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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)

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.

Items not listed under the Box Contents are sold separately.
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 Mode**
Presets let you to load, save, copy, and rename Presets—collections of information about how the faders, knobs, buttons, and pads will behave.

**Edit Mode**
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 Mode**
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 Mode**
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.
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 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 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 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.

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**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).

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**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.

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**Utilities**

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

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**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.

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**OS**

This page displays MPK249’s current operating system information.
Program Change Mode

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 16,384 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.

<table>
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<th>Parameter</th>
<th>Settings</th>
</tr>
</thead>
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<td>-3 to +3</td>
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<tr>
<td></td>
<td>Aftertouch</td>
<td>On, Off</td>
</tr>
<tr>
<td><strong>Assignable Pads</strong></td>
<td>Type</td>
<td>Note Common, USB A1–A16, USB B1–B16</td>
</tr>
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<td>MIDI Channel</td>
<td>C-1 to G9</td>
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<tr>
<td></td>
<td>Note</td>
<td>Off, Channel Aftertouch (Ch), Poly Aftertouch (Poly)</td>
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<tr>
<td></td>
<td>Aftertouch (Aft)</td>
<td>Off, Channel Aftertouch (Ch), Poly Aftertouch (Poly)</td>
</tr>
<tr>
<td></td>
<td>MIDI to DIN</td>
<td>On, Off</td>
</tr>
<tr>
<td></td>
<td>On Color</td>
<td>Off, Red, Orange, Amber, Yellow, Green, Green Blue, Aqua, Light Blue, Blue, Purple, Pink, Hot Pink, Light Purple, Light Green, Light Pink, Grey</td>
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<tr>
<td></td>
<td>Off Color</td>
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<tr>
<td></td>
<td>Note Mode</td>
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<td>Assignable</td>
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<td>Program Bank</td>
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<tr>
<td>Assignable</td>
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<tr>
<td>Assignable</td>
<td>LSB</td>
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<tr>
<td>Faders</td>
<td>MIDI to DIN</td>
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<td>Assignable</td>
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<td>MIDI Channel</td>
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<td>Assignable</td>
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<td>000–127</td>
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<td>Faders</td>
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<tr>
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<td>Assignable</td>
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<td>Control</td>
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<td><strong>Assignable Knobs</strong></td>
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<td>CC Number</td>
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<td>MIDI to DIN</td>
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<td>Min</td>
<td>000–127</td>
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<tr>
<td></td>
<td>Max</td>
<td>000–127</td>
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<td><strong>Aftertouch</strong></td>
<td>Common, USB A1–A16, USB B1–B16</td>
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<td>Min</td>
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<tr>
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<td>Max</td>
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<tr>
<td></td>
<td><strong>Inc/Dec1</strong></td>
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<tr>
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<tr>
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<td><strong>Inc/Dec2</strong></td>
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<tr>
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<td>Type</td>
<td>CC Common, USB A1–A16, USB B1–B16</td>
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<td>MIDI Channel</td>
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<td>CC Number</td>
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<td>Mode</td>
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<td>Invert</td>
<td>Common, USB A1–A16, USB B1–B16</td>
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<td>Velocity (Velo)</td>
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<tr>
<td></td>
<td>Key 2</td>
<td>On, Off</td>
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</table>

- **Type**: 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
- **Keystroke**: 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
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<td>30–300</td>
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<td>Time Division</td>
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<td></td>
<td>Gate</td>
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<tr>
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<td>Swing</td>
<td>50–75%</td>
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<tr>
<td><strong>Transport Controls</strong></td>
<td>Type</td>
<td>MMC, MMC/MIDI Clock, MIDI Real Time, MIDI CC, Pro Tools Express</td>
</tr>
<tr>
<td></td>
<td>MIDI to DIN</td>
<td>On, Off</td>
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<td>Rate</td>
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<tr>
<td></td>
<td>Mode</td>
<td>Momentary, Toggle</td>
</tr>
<tr>
<td></td>
<td>Gate</td>
<td>00–99%</td>
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<tr>
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<td>Swing</td>
<td>50–75%</td>
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<tr>
<td><strong>Arpeggiator</strong></td>
<td>Type</td>
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<td>Range</td>
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<td>Gate</td>
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<td>Swing</td>
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<tr>
<td></td>
<td>Pattern</td>
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<tr>
<td></td>
<td>Length</td>
<td>01–16</td>
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<td></td>
<td>Pattern Steps</td>
<td>1–16 steps, On (・) and Off (・) state for each step</td>
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<tr>
<td></td>
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<td></td>
<td>MIDI to DIN</td>
<td>On, Off</td>
</tr>
<tr>
<td>Control</td>
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<td>Footswitch 1</td>
<td>Type</td>
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<td>MIDI CC</td>
<td>000–127</td>
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<tr>
<td></td>
<td>MIDI to DIN</td>
<td>On, Off</td>
</tr>
<tr>
<td></td>
<td>Mode</td>
<td>Momentary, Toggle</td>
</tr>
<tr>
<td></td>
<td>Type</td>
<td>Tap Tempo, Play, Rec, Stop/Play/Stop, Arp/Seq, Sustain</td>
</tr>
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<td>MIDI Channel</td>
<td>Common, USB A1–A16, USB B1–B16</td>
</tr>
<tr>
<td></td>
<td>MIDI to DIN</td>
<td>On, Off</td>
</tr>
<tr>
<td></td>
<td>Mode</td>
<td>Momentary, Toggle</td>
</tr>
<tr>
<td>Expression Pedal</td>
<td>MIDI Channel</td>
<td>Common, USB A1–A16, USB B1–B16</td>
</tr>
<tr>
<td>Expression Pedal</td>
<td>MIDI CC</td>
<td>000–127</td>
</tr>
<tr>
<td>Expression Pedal</td>
<td>Max</td>
<td>000–127</td>
</tr>
<tr>
<td>Expression Pedal</td>
<td>Min</td>
<td>000–127</td>
</tr>
<tr>
<td>Expression Pedal</td>
<td>MIDI to DIN</td>
<td>On, Off</td>
</tr>
</tbody>
</table>
Global Mode

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

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

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

<table>
<thead>
<tr>
<th>Control</th>
<th>Parameter</th>
<th>Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Change</td>
<td>Program Change</td>
<td>Common, USB A1–A16, USB B1–B16</td>
</tr>
<tr>
<td></td>
<td>MIDI Channel</td>
<td>000–127</td>
</tr>
<tr>
<td></td>
<td>Program Number</td>
<td>000–127</td>
</tr>
<tr>
<td></td>
<td>MIDI to DIN</td>
<td>On, Off</td>
</tr>
<tr>
<td>Program Bank</td>
<td>MIDI Channel</td>
<td>Common, USB A1–A16, USB B1–B16</td>
</tr>
<tr>
<td></td>
<td>Program Number</td>
<td>000–127</td>
</tr>
<tr>
<td></td>
<td>MSB</td>
<td>000–127</td>
</tr>
<tr>
<td></td>
<td>LSB</td>
<td>000–127</td>
</tr>
<tr>
<td></td>
<td>MIDI to DIN</td>
<td>On, Off</td>
</tr>
</tbody>
</table>
### Technical Specifications

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

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