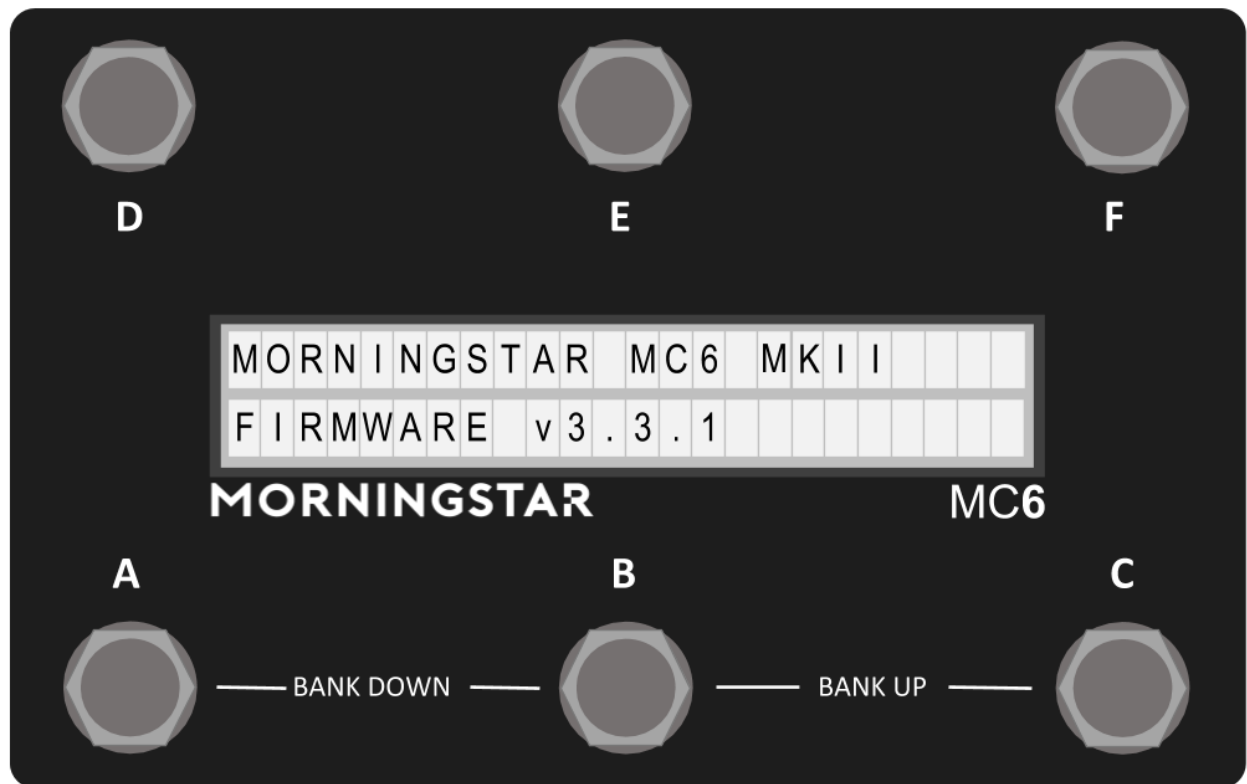


# Overview



## Latest Firmware: v3.3.1

### Updating your firmware

More instructions here ([user-guide/07-firmware-update](#))

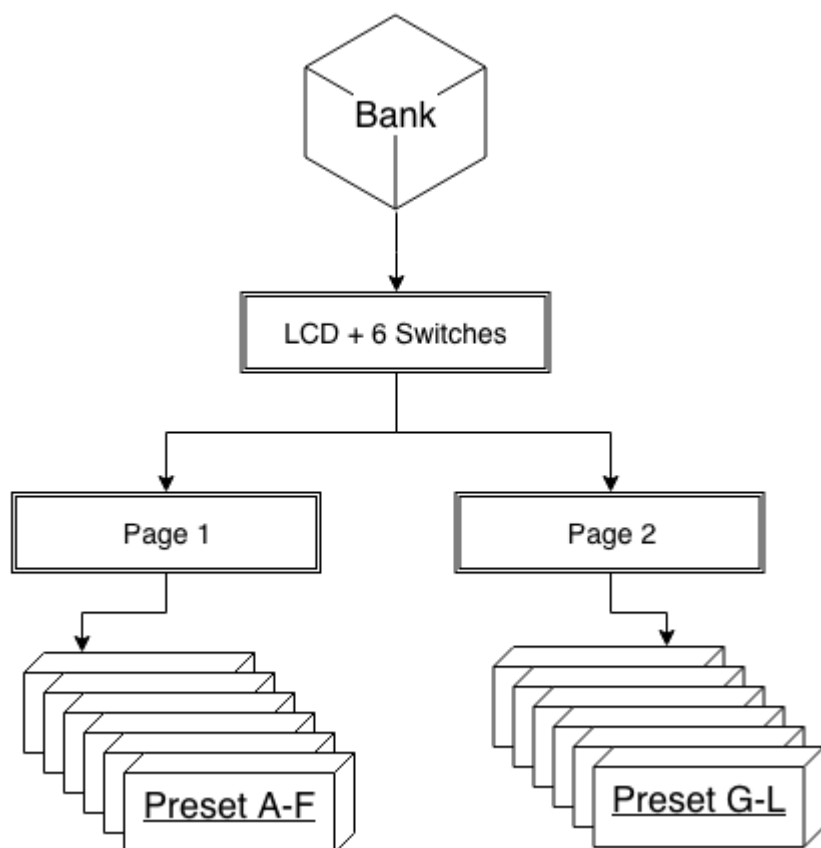
---

## How to use this manual

The navigation panel is at the top of the page.

The search widget allows you to easily find content in the manual.





Each bank can display up to 6 presets, of which all are accessible from the 6 switches. The other 6 presets can be engaged via dual switch presses or external aux controllers. A Page Toggle function is also available to switch between the first 6 presets and the last 6 presets.

Please refer to the Midi Types Glossary ([../glossary/07-midi-type-glossary](#)) for the full list of messages available to you.

---

## TL;DR

Too long, didn't read! Cause who likes reading manuals, right? While we encourage you to go through the full manual, here's a quick list of information to get you quickly started. We take pride in making the MC6 MKII as easy to use as possible, and hope that the on-board directions will be intuitive enough to you.

## Entering Edit Menu

Press Switch [D + F] in the main preset page. The last used preset, expression pedal input and bank will be displayed in the menu.

# Editing your presets in the editor

Make sure you are in Editor mode. Press Switch [C + D] to enter editor mode or click the Toggle Edit Mode button on the editor.

**Make sure to exit Editor mode to have the full functionality available before you use it with your devices.**

---

We take pride in making the device one of the easiest-to-use programmable Midi controllers in the market. If there is any questions you have using the device, please do not hesitate to drop us an email at [help@morningstarfx.com](mailto:help@morningstarfx.com).

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# Hardware I/Os

## Powering the MC6

How to power your MC6

### 9VDC Centre Negative power supply

Connect a 9VDC centre negative power supply to the power input of the MC6.

### Phantom Power (9-12v AC or DC)

Connect a 7-pin Midi cable to the MIDI OUT port of the MC6. Phantom power is supplied through pins 6 and 7. Phantom power is chained to pins 6 & 7 on the MIDI IN port as well, allowing you to power other devices.

If sending DC power, the polarity does not matter.

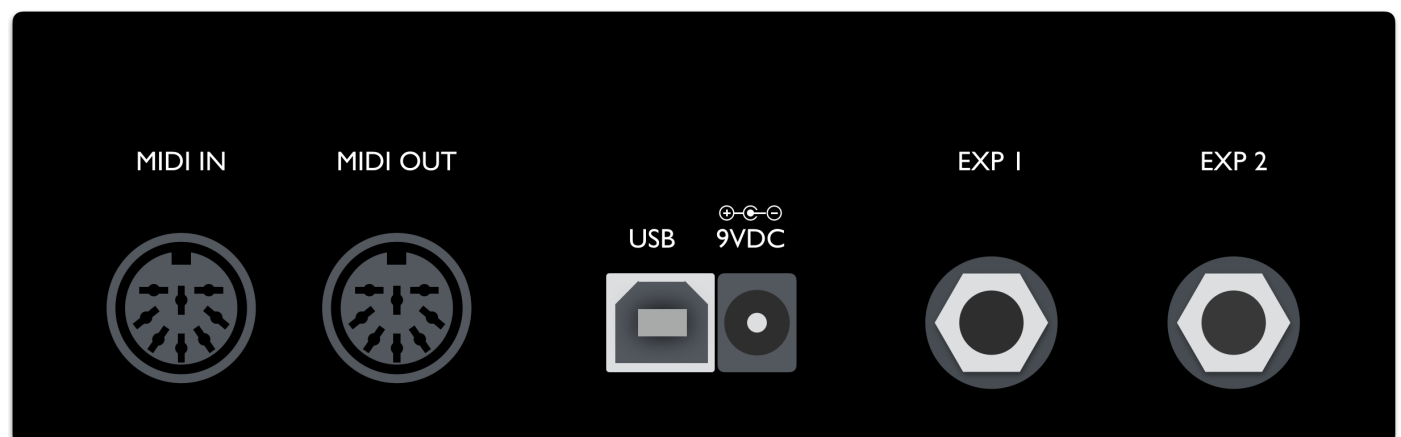
### USB power

Connect a USB cable to the MC6. The MC6 is capable of being fully powered by USB.

---

## Connections

Information on all the inputs and outputs on the MC6.



### Midi In/Receive

This is where the MC6 receives MIDI messages from other MIDI devices.

The MC6 passes incoming MIDI messages via the MIDI In/Receive port out to the USB port, and vice versa.

### **Midi Out/Send/Thru**

This is where MIDI data is sent from the MC6 to other devices. You can use a standard 5-pin MIDI cable, or a 7-pin one if you want to power the MC6 with phantom power. The MC6 also has MIDI THRU, which allows incoming MIDI messages to be relayed to other MIDI-capable devices.

### **USB port**

The MC6 can also send and receive MIDI data via USB, allowing you to have control over your DAWs and music software. It is class compliant and compatible with Windows, macOS, Android and iOS.

The MC6 passes incoming MIDI messages via the MIDI In/Receive port out to the USB port, and vice versa.

### **EXP 1 & 2**

Connect your expression pedals to these ports. You may also connect aux switches to add more programmable switches to the MC6.

Please note that these ports are INPUT only, and cannot be using to control functions like amp switching or sending Control Voltage messages. You should only be connecting an expression pedal or TRS passive Aux Switches to these ports.

You should only use **STEREO CABLES**. Using Mono cables will cause the MC6 to not work as intended.

**Please do not apply any power to these inputs**

---

## **Using External Aux Switches**

Connect an external Aux switch to your MC6 to control Presets G - L.

The MC6 requires an aux switch that is wired to work with the Eventide H9. It has to be connected to the MC6 with a stereo cable, where the Tip is conneted to the ground via a footswitch, and similar to the Ring as well. Another switch can be added to connect both Tip and Ring to ground to engage an additional preset/setting. Please refer to the schematic below.

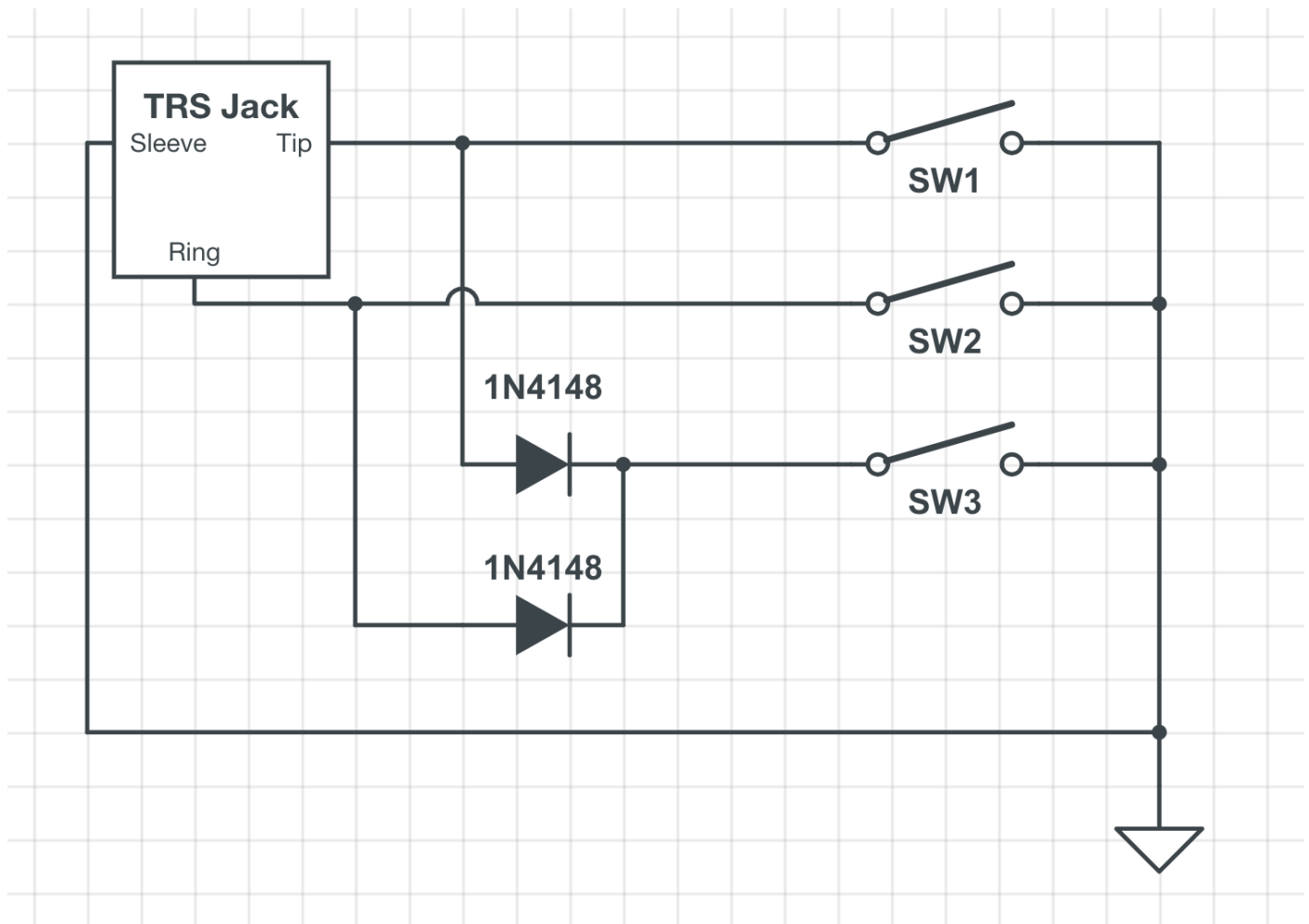
There are a few pedal builders that sell such devices:

Analog Endeavors ([www.analogendaevors.com](http://www.analogendaevors.com))

American Loopers ([www.americanloopers.com](http://www.americanloopers.com))

Please note that we are in no way affiliated with these companies.

If you would like to build one yourself, you can refer to the following schematic:



## Using Expression Pedals

The MC6 works best with Expression pedals fitted 10k - 25k linear potentiometers. The potentiometer wiper should be connected to the Tip of the stereo cable, while the Ring and Sleeve should be connected to the outer lugs on the potentiometer.

When connecting a new Expression pedal, be sure to calibrate it first by going into the Edit menu (Switch D+F), selecting **Exp1** or **Exp2** and then **Calibrite**.

---

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# Main Configuration Menu

To access the Controller Settings Menu, hold down **Switch D** before powering up the MC6. This menu allows you to edit the global settings for the device.

The Main Configuration Menu can also be accessed by going into the Edit Settings page (Switch D + F) and selecting **ConfigPg**.

Please note that the controller will restart after exiting the Main Configuration Menu.

The display will indicate that it is booting into the configuration page, and the menu below will be displayed:



D



E



F

M	i	d	i	C	h	n	l	R	e	s	e	t	P	g	(	1	/	2	)
E	x	p	l	n	p	t	S	w	S	e	n	s	(	E	x	i	t	)	

**MORNINGSTAR**

**MC6**

A



B



C



—— BANK DOWN ——

—— BANK UP ——



D



E



F

B	n	k	T	i	m	e	B	n	k	C	h	g	D	i	P	g	(	2	/	2	)
M	i	d	i	C	i	k	(	E	x	i	t	)									

**MORNINGSTAR**

**MC6**

A



B



C



—— BANK DOWN ——

—— BANK UP ——

## Factory Reset - Reset

To do a factory reset, hold down for 2 seconds. The MC6 will show that it is performing a factory reset. All user presets and settings will be reset to factory default when a reset is done.

## Set MIDI Channel - MidiCh

Set the MIDI receive channel for the MC6. The MC6 can receive and respond to messages from external midi controllers. Press Switch A or B to increase or decrease the MIDI channel respectively.

Press **(Save)** to save your settings and **(Exit)** to exit.

## Change Expression Input - Explnpt

Change Expression Input Type and select between **Aux Switch**, **Expression** or **Fixed Sw 1** Setting.

- Aux Switch: Use a stereo cable to connect to an external aux switch to control more presets. Aux Switch compatibility is described here ([../02-hardware-overview#using-external-aux-switches](#)).
- Expression: Connect an expression pedal via a stereo cable (Tip connected to wiper) to engage the expression preset. Expression Pedal compatibility is described here ([../02-hardware-overview#using-expression-pedals](#)).
- Fixed Sw 1: Similar to the aux switch, but the functions are hard-coded to control the Bank Up, Bank Down and Toggle Page functions without sacrificing any presets.

## Switch Sensitivity - SwSens

Set switch sensitivity. Choose from 1 (least sensitive) to 5 (most sensitive). Pressing Switch A+B together will select 2, while B+C will select 4.

By default, this is set to 3 and should be comfortable for most users. Depending on personal taste, you may adjust sensitivity to help you bank up/down (by stepping on 2 switches at once) more accurately. More sensitive means that the lag between the time when a message is sent out and when the switch is pressed it at its minimum.

## Change Page - Pg(1/2)

Access more options in the Main Configuration Menu by changing the page.

## Bank Display Time - BnkTime

This setting adjusts the amount of time the bank details will show when the bank is changed.

The value displayed is in milliseconds.

## Bank Change Time - BnkChgDelay

This setting adjusts the time it takes to load the next bank when the bank is changed.

The value displayed is in milliseconds.

## MIDI Clock - MidiClk

The MIDI clock setting toggles the persistent MIDI clock function ON and OFF. This setting is related to the MIDI Clock message under MIDI Types. If persistent MIDI is ON, the MIDI Clock message will continue sending a MIDI clock signal when engaged, even when engaging other presets or scrolling through banks. However, if persistent MIDI is OFF, the MIDI clock signals will shut off when an event (like a switch press or expression pedal move) is triggered.

# General Usage

---

## Changing Banks

Step on Switches [A + B] together to bank down and Switches [B + C] to bank up. There are a total of 30 banks on the MC6 MKII.

Bank Changes can also be executed by programming a Bank Change function to a preset, or by using an External Aux Switch.

## Switch and Display Names

Each switch corresponds to the display name closest to it. Pressing switch [A] activates Preset A, switch [B] activates Preset B and so forth.

## Mapping Actions to Midi Types

The MC6 MKII allows you to map actions taken on the switches to MIDI Types and functions. For example, you can map a CC#1 message to a Press action, and a CC#2 message to a Release action. When the switch is pressed, a CC#1 message will be sent, and when the switch is released, a CC#2 messages will be sent. There is a list of actions available to you.

1. Press
2. Release
3. Long Press
4. Long Press Release
5. Double Tap
6. Double Tap Release
7. Long Double Tap
8. Long Double Tap Release
9. Release All

More information can be found in the Action Glossary ([../glossary/08-action-glossary](#)).

# MIDI Thru

The MC6 MKII can be programmed to pass incoming MIDI signals from it's MIDI IN port to it's MIDI OUT port. It can also pass CC, PC and Note messages thru to the USB port. The MC6 MKII will also pass incoming CC, PC and Note MIDI signals from it's USB MIDI port to it's MIDI OUT port.

You can toggle this setting on and off by pressing Switches [A + F] together.

## Editing Presets

Both the Switch Presets and Expression Presets on the device can be edited via the on-board editing functions (../05-edit-mc6) or the Web/Desktop Editor (../06-midi-editor).

## Coping and Pasting Presets

The device allows copying and pasting of presets into different

## Dual Switch Functions

The MC6 MKII makes use of dual switch combination to carry out certain functions.

Function	Switch
Bank Down	A+B
Bank Up	B+C
Edit Menu	D+F
Toggle Editor Mode	C+D
Toggle MIDI Thru	A+F

Besides this, you can also use dual switch presses to call the extra presets.

Preset Switch	
G	D+E
H	E+F
I	A+D
J	B+E
K	C+F

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# Programming the MC6

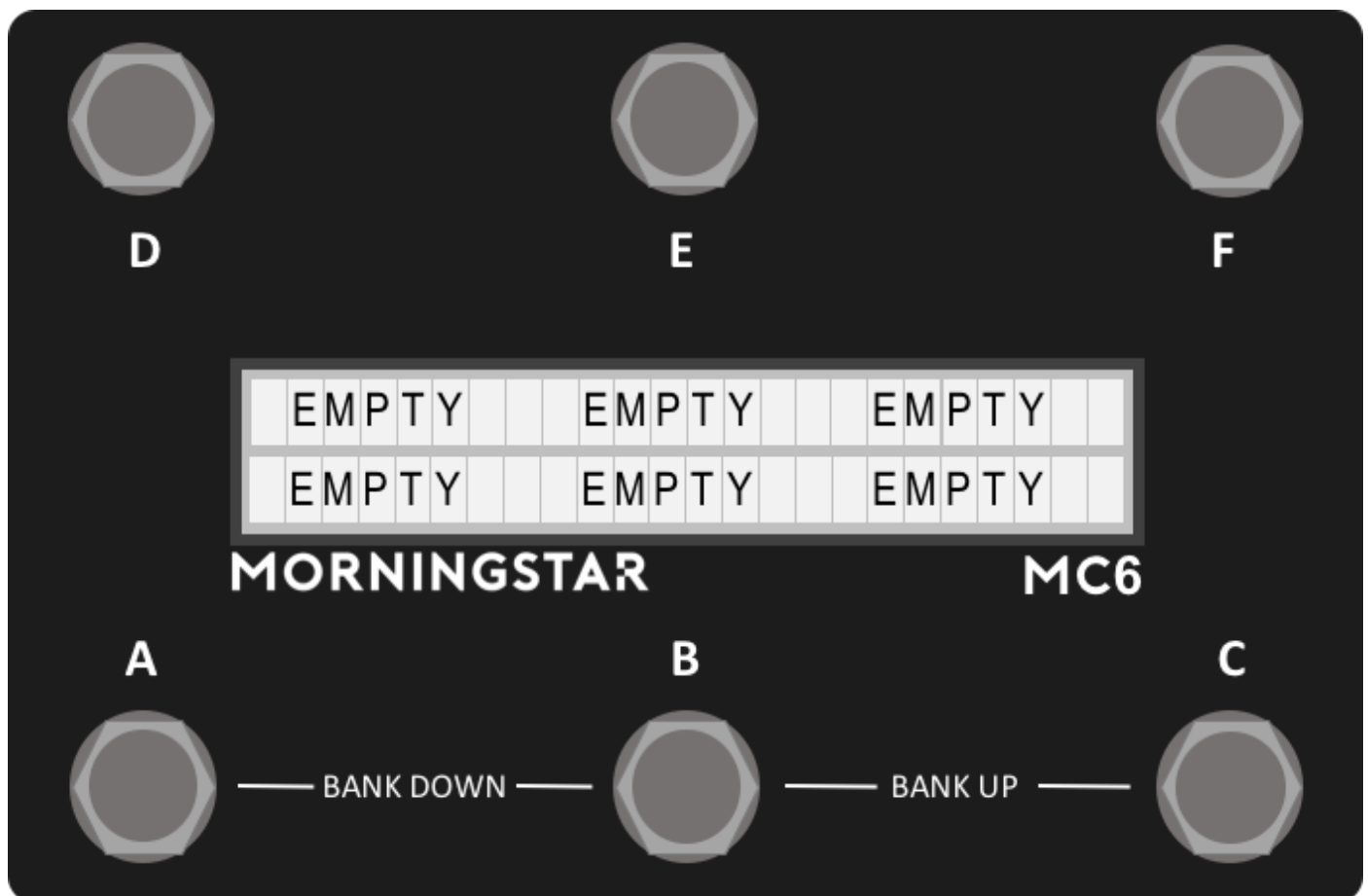
The MC6 MKII can be programmed on the device itself, or by using the Web/Desktop Editor ([../06-midi-editor](#)).

---

## Edit Menu

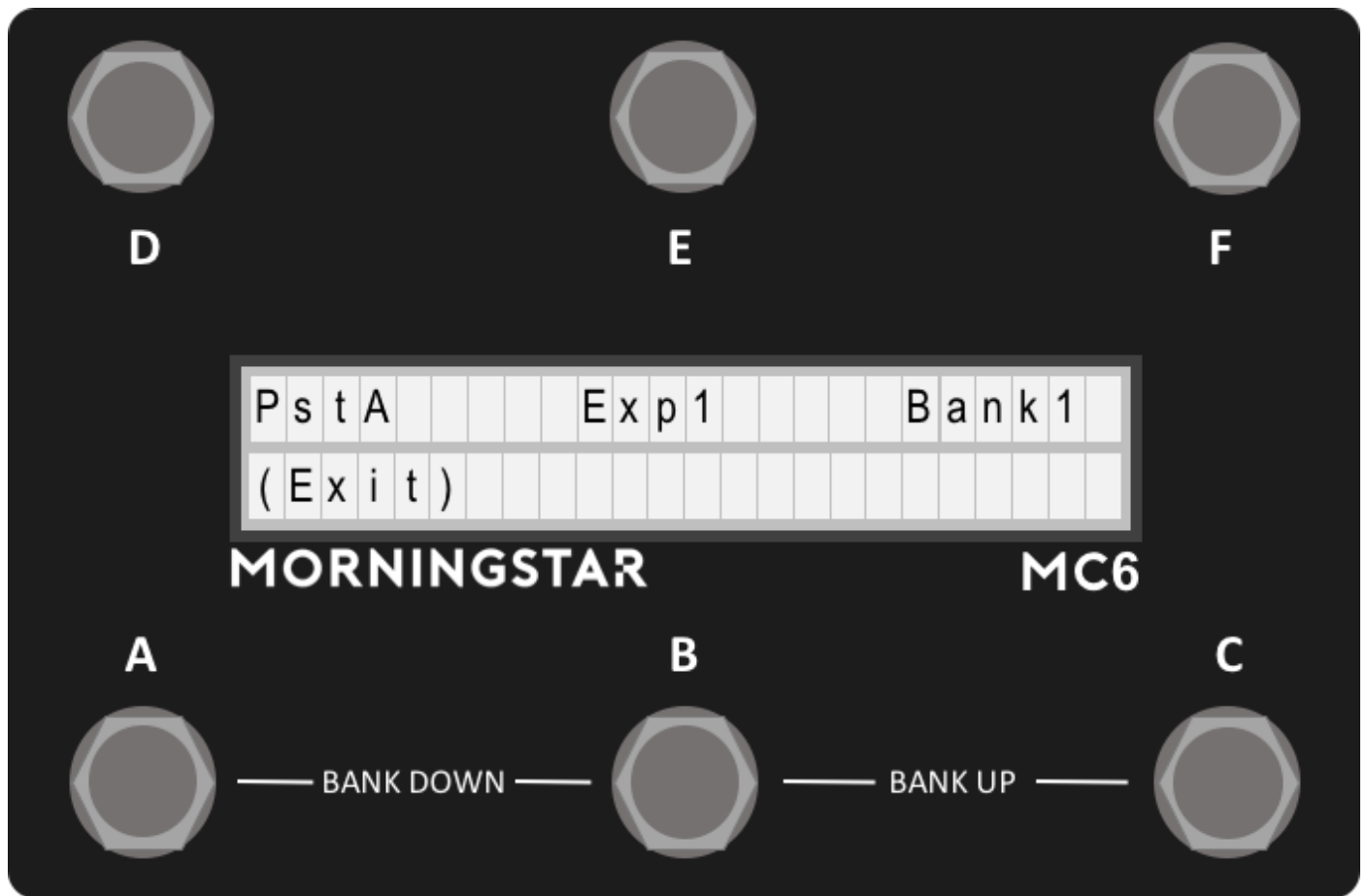
On a new controller, all switches are initially labelled as EMPTY. It is up to you to decide exactly what each one will do.

**To enter the Edit Menu**



1. Press the switch you wish to program
2. Press Switches [D + F] together. This will take you to the Edit Menu shown below.

**Edit Menu**

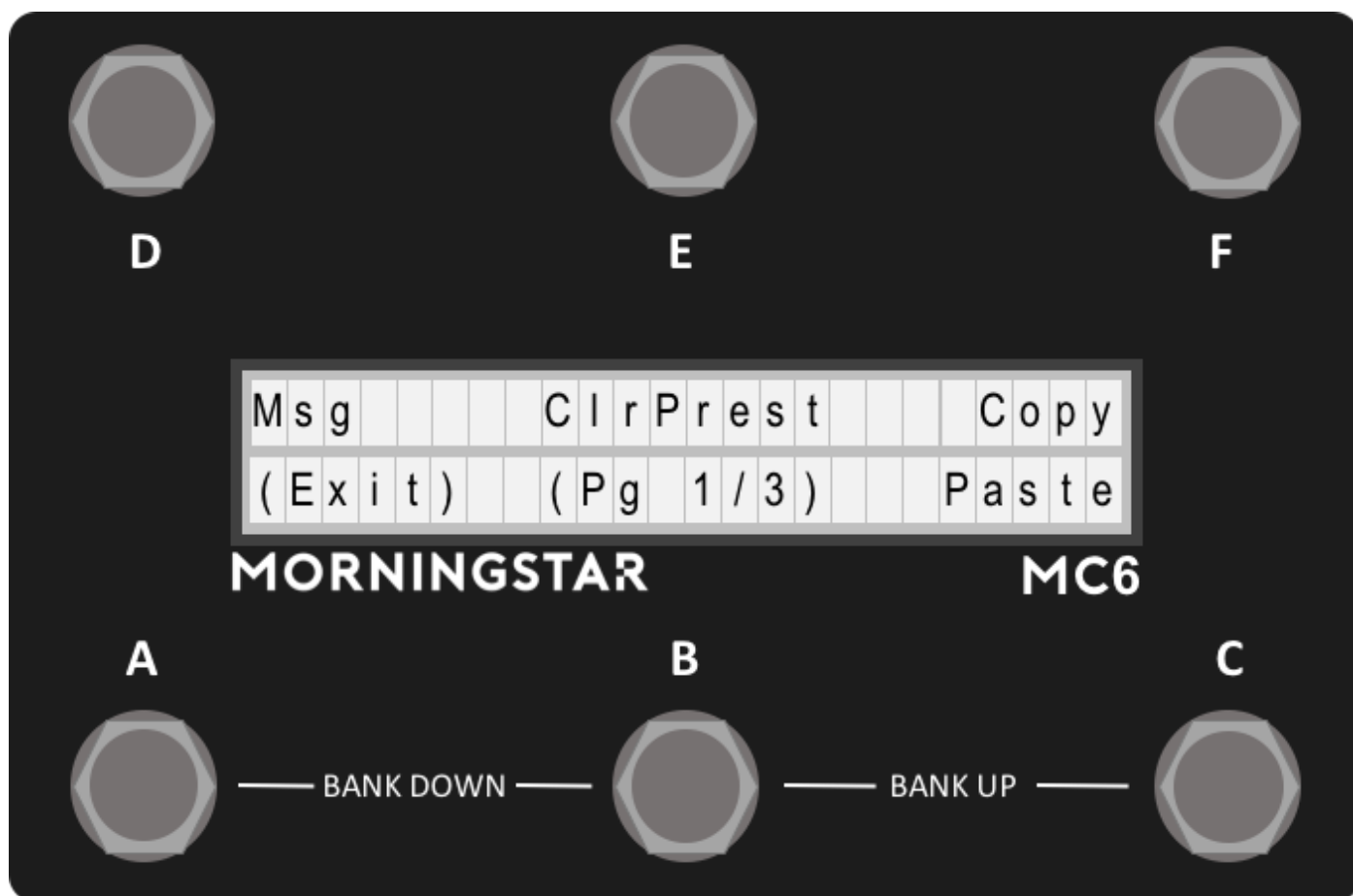


After pressing [D + F], the Edit menu will be displayed. The preset and expression you last used will be displayed, as well as the bank you are currently on. Press Switch D to edit the preset, Switch E to edit the expression preset, or Switch F to edit the bank.

## Programming Presets

Upon pressing Preset in the Edit Menu, you will be directed to the Preset Edit page.

## Preset Edit Menu (Page 1)



### **Msg**

Edits the 16 Midi Messages available in the preset.

### **ClrPrest (Clear Preset)**

Clear the preset settings.

### **Copy**

Copy the preset settings

### **Paste**

Paste the last copied preset settings

### **(Pg 1/3)**

Shows the current page in the menu. Press to go the next page.

---

## Preset Edit Menu (Page 2)



### **ShrtNme (Short Name)**

Edits the preset short name. Look at Editing Names for more information on how to edit any names in the MC6.

### **ToggNme (Toggle Name)**

Edits the preset toggle name. Look at Editing Names for more information on how to edit any names in the MC6.

### **FullNme (Full Name)**

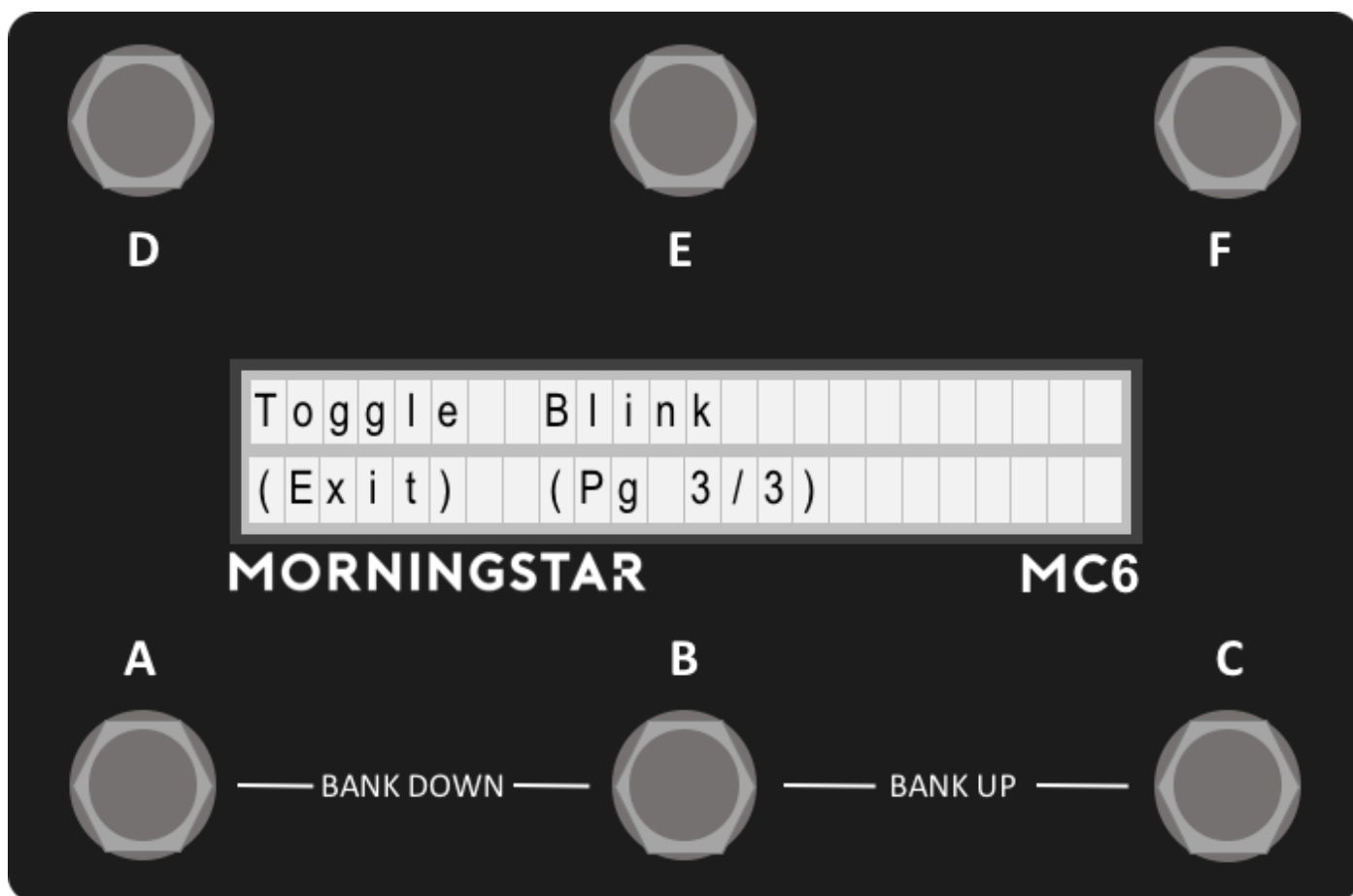
Edits the preset full name. Look at Editing Names for more information on how to edit any names in the MC6.

### **(Pg 2/3)**

Shows the current page in the menu. Press to go to the next page.

---

## Preset Edit Menu (Page 3)



### Toggle

Toggles between On and Off for the preset toggle setting. If On, each time the preset is engaged, the toggle position of the preset will change. The Midi Messages in the preset will rely on the toggle position of the preset to determine if it should be invoked.

### Blink

Toggles between On and Off for the preset blink setting. If On, the preset short name will blink when the preset toggle is in the engaged position. This is useful to visually determine the toggle state of your preset.

### (Pg 3/3)

Shows the current page in the menu. Press to go to the next page.

---

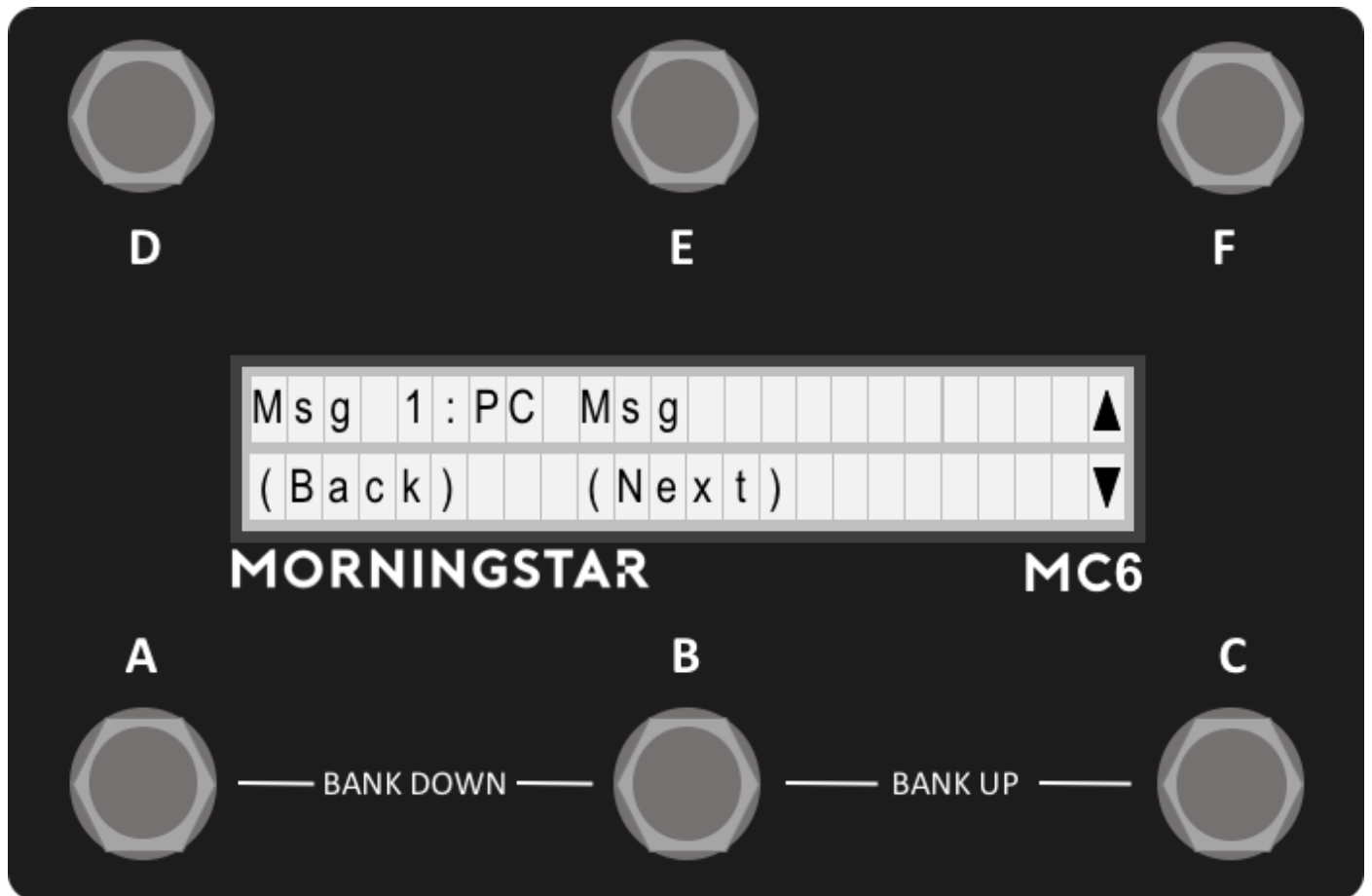
## Editing Preset Messages

The MC6 has 16 Messages in each Preset.

## Selecting a Message to Edit

When you enter the Edit Msg interface, the screen above will show. In this screen, you can view the current Midi Type that is assigned to that message. It also indicates the current message that is selected for editing. Pressing Next will allow you to edit the selected message.

### Edit Action



The next menu allows you to select the action to assign to the message. Once selected, each time that action is carried out on the corresponding preset switch, only the messages assigned to that action will be invoked.

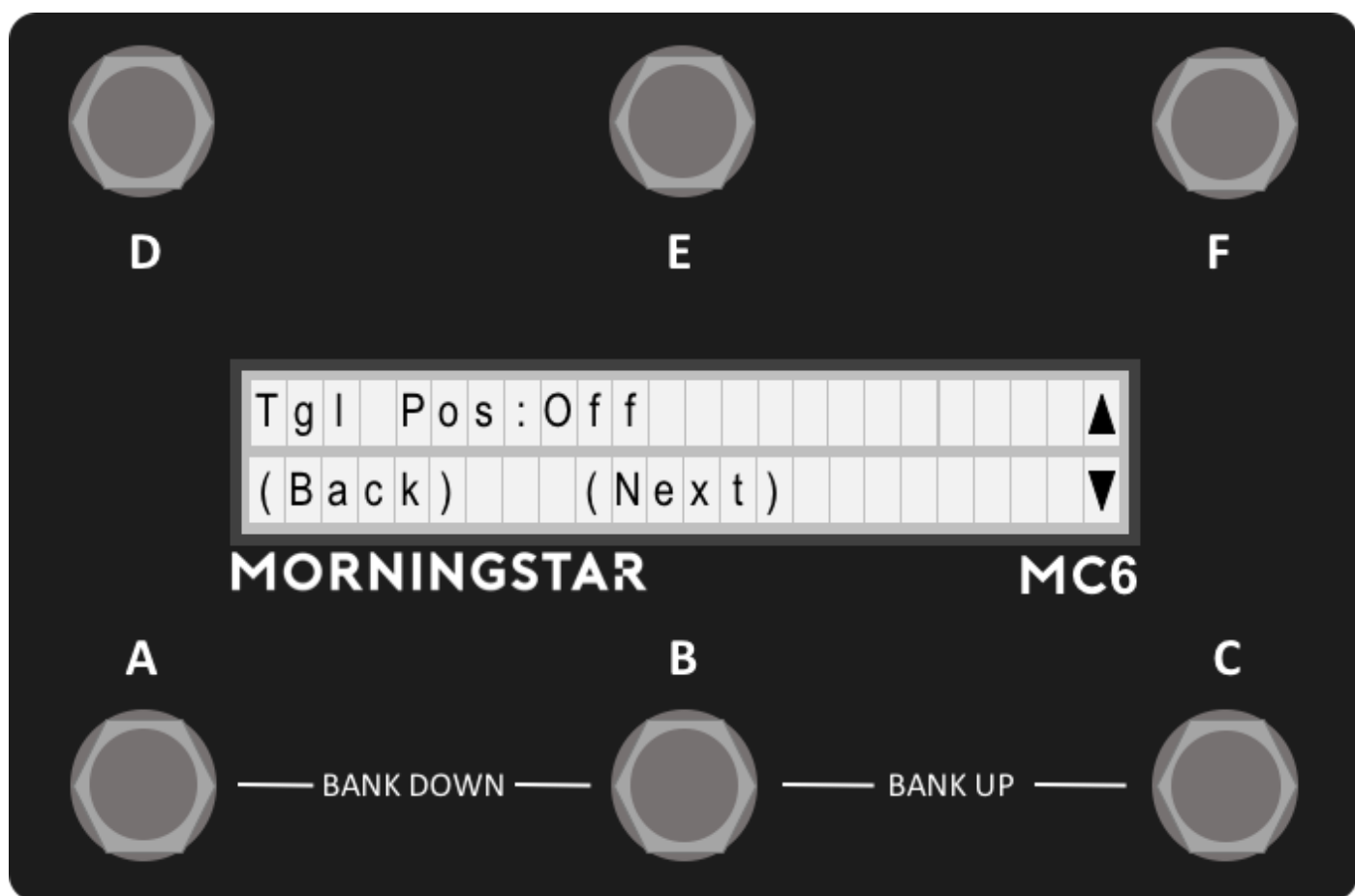
### Edit Toggle Position



The next menu allows you to edit the message toggle position. Select between On and Off. This allows only the messages that match the current preset toggle position to be invoked.

From firmware 3.2.1 onwards, this feature has changed to toggle positions 1, 2 and Both. Toggle position Both will have the message sent in both toggle positions.

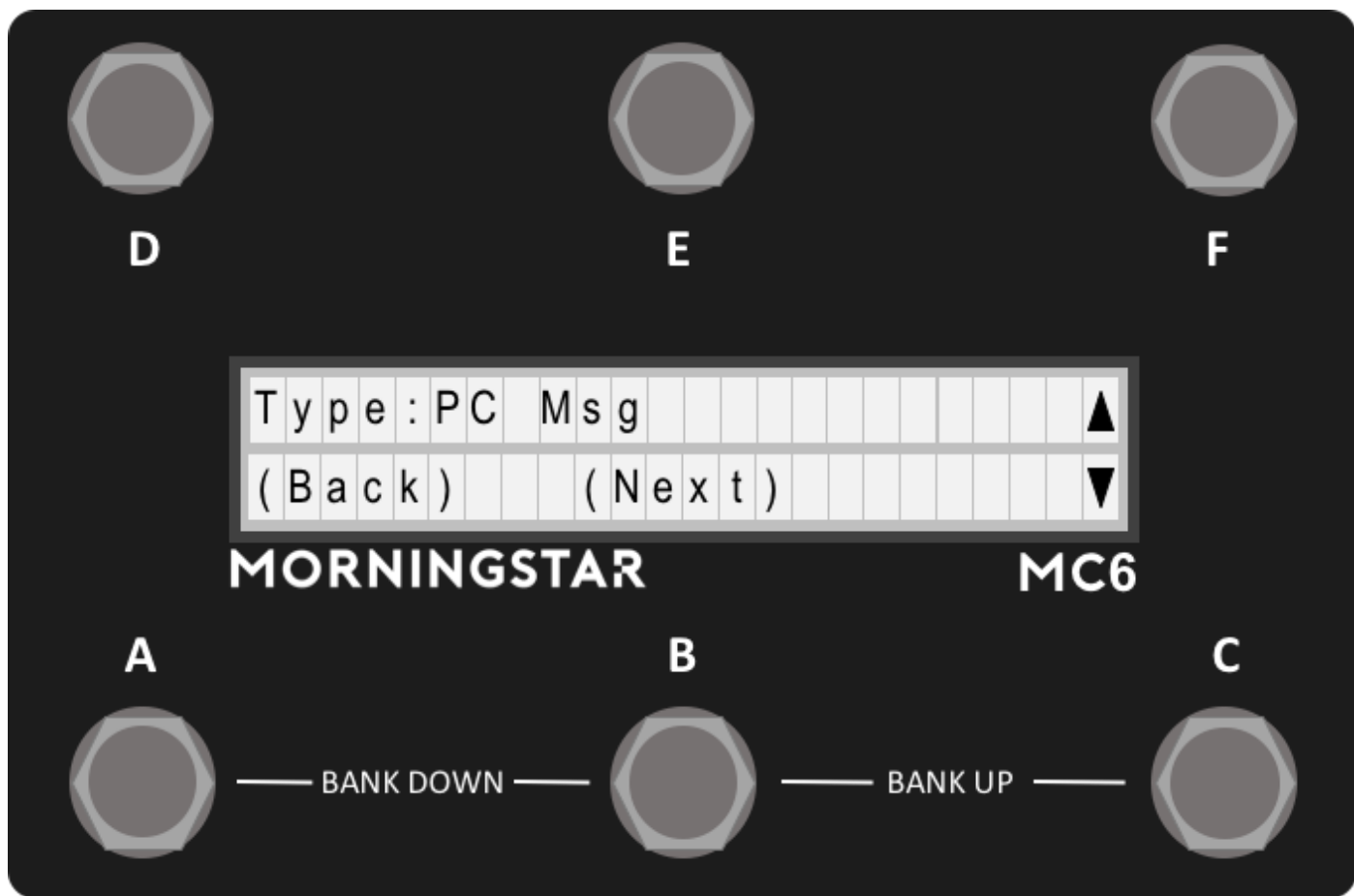
### Edit Type



The next menu allows you to edit the Message Type. Scroll up and down to select the Midi Type that you want to be associated with the message. You can read about the full list of Midi Types available in the Glossary.

### Edit Type Parameters





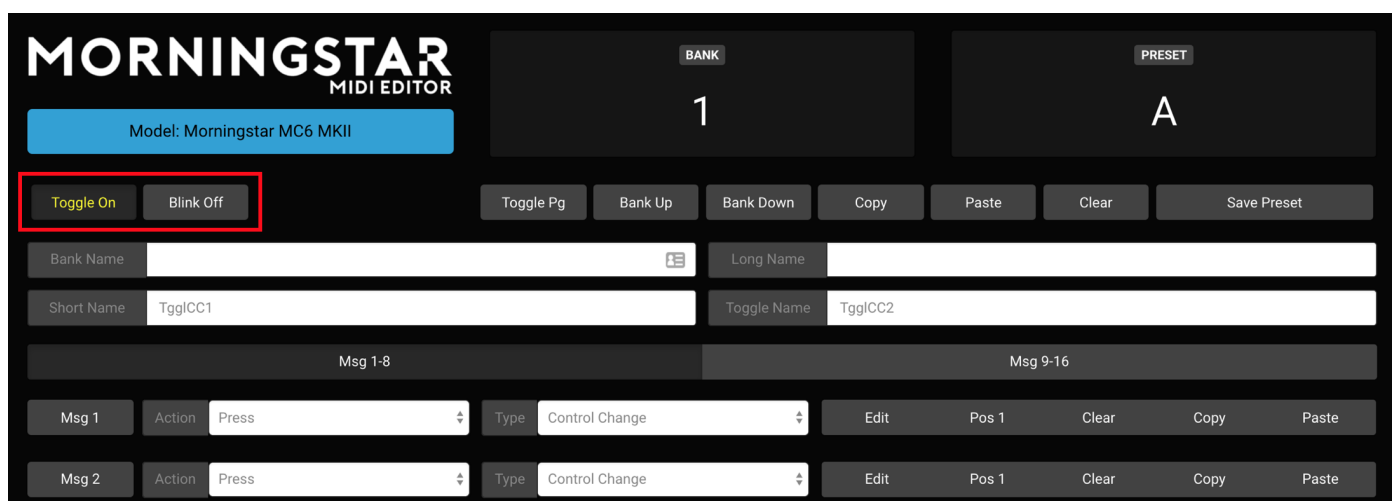
Depending the Midi Type that is selected in the previous menu, unique parameter edit menus will be loaded. Edit your parameters and then press Save on the last page to save your settings.

## Setting up a Toggle Message

How to toggle between two different messages on your MC6 MKII.

### Using the Web/Desktop Editor

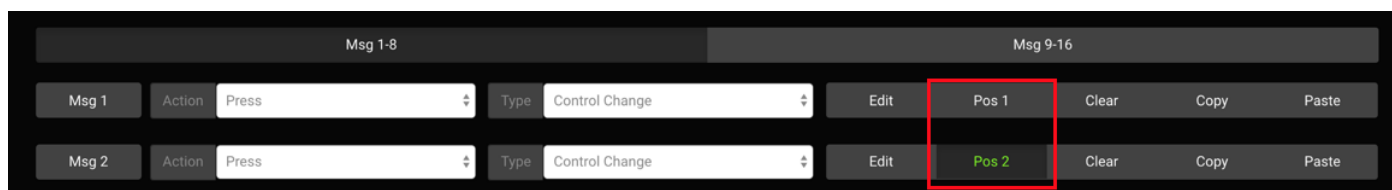
Setting up a toggle message is easy. On the editor, there is a toggle option on the top left of the interface. Switch it to On to enable toggling for the preset.



## How it works

Each preset on the MC6 allows you to toggle between two positions: 1 and 2. By default, the presets are on toggle position 1. If you switch the toggle to On, each time the preset is engaged, it will toggle to the other position (between 1 and 2).

Each message also has a position option, where it will be sent out only when the position of the message matches that of the preset. Hence, if you set Msg1 to be a CC message in Pos 1, and Msg2 to be a CC Message in Pos 2, and you have your toggle on for the preset, each press will toggle between Msg 1 and Msg 2.



## Toggle Name

When the preset is in position 1, the Short Name will be displayed. When the preset is in position 2, the Toggle Name will be displayed.

## Blinking

To indicate that the preset is in position 2, you can also use the blink option, where if the blink option is set to On, the Toggle Name on the main page will blink when the preset is in position 2.

## Using the built-in MC6 editor

After going into the preset edit menu, go to Page 3 of the menu. The Toggle button toggles between Toggle On and Toggle Off position for the preset, which the Blink button toggles between Blink On and Blink Off position for the preset.

When editing individual messages, there will be an option to select the toggle position for the message you are editing. Choose between position 1 or 2 accordingly.

## Editing Expression Messages

To edit expression messages, press switch D + F first, which will bring you to the edit page, and then select the expression option.

### Expression Edit Menu (Page 1)



The first page of the menu for editing Expression Messages are the same as that for editing Preset Messages.

### Expression Edit Menu (Page 2)



On the second page, you have the option to edit the Full Name, Sensitivity or calibrate your expression pedal.

### Edit Full Name

When the expression pedal is being used, you have the option of displaying a Name for your expression preset. Simply edit and save the name to your expression preset. See Editing Names for more information after entering the FullName option in the Expression Edit Menu.

## Calibrating your Expression Input

It is best to calibrate your expression pedal before use to get the optimum performance. Simply go into the Calibrate setting in your Expression Edit Menu. Once there, follow the instructions in the LCD. First set your expression pedal to a heel down position. Ideally, the value should be displayed as 0. Press Next. Next, set your expression pedal to a toe down position. Ideally, the value should be displayed as 127. Press Save to save your settings. Do not worry if you can get a value of 0 and 127 in both positions. Once your setting is saved, the MC6 will optimise the settings to get the most out of your expression pedal.

## Setting your Expression sensitivity

Depending on the potentiometer value used in your expression pedal, you may have to edit the sensitivity to get optimum performance. We recommend using expression pedals with 10k potentiometers. The sensitivity setting is used mainly to remove jitters, where the value sent by the MC6 might bounce between 2 values very quickly.

## Editing Bank Settings

To enter the bank settings, press Switch D + F, which will bring you to the edit page, and then select the Bank option.



In the edit bank interface, you can edit the Bank Name as well as copy and paste banks.

### Bank Name

Edits the Bank Name.

### Copy

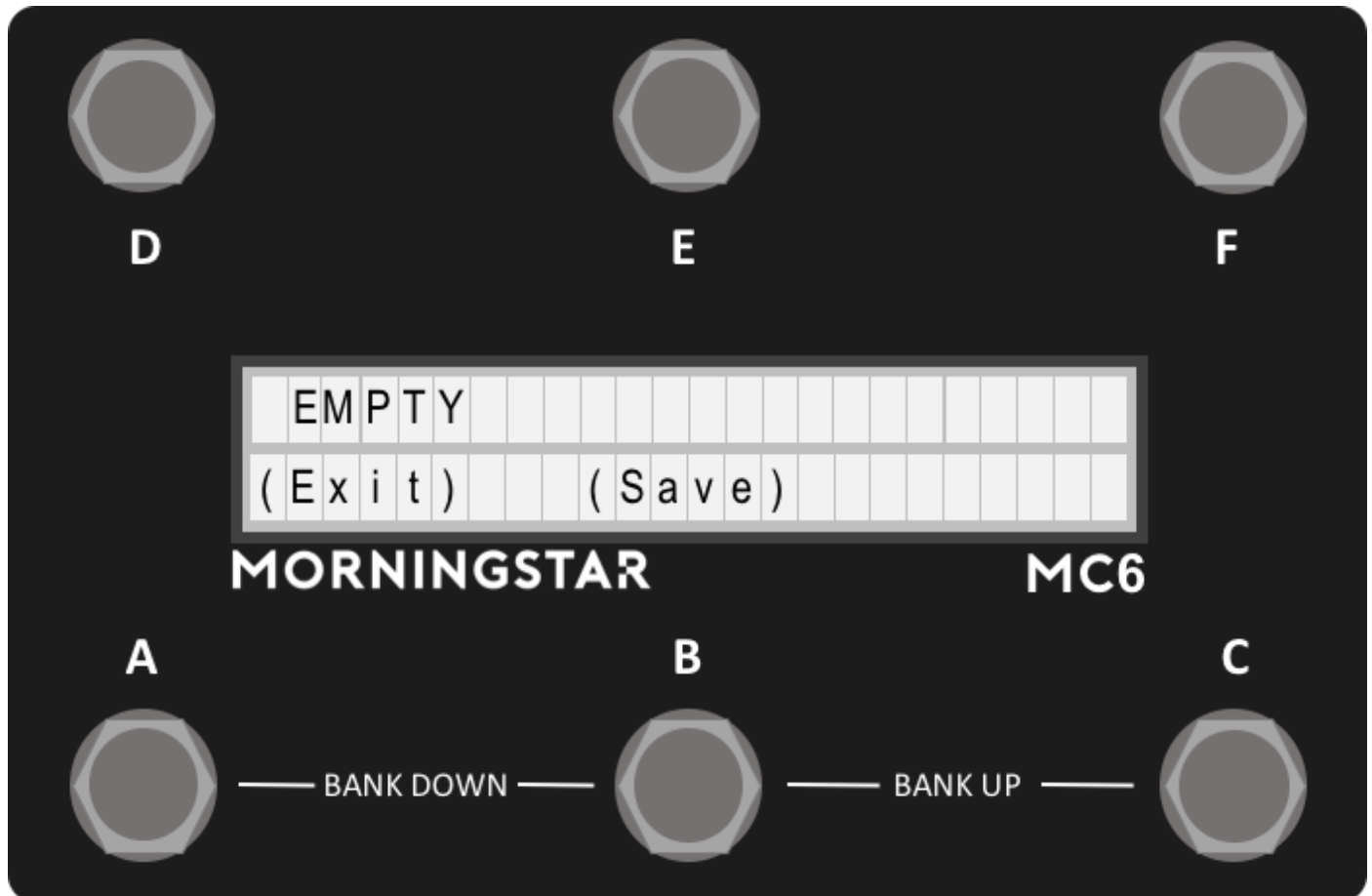
Copies the current bank.

## Paste

Paste the previously copied bank to the current bank.

---

## Editing Names



When editing any of the MC6 names like Preset Short Name, Toggle Name, Long Name, or Bank Name, this interface will be display on the screen.

### Controls

Moving the cursor To move the cursor left and right, press Switch D or Switch E.

### Changing characters

To change the characters, use Switch C and Switch F to scroll up and down the available characters.

### (Save)

Saves the name into memory.

### (Exit)

Exits the interface.

---

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# Midi Editor

Using the Web/Desktop Editor with your MC6 MKII

Besides using the on-board MIDI editing features on the MC6 MKII, you can also edit your settings via the Web/Desktop editor. The Web Editor will always contain the latest developments, while the Desktop editor will be updated less frequently.

The links are available on our website here: <https://www.morningstarfx.com/editor>

**NOTE: A number of functions are disabled when the device is in Editor mode. When using or testing the MC6 with other devices, please remember to toggle out of editor mode.**

## Connecting the device

Connect the device via USB to your computer and launch the editor in the latest version of Google Chrome (the Web Editor works on Google Chrome only).

The editor should detect your device and load the editing dashboard as shown below.

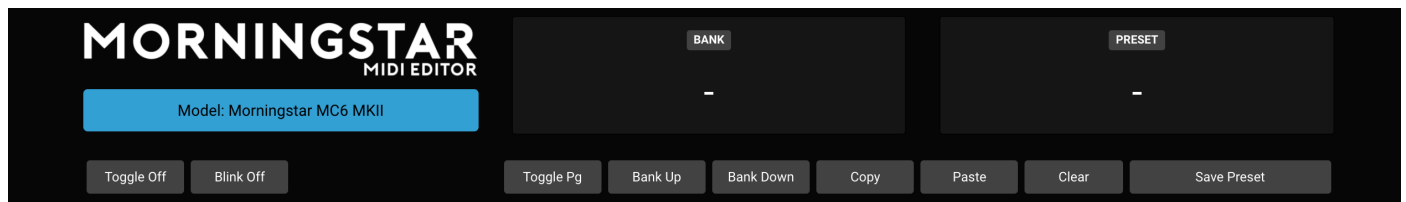
The screenshot displays the Morningstar MIDI Editor interface. At the top, the 'MORNINGSTAR MIDI EDITOR' logo is visible. Below it, a dropdown menu shows 'Model: Morningstar MC6 MKII'. To the right, there are two tabs: 'BANK' and 'PRESET', both showing a minus sign. Below these are several buttons: 'Toggle Off', 'Blink Off', 'Toggle Pg', 'Bank Up', 'Bank Down', 'Copy', 'Paste', 'Clear', and 'Save Preset'. Further down, there are input fields for 'Bank Name', 'Long Name', 'Short Name', and 'Toggle Name'. The main section is divided into two columns: 'Msg 1-8' and 'Msg 9-16'. Each column contains a table of MIDI messages. The 'Msg 1-8' column has 8 rows, and the 'Msg 9-16' column has 8 rows. Each row in the table has columns for 'Msg', 'Action', a dropdown menu (currently showing 'No Action'), 'Type', another dropdown menu (currently showing 'Empty'), and a set of buttons: 'Edit', 'Pos Off', 'Clear', 'Copy', and 'Paste'.

Msg 1-8						Msg 9-16					
Msg 1	Action	No Action	Type	Empty	Edit	Pos Off	Clear	Copy	Paste		
Msg 2	Action	No Action	Type	Empty	Edit	Pos Off	Clear	Copy	Paste		
Msg 3	Action	No Action	Type	Empty	Edit	Pos Off	Clear	Copy	Paste		
Msg 4	Action	No Action	Type	Empty	Edit	Pos Off	Clear	Copy	Paste		
Msg 5	Action	No Action	Type	Empty	Edit	Pos Off	Clear	Copy	Paste		
Msg 6	Action	No Action	Type	Empty	Edit	Pos Off	Clear	Copy	Paste		
Msg 7	Action	No Action	Type	Empty	Edit	Pos Off	Clear	Copy	Paste		
Msg 8	Action	No Action	Type	Empty	Edit	Pos Off	Clear	Copy	Paste		



Your device will have to be in Editor Mode for it to communicate with the editor. You can toggle into editor mode by pressing Switch [C + D] or by pressing the button below the logo on the editor [Toggle Editor Mode].

Once your controller is in editor mode, the Model button will turn Blue, indicating that it is communicating with your controller. You can then press any switch on your device to edit the corresponding preset. To edit your expression pedal, move the pedal and the settings will be loaded on the editor.

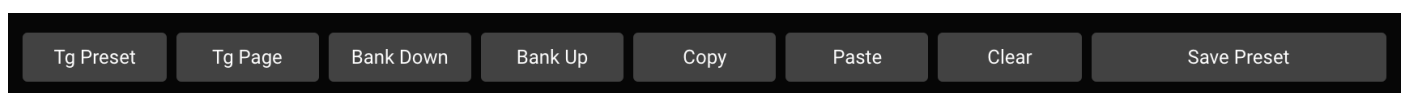


The editing parameters are similar to the on-board editing parameters.

## Editing Functions

There are various controls on the top right panel of the editor (below the Bank and Preset number display) as well. You can toggle the page on the MC6, Bank up or down or copy and paste presets. You can also clear your preset settings by double clicking the Clear button. This also applies to the Clear button on the individual Messages, where the Clear button has to be *double clicked*.

## Device Control Functions



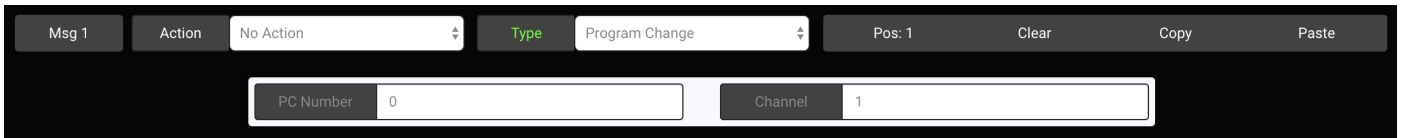
- Tg Preset: Toggles the Preset between Position 1 and Position 2
- Tg Page: Toggles the device page between 1 and 2 to load Preset A - F or G - L
- Bank Up / Bank Down: Bank up and down on the device
- Copy: Copy the Preset
- Paste: Paste the copied preset to a different selected preset
- Clear: Clear the Preset settings. This button has to be double-clicked
- Save Preset: Save the settings on the Editor to the device

# Preset Editing Options



- Toggle On/Off: Determines whether the preset should toggle it's toggle position each time it is engaged.
- Blink On/Off: Determines whether the preset name should blink when the preset is in toggle position 2.

# Message Editing Options



- Pos button: Determines if the message should be in Position 1, Position 2 or Both. For example, if Msg 1 is set to Pos 1, it will only engage when the Preset is in Position 1.
- Clear: Clears the message. This has to be doubled clicked.
- Copy: Copy the message
- Paste: Paste the earlier copied message to another message..



# Updating your firmware

We are constantly updating the firmware to include new features and bug fixes.

---

## What to download

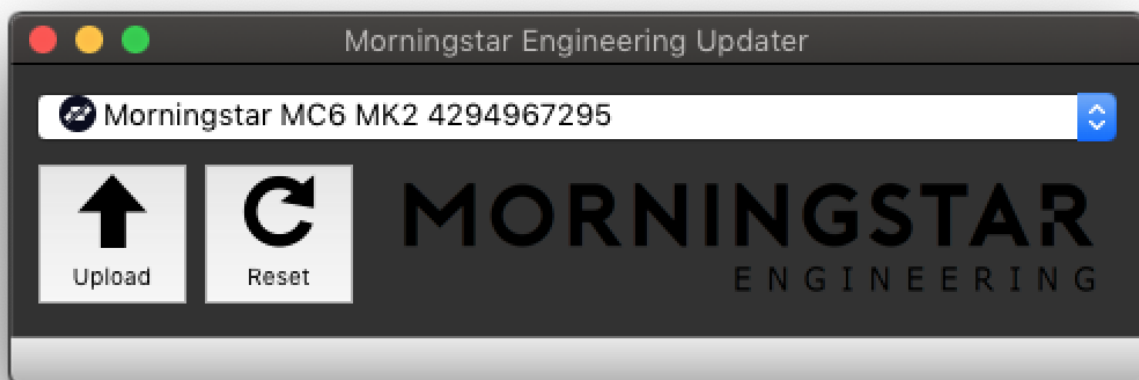
You'll need to use the Firmware Uploader software to upload the firmware to your device.

Download the latest Firmware Uploader software here (<https://github.com/Morningstar-Engineering/Firmware-Uploader/releases>).

Download the latest firmware here (<https://github.com/Morningstar-Engineering/MC6-MKII-Midi-Controller/releases>)

## Upload instructions

Open the Firmware Uploader



If your device is connected, it will appear in the Firmware Uploader software.

Click on Upload and select the firmware .hex file.

The firmware should then begin uploading and should take only a couple of seconds. Once it is completed, your device will restart with the new firmware.

---

# Troubleshooting

In the rare event where your device upload is not successful, the device might appear to be bricked with blocks showing across the LCD screen. Do not worry. Just remove the back cover for your device. While the device is connected to your computer via USB, and with the Firmware Uploader open, press the reset button location on the PCB.

Once pressed, the Firmware Uploader should detect the device. Thereafter, repeat the above upload procedure.

Reset Button

# Midi Type Glossary

This glossary describes each Midi Type message and the parameters/examples to use it.

---

## Empty Message

### Description

No data will be sent out.

## Program Change

### Description

Sends a Program Change message of a specified number and channel. Program Change messages are usually used to call presets or patches in your Midi devices.

### Example of Use

Activate a preset/patch on your Midi Device.

## Control Change

### Description

Sends a Control Change message of a specified number, value and channel. Control Change messages are usually used to change function parameters or call functions in your Midi devices.

### Example of Use

To activate the record function on the Strymon Timeline, send a CC#87 with any value. (Refer to Timeline Manual)

## Note On

**Description** Sends a Midi Note On Message.

# Note Off

## Description

Sends a Midi Note Off Message.

# Real Time

## Description

Sends a Midi Real Time message. Choose from Start, Stop or Continue

# SysEx

## Description

Sends a Midi System Exclusive message.

The first value is always the length of the SysEx array, followed by the values you want to send. The values are in decimal (base10) format and not in hex.

The values are spread across multiple messages. For example, if the length of your SysEx message is 5 and the message you want to send out is {0, 4, 25, 54, 23}, you will need to use 2 messages for this SysEx message where:

Msg 1 \* P1/Length = 5 \* P2 = 0 \* P3 = 4

Msg 2 \* P1/Length = 25 \* P2 = 54 \* P3 = 23

The actions assigned to each message must match. For example, if your SysEx message requires using 3 messages on the MC6, the 3 messages need to have the same action i.e. Press.

The length should not include the SysEx start and end bytes (i.e. 0xF0 and 0xF7).

# Midi Clock Tap Tempo

## Description

Sends a Midi Clock signal to out from USB and 5 Pin Midi. Syncs your Midi Clock enabled devices to a common BPM.

You can set the tempo in the parameters, and then choose if you want the device to show the tap menu.

If selected, the MC6 will load the tap tempo screen when the preset is activated.

If not selected, the MC6 will send out the Midi Clock messages according to the preset tempo. When another event occurs i.e. a switch is pressed or expression is moved, the Midi Clock messages will stop.

**Please note that this message does not work while you are in Editor Mode. Toggle out of Editor Mode to enable the full functionalities of this message.**

## PC Scroll Up

### Description

Sends an incremental message each time the preset is activated. There are 8 counters in the MC6 internal memory. The Select Slot parameter selects one of this counters for your PC Scroll message. Hence, each time the preset is activated, the MC6 will send a PC message which number is based on that counter. The Increment parameter determines if the counter will be increased each time the preset is engaged. The Lower Limit and Upper Limit parameters lets you set a range where the counter will scroll between.

Let's go through this scenario: If you are trying to scroll through 2 devices (on channel 1 & 2) at the same time with the same preset, first select a counter you want to use. In this example, let's set Select Slot to 1 for Msg1. Increment should be set to Yes, since we want the counter to increase (only for the first message). Thereafter, set your lower and upper limit and channel. For Msg2, select the same slot number as Msg1. Increment should be set to No, since the first message already increased the counter once.

## PC Scroll Down

### Description

Similar to PC Scroll Up, but counter is decreased instead of increase.

## Bank Up

### Description

Changes to the next bank on the MC6.

**Please note that this message does not work while you are in Editor Mode. Toggle out of Editor Mode to enable the full functionalities of this message.**



# Bank Down

## Description

Changes to the previous bank on the MC6.

**Please note that this message does not work while you are in Editor Mode. Toggle out of Editor Mode to enable the full functionalities of this message.**

# Bank Change Mode

## Description

Puts the MC6 into a state where you can scroll up and down banks with dedicated switches and then select the bank you want to use.

**Please note that this message does not work while you are in Editor Mode. Toggle out of Editor Mode to enable the full functionalities of this message.**

# Set Bank

## Description

Jumps to another bank on the MC6.

When the Last Bank option is set to Yes, the device will change to the last used bank. For example, if you banked up from Bank 3 to Bank 4, and you engage a preset with the Set Bank (Last Used Bank), the device will change back to Bank 3.

**Please note that this message does not work while you are in Editor Mode. Toggle out of Editor Mode to enable the full functionalities of this message.**

# Toggle Page

## Description

Toggle between pages in a bank. In the main page, the main switches control Presets A-F. By toggling to the next page, Presets G-L are brought forward to the main page where their preset names will be displayed on the screen, and you can control them with the main switches.

# Set Toggle

## Description

Changes the toggle state of your presets. You can choose whether to "Set" or "Clear" the toggle positions. "Set" will engage the preset, while "Clear" will disengage it. You can select the presets to apply this change to.

**Please note that this message does not work while you are in Editor Mode. Toggle out of Editor Mode to enable the full functionalities of this message.**

# MIDI Thru

## Description

Sets the global Midi Thru feature on the MC6 on or off.

# Select Expression Message

## Description

You can select individual messages in each expression preset to be active with this function. There are 16 messages in each expression preset. If, for example, you set Msg1 and Msg2 to be active on Expression 1, each time you move your expression pedal in Exp1 input, only Msg1 and Msg2 will be sent out.

This setting is global and applied to all banks. It will be reset to all active when the device power cycles.

# Looper Mode

## Description

This message toggles in and out of Looper mode. Looper mode basically increase the sensitivity of your switches to the maximum, so that messages sent out are instantaneous. This is useful if you are using the MC6 to control time-sensitive functions such as Record/Play/Stop.

In firmware v3.2 onwards, instead of Toggle on/off, we added a selection to allow users to select whether they want to Toggle or set Looper Mode to On or Off.

# Strymon Bank Up

## Description

Bank up on your Strymon Timeline, Möbius and Bigsky

# Strymon Bank Down

**Description** Bank down on your Strymon Timeline, Möbius and Bigsky

# AxeFX Tuner

## Description

Upon engagement, the MC6 will send a CC#15 message with value 127 to the selected channel. CC#15 controls the tuner function on the AxeFX. After which, the tuner page will load. Upon exit, the MC6 will send a CC#15 message with value 0 to disengage the AxeFX tuner.

## Things to note

Turn off Midi Thru on your AxeFX.

Enable SysEx send on your AxeFX.

Connect your AxeFX Midi out to the MC6 Midi In

**Please note that this message does not work while you are in Editor Mode. Toggle out of Editor Mode to enable the full functionalities of this message.**

# Toggle Preset

## Description

This setting toggles a Preset between positions 1 and 2, and can be useful if you want to toggle a Preset with a specific action.

## Things to note

To use this, be sure to leave the Preset-level toggle setting off. If not, any action engaged on the preset will toggle the preset.

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# Action Glossary

Descriptions for the list of actions.

---

## Overview

Each of the 16 messages can be programmed to match an action.

## Press

A single tap to the switch.

## Release

Releasing the switch after a Press action.

## Long Press

A single tap to the switch that is held down for at least 600ms.

## Long Press Release

Releasing the switch after a Long Press action.

## Double Tap

A double consecutive tap to the switch.

## Double Tap Release

Releasing the switch after a Double Tap action.

## Long Double Tap

A double consecutive tap to the switch that is held down for at least 600ms.

# Long Double Tap Release

Releasing the switch after a Long Double Tap action.

## Release All

This action groups Release and Long Press Release together.

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# MIDI Implementation

MIDI implementation chart for the MC6 MKII.

The MC6 MKII can respond to CC and PC messages from it's USB MIDI port and MIDI IN port to execute specific functions. You can send PC or CC messages via an external MIDI controller or software to control the MC6 MKII functions specified below.

## PC Messages

PC messages will change the banks on the MC6 MKII, where a PC#0 message will engage Bank 1, and PC#1 message will engage Bank 2, and so on.

## CC Messages

Function	CC#	Value
Bank Up	0	any
Bank Down	1	any
Clear Toggle (All)	2	127
Clear Toggle (Individual)	2	0 - 11 (0 = Preset A)
Set Toggle (All)	3	127
Set Toggle (Individual)	3	0 - 11 (0 = Preset A)
Page Toggle	4	any
Engage Preset	10 - 21 (10 = Preset A)	0 = Do Nothing 1 = On Press 2 = On Release 3 = On Long Press 4 = On Long Press Release 5 = On Double Tap 6 = On Double Tap Release 7 = On Double Tap Hold 8 = On Double Tap Hold Release



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# Frequently Asked Questions

## How do I set an external aux controller to change banks?

Connect an aux controller to the MC6 with a stereo cable. Be sure to change the expression input type to "Aux Switch" in the Main Configuration Menu. The Aux switch will work just like a regular switch, where each switch will invoke a preset. You simply need to program a bank up and bank down message in each preset and you are good to go.

## My MC6 hangs at the main preset screen.

Check your Expression input settings. It is likely that you have your expression input setting set to "Aux Switch" but do not anything plugged into the input ports. If you have nothing plugged into your expression input(s), it should be set to "Expression Pedal" instead of Aux Switch.

## How do I paste a preset to all banks?

Go into the preset edit menu and then copy the preset. After the preset is copied, hold down the Paste button for 2 seconds. The device will paste the copied preset to all banks for the current active preset.

## How do I set the expression pedal to send different CC messages per preset?

The expression pedal inputs work on a per-bank basis, where every bank has a different expression preset. Each expression preset has 16 midi messages that you can program. By changing banks on the MC6, you can send different CC messages. You can also send different CC messages in each expression preset in the same bank by using your standard presets A-L. By programming a "Select Exp Message" midi type in your preset, you can select which of the 16 midi messages in your expression preset to be active. Hence, when using your expression pedal, only the selected messages will be sent out.

There is a lag between the time when I press the switch and the time when the MIDI message is sent out. How can I fix this?

There are several possibilities to this.

### *Switch sensitivity*

This can be adjusted in the Switch Sensitivity setting in the Main Config menu. The switch sensitivity determines how fast dual switch presses are read. A lower sensitivity will make it easier to engage a dual switch press function. If you change the setting to 5, you'll notice that the delay will decrease. You can make use of the Looper mode function, which decreases the delay to close to 0. However, you'll find that dual switch presses to change backs etc are not possible in this mode.

### *Double Tap*

If you have a Double Tap action programmed into your preset, there will be a delay as the controller is checking if a Double Tap action will occur, before sending out the message.

How do I lock my banks so that Switch A+B or B+C will not bank down or bank up?

Set your Switch Sensitivity to the maximum. This reduces the delay when a switch is pressed, and hence makes engaging dual switch functions harder.

# Help

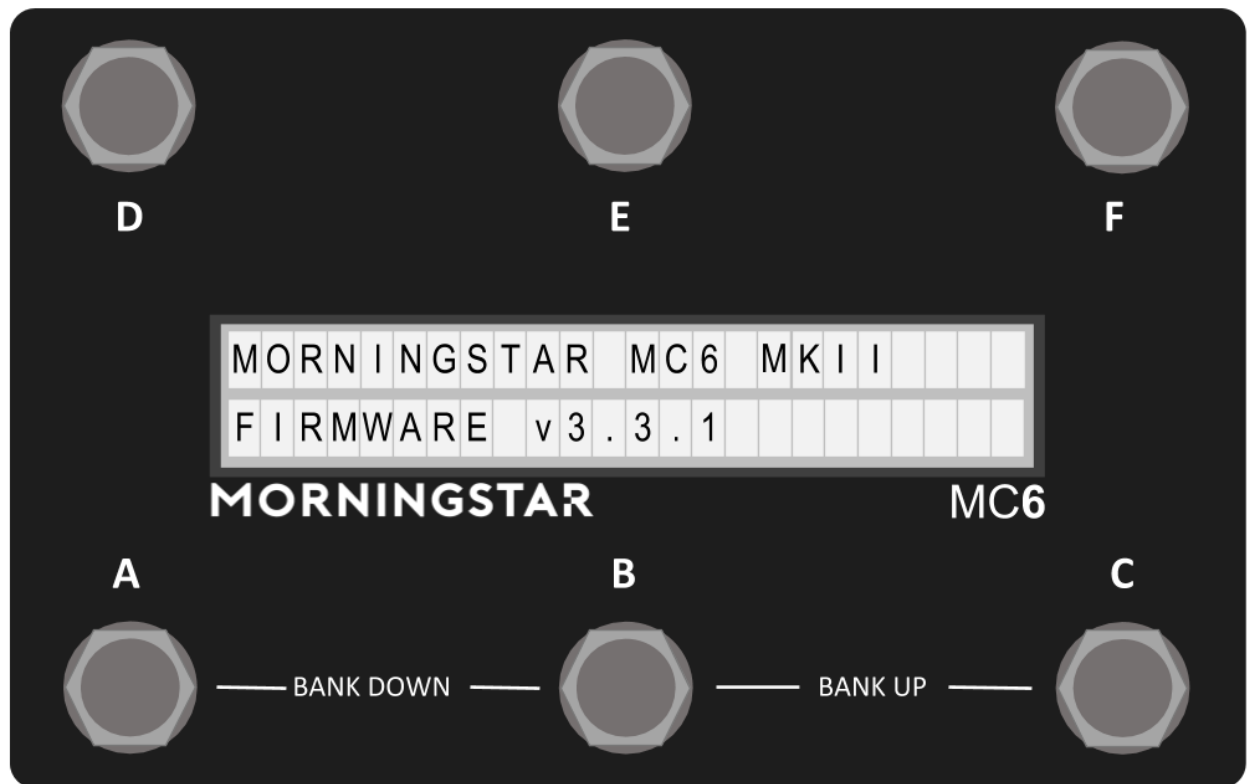
If you are facing any issues with using the MC6, please do not hesitate to reach out to us at [help@morningstarfx.com](mailto:help@morningstarfx.com)

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# Overview



## Latest Firmware: v3.3.1

### Updating your firmware

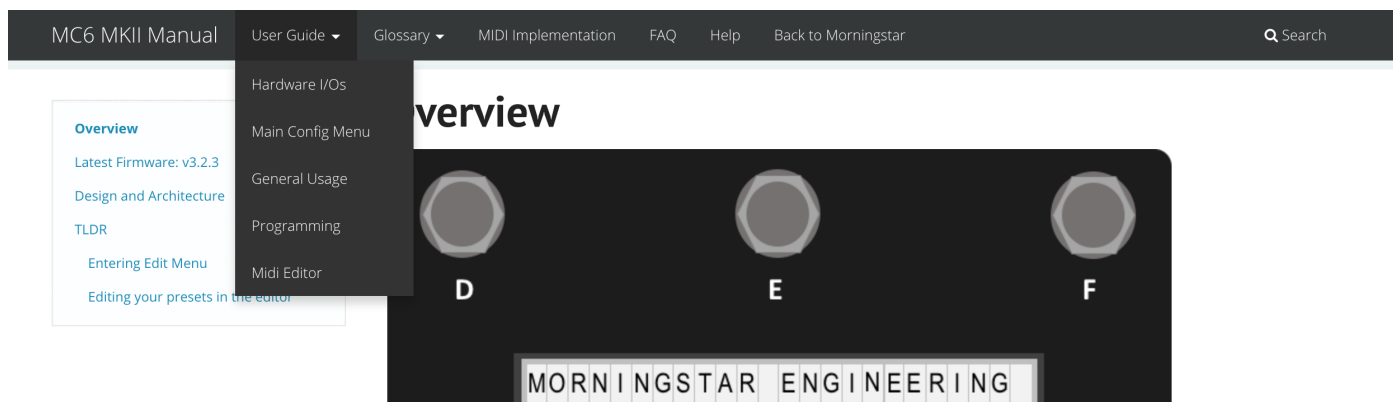
More instructions here ([user-guide/07-firmware-update](#))

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## How to use this manual

The navigation panel is at the top of the page.

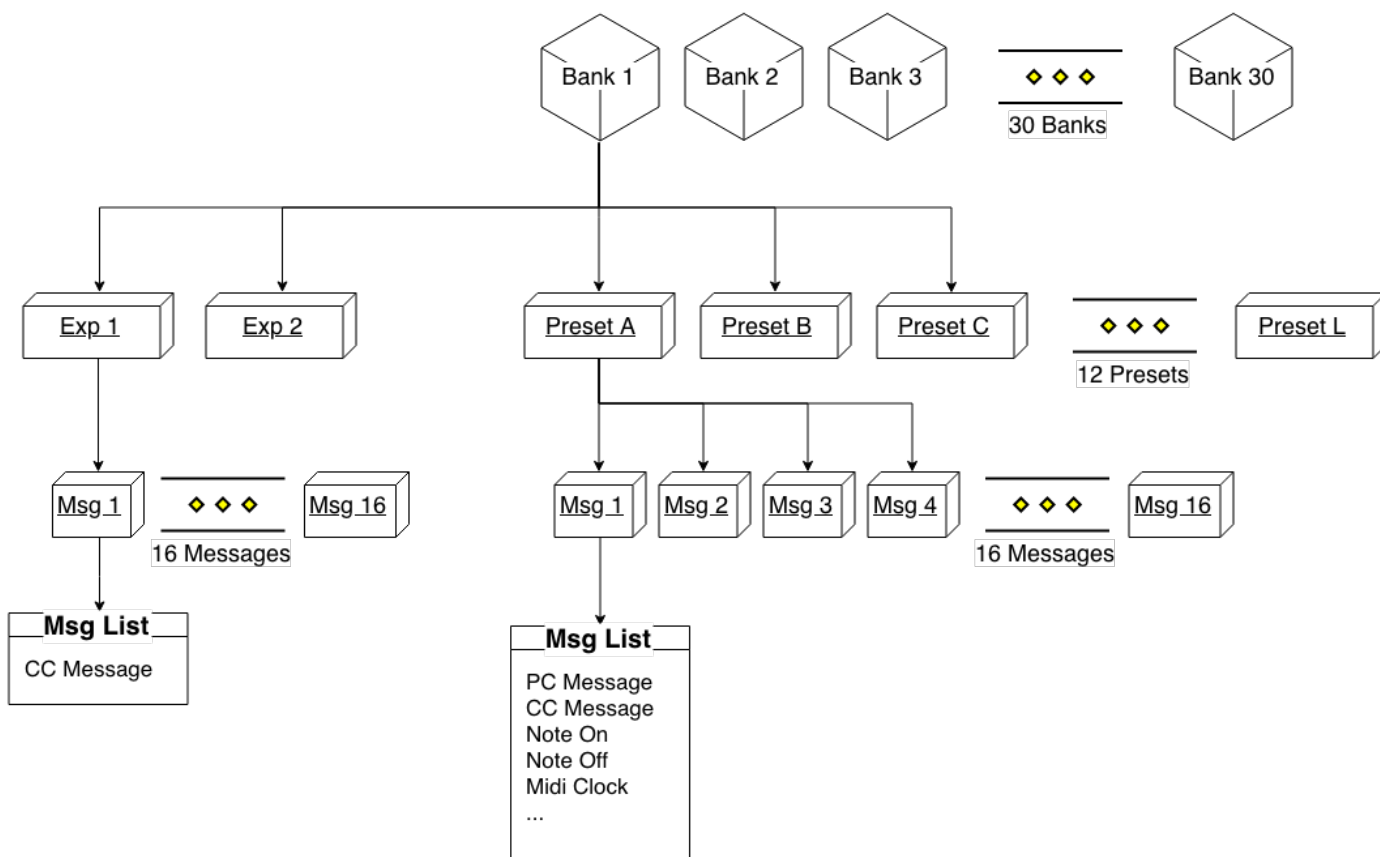
The search widget allows you to easily find content in the manual.



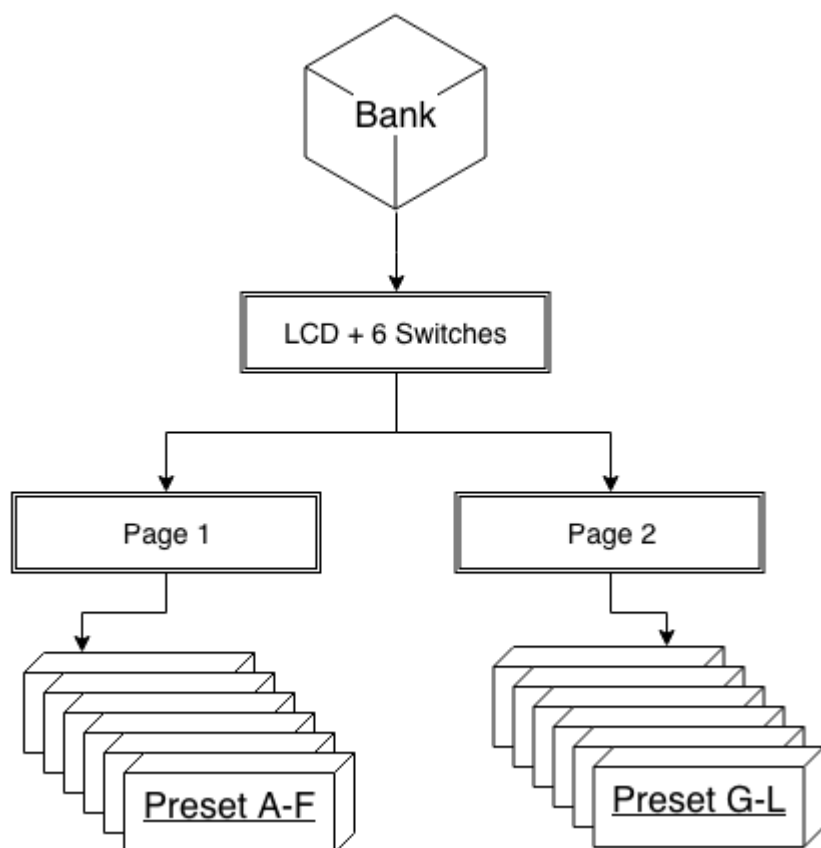
# Design and Architecture

The MC6 MKII is a fully programmable MIDI controller.

How it is structured is simple



There are 30 banks. Each bank has 12 presets and 2 expression presets. Each preset can be programmed to send out 16 different messages.



Each bank can display up to 6 presets, of which all are accessible from the 6 switches. The other 6 presets can be engaged via dual switch presses or external aux controllers. A Page Toggle function is also available to switch between the first 6 presets and the last 6 presets.

Please refer to the Midi Types Glossary ([../glossary/07-midi-type-glossary](#)) for the full list of messages available to you.

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## TL;DR

Too long, didn't read! Cause who likes reading manuals, right? While we encourage you to go through the full manual, here's a quick list of information to get you quickly started. We take pride in making the MC6 MKII as easy to use as possible, and hope that the on-board directions will be intuitive enough to you.

## Entering Edit Menu

Press Switch [D + F] in the main preset page. The last used preset, expression pedal input and bank will be displayed in the menu.

# Editing your presets in the editor

Make sure you are in Editor mode. Press Switch [C + D] to enter editor mode or click the Toggle Edit Mode button on the editor.

**Make sure to exit Editor mode to have the full functionality available before you use it with your devices.**

---

We take pride in making the device one of the easiest-to-use programmable Midi controllers in the market. If there is any questions you have using the device, please do not hesitate to drop us an email at [help@morningstarfx.com](mailto:help@morningstarfx.com).

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# Hardware I/Os

## Powering the MC6

How to power your MC6

### 9VDC Centre Negative power supply

Connect a 9VDC centre negative power supply to the power input of the MC6.

### Phantom Power (9-12v AC or DC)

Connect a 7-pin Midi cable to the MIDI OUT port of the MC6. Phantom power is supplied through pins 6 and 7. Phantom power is chained to pins 6 & 7 on the MIDI IN port as well, allowing you to power other devices.

If sending DC power, the polarity does not matter.

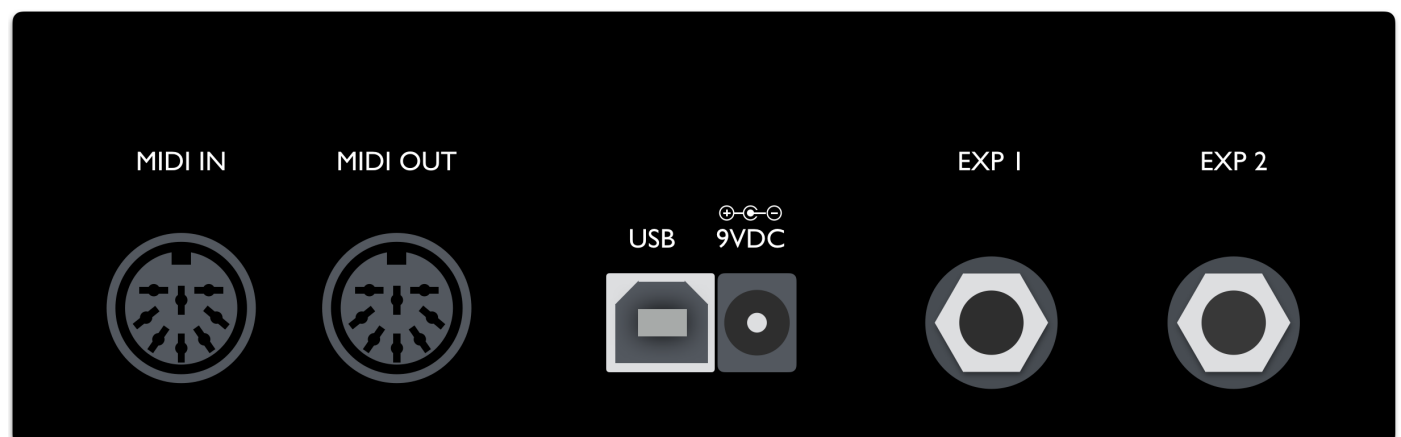
### USB power

Connect a USB cable to the MC6. The MC6 is capable of being fully powered by USB.

---

## Connections

Information on all the inputs and outputs on the MC6.



### Midi In/Receive

This is where the MC6 receives MIDI messages from other MIDI devices.

The MC6 passes incoming MIDI messages via the MIDI In/Receive port out to the USB port, and vice versa.

### **Midi Out/Send/Thru**

This is where MIDI data is sent from the MC6 to other devices. You can use a standard 5-pin MIDI cable, or a 7-pin one if you want to power the MC6 with phantom power. The MC6 also has MIDI THRU, which allows incoming MIDI messages to be relayed to other MIDI-capable devices.

### **USB port**

The MC6 can also send and receive MIDI data via USB, allowing you to have control over your DAWs and music software. It is class compliant and compatible with Windows, macOS, Android and iOS.

The MC6 passes incoming MIDI messages via the MIDI In/Receive port out to the USB port, and vice versa.

### **EXP 1 & 2**

Connect your expression pedals to these ports. You may also connect aux switches to add more programmable switches to the MC6.

Please note that these ports are INPUT only, and cannot be using to control functions like amp switching or sending Control Voltage messages. You should only be connecting an expression pedal or TRS passive Aux Switches to these ports.

You should only use **STEREO CABLES**. Using Mono cables will cause the MC6 to not work as intended.

**Please do not apply any power to these inputs**

---

## **Using External Aux Switches**

Connect an external Aux switch to your MC6 to control Presets G - L.

The MC6 requires an aux switch that is wired to work with the Eventide H9. It has to be connected to the MC6 with a stereo cable, where the Tip is conneted to the ground via a footswitch, and similar to the Ring as well. Another switch can be added to connect both Tip and Ring to ground to engage an additional preset/setting. Please refer to the schematic below.

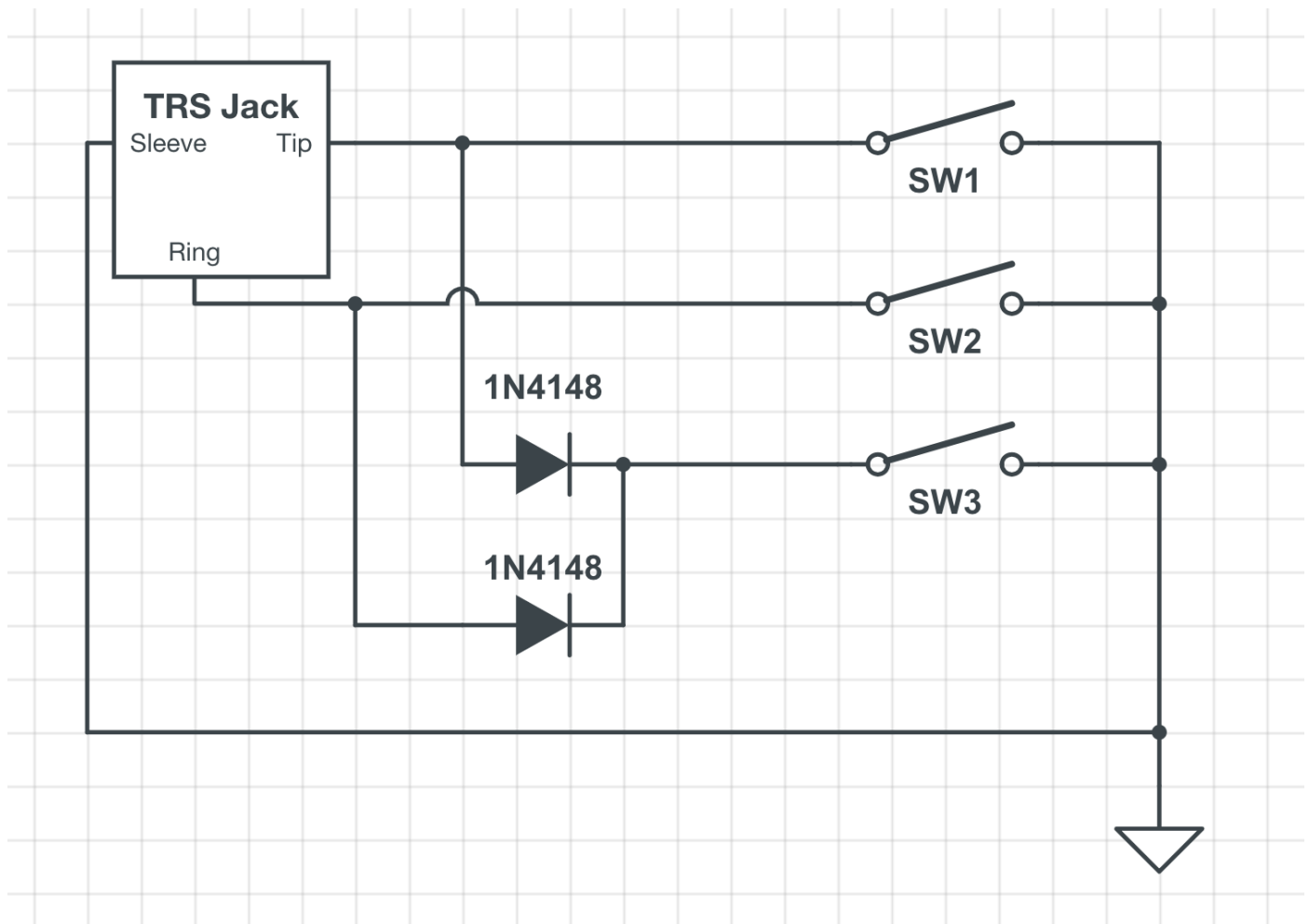
There are a few pedal builders that sell such devices:

Analog Endeavors ([www.analogendaevors.com](http://www.analogendaevors.com))

American Loopers ([www.americanloopers.com](http://www.americanloopers.com))

Please note that we are in no way affiliated with these companies.

If you would like to build one yourself, you can refer to the following schematic:



## Using Expression Pedals

The MC6 works best with Expression pedals fitted 10k - 25k linear potentiometers. The potentiometer wiper should be connected to the Tip of the stereo cable, while the Ring and Sleeve should be connected to the outer lugs on the potentiometer.

When connecting a new Expression pedal, be sure to calibrate it first by going into the Edit menu (Switch D+F), selecting **Exp1** or **Exp2** and then **Calibrite**.

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# Main Configuration Menu

To access the Controller Settings Menu, hold down **Switch D** before powering up the MC6. This menu allows you to edit the global settings for the device.

The Main Configuration Menu can also be accessed by going into the Edit Settings page (Switch D + F) and selecting **ConfigPg**.

Please note that the controller will restart after exiting the Main Configuration Menu.

The display will indicate that it is booting into the configuration page, and the menu below will be displayed:



D



E



F

M	i	d	i	C	h	n	l		R	e	s	e	t		P	g	(	1	/	2	)
E	x	p	i	n	p	t		S	w	S	e	n	s			(	E	x	i	t	)

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**MC6**

A



—— BANK DOWN ——

B



—— BANK UP ——

C



D



E



F

B	n	k	T	i	m	e		B	n	k	C	h	g	D	i		P	g	(	2	/	2	)
M	i	d	i	C	i	k											(	E	x	i	t	)	

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**MC6**

A



—— BANK DOWN ——

B



—— BANK UP ——

C



## Factory Reset - Reset

To do a factory reset, hold down for 2 seconds. The MC6 will show that it is performing a factory reset. All user presets and settings will be reset to factory default when a reset is done.

## Set MIDI Channel - MidiCh

Set the MIDI receive channel for the MC6. The MC6 can receive and respond to messages from external midi controllers. Press Switch A or B to increase or decrease the MIDI channel respectively.

Press **(Save)** to save your settings and **(Exit)** to exit.

## Change Expression Input - Explnpt

Change Expression Input Type and select between **Aux Switch**, **Expression** or **Fixed Sw 1** Setting.

- Aux Switch: Use a stereo cable to connect to an external aux switch to control more presets. Aux Switch compatibility is described here ([../02-hardware-overview#using-external-aux-switches](#)).
- Expression: Connect an expression pedal via a stereo cable (Tip connected to wiper) to engage the expression preset. Expression Pedal compatibility is described here ([../02-hardware-overview#using-expression-pedals](#)).
- Fixed Sw 1: Similar to the aux switch, but the functions are hard-coded to control the Bank Up, Bank Down and Toggle Page functions without sacrificing any presets.

## Switch Sensitivity - SwSens

Set switch sensitivity. Choose from 1 (least sensitive) to 5 (most sensitive). Pressing Switch A+B together will select 2, while B+C will select 4.

By default, this is set to 3 and should be comfortable for most users. Depending on personal taste, you may adjust sensitivity to help you bank up/down (by stepping on 2 switches at once) more accurately. More sensitive means that the lag between the time when a message is sent out and when the switch is pressed it at its minimum.

## Change Page - Pg(1/2)

Access more options in the Main Configuration Menu by changing the page.



## Bank Display Time - BnkTime

This setting adjusts the amount of time the bank details will show when the bank is changed.

The value displayed is in milliseconds.

## Bank Change Time - BnkChgDelay

This setting adjusts the time it takes to load the next bank when the bank is changed.

The value displayed is in milliseconds.

## MIDI Clock - MidiClk

The MIDI clock setting toggles the persistent MIDI clock function ON and OFF. This setting is related to the MIDI Clock message under MIDI Types. If persistent MIDI is ON, the MIDI Clock message will continue sending a MIDI clock signal when engaged, even when engaging other presets or scrolling through banks. However, if persistent MIDI is OFF, the MIDI clock signals will shut off when an event (like a switch press or expression pedal move) is triggered.

# General Usage

---

## Changing Banks

Step on Switches [A + B] together to bank down and Switches [B + C] to bank up. There are a total of 30 banks on the MC6 MKII.

Bank Changes can also be executed by programming a Bank Change function to a preset, or by using an External Aux Switch.

## Switch and Display Names

Each switch corresponds to the display name closest to it. Pressing switch [A] activates Preset A, switch [B] activates Preset B and so forth.

## Mapping Actions to Midi Types

The MC6 MKII allows you to map actions taken on the switches to MIDI Types and functions. For example, you can map a CC#1 message to a Press action, and a CC#2 message to a Release action. When the switch is pressed, a CC#1 message will be sent, and when the switch is released, a CC#2 messages will be sent. There is a list of actions available to you.

1. Press
2. Release
3. Long Press
4. Long Press Release
5. Double Tap
6. Double Tap Release
7. Long Double Tap
8. Long Double Tap Release
9. Release All

More information can be found in the Action Glossary ([../glossary/08-action-glossary](#)).

# MIDI Thru

The MC6 MKII can be programmed to pass incoming MIDI signals from it's MIDI IN port to it's MIDI OUT port. It can also pass CC, PC and Note messages thru to the USB port. The MC6 MKII will also pass incoming CC, PC and Note MIDI signals from it's USB MIDI port to it's MIDI OUT port.

You can toggle this setting on and off by pressing Switches [A + F] together.

## Editing Presets

Both the Switch Presets and Expression Presets on the device can be edited via the on-board editing functions (../05-edit-mc6) or the Web/Desktop Editor (../06-midi-editor).

## Coping and Pasting Presets

The device allows copying and pasting of presets into different

## Dual Switch Functions

The MC6 MKII makes use of dual switch combination to carry out certain functions.

Function	Switch
Bank Down	A+B
Bank Up	B+C
Edit Menu	D+F
Toggle Editor Mode	C+D
Toggle MIDI Thru	A+F

Besides this, you can also use dual switch presses to call the extra presets.

Preset Switch	
G	D+E
H	E+F
I	A+D
J	B+E
K	C+F

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# Programming the MC6

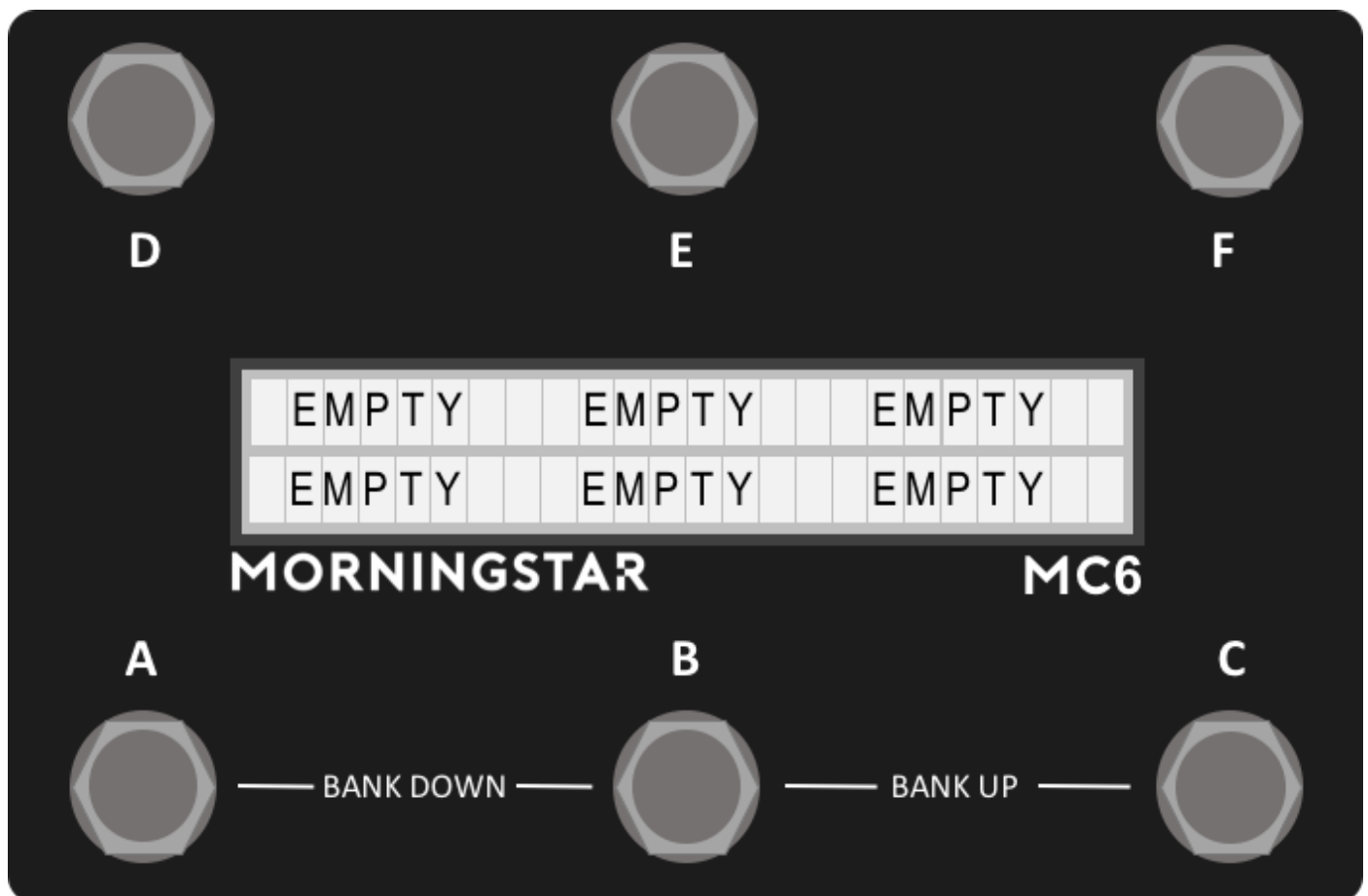
The MC6 MKII can be programmed on the device itself, or by using the Web/Desktop Editor ([../06-midi-editor](#)).

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## Edit Menu

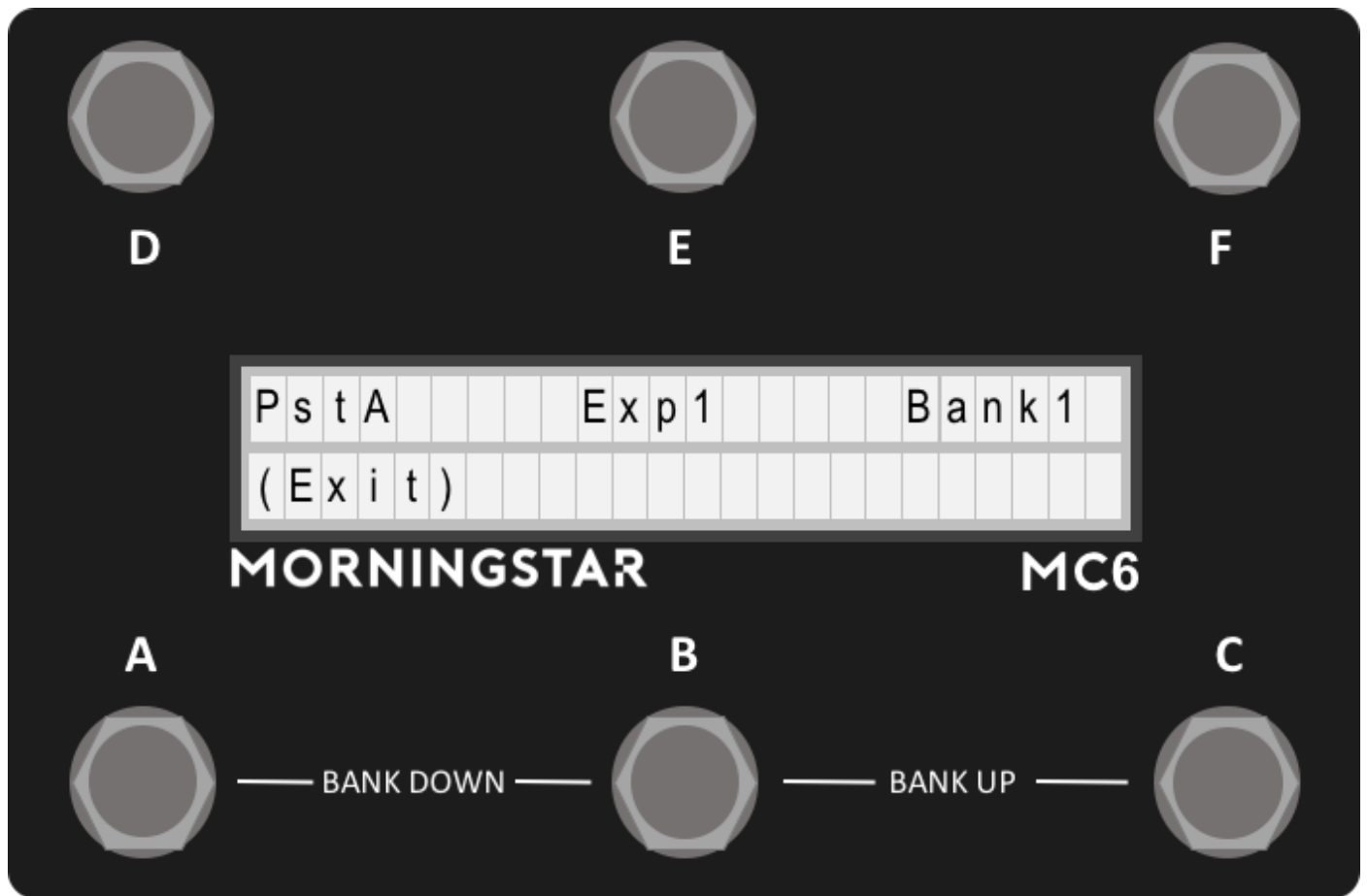
On a new controller, all switches are initially labelled as EMPTY. It is up to you to decide exactly what each one will do.

**To enter the Edit Menu**



1. Press the switch you wish to program
2. Press Switches [D + F] together. This will take you to the Edit Menu shown below.

**Edit Menu**

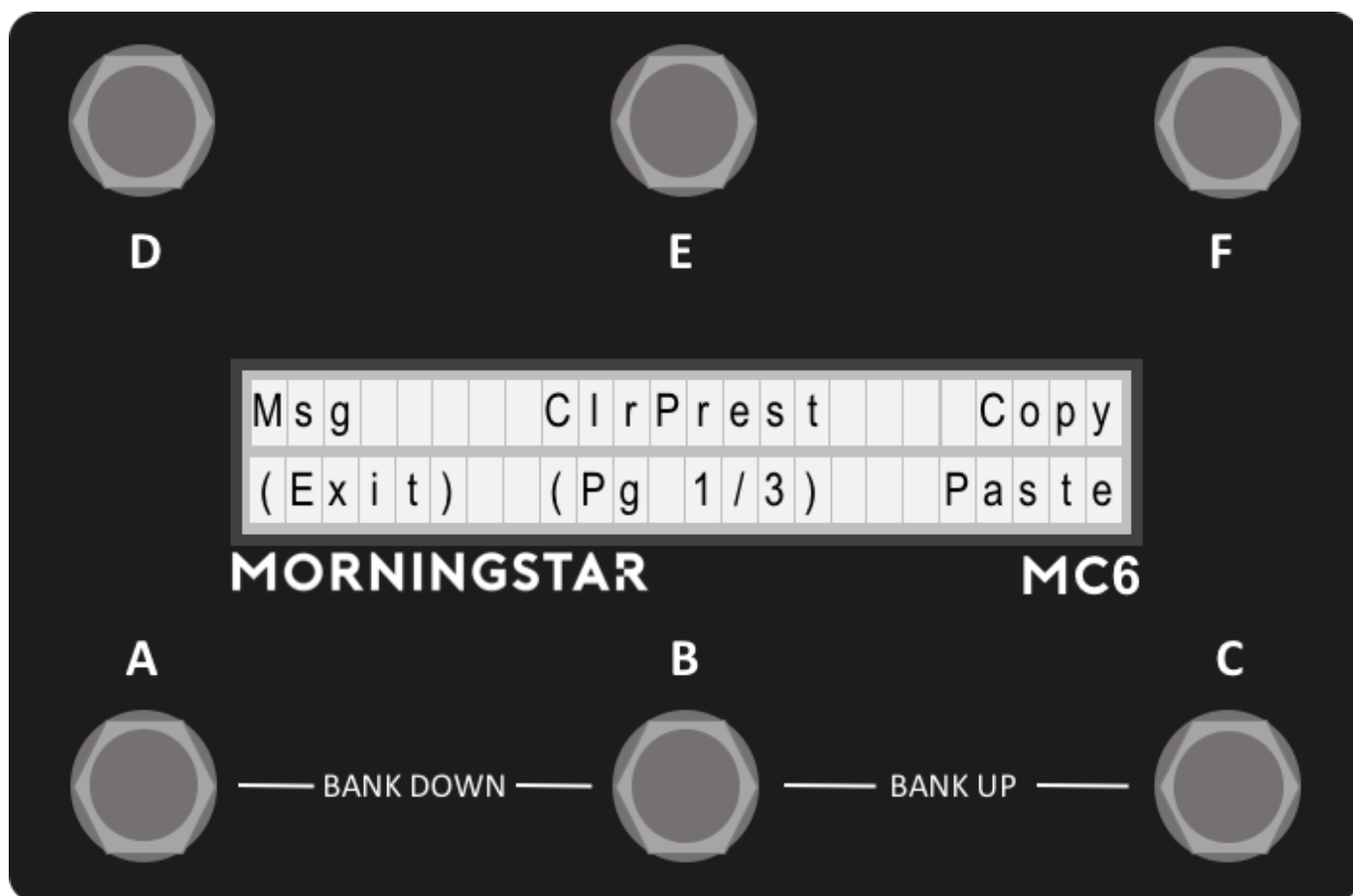


After pressing [D + F], the Edit menu will be displayed. The preset and expression you last used will be displayed, as well as the bank you are currently on. Press Switch D to edit the preset, Switch E to edit the expression preset, or Switch F to edit the bank.

## Programming Presets

Upon pressing Preset in the Edit Menu, you will be directed to the Preset Edit page.

## Preset Edit Menu (Page 1)



### **Msg**

Edits the 16 Midi Messages available in the preset.

### **ClrPrest (Clear Preset)**

Clear the preset settings.

### **Copy**

Copy the preset settings

### **Paste**

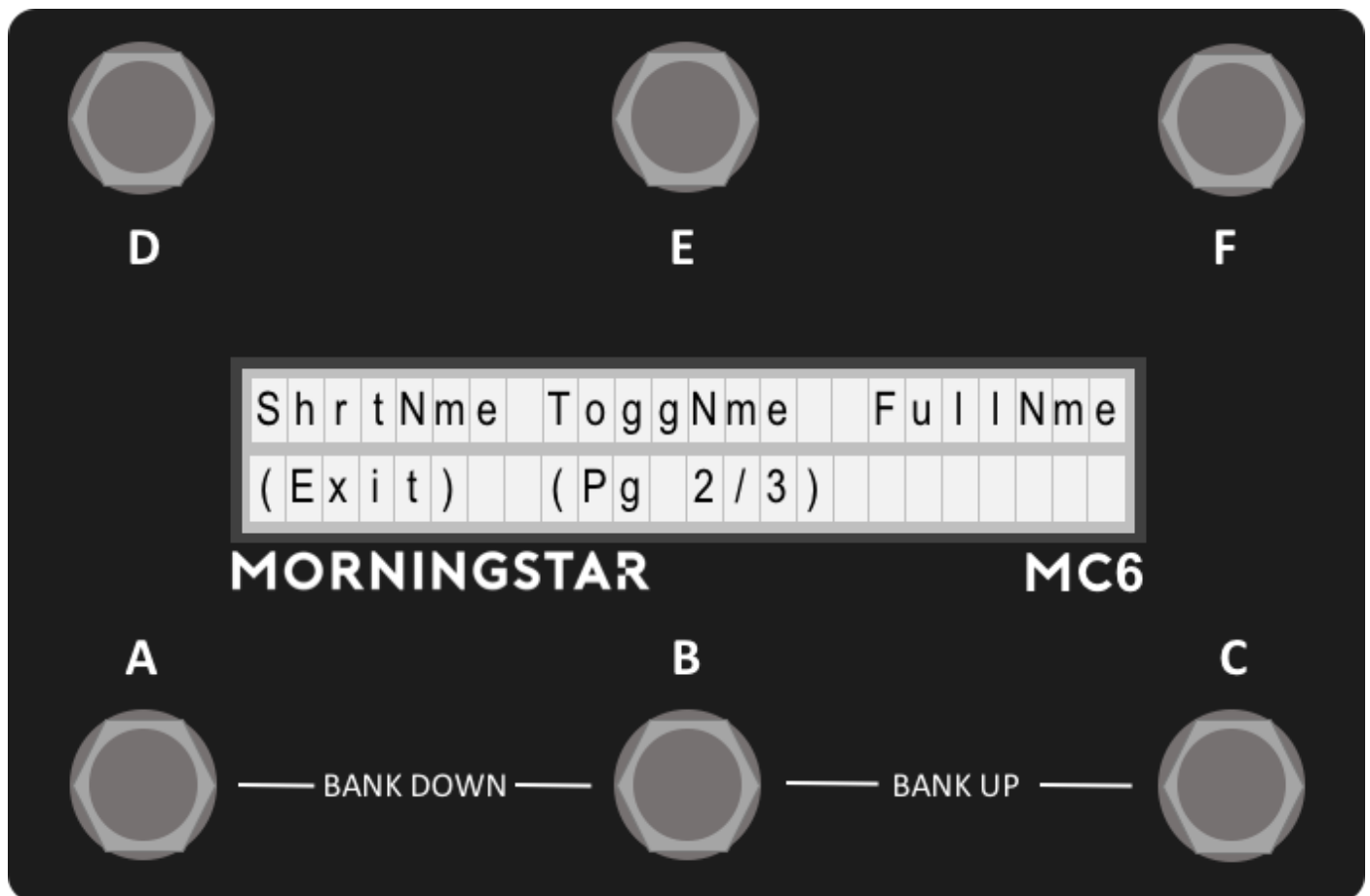
Paste the last copied preset settings

### **(Pg 1/3)**

Shows the current page in the menu. Press to go the next page.

---

## Preset Edit Menu (Page 2)



### **ShrtNme (Short Name)**

Edits the preset short name. Look at Editing Names for more information on how to edit any names in the MC6.

### **ToggNme (Toggle Name)**

Edits the preset toggle name. Look at Editing Names for more information on how to edit any names in the MC6.

### **FullNme (Full Name)**

Edits the preset full name. Look at Editing Names for more information on how to edit any names in the MC6.

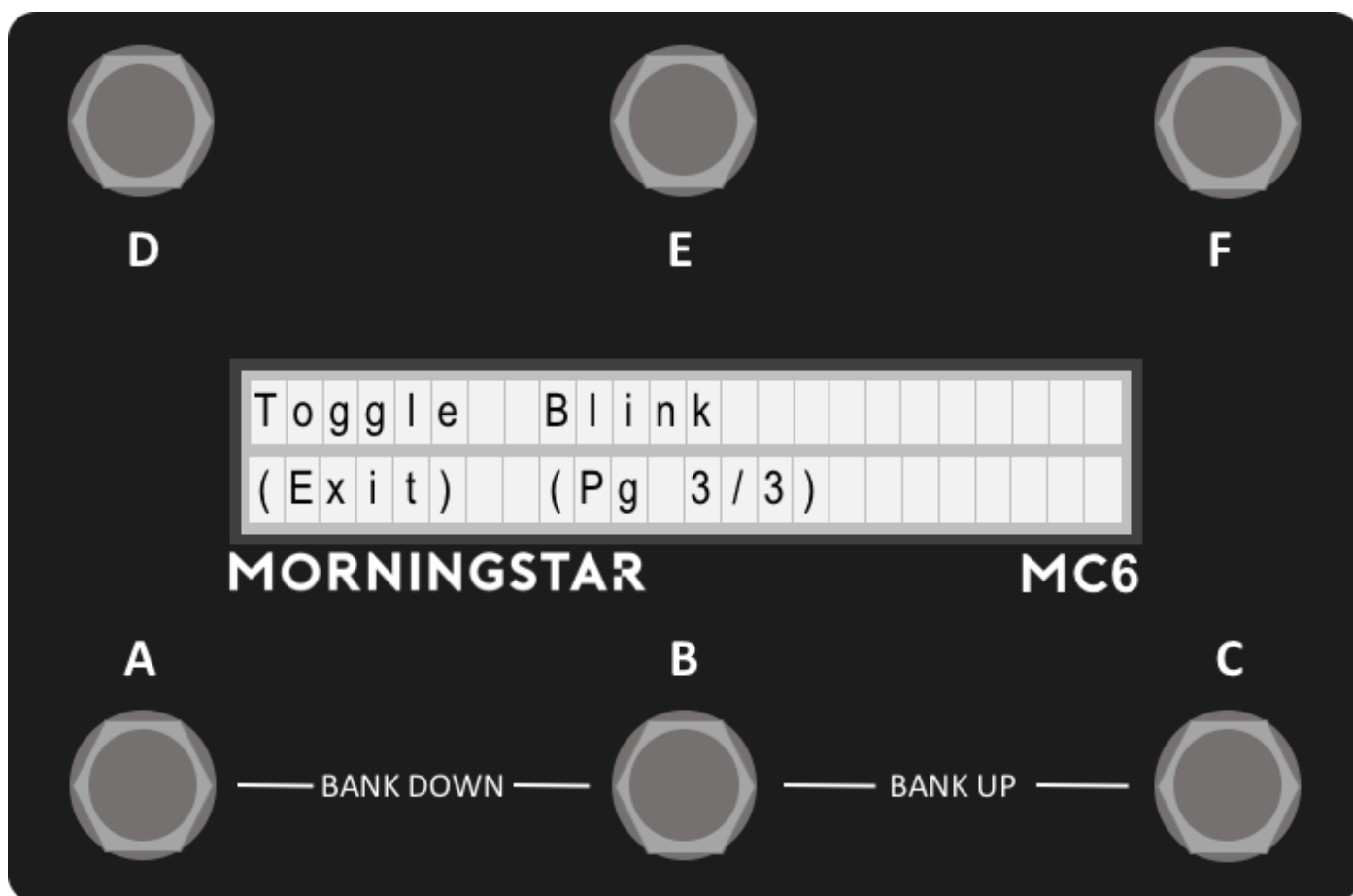
### **(Pg 2/3)**

Shows the current page in the menu. Press to go to the next page.

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## Preset Edit Menu (Page 3)



### Toggle

Toggles between On and Off for the preset toggle setting. If On, each time the preset is engaged, the toggle position of the preset will change. The Midi Messages in the preset will rely on the toggle position of the preset to determine if it should be invoked.

### Blink

Toggles between On and Off for the preset blink setting. If On, the preset short name will blink when the preset toggle is in the engaged position. This is useful to visually determine the toggle state of your preset.

### (Pg 3/3)

Shows the current page in the menu. Press to go to the next page.

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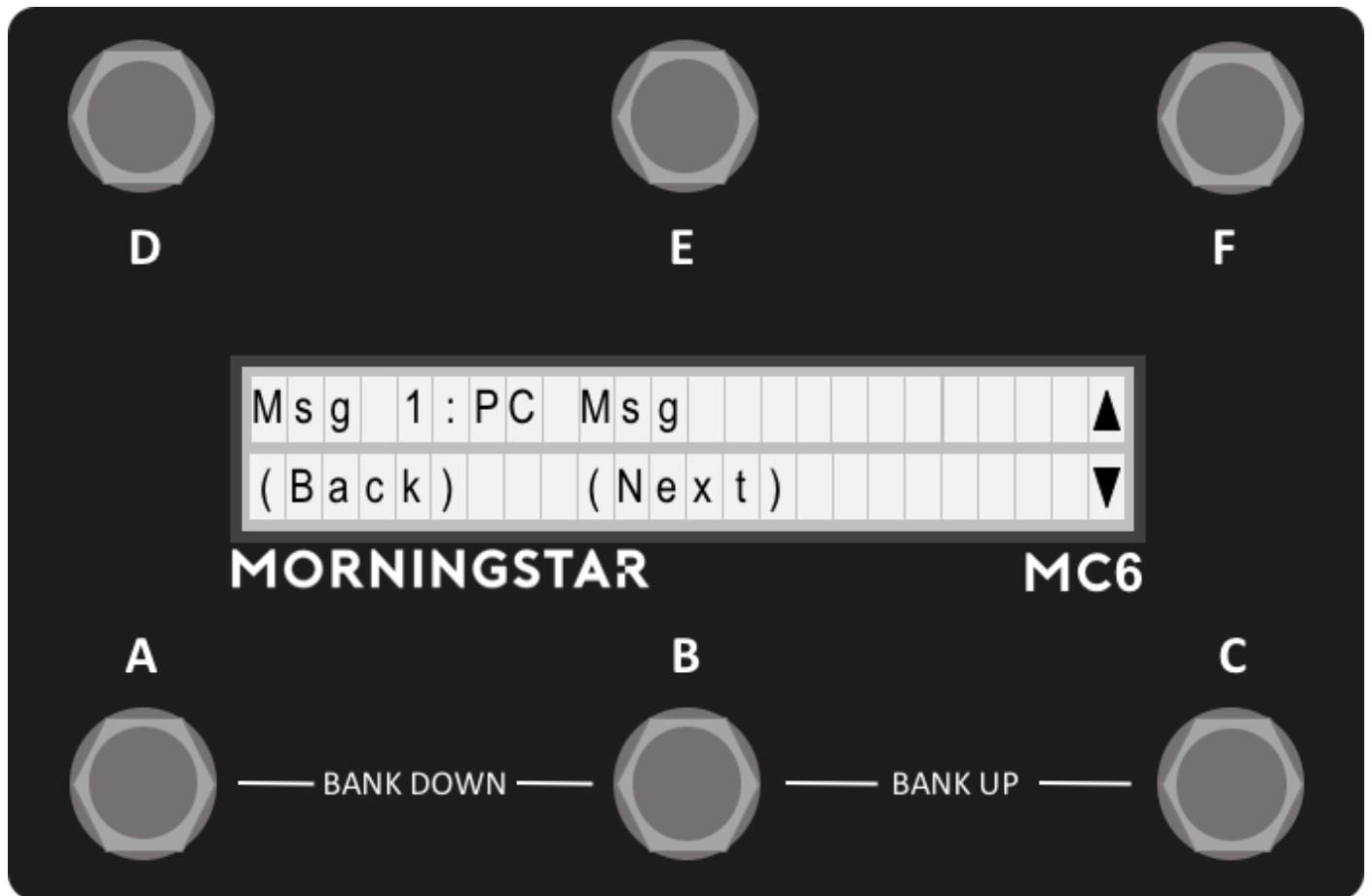
## Editing Preset Messages

The MC6 has 16 Messages in each Preset.

## Selecting a Message to Edit

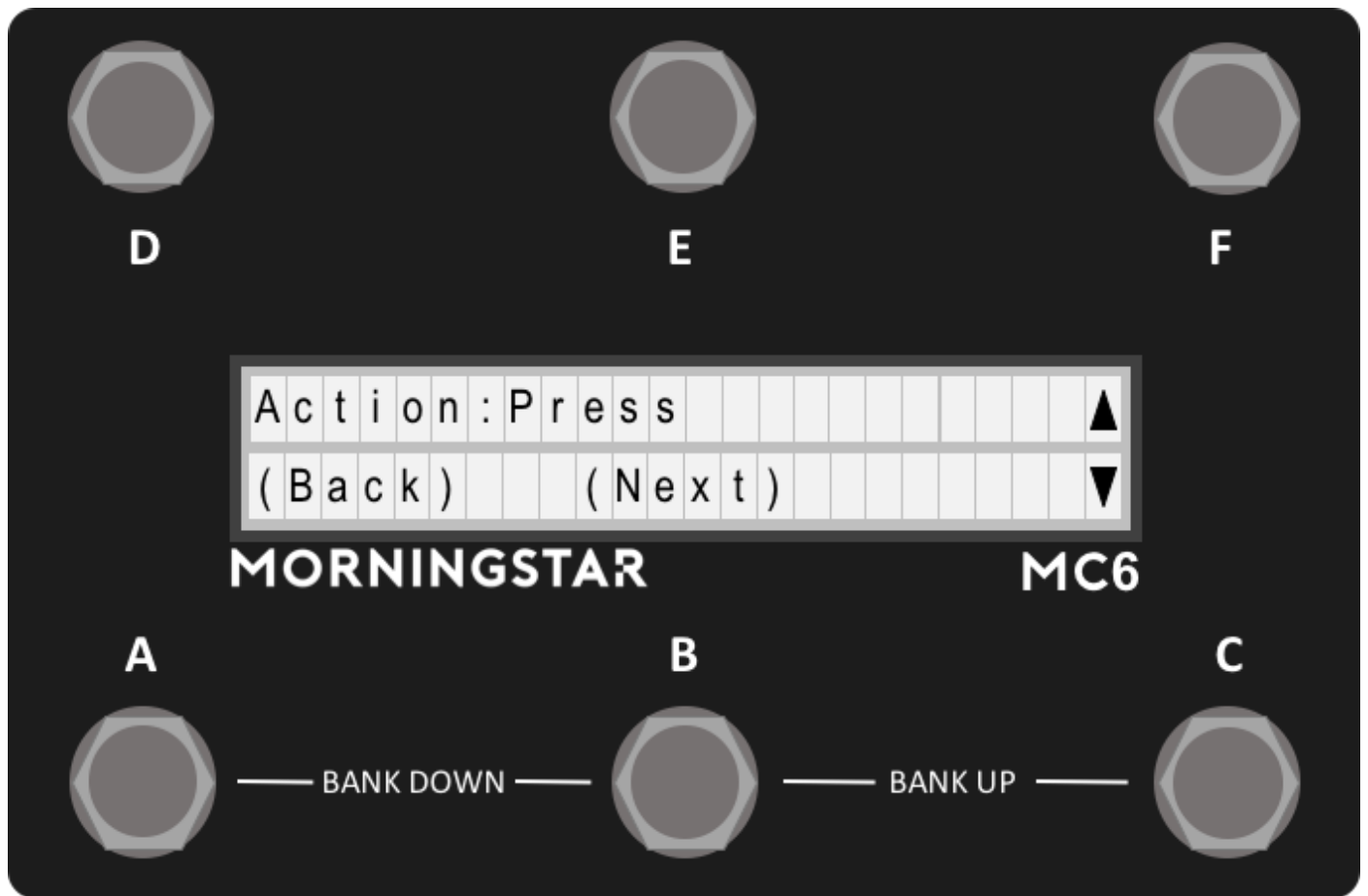
When you enter the Edit Msg interface, the screen above will show. In this screen, you can view the current Midi Type that is assigned to that message. It also indicates the current message that is selected for editing. Pressing Next will allow you to edit the selected message.

### Edit Action



The next menu allows you to select the action to assign to the message. Once selected, each time that action is carried out on the corresponding preset switch, only the messages assigned to that action will be invoked.

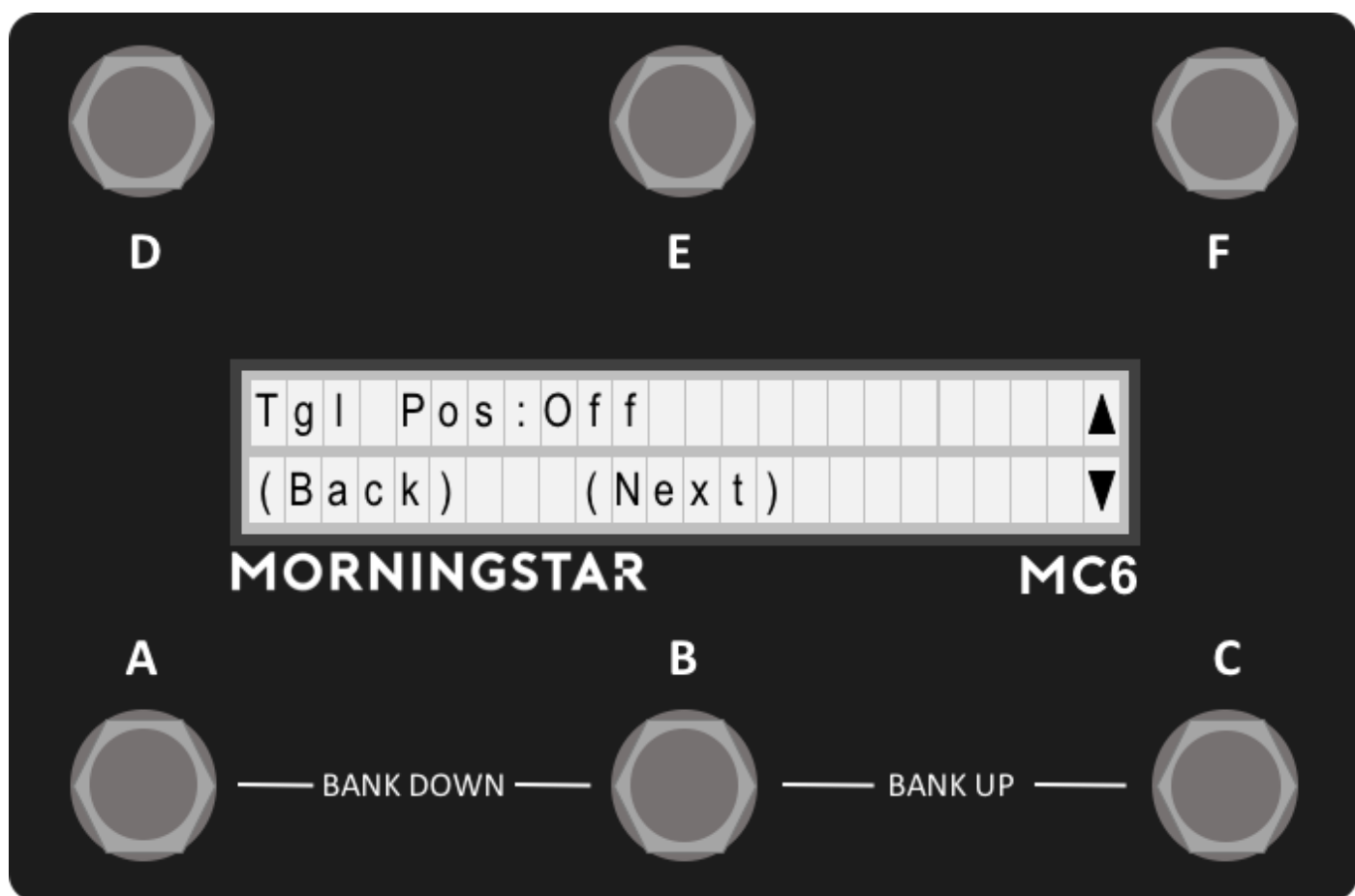
### Edit Toggle Position



The next menu allows you to edit the message toggle position. Select between On and Off. This allows only the messages that match the current preset toggle position to be invoked.

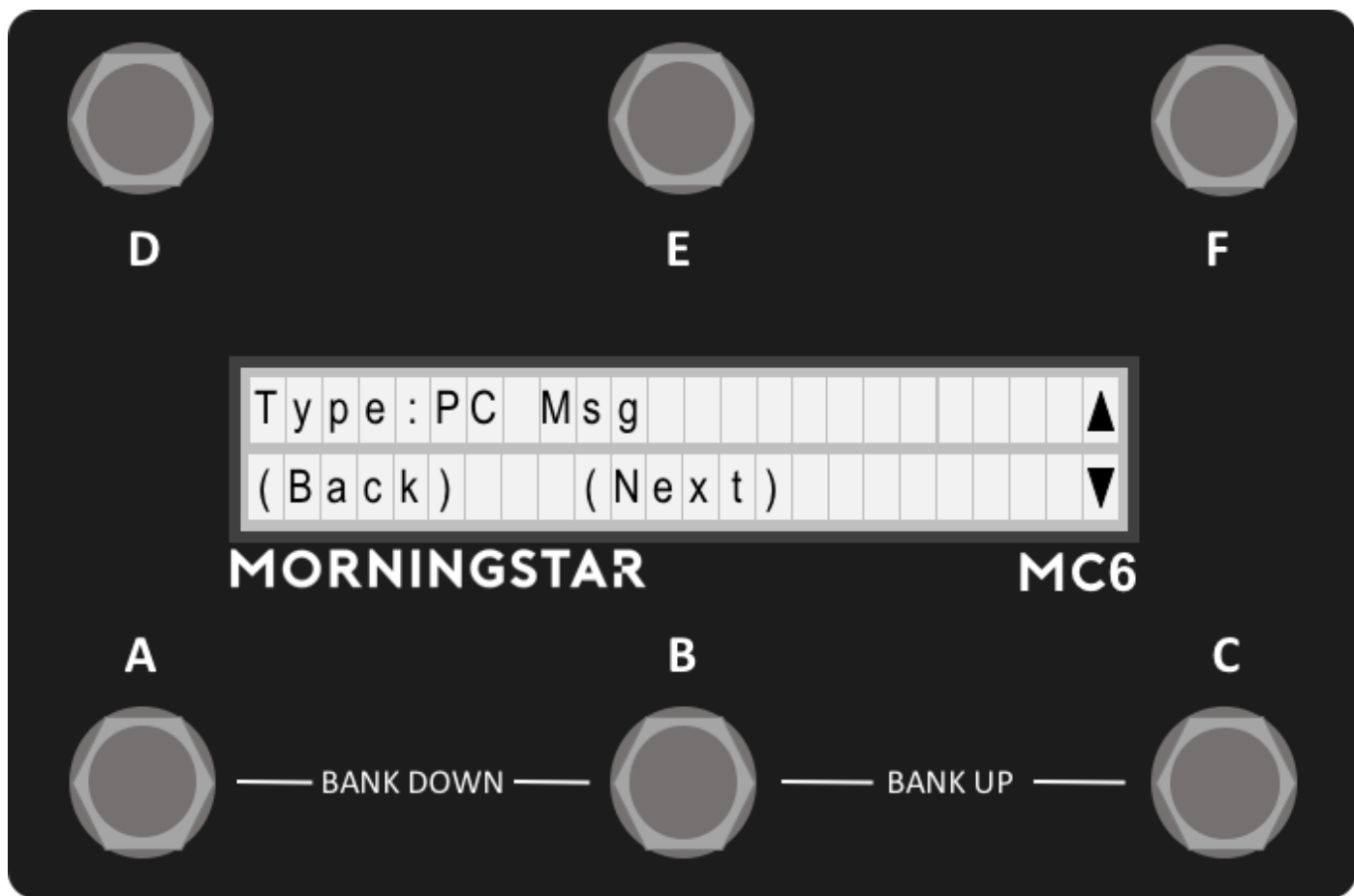
From firmware 3.2.1 onwards, this feature has changed to toggle positions 1, 2 and Both. Toggle position Both will have the message sent in both toggle positions.

### Edit Type



The next menu allows you to edit the Message Type. Scroll up and down to select the Midi Type that you want to be associated with the message. You can read about the full list of Midi Types available in the Glossary.

### **Edit Type Parameters**



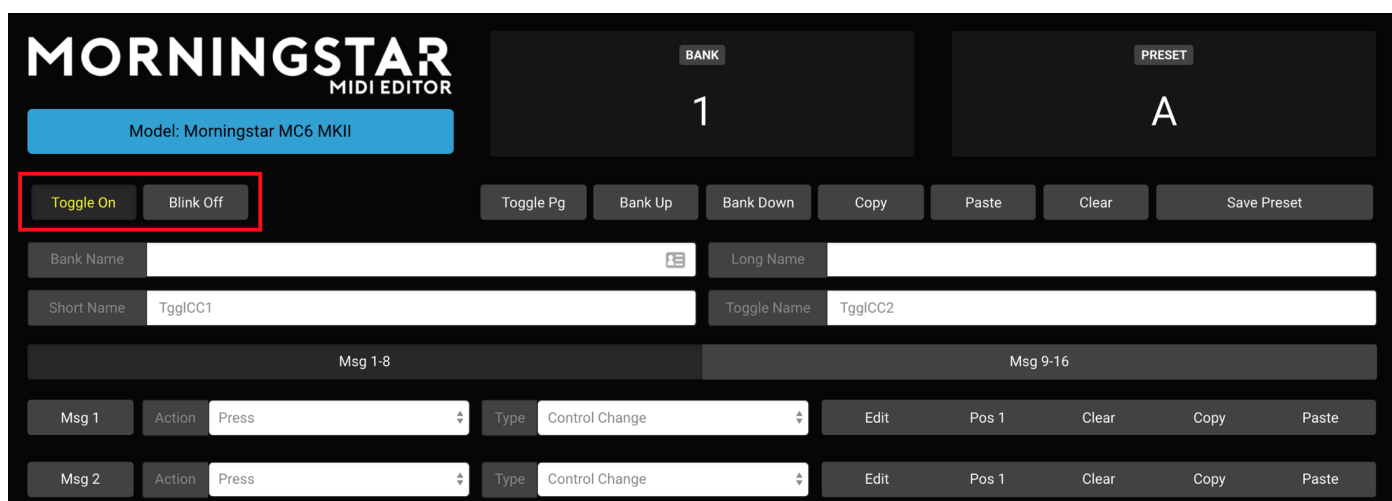
Depending the Midi Type that is selected in the previous menu, unique parameter edit menus will be loaded. Edit your parameters and then press Save on the last page to save your settings.

## Setting up a Toggle Message

How to toggle between two different messages on your MC6 MKII.

### Using the Web/Desktop Editor

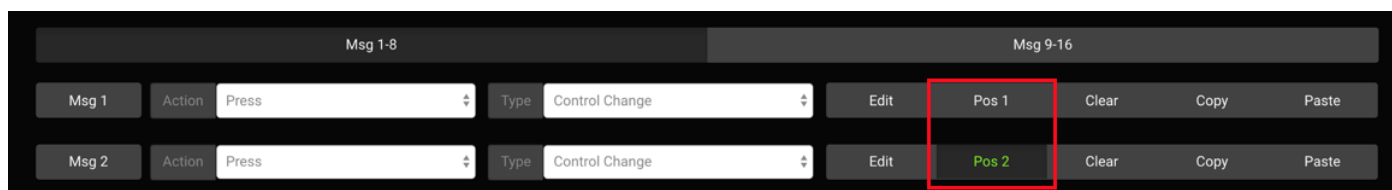
Setting up a toggle message is easy. On the editor, there is a toggle option on the top left of the interface. Switch it to On to enable toggling for the preset.



## How it works

Each preset on the MC6 allows you to toggle between two positions: 1 and 2. By default, the presets are on toggle position 1. If you switch the toggle to On, each time the preset is engaged, it will toggle to the other position (between 1 and 2).

Each message also has a position option, where it will be sent out only when the position of the message matches that of the preset. Hence, if you set Msg1 to be a CC message in Pos 1, and Msg2 to be a CC Message in Pos 2, and you have your toggle on for the preset, each press will toggle between Msg 1 and Msg 2.



## Toggle Name

When the preset is in position 1, the Short Name will be displayed. When the preset is in position 2, the Toggle Name will be displayed.

## Blinking

To indicate that the preset is in position 2, you can also use the blink option, where if the blink option is set to On, the Toggle Name on the main page will blink when the preset is in position 2.

## Using the built-in MC6 editor

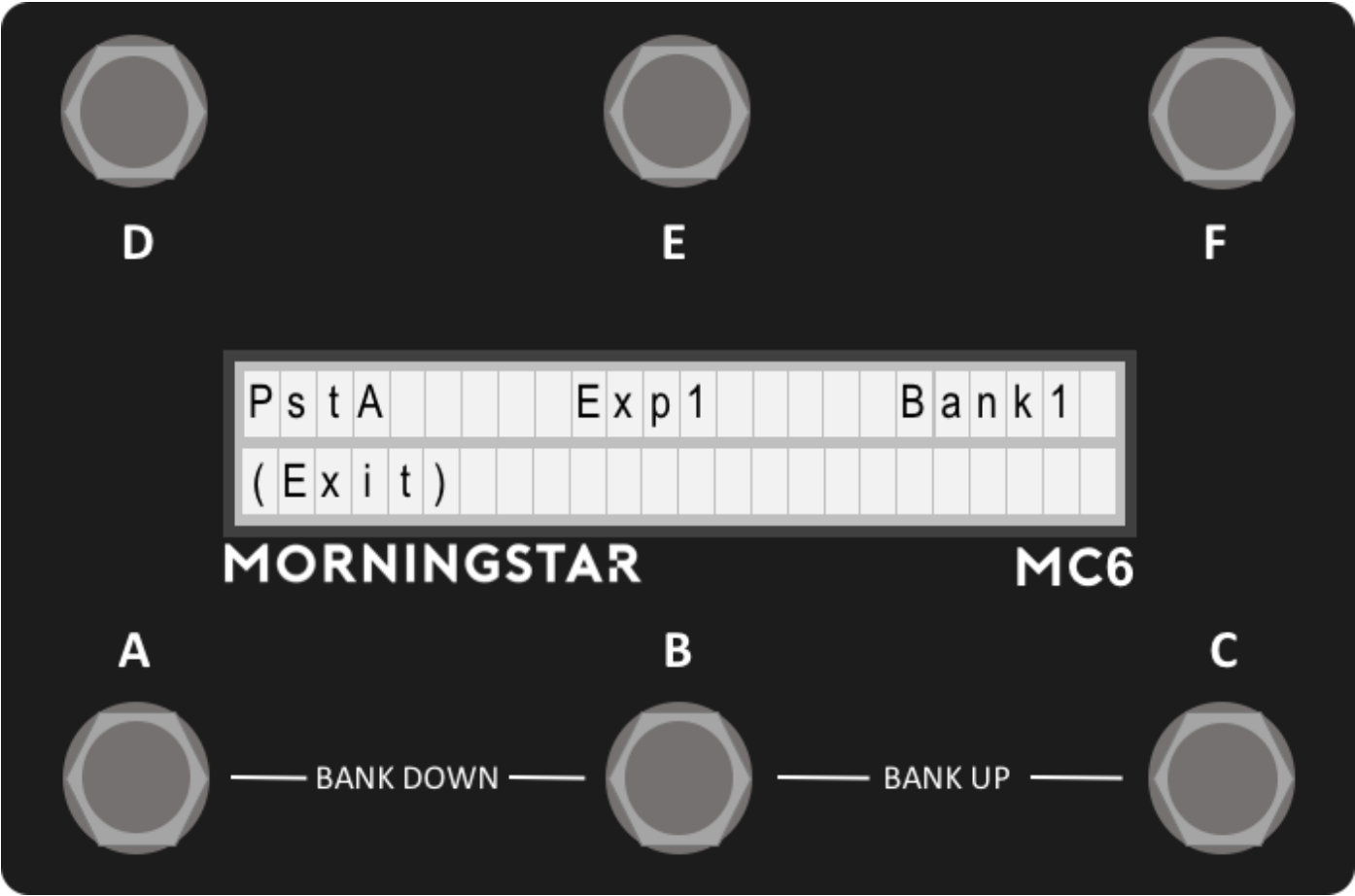
After going into the preset edit menu, go to Page 3 of the menu. The Toggle button toggles between Toggle On and Toggle Off position for the preset, which the Blink button toggles between Blink On and Blink Off position for the preset.

When editing individual messages, there will be an option to select the toggle position for the message you are editing. Choose between position 1 or 2 accordingly.

# Editing Expression Messages

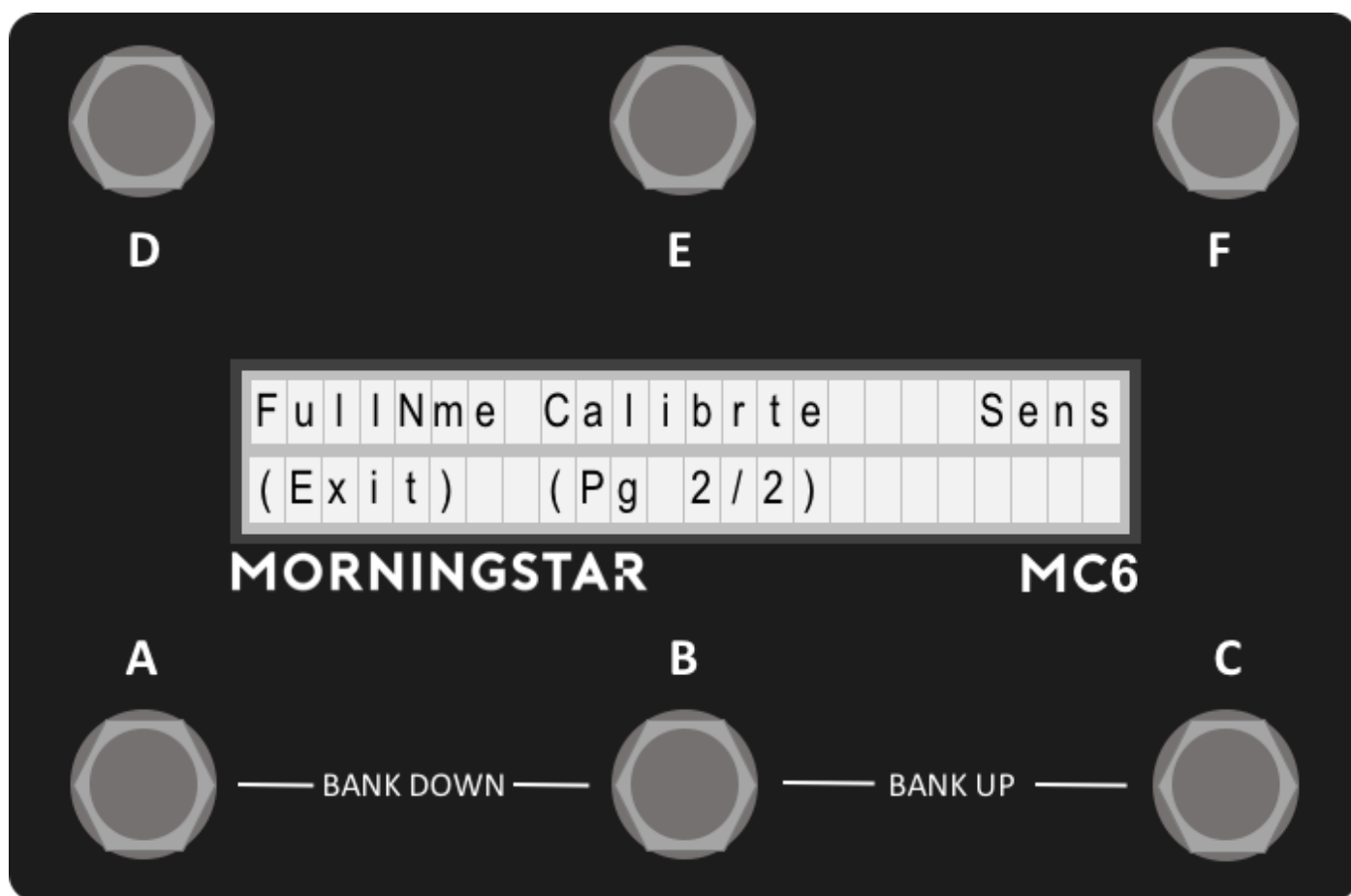
To edit expression messages, press switch D + F first, which will bring you to the edit page, and then select the expression option.

## Expression Edit Menu (Page 1)



The first page of the menu for editing Expression Messages are the same as that for editing Preset Messages.

## Expression Edit Menu (Page 2)



On the second page, you have the option to edit the Full Name, Sensitivity or calibrate your expression pedal.

### Edit Full Name

When the expression pedal is being used, you have the option of displaying a Name for your expression preset. Simply edit and save the name to your expression preset. See Editing Names for more information after entering the FullName option in the Expression Edit Menu.

## Calibrating your Expression Input

It is best to calibrate your expression pedal before use to get the optimum performance. Simply go into the Calibrate setting in your Expression Edit Menu. Once there, follow the instructions in the LCD. First set your expression pedal to a heel down position. Ideally, the value should be displayed as 0. Press Next. Next, set your expression pedal to a toe down position. Ideally, the value should be displayed as 127. Press Save to save your settings. Do not worry if you can get a value of 0 and 127 in both positions. Once your setting is saved, the MC6 will optimise the settings to get the most out of your expression pedal.

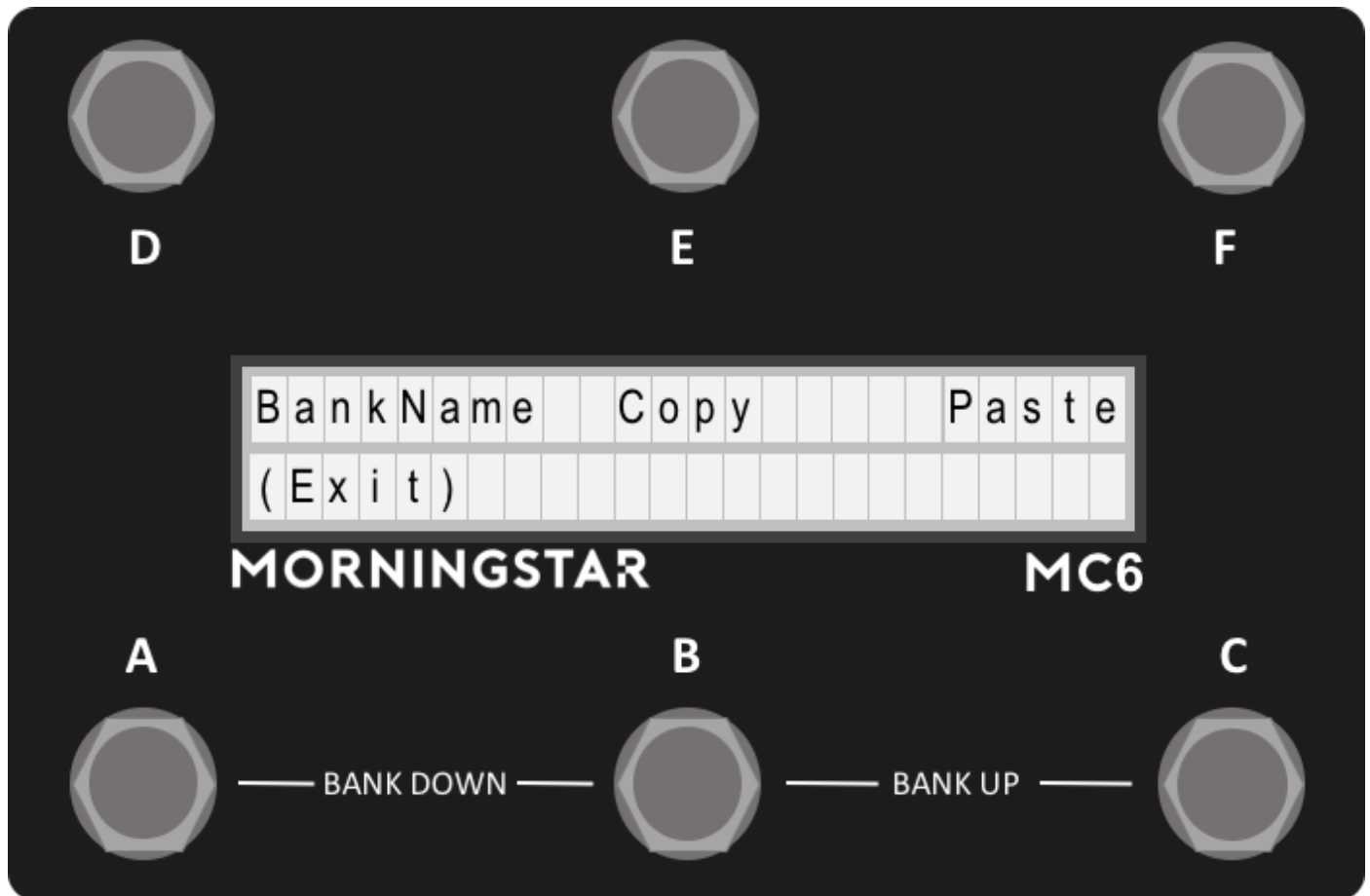


## Setting your Expression sensitivity

Depending on the potentiometer value used in your expression pedal, you may have to edit the sensitivity to get optimum performance. We recommend using expression pedals with 10k potentiometers. The sensitivity setting is used mainly to remove jitters, where the value sent by the MC6 might bounce between 2 values very quickly.

## Editing Bank Settings

To enter the bank settings, press Switch D + F, which will bring you to the edit page, and then select the Bank option.



In the edit bank interface, you can edit the Bank Name as well as copy and paste banks.

### Bank Name

Edits the Bank Name.

### Copy

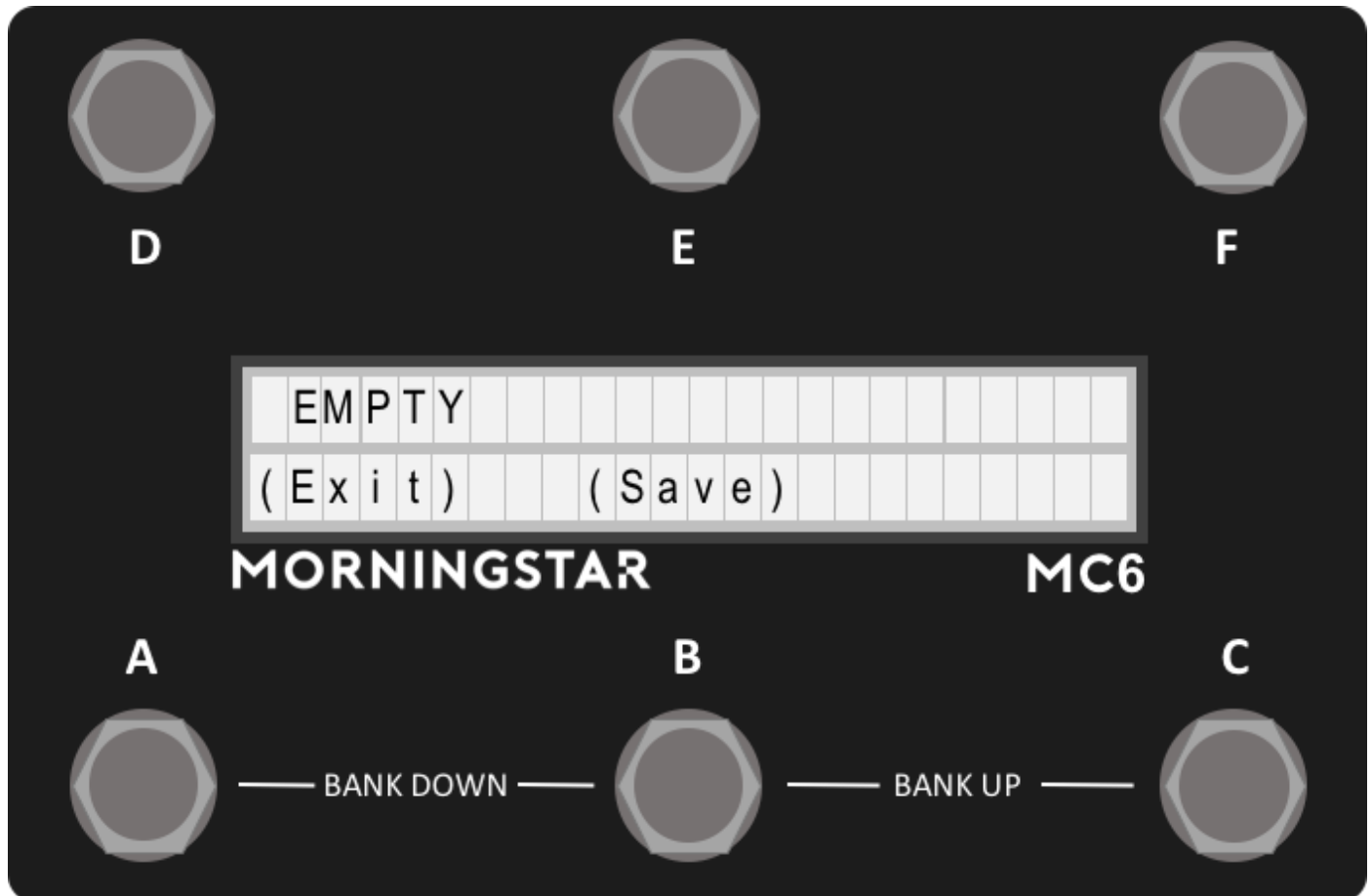
Copies the current bank.

## Paste

Paste the previously copied bank to the current bank.

---

## Editing Names



When editing any of the MC6 names like Preset Short Name, Toggle Name, Long Name, or Bank Name, this interface will be display on the screen.

### Controls

Moving the cursor To move the cursor left and right, press Switch D or Switch E.

### Changing characters

To change the characters, use Switch C and Switch F to scroll up and down the available characters.

### (Save)

Saves the name into memory.

### (Exit)

Exits the interface.

---

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# Midi Editor

Using the Web/Desktop Editor with your MC6 MKII

Besides using the on-board MIDI editing features on the MC6 MKII, you can also edit your settings via the Web/Desktop editor. The Web Editor will always contain the latest developments, while the Desktop editor will be updated less frequently.

The links are available on our website here: <https://www.morningstarfx.com/editor>

**NOTE: A number of functions are disabled when the device is in Editor mode. When using or testing the MC6 with other devices, please remember to toggle out of editor mode.**

## Connecting the device

Connect the device via USB to your computer and launch the editor in the latest version of Google Chrome (the Web Editor works on Google Chrome only).

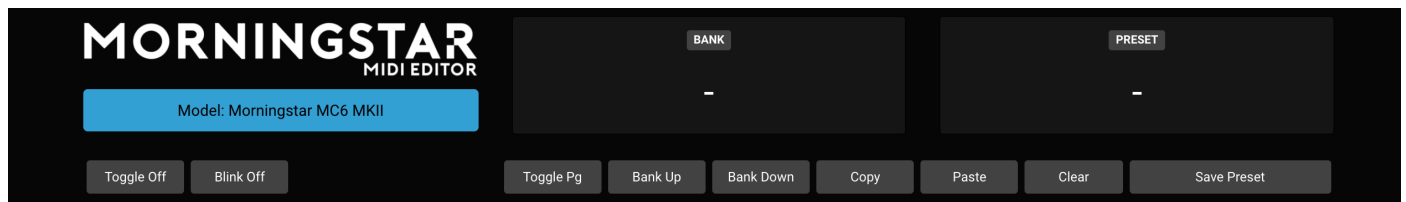
The editor should detect your device and load the editing dashboard as shown below.

The screenshot displays the Morningstar MIDI Editor interface. At the top, the 'MORNINGSTAR MIDI EDITOR' logo is visible. Below it, a dropdown menu shows 'Model: Morningstar MC6 MKII'. To the right, there are 'BANK' and 'PRESET' dropdowns, both currently set to '-'. A row of buttons includes 'Toggle Off', 'Blink Off', 'Toggle Pg', 'Bank Up', 'Bank Down', 'Copy', 'Paste', 'Clear', and 'Save Preset'. Below these are input fields for 'Bank Name', 'Long Name', 'Short Name', and 'Toggle Name'. The main section is divided into two columns: 'Msg 1-8' and 'Msg 9-16'. Each column contains a table of MIDI messages. The 'Msg 1-8' table has 8 rows, each with a 'Msg' number, an 'Action' dropdown (all set to 'No Action'), and a 'Type' dropdown (all set to 'Empty'). The 'Msg 9-16' table has 8 rows, each with an 'Edit' button, a 'Pos Off' button, a 'Clear' button, a 'Copy' button, and a 'Paste' button.

Msg 1-8				Msg 9-16					
Msg 1	Action	No Action	Type	Empty	Edit	Pos Off	Clear	Copy	Paste
Msg 2	Action	No Action	Type	Empty	Edit	Pos Off	Clear	Copy	Paste
Msg 3	Action	No Action	Type	Empty	Edit	Pos Off	Clear	Copy	Paste
Msg 4	Action	No Action	Type	Empty	Edit	Pos Off	Clear	Copy	Paste
Msg 5	Action	No Action	Type	Empty	Edit	Pos Off	Clear	Copy	Paste
Msg 6	Action	No Action	Type	Empty	Edit	Pos Off	Clear	Copy	Paste
Msg 7	Action	No Action	Type	Empty	Edit	Pos Off	Clear	Copy	Paste
Msg 8	Action	No Action	Type	Empty	Edit	Pos Off	Clear	Copy	Paste

Your device will have to be in Editor Mode for it to communicate with the editor. You can toggle into editor mode by pressing Switch [C + D] or by pressing the button below the logo on the editor [Toggle Editor Mode].

Once your controller is in editor mode, the Model button will turn Blue, indicating that it is communicating with your controller. You can then press any switch on your device to edit the corresponding preset. To edit your expression pedal, move the pedal and the settings will be loaded on the editor.

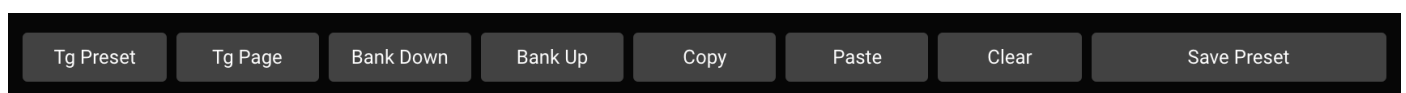


The editing parameters are similar to the on-board editing parameters.

## Editing Functions

There are various controls on the top right panel of the editor (below the Bank and Preset number display) as well. You can toggle the page on the MC6, Bank up or down or copy and paste presets. You can also clear your preset settings by double clicking the Clear button. This also applies to the Clear button on the individual Messages, where the Clear button has to be *double clicked*.

## Device Control Functions



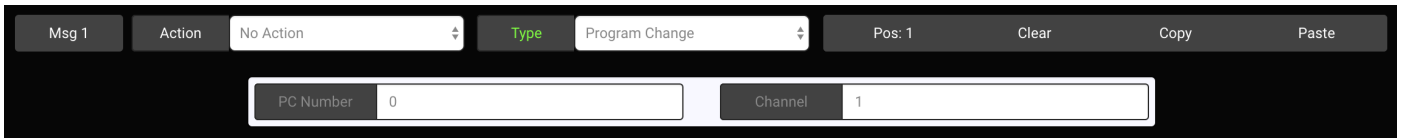
- Tg Preset: Toggles the Preset between Position 1 and Position 2
- Tg Page: Toggles the device page between 1 and 2 to load Preset A - F or G - L
- Bank Up / Bank Down: Bank up and down on the device
- Copy: Copy the Preset
- Paste: Paste the copied preset to a different selected preset
- Clear: Clear the Preset settings. This button has to be double-clicked
- Save Preset: Save the settings on the Editor to the device

# Preset Editing Options



- Toggle On/Off: Determines whether the preset should toggle it's toggle position each time it is engaged.
- Blink On/Off: Determines whether the preset name should blink when the preset is in toggle position 2.

# Message Editing Options



- Pos button: Determines if the message should be in Position 1, Position 2 or Both. For example, if Msg 1 is set to Pos 1, it will only engage when the Preset is in Position 1.
- Clear: Clears the message. This has to be doubled clicked.
- Copy: Copy the message
- Paste: Paste the earlier copied message to another message..



# Updating your firmware

We are constantly updating the firmware to include new features and bug fixes.

---

## What to download

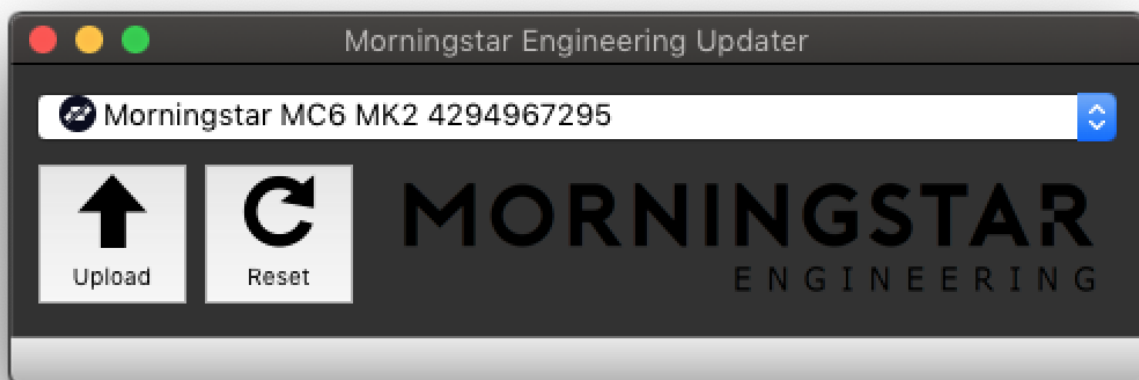
You'll need to use the Firmware Uploader software to upload the firmware to your device.

Download the latest Firmware Uploader software here (<https://github.com/Morningstar-Engineering/Firmware-Uploader/releases>).

Download the latest firmware here (<https://github.com/Morningstar-Engineering/MC6-MKII-Midi-Controller/releases>)

## Upload instructions

Open the Firmware Uploader



If your device is connected, it will appear in the Firmware Uploader software.

Click on Upload and select the firmware .hex file.

The firmware should then begin uploading and should take only a couple of seconds. Once it is completed, your device will restart with the new firmware.

---



# Troubleshooting

In the rare event where your device upload is not successful, the device might appear to be bricked with blocks showing across the LCD screen. Do not worry. Just remove the back cover for your device. While the device is connected to your computer via USB, and with the Firmware Uploader open, press the reset button location on the PCB.

Once pressed, the Firmware Uploader should detect the device. Thereafter, repeat the above upload procedure.

Reset Button

# Midi Type Glossary

This glossary describes each Midi Type message and the parameters/examples to use it.

---

## Empty Message

### Description

No data will be sent out.

## Program Change

### Description

Sends a Program Change message of a specified number and channel. Program Change messages are usually used to call presets or patches in your Midi devices.

### Example of Use

Activate a preset/patch on your Midi Device.

## Control Change

### Description

Sends a Control Change message of a specified number, value and channel. Control Change messages are usually used to change function parameters or call functions in your Midi devices.

### Example of Use

To activate the record function on the Strymon Timeline, send a CC#87 with any value. (Refer to Timeline Manual)

## Note On

**Description** Sends a Midi Note On Message.

# Note Off

## Description

Sends a Midi Note Off Message.

# Real Time

## Description

Sends a Midi Real Time message. Choose from Start, Stop or Continue

# SysEx

## Description

Sends a Midi System Exclusive message.

The first value is always the length of the SysEx array, followed by the values you want to send. The values are in decimal (base10) format and not in hex.

The values are spread across multiple messages. For example, if the length of your SysEx message is 5 and the message you want to send out is {0, 4, 25, 54, 23}, you will need to use 2 messages for this SysEx message where:

Msg 1 \* P1/Length = 5 \* P2 = 0 \* P3 = 4

Msg 2 \* P1/Length = 25 \* P2 = 54 \* P3 = 23

The actions assigned to each message must match. For example, if your SysEx message requires using 3 messages on the MC6, the 3 messages need to have the same action i.e. Press.

The length should not include the SysEx start and end bytes (i.e. 0xF0 and 0xF7).

# Midi Clock Tap Tempo

## Description

Sends a Midi Clock signal to out from USB and 5 Pin Midi. Syncs your Midi Clock enabled devices to a common BPM.

You can set the tempo in the parameters, and then choose if you want the device to show the tap menu.

If selected, the MC6 will load the tap tempo screen when the preset is activated.

If not selected, the MC6 will send out the Midi Clock messages according to the preset tempo. When another event occurs i.e. a switch is pressed or expression is moved, the Midi Clock messages will stop.

**Please note that this message does not work while you are in Editor Mode. Toggle out of Editor Mode to enable the full functionalities of this message.**

## PC Scroll Up

### Description

Sends an incremental message each time the preset is activated. There are 8 counters in the MC6 internal memory. The Select Slot parameter selects one of this counters for your PC Scroll message. Hence, each time the preset is activated, the MC6 will send a PC message which number is based on that counter. The Increment parameter determines if the counter will be increased each time the preset is engaged. The Lower Limit and Upper Limit parameters lets you set a range where the counter will scroll between.

Let's go through this scenario: If you are trying to scroll through 2 devices (on channel 1 & 2) at the same time with the same preset, first select a counter you want to use. In this example, let's set Select Slot to 1 for Msg1. Increment should be set to Yes, since we want the counter to increase (only for the first message). Thereafter, set your lower and upper limit and channel. For Msg2, select the same slot number as Msg1. Increment should be set to No, since the first message already increased the counter once.

## PC Scroll Down

### Description

Similar to PC Scroll Up, but counter is decreased instead of increase.

## Bank Up

### Description

Changes to the next bank on the MC6.

**Please note that this message does not work while you are in Editor Mode. Toggle out of Editor Mode to enable the full functionalities of this message.**

# Bank Down

## Description

Changes to the previous bank on the MC6.

**Please note that this message does not work while you are in Editor Mode. Toggle out of Editor Mode to enable the full functionalities of this message.**

# Bank Change Mode

## Description

Puts the MC6 into a state where you can scroll up and down banks with dedicated switches and then select the bank you want to use.

**Please note that this message does not work while you are in Editor Mode. Toggle out of Editor Mode to enable the full functionalities of this message.**

# Set Bank

## Description

Jumps to another bank on the MC6.

When the Last Bank option is set to Yes, the device will change to the last used bank. For example, if you banked up from Bank 3 to Bank 4, and you engage a preset with the Set Bank (Last Used Bank), the device will change back to Bank 3.

**Please note that this message does not work while you are in Editor Mode. Toggle out of Editor Mode to enable the full functionalities of this message.**

# Toggle Page

## Description

Toggle between pages in a bank. In the main page, the main switches control Presets A-F. By toggling to the next page, Presets G-L are brought forward to the main page where their preset names will be displayed on the screen, and you can control them with the main switches.

# Set Toggle

## Description

Changes the toggle state of your presets. You can choose whether to "Set" or "Clear" the toggle positions. "Set" will engage the preset, while "Clear" will disengage it. You can select the presets to apply this change to.

**Please note that this message does not work while you are in Editor Mode. Toggle out of Editor Mode to enable the full functionalities of this message.**

# MIDI Thru

## Description

Sets the global Midi Thru feature on the MC6 on or off.

# Select Expression Message

## Description

You can select individual messages in each expression preset to be active with this function. There are 16 messages in each expression preset. If, for example, you set Msg1 and Msg2 to be active on Expression 1, each time you move your expression pedal in Exp1 input, only Msg1 and Msg2 will be sent out.

This setting is global and applied to all banks. It will be reset to all active when the device power cycles.

# Looper Mode

## Description

This message toggles in and out of Looper mode. Looper mode basically increase the sensitivity of your switches to the maximum, so that messages sent out are instantaneous. This is useful if you are using the MC6 to control time-sensitive functions such as Record/Play/Stop.

In firmware v3.2 onwards, instead of Toggle on/off, we added a selection to allow users to select whether they want to Toggle or set Looper Mode to On or Off.

# Strymon Bank Up

## Description

Bank up on your Strymon Timeline, Möbius and Bigsky

# Strymon Bank Down

**Description** Bank down on your Strymon Timeline, Möbius and Bigsky

# AxeFX Tuner

## Description

Upon engagement, the MC6 will send a CC#15 message with value 127 to the selected channel. CC#15 controls the tuner function on the AxeFX. After which, the tuner page will load. Upon exit, the MC6 will send a CC#15 message with value 0 to disengage the AxeFX tuner.

## Things to note

Turn off Midi Thru on your AxeFX.

Enable SysEx send on your AxeFX.

Connect your AxeFX Midi out to the MC6 Midi In

**Please note that this message does not work while you are in Editor Mode. Toggle out of Editor Mode to enable the full functionalities of this message.**

# Toggle Preset

## Description

This setting toggles a Preset between positions 1 and 2, and can be useful if you want to toggle a Preset with a specific action.

## Things to note

To use this, be sure to leave the Preset-level toggle setting off. If not, any action engaged on the preset will toggle the preset.

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# Action Glossary

Descriptions for the list of actions.

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## Overview

Each of the 16 messages can be programmed to match an action.

## Press

A single tap to the switch.

## Release

Releasing the switch after a Press action.

## Long Press

A single tap to the switch that is held down for at least 600ms.

## Long Press Release

Releasing the switch after a Long Press action.

## Double Tap

A double consecutive tap to the switch.

## Double Tap Release

Releasing the switch after a Double Tap action.

## Long Double Tap

A double consecutive tap to the switch that is held down for at least 600ms.

# Long Double Tap Release

Releasing the switch after a Long Double Tap action.

# Release All

This action groups Release and Long Press Release together.

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# MIDI Implementation

MIDI implementation chart for the MC6 MKII.

The MC6 MKII can respond to CC and PC messages from it's USB MIDI port and MIDI IN port to execute specific functions. You can send PC or CC messages via an external MIDI controller or software to control the MC6 MKII functions specified below.

## PC Messages

PC messages will change the banks on the MC6 MKII, where a PC#0 message will engage Bank 1, and PC#1 message will engage Bank 2, and so on.

## CC Messages

Function	CC#	Value
Bank Up	0	any
Bank Down	1	any
Clear Toggle (All)	2	127
Clear Toggle (Individual)	2	0 - 11 (0 = Preset A)
Set Toggle (All)	3	127
Set Toggle (Individual)	3	0 - 11 (0 = Preset A)
Page Toggle	4	any
Engage Preset	10 - 21 (10 = Preset A)	0 = Do Nothing 1 = On Press 2 = On Release 3 = On Long Press 4 = On Long Press Release 5 = On Double Tap 6 = On Double Tap Release 7 = On Double Tap Hold 8 = On Double Tap Hold Release

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# Frequently Asked Questions

## How do I set an external aux controller to change banks?

Connect an aux controller to the MC6 with a stereo cable. Be sure to change the expression input type to "Aux Switch" in the Main Configuration Menu. The Aux switch will work just like a regular switch, where each switch will invoke a preset. You simply need to program a bank up and bank down message in each preset and you are good to go.

## My MC6 hangs at the main preset screen.

Check your Expression input settings. It is likely that you have your expression input setting set to "Aux Switch" but do not anything plugged into the input ports. If you have nothing plugged into your expression input(s), it should be set to "Expression Pedal" instead of Aux Switch.

## How do I paste a preset to all banks?

Go into the preset edit menu and then copy the preset. After the preset is copied, hold down the Paste button for 2 seconds. The device will paste the copied preset to all banks for the current active preset.

## How do I set the expression pedal to send different CC messages per preset?

The expression pedal inputs work on a per-bank basis, where every bank has a different expression preset. Each expression preset has 16 midi messages that you can program. By changing banks on the MC6, you can send different CC messages. You can also send different CC messages in each expression preset in the same bank by using your standard presets A-L. By programming a "Select Exp Message" midi type in your preset, you can select which of the 16 midi messages in your expression preset to be active. Hence, when using your expression pedal, only the selected messages will be sent out.

There is a lag between the time when I press the switch and the time when the MIDI message is sent out. How can I fix this?

There are several possibilities to this.

### *Switch sensitivity*

This can be adjusted in the Switch Sensitivity setting in the Main Config menu. The switch sensitivity determines how fast dual switch presses are read. A lower sensitivity will make it easier to engage a dual switch press function. If you change the setting to 5, you'll notice that the delay will decrease. You can make use of the Looper mode function, which decreases the delay to close to 0. However, you'll find that dual switch presses to change backs etc are not possible in this mode.

### *Double Tap*

If you have a Double Tap action programmed into your preset, there will be a delay as the controller is checking if a Double Tap action will occur, before sending out the message.

How do I lock my banks so that Switch A+B or B+C will not bank down or bank up?

Set your Switch Sensitivity to the maximum. This reduces the delay when a switch is pressed, and hence makes engaging dual switch functions harder.

# Help

If you are facing any issues with using the MC6, please do not hesitate to reach out to us at [help@morningstarfx.com](mailto:help@morningstarfx.com)

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