

MIDI Controller Pro Configuration Instructions



Midi Controller Pro is an ultra compact keyboard peripheral for musicians, DJs, sound engineers, and other music professionals, enabling real-time adjustments of the 127 standard, system-exclusive MIDI messages on a wide range of keyboards.

Midi Controller Pro is ideal for a variety of applications from music studio productions to live performances. From a simple three-button, three-character display interface via a MIDI OUT port you apply the Transpose (Note Shift) function in semitones up or down an octave, as well as store presets and exercise a variety of real-time recall modes to send these MIDI messages to the keyboard:

- Control Change (CC)
- Program Change (PC)
- Aftertouch (AT)
- Pitch Bend (PB)

With Midi Controller Pro, you can also advance to a programmed song, select System Common and System Real-Time Settings (Time Clock) and apply MTC or MIDI Transport Controls (Start, Continue, and Start) as defined by MIDI Standards. The Time Clock can be used to control the beats per minute (BPM). New “tap tempo” feature allows you to tap the buttons to change the tempo quickly and easily.

Supported keyboards include General MIDI 2 (Korg and other devices with the GM2 logo), Roland GS, Yamaha XG, Ketron, General Transpose “Coarse Tune,” General Transpose “Coarse Tune”, Yamaha MOTIF XF, and Yamaha MOTIF XS.

MIDI Controller Pro is powered from any USB port or with a 5-volt power adapter (included with purchase). You can power the device from the USB port on your keyboard.

MIDI Controller Pro Product Features

Function	Programmable Settings
P00	Configure keyboard device type
P01	Configure the Control Change settings
P02	Configure the Program Change settings
P03	Configure the Aftertouch settings
P04	Configure Pitch Bend
P05	Configure programmed songs: “F3: System Common Message”

Function	Real-Time Settings
P00	Transpose (Note Shift)
P01	Adjust a Control Change setting
P02	Adjust a Program Change setting
P03	Adjust the Aftertouch setting
P04	Advance to a Pitch Bend setting
P05	Advance to a programmed song
P06	Select the Time Clock (BPM&Tap Tempo)
P07	Apply MTC or MIDI Transport Controls: Start, Continue, and Stop

Firmware is user-upgradable as updates are made available by Kelfar Technologies.

Supplied Items

- MIDI Controller Pro unit with three-button interface and three-character display
- USB cable
- Five-volt power adapter
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Customer-Supplied Items

- MIDI cable connecting the MIDI OUT port on the MIDI Controller Pro unit to the MIDI IN port on the keyboard.

Required Keyboard Settings

- Enable the system-exclusive message filter before using MIDI Controller Pro.
- Enable Control Change, Aftertouch, and Program Change MIDI messages. **Note:** Most keyboards enable these settings by default.

Refer to the keyboard manufacturer’s documentation for instructions on how to update or verify the required keyboard settings.

General Configuration Rules

- Only one function at a time can be active.
- When you select a function or power up the unit, the function that was last used is active.

- Real-time settings for functions *P00* to *P06* are available for immediate use only if the function is active. To change the function that is active, you must go through the configuration steps for that function as described in the procedures below.

Initial Setup: Selecting the Device Type

To configure the device type

1. Hold down **MINUS** and **PLUS** buttons for 3 seconds to access the programmable functions on screen.
2. With *P00* displaying, click **RESET**.
3. Press **PLUS** or **MINUS** to navigate to the selection that matches your keyboard type:

T00 General MIDI 2 (supports Korg and other devices with the GM2 logo)

T01 Roland GS

T02 Yamaha XG

T03 Ketron

T04 General Transpose “Coarse Tune”

T05 Yamaha MOTIF XF

T06 Yamaha MOTIF XS

4. Click **RESET** to save the selection in memory.

Apply a Transpose (Note Shift) Interval

Use the **POO** function to transpose the key or pitch in semi-tone increments from -12 to +12 (equivalent to one octave below and one octave above actual pitch). A setting of 0 represents no change.

Example: To shift two semi-tones up from the pitch, apply a transpose setting of +2.

To transpose or shift notes

Note: If the **POO** function is already active, skip to Step 5. Otherwise, complete all the steps.

1. Hold down **MINUS** and **PLUS** buttons together for 3 seconds to access the programmable functions on screen.
2. Press **PLUS** or **MINUS** until **POO** displays.
3. Press **RESET**.
4. Press **PLUS** or **MINUS** until the keyboard type (**TOO** to **TO7**) displays, and then press **RESET**.

POO displays for a second, and then clears.

5. Press **PLUS** or **MINUS** until the transpose setting you are using (-12 to + 12) displays on screen. **Note:** The decimal by itself indicates actual pitch (0).
6. Press **RESET**.

Configure and Apply Control Change (CC) Settings

Use the **POI** function to configure CC presets in memory and apply them in a variety of ways. CC presets include controls such as volume, vibrato, sustain, and expression, as supported by your keyboard. For a list of available controls, consult the MIDI implementation chart in the keyboard manufacturer's documentation. A reference chart is provided at the end of this document where you can record your custom CC presets.

Each CC preset or setting is identified by a channel (1 to 16), CC number (0 to 127), and CC value (0 to 127).

Configuration notes

You can apply a CC preset in one of four ways:

- **S 0** mode: Toggle by holding the **MINUS**, **RESET**, or **PLUS** button to apply a CC preset, and releasing the button to apply a second CC preset.
- **S 1** mode: Toggle by pressing **MINUS**, **RESET**, or **PLUS** to apply a CC preset, and pressing the button again to apply a second CC preset.
- **S 2** mode: Select and send a CC setting.
- **S 3** mode: Scroll and apply real-time CC settings; press **RESET** to exit the mode.

The last-saved mode (**S 0** to **S 3**) is active until you switch to a different mode or function.

To configure and apply CC settings

Note: If the **POI** function and mode you are using are already active, skip to Step 6. Otherwise, complete all the steps.

1. Hold down **MINUS** and **PLUS** buttons together for 3 seconds to access the programmable functions on screen.
2. Press **PLUS** or **MINUS** until **POI** displays, and then press **RESET**.
3. Select a mode (**S 0** to **S 3**) by pressing **PLUS** or **MINUS** (as needed) until it displays, and then press **RESET**.

Continue with Step 4 or Step 5, depending on the mode you are configuring.

4. For **S 0** and **S 1** modes, do the following:
 - a) **CC 1** displays, indicating the first preset for the **MINUS** button. Press **RESET**.
 - b) At the channel prompt (**C.xx**, where xx = 01 to 16), use the **PLUS** and **MINUS** buttons to scroll to a channel associated with the preset, and then press **RESET**.
 - c) At the CC number prompt (0 to 127), press **PLUS** and **MINUS** to scroll to a CC number. Press **RESET**.
 - d) At the CC setting prompt (0 to 127), press **PLUS** and **MINUS** to scroll to a CC value. Press **RESET** to save the value in memory. Optionally record your setting in the reference chart at the end of this document.
 - e) Repeat Steps 4a to 4d for the second preset for the **MINUS** button (**CC2**), the first preset for the **RESET** button (**CC3**), the second preset for the **RESET** button

(**CC4**), the first preset for the **PLUS** button (**CC5**), and the second preset for the **PLUS** button (**CC6**),

5. For **S 2** and **S 3** modes, do the following:
 - a) At the **CC 1** prompt, press **RESET**.
 - b) At the channel prompt (**C.XX**, where xx = 01 to 16), use the **PLUS** and **MINUS** buttons to scroll to a channel associated with the preset, and then press **RESET**.
 - c) At the CC number prompt (0 to 127), press **PLUS** and **MINUS** to scroll to a CC number. Press **RESET**.

PO 1 displays momentarily and then clears.

6. To apply a CC setting, do one of the following:
 - **S 0** Mode:
Press and hold **MINUS**, **RESET**, or **PLUS**. The corresponding CC preset displays and is sent to the keyboard for as long as you hold down the button. Release the button to send the next preset to the keyboard.
 - **S 1** Mode:
Press **MINUS**, **RESET**, or **PLUS** to send the corresponding CC preset to the keyboard. Press the button a second time to send next preset to the keyboard.
 - **S 2** Mode:
Press **MINUS** or **PLUS** to scroll to CC setting. Press **RESET** to send the setting on screen to the keyboard.
 - **S 3** Mode:
Press **MINUS** or **PLUS** to send CC settings to the keyboard in real-time. Press **RESET** to exit the mode.

Configure and Apply Program Change (PC) Settings

Use the **PO2** function to configure PC presets in memory and apply them in a variety of ways. PC presets include settings such as sound and effect, as supported by your keyboard. For a list of available controls, consult the MIDI implementation chart in the keyboard manufacturer's documentation. A reference chart is provided at the end of this document where you can record your custom PC settings.

Each PC preset or setting is identified by a channel (1 to 16) and PC number (0 to 127).

Configuration notes

You can apply a PC preset in one of four ways:

- **S 0** mode: Toggle by holding the **MINUS**, **RESET**, or **PLUS** button to apply a PC preset, and releasing the button to apply a second PC preset.
- **S 1** mode: Toggle by pressing **MINUS**, **RESET**, or **PLUS** to apply a PC preset, and pressing the button again to apply a second PC preset.
- **S 2** mode: Select and send a PC setting.
- **S 3** mode: Scroll and apply real-time PC settings; press **RESET** to exit the mode.

The last-saved mode (**S 0** to **S 3**) is active until you switch to a different mode or function.

To configure and apply PC settings

Note: If the **PO2** function and mode you are using are already active, skip to Step 7. Otherwise, complete all the steps.

1. Hold down **MINUS** and **PLUS** buttons together for 3 seconds to access the programmable functions on screen.
2. Press **PLUS** or **MINUS** until **PO2** displays, and then press **RESET**.
3. At the **PC1** prompt, press **RESET**.
4. Select a mode (**S 0** to **S 3**) by pressing **PLUS** or **MINUS** (as needed) until it displays, and then press **RESET**.

Continue with Step 5 or Step 6, depending on the mode you are configuring.

5. For **S 0** and **S 1** modes, do the following:
 - a) **PC 1** displays, indicating the first preset for the **MINUS** button. Press **RESET**.
 - b) At the channel prompt (**C.XX**, where **xx** = 01 to 16), use the **PLUS** and **MINUS** buttons to scroll to a channel associated with the preset, and then press **RESET**.
 - c) At the PC number prompt (0 to 127), press **PLUS** and **MINUS** to scroll to a PC number. Press **RESET**.
 - d) At the PC setting prompt (0 to 127), press **PLUS** and **MINUS** to scroll to a PC value. Press **RESET** to save the value in memory. Optionally record your setting in the reference chart at the end of this document.
 - e) Repeat Steps 5a to 5d for the second preset for the **MINUS** button (**PC2**), the first preset for the **RESET** button (**PC3**), the second preset for the **RESET** button

(**PC4**), the first preset for the **PLUS** button (**PC5**), and the second preset for the **PLUS** button (**PC6**),

6. For **S 2** and **S 3** modes, do the following:
 - a) At the **PC 1** prompt, press **RESET**.
 - b) At the channel prompt (**C.XX**, where xx = 01 to 16), use the **PLUS** and **MINUS** buttons to scroll to a channel associated with the preset, and then press **RESET**.
 - c) At the CC number prompt (0 to 127), press **PLUS** and **MINUS** to scroll to a CC number. Press **RESET**.

PC2 displays momentarily and then clears.

7. To apply a PC setting, do one of the following:
 - **S 0** Mode:
Press and hold **MINUS**, **RESET**, or **PLUS**. The corresponding PC preset displays and is sent to the keyboard for as long as you hold down the button. Release the button to send the next preset to the keyboard.
 - **S 1** Mode:
Press **MINUS**, **RESET**, or **PLUS** to send the corresponding PC preset to the keyboard. Press the button a second time to send next preset to the keyboard.
 - **S 2** Mode:
Press **MINUS** or **PLUS** to scroll to PC setting. Press **RESET** to send the setting on screen to the keyboard.
 - **S 3** Mode:
Press **MINUS** or **PLUS** to send PC settings to the keyboard in real-time. Press **RESET** to exit the mode.

Configure and Apply Aftertouch Settings

Use the **PO3** function to select Aftertouch presets that can be sent to the keyboard independently. To configure Aftertouch presets, you select a channel (1 to 16) and On and Off value settings (0 to 127) for three switches. A reference chart is provided at the end of this document where you can record your custom Aftertouch settings.

Configuration notes

You can apply an Aftertouch setting in one of four ways:

- **CC0** mode: Toggle by holding the **MINUS**, **RESET**, or **PLUS** button to apply an On Aftertouch setting, and releasing the button to apply an Aftertouch Off setting.
- **CC1** mode: Toggle by pressing **MINUS**, **RESET**, or **PLUS** to apply an Aftertouch On setting, and pressing the button again to apply an Aftertouch Off setting.
- **CC2** mode: Select and send an Aftertouch setting.
- **CC3** mode: Scroll and apply real-time Aftertouch settings; press **RESET** to turn Aftertouch off.

The last-saved mode (**CC0** to **CC3**) is active until you switch to a different mode or function.

To configure the Aftertouch presets

Note: If the **PO3** function and mode you are using are already active, skip to Step 7. Otherwise, complete all the steps.

1. Hold down **MINUS** and **PLUS** buttons together for 3 seconds to access the programmable functions on screen.
2. Press **PLUS** or **MINUS** until **PO3** displays, and then press **RESET**.
3. At the **AAT** prompt, press **RESET**.
4. Select a mode (**CC0** to **CC3**) by pressing **PLUS** or **MINUS** (as needed) until it displays, and then press **RESET**.
5. At the channel prompt (**C.xx**, where xx = 01 to 16), press **PLUS** or **MINUS** (as needed) to scroll to the Aftertouch channel, and then press **RESET**.
6. (For **CC0** and **CC1** modes) Do the following:
 - a) **ON** displays with a decimal in the third position indicating the On preset for the **MINUS** button. Press **PLUS** or **MINUS** to scroll to the setting to assign, and then press **RESET**. At the **OFF** prompt, repeat to set the Off preset.
 - b) **ON** displays with a decimal in the second position indicating the On preset for the **RESET** button. Press **PLUS** or **MINUS** to scroll to the setting to assign, and then press **RESET**. At the **OFF** prompt, repeat to set the Off preset.
 - c) **ON** displays with a decimal in the first position indicating the On preset for the **PLUS** button. Press **PLUS** or **MINUS** to scroll to the setting to assign, and then press **RESET**. At the **OFF** prompt, repeat to set the Off preset.

PO3 displays momentarily and then clears.

7. To apply an Aftertouch setting, do one of the following:
- **[[0** Mode:
Press and hold **MINUS**, **RESET**, or **PLUS**. The corresponding Aftertouch On preset displays and is sent to the keyboard for as long as you hold down the button. Release the button to send the Aftertouch Off preset to the keyboard.
 - **[[1** Mode:
Press **MINUS**, **RESET**, or **PLUS** to sent the corresponding Aftertouch On preset to the keyboard. Press the button a second time to send the Aftertouch Off preset to the keyboard.
 - **[[2** Mode:
Press **MINUS** or **PLUS** to scroll to an Aftertouch setting. Press **RESET** to send the Aftertouch setting on screen to the keyboard.
 - **[[3** Mode:
Press **MINUS** or **PLUS** to send the selected Aftertouch settings to the keyboard in real time. Press **RESET** to turn Aftertouch off.

Configure Pitch Bend Setting and Apply a Real-Time Pitch Bend

Use the **PO4** function to configure a Pitch Bend preset, select a channel (1 to 16) and select an increment value (0 to 127). **Note:** The Pitch bend channel on MIDI Controller Pro must match the Pitch Bend channel set up on the keyboard. You can then adjust the real-time pitch bend.

Configuration notes

- The Pitch Bend increment uses a scale of 0 to 127, with 0 as the slowest bend duration and 127 as the fastest bend duration.
- You can apply a pitch bend setting in one of two ways:
 - **PO0** Mode: Bend the pitch and immediately return to the initial pitch value.
 - **PO1** Mode: Bend the pitch and ramp back to the initial pitch value.The last-saved mode (**PO0** or **PO1**) is active until you switch to a different mode or function.

To configure the Pitch Bend

Note: If the **PO4** function and recall mode you are using are already active, skip to Step 8. Otherwise, complete all the steps.

1. Hold down **MINUS** and **PLUS** buttons together for 3 seconds to access the programmable functions on screen.
2. Press **PLUS** or **MINUS** until **PO4** displays.
3. Press **RESET**.
4. At the **PB1** prompt, press **RESET**.
5. At the Pitch Bend increment prompt, press **PLUS** or **MINUS** to scroll to the value you are configuring. Press **RESET** to save the value in memory.
6. Set the Pitch Bend mode by pressing **PLUS** or **MINUS** (as needed) to display **PO0** or **PO1** on screen, and then press **RESET**.
7. At the channel prompt, press **PLUS** or **MINUS** to navigate to the Pitch Bend channel (**C.01** to **C.16**). Press **RESET**.

PO4 displays momentarily and then clears.

8. To apply a Pitch Bend, do the following:
 - Press and hold **MINUS** to bend the pitch down.
 - Press and hold **PLUS** to bend the pitch up.
 - Release the button to return to the initial pitch (value displays as **64**).

Configure Song Common Settings and Recall Mode and Advance to a Programmed Song

Use the **POS** function to configure three Song Common presets. You can then either recall a preset or send a custom song to the keyboard.

Configuration notes

- You advance to a programmed song in one of two ways:
 - **SSO** Mode: Recall a preset that you have assigned to one of the three buttons: **MINUS**, **RESET**, or **PLUS**.
 - **SS I** Mode: Specify a custom song number.
- The last-saved mode (**SSO** or **SS I**) is active until you switch to a different mode or function.

To configure Song Common settings and recall mode

Note: If the **POS** function and recall mode you are using are already active, skip to Step 4. Otherwise, complete all the steps.

1. Hold down **MINUS** and **PLUS** buttons together for 3 seconds to access the programmable functions on screen.
2. Press **PLUS** or **MINUS** until **POS** displays, and then press **RESET**.
3. Select the recall mode by pressing **PLUS** or **MINUS** (as needed) to display **SSO** or **SS I** on screen, and then press **RESET**.

If you selected **SSO**, do the following:

- a) A decimal displays in the third position (for example . **0**) indicating the song preset for the **MINUS** button. Press **PLUS** or **MINUS** to scroll to the song to assign, and then press **RESET**.
- b) A decimal displays in the second position (for example .**0**) indicating the song preset for the **RESET** button. Press **PLUS** or **MINUS** to scroll to the song to assign, and then press **RESET**.
- c) A decimal displays in the first position (for example **0**) indicating the song preset for the **PLUS** button. Press **PLUS** or **MINUS** to scroll to the song to assign, and then press **RESET**.

POS displays momentarily and then clears.

4. To recall a song, do one of the following:
 - **SSO** Mode:
Press **MINUS**, **RESET**, or **PLUS**. The corresponding song preset displays momentarily and then is sent to the keyboard.
 - **SS I** Mode:
Press **PLUS** or **MINUS** to scroll to a song value. Press **RESET** to send the song to the keyboard.

Configure System Real-Time Settings

Use the **PO6** function to configure System Real-Time settings
Time Clock (**FB**)

To configure System Real-Time settings

Note: If the function **PO6** is already active, skip to Step 3. Otherwise complete all the steps.

1. Hold down **MINUS** and **PLUS** buttons together for 3 seconds to access the programmable functions on screen.
2. Press **PLUS** or **MINUS** until **PO6** displays, and then press **RESET**.

PO6 display momentarily, and then clears.

At the decimal prompt, use the **MINUS** or **PLUS** button to adjust the BPM value in steps of 1. The maximum value is 295 BPM. The minimum value is 40 BPM. Range: 40 - 295 BPM. In this mode, the cancel button controls two functions. Hold the cancel button for more than two seconds and it resets the device to a default setting of 120 BPM. If you tap the cancel button twice, it averages the tempo between two taps. Taps that are too fast or too slow are ignored. When you turn the device off and back on again, it will automatically return to the last BPM setting displayed.

3. Press **RESET** to send the value.

Configure MTC or MIDI Transport Controls

Use the **PO7** function to configure Transport Controls, including Start (**FA**), Continue (**FB**), and Stop (**FC**).

To configure Transport Controls

Note: If the **PO7** function is already active, skip to Step 3. Otherwise complete all the steps.

1. Hold down **MINUS** and **PLUS** buttons together for 3 seconds to access the programmable functions on screen.
2. Press **PLUS** or **MINUS** until **PO7** displays, and then press **RESET**.

PO7 display momentarily, and then clears.

3. Press one of the buttons to send the corresponding control:
 - **MINUS (FA)** – Start
 - **RESET (FB)** – Continue
 - **PLUS (FC)** – Stop

Appendix

Chart of Custom Settings – PD I Function

	Mode	Channel (1 to 16)	Control Change Number (0 to 127)	Control Change Value (0 to 127)
<i>CC1</i>	<i>S 0</i> First			
	<i>S 0</i> Second			
	<i>S 1</i> First			
	<i>S 1</i> Second			
	<i>S 2</i>			Set Manually
	<i>S 3</i>			Set Manually
<i>CC2</i>	<i>S 0</i> First			
	<i>S 0</i> Second			
	<i>S 1</i> First			
	<i>S 1</i> Second			
<i>CC3</i>	<i>S 0</i> First			
	<i>S 0</i> Second			
	<i>S 1</i> First			
	<i>S 1</i> Second			
<i>CC4</i>	<i>S 0</i> First			
	<i>S 0</i> Second			
	<i>S 1</i> First			
	<i>S 1</i> Second			

	Mode	Channel (1 to 16)	Control Change Number (0 to 127)	Control Change Value (0 to 127)
<i>CCS</i>	<i>S 0</i> First			
	<i>S 0</i> Second			
	<i>S 1</i> First			
	<i>S 1</i> Second			
<i>CCS</i>	<i>S 0</i> First			
	<i>S 0</i> Second			
	<i>S 1</i> First			
	<i>S 1</i> Second			

Chart of Custom PC Settings – *PO2* Function

	Mode	Channel (1 to 16)	Program Change Number (0 to 127)
<i>PC 1</i>	<i>S 0</i> First		
	<i>S 0</i> Second		
	<i>S 1</i> First		
	<i>S 1</i> Second		
	<i>S 2</i>		Set Manually
	<i>S 3</i>		Set Manually
<i>PC 2</i>	<i>S 0</i> First		
	<i>S 0</i> Second		
	<i>S 1</i> First		
	<i>S 1</i> Second		

	Mode	Channel (1 to 16)	Program Change Number (0 to 127)
<i>PC3</i>	<i>S 0</i> First		
	<i>S 0</i> Second		
	<i>S 1</i> First		
	<i>S 1</i> Second		
<i>PC4</i>	<i>S 0</i> First		
	<i>S 0</i> Second		
	<i>S 1</i> First		
	<i>S 1</i> Second		
<i>PCS</i>	<i>S 0</i> First		
	<i>S 0</i> Second		
	<i>S 1</i> First		
	<i>S 1</i> Second		
<i>PCS</i>	<i>S 0</i> First		
	<i>S 0</i> Second		
	<i>S 1</i> First		
	<i>S 1</i> Second		

Chart of Custom Aftertouch Settings - PD3 Function

	Mode	Channel (1 to 16)	Control Change Number (0 to 127)
MINUS button	CC0 ON		
	CC0 OFF		
	CC1 ON		
	CC1 ON		
RESET button	CC0 ON		
	CC0 OFF		
	CC1 ON		
	CC1 ON		
PLUS button	CC0 ON		
	CC0 OFF		
	CC1 ON		
	CC1 ON		