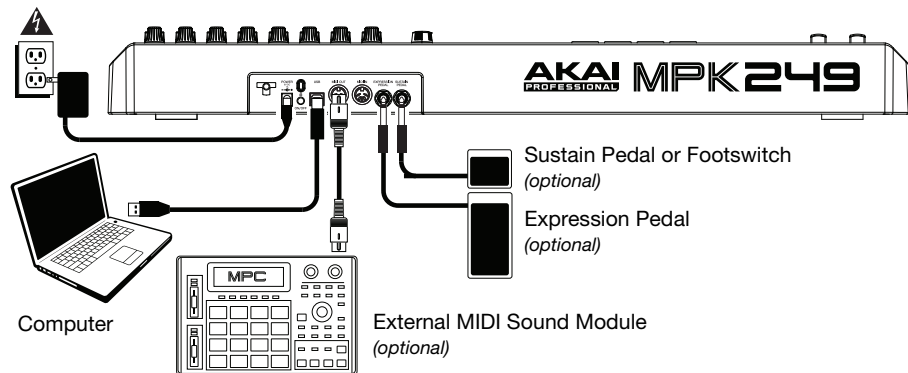
Support

For the latest information about this product (system requirements, compatibility information, etc.) and product registration, visit **akaipro.com/mpk249**.

For additional product support, visit **akaipro.com/support**.

Quick Setup / Connection Diagram

Wall Power
(optional)



*Items not listed under the **Box Contents** are sold separately.*

Important note for Mac OS X users: The first time you connect MPK249 to your computer, you will see a Keyboard Setup Assistant message saying that your keyboard cannot be identified. **Do not click Continue.** Instead, close the window by clicking the circle in the upper-left corner. If you see another window asking you to select your type of keyboard, select **ANSI (United States and others)** and click **Done**.

Note: If you do not want to use a computer in your setup, you have two options:

To use MPK249 to control an external MIDI module, connect MPK249's power input to a power outlet using an optional power adapter (6V DC, 1A, center-positive, sold separately).

To use MPK249 to control an app on an iOS device, connect MPK249's USB Port to an iOS device using an Apple iPad Camera Connection Kit (sold separately), and power on MPK249 while holding down the **Preview** button.

About Modes

The MPK249 has four different modes of operation. Enter each mode by pressing its corresponding button. These modes are described in detail in their respective chapters (click the name of the mode to jump to its chapter).

PRESET



Preset Mode lets you to load, save, copy, and rename Presets—collections of information about how the faders, knobs, buttons, and pads will behave.

EDIT



Edit Mode lets you to edit MPK249's configuration—how the keyboard, pads, knobs, faders, buttons, and other features behave. See the **Appendix: Mode Parameters** section for a complete list of editable parameters.

GLOBAL



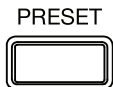
Global Mode lets you set parameters and make changes to MPK249's general ("global") functioning—behavior and settings that are not specific to a Preset. See the **Appendix: Mode Parameters** section for a complete list of editable settings.

PROGRAM CHANGE



Program Change Mode lets you send various Program Change messages, letting you remotely switch to a different program bank of sounds in your software or external MIDI device. See the **Appendix: Mode Parameters** section for a complete list of editable settings.

Preset Mode



In Preset Mode, you can load, save, copy, and rename Presets. A *Preset* is a collection of information about how the faders, knobs, buttons, and pads will behave. Using Presets allows you to save different configurations so you can load them quickly without reprogramming the MPK249 every time. This is also the default "performance mode."

To load a Preset:

1. Press **Preset** to enter Preset Mode.
2. Turn the **Value Dial** to select the desired Preset, which will appear in the display.
3. To load the selected Preset, press the **Value Dial**.

To cancel the operation and return to the current Preset, press **Preset** or just wait a few seconds.

To edit a Preset, please see the *Edit Mode* chapter.

To save or copy a Preset:

Note: Saving and copying a Preset are mostly the same operation. The difference is that saving a Preset will save it to the same/original Preset number while copying a Preset will save it to a different Preset number.

1. Press **Preset** to enter Preset Mode.
2. Press the **Right Cursor** button. **Store Program** will appear in the display.
3. If you want to save it to the current Preset, press the **Value Dial**.
If you want to save/copy it to a different Preset, turn the **Value Dial** to select the desired Preset number (**Copy Program** will appear in the display), and then press the **Value Dial**.

To cancel the operation, press **Preset**.

To name or rename a Preset:

1. Press **Preset** to enter Preset Mode.
2. Press the **Right Cursor** button so **Store Program** appears in the display.
3. Press the **Down Cursor** button to select the **Name** field. The first letter of the name will blink.
4. Turn the **Value Dial** to change the blinking character, and use the **Left Cursor** and **Right Cursor** buttons to move between the characters.
5. To save the Preset name when you are finished, press the **Value Dial**.
To cancel the operation, press **Preset**.

To restore the factory default Presets:

1. Press **Preset** to enter Preset Mode.
2. Press the **Left Cursor** button so **Factory Settings** appears in the display.
3. Turn the **Value Dial** and select **Presets**.
4. To restore MPK249's factory default Presets (which overwrites those you have saved), press the **Value Dial**.
To cancel the operation, press **Preset**.

Edit Mode

EDIT



In Edit Mode, you can edit the settings of the currently selected Preset. The settings vary depending on the controller you are editing and are listed in the **Appendix: Mode Parameters** section. Please note that the changes you make will only apply to the currently selected Preset.

To navigate Edit Mode:

1. Press **Edit** to enter Edit Mode.
2. Select a control to edit (fader, pad, button, etc.) by moving or pressing it. The selected control and its editable parameters will appear in the display.
3. **In each page of Edit Mode:**
 - Use the **Up Cursor** and **Down Cursor** buttons to move through the parameters on the current page.
 - If there are multiple pages (indicated by **Pg1**, **Pg2**, etc.), use the **Left Cursor** and **Right Cursor** buttons to move between different pages.
 - Turn the **Value Dial** to change the currently selected value/setting.
4. To edit more controls, repeat Steps 2–3.

To return to a normal performance mode, press **Preset**.

Important: Save the Preset to retain your edits. Without saving, these changes will be lost if you load a new Preset. See the **Preset Mode** section to learn how save your Preset.

Each section of this chapter is dedicated to a specific control and lists its editable parameters.

For an overview of the available controls and parameters, see the **Appendix: Mode Parameters** section.

Keyboard

Important: Global Mode contains other parameters that affect the keyboard but are saved only with global settings and not with the current Preset. See the ***Global Mode: Keyboard*** section for more information.

MIDI Channel: This setting determines over which MIDI channel the messages are sent. The available settings are **Common**, **USB A1–A16**, and **USB B1–B16**.

Octave: The keyboard's octave setting. The available range is **-3** to **+3**, with **0** as the center octave.

Transpose: The keyboard's transposition (in half-steps). The available range is **-36** to **+36**, with **0** as the center position (no transposition).

MIDI to DIN: This determines whether or not MIDI data is sent to the MIDI Out (**On**) or not (**Off**). MIDI data will be sent to MPK249's USB connection regardless of this setting.

Aftertouch (Aft): This determines whether or not the keyboard sends Aftertouch messages (**On**) or not (**Off**).

Important: Aftertouch refers to MIDI information sent when pressure is applied to a key after it has been played and while it is being held down. Aftertouch is often used to control volume, vibrato and other parameters.

Pads

Important: Global Mode contains other parameters that affect the pads but are saved only with the global settings, not with the Preset. See the **Global Mode: Pads** section for more information.

Type: The type of message that will be sent. The available settings are **Note**, **Program Change**, and **Program Bank**.

Tip: For more information about Program Change and Program Bank messages, please see the **Program Change Mode** chapter of this guide.

MIDI Channel: This setting determines over which MIDI channel the messages are sent. The available settings are **Common**, **USB A1–A16**, and **USB B1–B16**.

Note: If **Note** is the selected **Type**, this assigns the note number the pad will send when played.

Aftertouch (Aft): This determines the pad's Aftertouch settings. The available options are **Off**, Channel Aftertouch (**Ch**), and Poly Aftertouch (**Poly**).

Important: Aftertouch refers to MIDI information sent when pressure is applied to a pad after it has been played and while it is being held down. Aftertouch is often used to control volume, vibrato and other parameters. When set to **Poly**, the pad will transmit Aftertouch information independently from the other pads. When set to **Ch**, all pads assigned to a particular MIDI Channel will transmit Aftertouch information as a group (applying pressure to any pad assigned to the same MIDI channel will send Aftertouch information).

Program Number (Pgm): If **Program Change** or **Program Bank** is the selected **Type**, this determines the Program number. The available range is **000–127**.

Tip: For more information about Program Change and Program Bank messages, please see the **Program Change Mode** chapter of this guide.

MSB / LSB: If **Program Change** or **Program Bank** is the selected **Type**, these determine the MSB (Most Significant Bit) and LSB (Least Significant Bit). The available range is **000–127**.

Tip: For more information about Program Change and Program Bank messages, please see the ***Program Change Mode*** chapter of this guide.

MIDI to DIN: This determines whether or not MIDI data is sent to the MIDI Out (**On**) or not (**Off**). MIDI data will be sent to MPK249's USB connection regardless of this setting.

On Color / Off Color: These determine what colors the pad will be when it is pressed (On) and not pressed (Off). The available settings are **Off, Red, Orange, Amber, Yellow, Green, Green Blue, Aqua, Light Blue, Blue, Purple, Pink, Hot Pink, Light Purple, Light Green, Light Pink, Grey**.

Note Mode: If **Note** is the selected **Type**, this determines whether it is in **Momentary** Mode (sends a Note On message only while pressed and held, sends a Note Off message when released) or **Toggle** Mode (sends a continuous Note On message when pressed once, sends the Note Off message when pressed once again).

Assignable Knobs

Type: The type of message that will be sent. The available settings are **MIDI CC**, Aftertouch (**Aft**), Increment/Decrement 1 (**Inc/Dec1**), and Increment/Decrement 2 (**Inc/Dec2**).

MIDI Channel: This setting determines over which MIDI channel the messages are sent. The available settings are **Common**, **USB A1–A16**, and **USB B1–B16**.

CC Number: If **MIDI CC** or **Inc/Dec2** is the selected **Type**, this determines the MIDI CC number. The available range is **000–127**.

MIDI to DIN: This determines whether or not MIDI data is sent to the MIDI Out (**On**) or not (**Off**). MIDI data will be sent to MPK249's USB connection regardless of this setting.

Min / Max: If **MIDI CC** or **Aft** is the selected **Type**, these determine the lowest (**Min**) and highest (**Max**) values. (If **Min** is higher than **Max**, the knob's polarity will be reversed.) The available range is **000–127**.

MSB / LSB: If **Inc/Dec1** is the selected **Type**, these determine the MSB (Most Significant Bit) and LSB (Least Significant Bit). The available range is **000–127**.

Tip: For more information about Program Change and Program Bank messages, please see the **Program Change Mode** chapter of this guide.

Value: If **Inc/Dec1** is the selected **Type**, this determines the value sent by an Increment (CC #96) or Decrement (CC #97) message. The available range is **000–127**.

Assignable Faders

Type: The type of message that will be sent. The available settings are **MIDI CC** and **Aftertouch (Aft)**.

Important: Aftertouch refers to MIDI information sent when pressure is applied to a key or pad after it has been played and while it is being held down. Aftertouch is often used to control volume, vibrato and other parameters.

MIDI Channel: This setting determines over which MIDI channel the messages are sent. The available settings are **Common**, **USB A1–A16**, and **USB B1–B16**.

CC Number: If **MIDI CC** is the selected **Type**, this determines the MIDI CC number. The available range is **000–127**.

MIDI to DIN: This determines whether or not MIDI data is sent to the MIDI Out (**On**) or not (**Off**). MIDI data will be sent to MPK249's USB connection regardless of this setting.

Min / Max: These determine the lowest (**Min**) and highest (**Max**) values. (If **Min** is higher than **Max**, the fader's polarity will be reversed.) The available range is **000–127**.

Assignable Switches and DAW Control

Type: The type of message that will be sent. The available settings are **CC**, **Note**, Program Change (**PrgChange**), Program Bank (**PrgBank**), and **Keystroke**.

MIDI Channel: This setting determines over which MIDI channel the messages are sent. The available settings are **Common**, **USB A1–A16**, and **USB B1–B16**.

CC Number: If **CC** is the selected **Type**, this determines the MIDI CC number. The available range is **000–127**.

MIDI to DIN: This determines whether or not MIDI data is sent to the MIDI Out (**On**) or not (**Off**). MIDI data will be sent to MPK249's USB connection regardless of this setting.

Mode: If **CC** or **Note** is the selected **Type**, this determines whether it is in **Momentary** Mode (sends a CC or Note On message only while pressed and held, stops sending the CC message or sends a Note Off message when released) or **Toggle** Mode (sends a CC or continuous Note On message when pressed once, stops sending the CC message or sends the Note Off message when pressed once again).

Invert: If **CC** is the selected **Type**, the Assignable Switches send **000** as the "off" value and **127** as the "on" value. This determines whether the values sent are normal (**Off**), as described above, or switched/inverted (**On**).

Note: If **Note** is the selected **Type**, this assigns the note number that will be sent when the switch is pressed.

Velocity: If **Note** is the selected **Type**, this assigns the velocity. The available range is **000–127**.

Program Number (Pgm): If **PrgChange** or **PrgBank** is the selected **Type**, this determines the Program number. The available range is **000–127**.

Tip: For more information about Program Change and Program Bank messages, please see the **Program Change Mode** chapter of this guide.

MSB / LSB: If **PrgChange** or **PrgBank** is the selected **Type**, these determine the MSB (Most Significant Bit) and LSB (Least Significant Bit). The available range is **000–127**.

Tip: For more information about Program Change and Program Bank messages, please see the **Program Change Mode** chapter of this guide.

MIDI to DIN: This determines whether or not MIDI data is sent to the MIDI Out (**On**) or not (**Off**). MIDI data will be sent to MPK249's USB connection regardless of this setting.

Key 1: If **Keystroke** is the selected **Type**, this determines what keystroke the Assignable Switch sends. The available keystrokes are **0–9**, **A–Z**, **F1–F12**, **Backspace**, **Return**, **Up Arrow**, **Down Arrow**, **Left Arrow**, **Right Arrow**, **Tab**, various symbols (, . / [] \ ' ;), **Esc**, **Insert**, **Home**, **Page Up**, **Delete**, **End**, **Page Down**, and **Num 0–9**.

Tip: The HID (Human Interface Device) protocol lets devices send typical computer keyboard keystrokes. USB game controllers are an example of this, acting as an alternative to your computer's keyboard. MPK249 also uses the HID protocol, letting you configure certain buttons to send your most-often used keystrokes to your software, so you no longer need to switch focus constantly between the computer's keyboard and your MPK249.

Key 2: If **Keystroke** is the selected **Type**, this determines what modifier keystroke (e.g., Shift, Command, etc.), if any, the Assignable Switch sends with the **Key 1** keystroke. The available modifier keystrokes are **None**, **Control**, **Shift**, **Alt**, **Option**, **Control-Shift**, **Control-Alt**, **Control-Option**, **Shift-Alt**, **Shift-Option**, **Alt-Option**, **Control-Option-Alt**, **Control-Shift-Alt**, and **Control-Shift-Option**.

Tip: The HID (Human Interface Device) protocol lets devices send typical computer keyboard keystrokes. USB game controllers are an example of this, acting as an alternative to your computer's keyboard. MPK249 also uses the HID protocol, letting you configure certain buttons to send your most-often used keystrokes to your software, so you no longer need to switch focus constantly between the computer's keyboard and your MPK249.

Tap Tempo

Important: Global Mode contains other parameters that affect the tempo but are saved only with the global settings, not with the Preset. See the **Global Mode: Tempo** section for more information.

BPM: The tempo as indicated in beats per minute. The available range is **30–300 BPM**.

Tip: You can also enter a new BPM setting by tapping the **Tap Tempo** button in time with the desired tempo several times.

Time Division: The division of the master tempo or external clock. The available options are **1/4**, **1/4T**, **1/8**, **1/8T**, **1/16**, **1/16T**, **1/32**, and **1/32T**. (**T** denotes a triplet-based Time Division.)

Tip: You can also adjust this setting in the **Note Repeat** button parameters. See **Edit Mode: Note Repeat** section.

Gate: The length of the repeated notes. The available range is **00%–99%** of the current **Time Division** setting.

Swing: The amount of swing used in the repeated notes. The available range is **50%–75%**.

Transport Controls

Type: The type of message that will be sent. The available settings are **MMC**, **MMC/MIDI Clock**, **MIDI Real Time**, **MIDI CC**, and Pro Tools Express (**PTEX**).

MIDI to DIN: Determines whether or not MIDI data is sent to the MIDI Out (**On**) or not (**Off**). MIDI data will be sent to MPK249's USB connection regardless of this setting.

Note Repeat

Time Division: The speed of the repetition as a division of the master tempo or external clock. The available options are **1/4**, **1/4T**, **1/8**, **1/8T**, **1/16**, **1/16T**, **1/32**, and **1/32T**. (**T** denotes a triplet-based Time Division.)

Tip: You can also adjust this setting in the **Tap Tempo** button parameters. See **Edit Mode: Tap Tempo** section.

Mode: This determines whether it is in **Momentary** Mode (activates Note Repeat only while pressed and held, deactivates it when released) or **Toggle** Mode (activates Note Repeat when pressed once, deactivates Note Repeat when pressed once again).

Gate: The length of the repeated notes. The available range is **00%–99%** of the current **Time Division** setting. (See **Edit Mode: Tap Tempo** for more information.)

Swing: The amount of swing used in the repeated notes. The available range is **50%–75%**.

Arpeggiator

Type: The type of arpeggiation that will be used. The available settings are:

- **Double:** Each note will sound twice. This setting can be selected in conjunction with any of the settings described below, except **Chord**.
- **Up:** Notes will sound from the lowest to the highest.
- **Down:** Notes will sound from the highest to lowest.
- **Inclusive (Incl):** Notes will sound from the lowest to the highest, then back down. The lowest and highest notes will sound twice at the direction change.
- **Exclusive (Excl):** Notes will sound from the lowest to the highest, then back down. The lowest and highest notes will sound only once at the direction change.
- **Random (Rand):** Notes will sound in random order.
- **Chord:** All notes of the chord will sound together repeatedly.

Range: The octave range of the Arpeggiator. The available range is **0** to **+3** octaves.

Gate: The length of the arpeggiated notes. The available range is **00%–99%** of the current **Time Division** setting. (See ***Edit Mode: Tap Tempo*** for more information.)

Swing: The amount of swing used in the arpeggiated notes. The available range is **50%–75%**.

Pattern: Determines whether the Arpeggiator will use the pattern shown in the Pattern Indicator (**On**) or not use it (**Off**). See the ***Pattern Steps*** description below.

Length: The number of steps in the Arpeggiator pattern. The available range is **0–16** steps.

Pattern Steps: The pattern at the bottom of the display on this page represents the rhythm in which the notes will sound when the Arpeggiator is engaged (and when Pattern is set to **On**). A star (*) indicates a sounding note, while an underscore (_) indicates a rest (no note will sound). Use the **Value Dial** to move the cursor through the notes, and push the **Value Dial** to change its state (between * and _).

Pitch-Bend Wheel

MIDI Channel: This setting determines over which MIDI channel the messages are sent. The available settings are **Common**, **USB A1–A16**, and **USB B1–B16**.

MIDI to DIN: This determines whether or not MIDI data is sent to the MIDI Out (**On**) or not (**Off**). MIDI data will be sent to MPK249's USB connection regardless of this setting.

Modulation Wheel

MIDI Channel: This setting determines over which MIDI channel the messages are sent. The available settings are **Common**, **USB A1–A16**, and **USB B1–B16**.

MIDI CC: This determines the MIDI CC number. The available range is **000–127**.

Min / Max: These determine the lowest (**Min**) and highest (**Max**) values. (If **Min** is higher than **Max**, the wheel's polarity will be reversed.) The available range is **000–127**.

MIDI to DIN: This determines whether or not MIDI data is sent to the MIDI Out (**On**) or not (**Off**). MIDI data will be sent to MPK249's USB connection regardless of this setting.

Footswitch Input

Type: The type of message that will be sent. The available settings are **MIDI CC**, **Tap Tempo**, **Play**, **Record**, **Stop**, **Play/Stop**, **Arp/Seq**, and **Sustain**.

MIDI Channel: This setting determines over which MIDI channel the messages are sent. The available settings are **Common**, **USB A1–A16**, and **USB B1–B16**.

MIDI CC: If **MIDI CC** is the selected **Type**, this determines the MIDI CC number. The available range is **000–127**.

MIDI to DIN: This determines whether or not MIDI data is sent to the MIDI Out (**On**) or not (**Off**). MIDI data will be sent to MPK249's USB connection regardless of this setting.

Mode: This determines whether it is in **Momentary** Mode (sends its message only while pressed and held, stops sending its message when released) or **Toggle** Mode (sends its message continuously when pressed once, stops sending its message when pressed once again).

Expression Pedal Input

MIDI Channel: This setting determines over which MIDI channel the messages are sent. The available settings are **Common**, **USB A1–A16**, and **USB B1–B16**.

MIDI CC: This determines the MIDI CC number. The available range is **000–127**.

Min / Max: These determine the lowest (**Min**) and highest (**Max**) values. (If **Min** is higher than **Max**, the fader's polarity will be reversed.) The available range is **000–127**.

MIDI to DIN: This determines whether or not MIDI data is sent to the MIDI Out (**On**) or not (**Off**). MIDI data will be sent to MPK249's USB connection regardless of this setting.

Global Mode

GLOBAL



Global Mode lets you set parameters and make changes to MPK249's general ("global") functioning. These settings are not specific to a Preset; they affect all Presets.

To navigate Global Mode:

1. Press **Global** to enter Global Mode.
2. **In each page of Global Mode:**
 - Use the **Up Cursor** and **Down Cursor** buttons to move through the parameters on the current page.
 - Use the **Left Cursor** and **Right Cursor** buttons to move between different pages.
 - Turn the **Value Dial** to change the currently selected value/setting.
3. To save the new Global Mode settings, use the **Left Cursor** and **Right Cursor** buttons to select the **Save Globals** page, and press the Value Dial to confirm the operation.
To cancel the operation instead, use the **Left Cursor** or **Right Cursor** buttons to select another page, or press **Global**.

To restore the factory default Global Mode settings:

1. Press **Preset** to enter Preset Mode.
2. Press the **Left Cursor** button so **Factory Settings** appears in the display.
3. Turn the **Value Dial** and select **Globals**.
4. To restore MPK249's factory default Global Mode settings (which overwrites those you have saved), press the **Value Dial**.
To cancel the operation, press **Preset**.

Each section of this chapter is dedicated to a specific Global Mode setting and lists its editable parameters.

For an overview of the available settings and parameters, see the **Appendix: Mode Parameters** section.

MIDI Channels

Common Channel (Common Chnl): This setting determines which MIDI channel is the common channel (various controls can be assigned to the common channel in Edit Mode). The available settings are **USB A1–A16**, and **USB B1–B16**.

Note Display

Type: Determines whether the display will show a note by its pitch **Value** (e.g., C2, F#3, etc.) or by its MIDI note **Number** (e.g., 36, 54, etc.).

Keyboard

Important: Edit Mode contains other parameters that affect the keyboard but are saved only with the Preset, not with the global settings. See the **Edit Mode: Keyboard** section for more information.

Curve: The keyboard's velocity curve. The available range is **-50** to **+50**. At a low value, the curve is flatter at low velocities, becoming much steeper at high velocities. At a high value, the curve is steeper at low velocities, becoming flatter at high velocities. At the maximum setting of **+50**, it takes very little force to generate a velocity value of 127.

Gain: An offset to keyboard's overall velocity sensitivity. The available range is **-20** to **+20**. At a low value, more force is required to generate a note. At a high value, less force is required to generate a note.

Black / White: An offset to the black keys' or white keys' overall velocity sensitivity. The available range is **-20** to **+20**. At a low value, more force is required to generate a note. At a high value, less force is required to generate a note.

Tip: These parameters are useful if you play the black keys and white keys differently (e.g., due to the higher position of the black keys, your preferred hand positioning, etc.).

Pads

Important: Edit Mode contains other parameters that affect the pads but are saved only with the Preset, not with the global settings. See the **Edit Mode: Pads** section for more information.

Pad Threshold: The velocity threshold to trigger the pads. The available range is **0–15**. This can help prevent false triggering or make it easier to trigger the pads.

Velocity Curve: The pads' velocity curve. The available settings are **Linear**, **Exp1**, **Exp2**, **Log1**, and **Log2**.

Velocity Sensitivity (VelocitySense): The pads' overall velocity sensitivity. The available range is **01–10**. At a low value, it would take a lot of force to generate a velocity value of 127. At a high value, the opposite is true.

Tempo

Important: Edit Mode contains other parameters that affect the tempo but are saved only with the Preset, not with the global settings. See the **Edit Mode: Tap Tempo** section for more information.

Tempo: The global tempo as indicated in beats per minute. When MPK249 is using its internal MIDI clock, this global tempo setting determines the speed of the Arpeggiator, Sequencer, and Note Repeat rate. The available range is **30–300 BPM**.

Tap Average: The number of times you would need to press the **Tap Tempo** button to enter a new tempo. The available range is **2–4**.

Tempo LED: When MPK249 is using its internal MIDI clock, the **Tap Tempo** button LED will flash in time with the current tempo setting. You can set this feature **On** or **Off**.

Clock

Source: Determines whether MPK249 uses its **Internal** MIDI clock or refers to an **External** clock (e.g., from a DAW).

SysEx

Send Program: The Program to be sent via SysEx. The available options are the individual Program numbers (**01–30**) or **All** Programs. Press the **Value Dial** to send the Program.
Prog: ___ **Sent** will appear to confirm the Program was sent successfully.

Utilities

Contrast: The display's contrast. The available range is **0** to **99**.

Save Globals

On this page, press the **Value Dial** to save your global settings. After **Stored** flashes three times on the display, the global settings are stored in MPK249's internal memory.

OS

This page displays MPK249's current operating system information.

Program Change Mode

PROGRAM CHANGE



A *Program Change*, often referred to as a *Patch Change*, is a MIDI message from one device to another that causes the latter to switch to a new program. Using Program Change messages, MPK249 can tell another hardware or software device which sound to play. For example, if your MPK249 is controlling a piano patch in your software or an external MIDI device, sending a Program Change message from MPK249 causes it to switch to a synth patch.

MPK249 lets you send two types of Program Change messages:

- **Program Change:** This is a standard Program Change message (0–127) sent to your software or external device, letting you switch between 128 different program banks.
- **Program Change with Bank Change:** This is a standard Program Change message (0–127) *plus* a Bank Select **LSB** (Least Significant Bit) (0–127) and a Bank Select **MSB** (Most Significant Bit) message (0–127). This gives you access to up to 16384 different program banks. Your software or external device must support LSB and MSB messages to use this feature.

To navigate Program Change Mode:

1. Press **Program Change** to enter Program Change Mode.
2. **In each page of Program Change Mode:**
 - Use the **Up Cursor** and **Down Cursor** buttons to move through the parameters on the current page.
 - Use the **Left Cursor** and **Right Cursor** buttons to move between different pages.
 - Turn the **Value Dial** to change the currently selected value/setting.

Important: These changes cannot be saved to your Presets or global settings. Once you power off the MPK249 they will return to the default settings.

Each section of this chapter is dedicated to a specific Program Change and lists its editable parameters.

For an overview of the available settings and parameters, see the **Appendix: Mode Parameters** section.

Program Change

MIDI Channel: This setting determines over which MIDI channel the messages are sent. The available settings are **Common**, **USB A1–A16**, and **USB B1–B16**.

Program Number: This determines the Program number that will be sent. The available range is **000–127**. Please refer to your external MIDI device's documentation for information on its available programs.

MIDI to DIN: Determines whether or not MIDI data is sent to the MIDI Out (**On**) or not (**Off**). MIDI data will be sent to MPK249's USB connection regardless of this setting. Since an external device will usually be connected to MPK249's MIDI Out, we recommend leaving this set to **On**.

Program Change with Bank Change

MIDI Channel: This setting determines over which MIDI channel the messages are sent. The available settings are **Common**, **USB A1–A16**, and **USB B1–B16**.

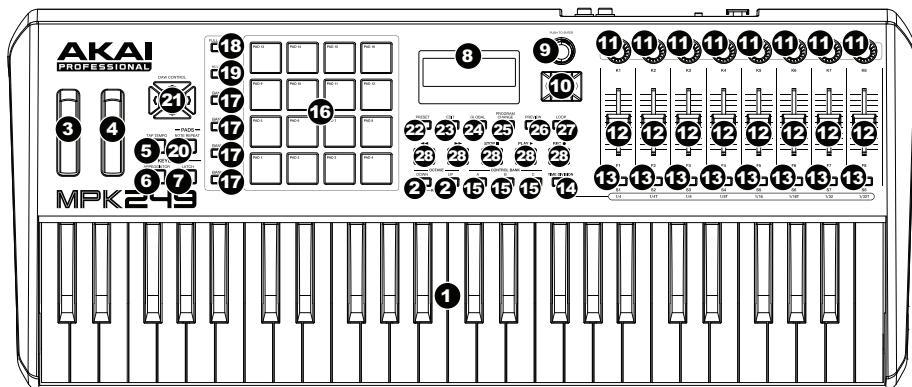
Program Number: This determines the Program number that will be sent. The available range is **000–127**. Please refer to your external MIDI device's documentation for information on its available programs.

MSB / LSB: These determine the MSB (Most Significant Bit) and LSB (Least Significant Bit). The available range is **000–127**.

MIDI to DIN: Determines whether or not MIDI data is sent to the MIDI Out (**On**) or not (**Off**). MIDI data will be sent to MPK249's USB connection regardless of this setting. Since an external device will usually be connected to MPK249's MIDI Out, we recommend leaving this set to **On**.

Features

Top Panel



1. **Keyboard:** This 49-note keyboard is velocity-sensitive and, in conjunction with the **Octave Up/Down** buttons, can control a ten-octave range.
2. **Octave +/- :** Use these buttons to shift the keyboard's range up or down. The display will indicate the current octave. Press both buttons simultaneously to reset the octave shift to "zero."
3. **Pitch-Bend Wheel:** Moving this wheel sends MIDI Pitch Bend information on a selected MIDI channel and port.
4. **Modulation Wheel:** Moving this wheel sends continuous controller data—MIDI CC #01 (modulation), by default.
5. **Tap Tempo:** Tap this button at the desired rate to enter a new tempo.

Note: If you reload the current Preset, the tempo will revert to that Preset's tempo, which you set in Edit Mode.

Important: This feature does not work when the MPK249 is set to **External** sync.

6. **Arp On/Off:** Press this button to enable or disable the internal Arpeggiator whose rate is based on the current Tempo and Time Division settings. The Arpeggiator will function on notes being played on the keyboard only.
Note: You can also sync the Arpeggiator to an internal or external MIDI Clock source.
7. **Latch:** Press this button to activate or deactivate the Arpeggiator's Latch feature. When the Arpeggiator is on and Latch is enabled, you can press a combination of keys on the keyboard and the Arpeggiator continue to arpeggiate these notes even after you release the keys. Pressing a new combination of keys will start a new arpeggiation.
Tip: While holding down a combination of keys on the keyboard, add more notes to that arpeggiated chord by pressing additional keys.
8. **Display:** Use this LCD screen to view MPK249's menus, options, parameters, and settings.
9. **Value Dial (Push to Enter):** Use this dial to change the Preset, parameter values, settings, etc. Pressing the dial also functions as an **Enter** button.
10. **Cursor Buttons:** Use these buttons to navigate through the menus and options in the display. Use the **Up Cursor** and **Down Cursor** to move through the parameters currently shown in the display. (On some pages, the display's last row contains multiple parameters. Use the **Up Cursor** and **Down Cursor** to move between these, as well.) Use the **Left Cursor** and **Right Cursor** to move to the previous or next page.
11. **Assignable Knobs:** Use these 360° knobs to send continuous controller messages to your software or external MIDI device.
12. **Assignable Faders:** Use these faders to send continuous controller messages to your software or external MIDI device.
13. **Assignable Switches:** Use these switches to send MIDI CC messages or Program Change messages to your software or external MIDI device. They can function as momentary or toggle (latching) switches. If **Time Division** is activated, these switches select the time division of the Arpeggiator and Note Repeat features.

14. **Time Division:** Press this button and then press one of the **Assignable Switches** to select the current Time Division, which determines the rate of the Note Repeat and Arpeggiator features. This button can function as a momentary or toggle (latching) button.

Important: While **Time Division** is active, the **Assignable Switches** will not send any of their normal MIDI CC or Program Change messages until Time Division has been deactivated.

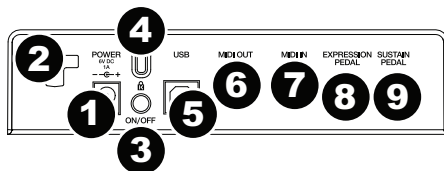
15. **Control Bank Buttons:** Use these buttons to select one of three independent banks of continuous controllers. This lets you control up to 72 independent parameters with the knobs, faders, and switches.
16. **Pads:** Use these pads to trigger drum hits or other samples in your software or external MIDI sound module. The pads are pressure- and velocity-sensitive, which makes them very responsive and intuitive to play.
17. **Pad Bank:** Use these buttons to select one of four independent banks of pads. Each pad bank can contain a unique set of samples, giving you access of up to 48 different sounds.
18. **Full Level:** Press this button to activate Full Level Mode in which the pads always play at a maximum velocity (127), no matter how hard or soft you hit them.
19. **16 Level:** Press this button to activate 16 Level Mode in which the last-triggered pad is mapped to all 16 pads. All 16 pads will now output the same note number and pressure controller as the last-triggered pad, but the velocity for each pad is fixed, regardless of how hard you hit them—Pad 1 plays at the lowest velocity while Pad 16 plays at the maximum velocity (127).
20. **Note Repeat:** Press and hold this button while striking a pad to cause the pad to retrigger at a rate based on the current Tempo and Time Division settings. This button can function as a momentary or toggle (latching) button.

Note: You can also sync Note Repeat to an internal or external MIDI Clock source.

21. **DAW Control:** You can configure these buttons to send HID (Human Interface Device) messages to your DAW (digital audio workstation—your music software). To learn how to do this, please see the **Edit Mode: Assignable Switches and DAW Control** section.
Tip: You can save time by configuring these controls to send your most-often-used commands to your software (e.g., copy, paste, save, zoom, etc.).
22. **Preset:** Press this button to enter Preset Mode where you can select and load different Presets (or Programs).
23. **Edit:** Press this button to enter Edit Mode where you can edit the functions of the keyboard, pads, knobs, buttons, and faders as well as each Preset's default settings.
24. **Global:** Press this button to enter Global Mode where you can set your global (system-wide) preferences and execute MIDI reset commands.
25. **Program Change:** Press this button to enter Program Change Mode where you can send a Program Change or Program With Bank Change message to a hardware or software module.
26. **Preview:** Press and hold this button, and then press or move another control on the keyboard to see the value that control will send *without* actually sending the value. This helps you avoid sending erroneous controller messages due to the physical position of the controller. (This is useful when switching between control banks where, for example, the physical position of a fader may not correspond to the last value sent by the controller.)
27. **Loop:** Press and hold this button to activate the Loop or Repeat feature in your software. This button is considered a transport control, so it can be set to send the same messages as the other transport control buttons: MMC (MIDI Machine Control), MMC/MIDI SysEx, MIDI Start/Stop, or pre-assigned MIDI CC values.
Important: Your software must be able to loop or repeat in order to use this feature. Also, make sure that you are using the MPK249 Preset named after your particular software. If your software does not have a corresponding MPK249 Preset, configure the **Loop** button in Edit Mode so it communicates properly with your software.
28. **Transport Control Buttons:** These five buttons are dedicated buttons for sending conventional transport control commands: **Rewind**, **Fast-Forward**, **Stop**, **Play**, and **Record**. These can be set to send MMC (MIDI Machine Control), MMC/MIDI SysEx, MIDI Start/Stop, or pre-assigned MIDI CC values.

Rear Panel

1. **Power Input:** If you do not want to use a computer in your setup (i.e., if you are using MPK249 to control an external MIDI module), connect MPK249's power input to a power outlet using an optional power adapter (6V DC, 1A, center-positive, sold separately). Alternatively, you can connect MPK249's **USB Port** to a power outlet using a standard USB charger (sold separately).



2. **Power Adapter Restraint:** You can secure a power adapter cord to this restraint to help avoid disconnecting it accidentally.
3. **Power Switch:** Press this button to power the MPK249 on or off.
4. **Kensington Lock:** You may use this Kensington lock slot to secure the MPK249 to a table or other surface.
5. **USB Port:** Use a standard USB cable to connect this USB port to your computer. The computer's USB port provides ample power to MPK249. You can also power MPK249 by connecting this USB port to a power outlet using a standard USB charger (sold separately). This connection is also used to send and receive MIDI data to and from your computer.

This connection is also relevant to MPK249's **MIDI Out** and **MIDI In**:

- If an external device is connected to the **MIDI Out**, your computer can send MIDI messages out along this path: **Computer ➡ MPK249 ➡ External Device**.
 - If an external device is connected to the **MIDI In**, the external device sends MIDI messages in along this path: **External Device ➡ MPK249 ➡ Computer**. MIDI messages can then be sent to an external device via the MIDI Out, but it must pass through the computer first.
6. **MIDI Out:** Use a standard five-pin MIDI cable to connect this MIDI Out to the MIDI In of an external MIDI device (e.g., a synthesizer, sequencer, drum machine, etc.).

7. **MIDI In:** Use a standard five-pin MIDI cable to connect this MIDI In to the MIDI Out of an external MIDI device (e.g., another MIDI controller). The MIDI messages sent to this MIDI In will be sent to your computer via the USB port.
8. **Expression Pedal Input:** Connect an optional 1/4" TRS expression pedal to this input.
9. **Sustain Pedal Input:** Connect an optional 1/4" TS sustain pedal or footswitch to this input. (You can configure the connected pedal to control the keyboard's sustain, to send a MIDI CC message, or other messages.)

Appendix

Mode Parameters

Edit Mode

To edit a control's parameters, press **Edit** then move or press that control.

Control	Parameter	Settings
Keyboard	MIDI Channel	Common, USB A1–A16, USB B1–B16
	Octave	-3 to +3
	Transpose	-36 to +36
	MIDI to DIN	On, Off
	Aftertouch	On, Off
Assignable Pads	Type	Note
	MIDI Channel	Common, USB A1–A16, USB B1–B16
	Note	C-1 to G9
	Aftertouch (Aft)	Off, Channel Aftertouch (Ch), Poly Aftertouch (Poly)
	MIDI to DIN	On, Off
	On Color	Off, Red, Orange, Amber, Yellow, Green, Green Blue, Aqua, Light Blue, Blue, Purple, Pink, Hot Pink, Light Purple, Light Green, Light Pink, Grey
	Off Color	Off, Red, Orange, Amber, Yellow, Green, Green Blue, Aqua, Light Blue, Blue, Purple, Pink, Hot Pink, Light Purple, Light Green, Light Pink, Grey
	Note Mode	Momentary, Toggle

Control	Parameter	Settings
Assignable Pads <i>(continued)</i>	Type MIDI Channel Program Number MIDI to DIN On Color Off Color	Program Change Common, USB A1–A16, USB B1–B16 000–127 On, Off Off, Red, Orange, Amber, Yellow, Green, Green Blue, Aqua, Light Blue, Blue, Purple, Pink, Hot Pink, Light Purple, Light Green, Light Pink, Grey Off, Red, Orange, Amber, Yellow, Green, Green Blue, Aqua, Light Blue, Blue, Purple, Pink, Hot Pink, Light Purple, Light Green, Light Pink, Grey
	Type MIDI Channel Program (Pgm) MSB LSB MIDI to DIN On Color Off Color	Program Bank Common, USB A1–A16, USB B1–B16 000–127 000–127 000–127 On, Off Off, Red, Orange, Amber, Yellow, Green, Green Blue, Aqua, Light Blue, Blue, Purple, Pink, Hot Pink, Light Purple, Light Green, Light Pink, Grey Off, Red, Orange, Amber, Yellow, Green, Green Blue, Aqua, Light Blue, Blue, Purple, Pink, Hot Pink, Light Purple, Light Green, Light Pink, Grey
Assignable Faders	Type MIDI Channel CC Number MIDI to DIN Min Max	MIDI CC Common, USB A1–A16, USB B1–B16 000–127 On, Off 000–127 000–127
	Type MIDI Channel Min Max MIDI to DIN	Aftertouch (Aft) Common, USB A1–A16, USB B1–B16 000–127 000–127 On, Off

Control	Parameter	Settings
Assignable Knobs	Type	MIDI CC
	MIDI Channel	Common, USB A1–A16, USB B1–B16
	CC Number	000–127
	MIDI to DIN	On, Off
	Min	000–127
	Max	000–127
	Type	Aftertouch
	MIDI Channel	Common, USB A1–A16, USB B1–B16
	Min	000–127
	Max	000–127
	MIDI to DIN	On, Off
	Type	Inc/Dec1
	MIDI Channel	Common, USB A1–A16, USB B1–B16
	MSB	000–127
	LSB	000–127
	MIDI to DIN	On, Off
	Value	000–127
	Type	Inc/Dec2
	MIDI Channel	Common, USB A1–A16, USB B1–B16
	CC Number	000–127
	MIDI to DIN	On, Off

Control	Parameter	Settings
Assignable Switches	Type	CC
	MIDI Channel	Common, USB A1–A16, USB B1–B16
	CC Number	000–127
	MIDI to DIN	On, Off
	Mode	Momentary, Toggle
	Invert	On, Off
	Type	Note
	MIDI Channel	Common, USB A1–A16, USB B1–B16
	Note	C-1 to G9
	Velocity (Velo)	000–127
	MIDI to DIN	On, Off
	Mode	Momentary, Toggle
	Type	Program Change (PrgChange)
	MIDI Channel	Common, USB A1–A16, USB B1–B16
	Program Number	000–127
	MIDI to DIN	On, Off
	Type	Program Bank (PrgBank)
	MIDI Channel	Common, USB A1–A16, USB B1–B16
	Program (Pgm)	000–127
	MSB	000–127
	LSB	000–127
	MIDI to DIN	On, Off
	Type	Keystroke
	Key 1	0–9, A–Z, F1–F12, Backspace, Return, Up Arrow, Down Arrow, Left Arrow, Right Arrow, Tab, various symbols (, . / [] \ ' ;) Esc, Insert, Home, Page Up, Delete, End, Page Down, Num 0–9
	Key 2	None, Control, Shift, Alt, Option, Control-Shift, Control-Alt, Control-Option, Shift-Alt, Shift-Option, Alt-Option, Control-Option-Alt, Control-Shift-Alt, Control-Shift-Option

Control	Parameter	Settings
Tempo	BPM	30–300
	Time Division	1/4, 1/4T, 1/8, 1/8T, 1/16, 1/16T, 1/32, 1/32T
	Gate	00–99%
	Swing	50–75%
Transport Controls	Type	MMC, MMC/MIDI Clock, MIDI Real Time, MIDI CC, Pro Tools Express
	MIDI to DIN	On, Off
Note Repeat	Rate	1/4, 1/4T, 1/8, 1/8T, 1/16, 1/16T, 1/32, 1/32T
	Mode	Momentary, Toggle
	Gate	00–99%
	Swing	50–75%
Arpeggiator	Type	Up, Up Double, Down, Down Double, Inclusive (Incl), Inclusive (Incl) Double, Exclusive (Excl), Exclusive (Excl) Double, Random (Rand), Random (Rand) Double, Chord
	Range	0 to +3
	Gate	00–99%
	Swing	50–75%
	Pattern	On, Off
	Length	01–16
	Pattern Steps	1–16 steps, On (*) and Off () state for each step
Pitch-Bend Wheel	MIDI Channel	Common, USB A1–A16, USB B1–B16
	MIDI to DIN	On, Off
Modulation Wheel	MIDI Channel	Common, USB A1–A16, USB B1–B16
	MIDI CC	000–127
	Min	000–127
	Max	000–127
	MIDI to DIN	On, Off

Control	Parameter	Settings
Footswitch 1	Type	MIDI CC
	MIDI Channel	Common, USB A1–A16, USB B1–B16
	MIDI CC	000–127
	MIDI to DIN1	On, Off
	Mode	Momentary, Toggle
	Type	Tap Tempo, Play, Rec, Stop, Play/Stop, Arp/Seq, Sustain
Expression Pedal	MIDI Channel	Common, USB A1–A16, USB B1–B16
	MIDI CC	000–127
	Max	000–127
	Min	000–127
	MIDI to DIN	On, Off

Global Mode

To edit these parameters, press **Global** and use the **Left Cursor** and **Right Cursor** buttons to move through the pages.

Page	Parameter	Settings
MIDI Channels	Common Channel (Common Chnl)	USB A1–A16, USB B1–B16
Note Display	Type	Value, Number
Keyboard	Curve	-50 to +50
	Gain	-20 to +20
	Black	-20 to +20
	White	-20 to +20
Pads	Pad Threshold	0–15
	Velocity Curve	Linear, Exp 1, Exp 2, Log1, Log2
	Velocity Sensitivity (VelocitySense)	01–10
Tempo	Tempo	30–300 BPM
	Tap Average	2–4
	Tempo LED	On, Off
Clock	Source	Internal, External
SysEx	Send Program	All, 1–30
Utilities	Contrast	00–99
Save Globals		Press Value Dial to save Global Settings.
OS		Current MPK249 operating systems versions.

Program Change Mode

To edit these parameters, press **Program Change** and use the **Value Dial** to switch between **Program Change** and **Program Bank**.

Control	Parameter	Settings
Program Change	Program Change	
	MIDI Channel	Common, USB A1–A16, USB B1–B16
	Program Number	000–127
	MIDI to DIN	On, Off
	Program Bank	
	MIDI Channel	Common, USB A1–A16, USB B1–B16
	Program Number	000–127
	MSB	000–127
	LSB	000–127
	MIDI to DIN	On, Off

Technical Specifications

Note Keys	49 keys; velocity-sensitive; 10 -octave range with octave up/down buttons or transposition
Pads	16 pads; velocity- and pressure-sensitive; 4 banks
Faders	8 faders; 3 banks
Knobs	8 360° encoders; 3 banks
Switches	8 switches; LED-backlit; 3 banks
Inputs / Outputs	1 USB port 1 1/4" (6.35mm) TRS expression pedal input 1 1/4" (6.35mm) TS sustain pedal or footswitch input 1 5-pin MIDI in 1 5-pin MIDI out
Power	via computer USB bus or USB charger (sold separately) via power adapter (sold separately): 6V DC, 1A, center-positive
Dimensions (width x depth x height)	29" x 12.25" x 3.38" 73.7 cm x 31.1 cm x 8.6 cm
Weight	12.6 lbs. 5.72 kg

Specifications are subject to change without notice.

Trademarks and Licenses

Akai Professional is a trademark of inMusic Brands, Inc., registered in the U.S. and other countries.

IOS is a registered trademark of Cisco in the U.S. and other countries and is used under license.

Kensington and the K & Lock logo are registered trademarks of ACCO Brands.

Mac and OS X are trademarks or service marks of Apple Inc., registered in the U.S. and other countries.

All other product or company names are trademarks or registered trademarks of their respective owners.



akaipro.com