MCS² USB Software for OSX

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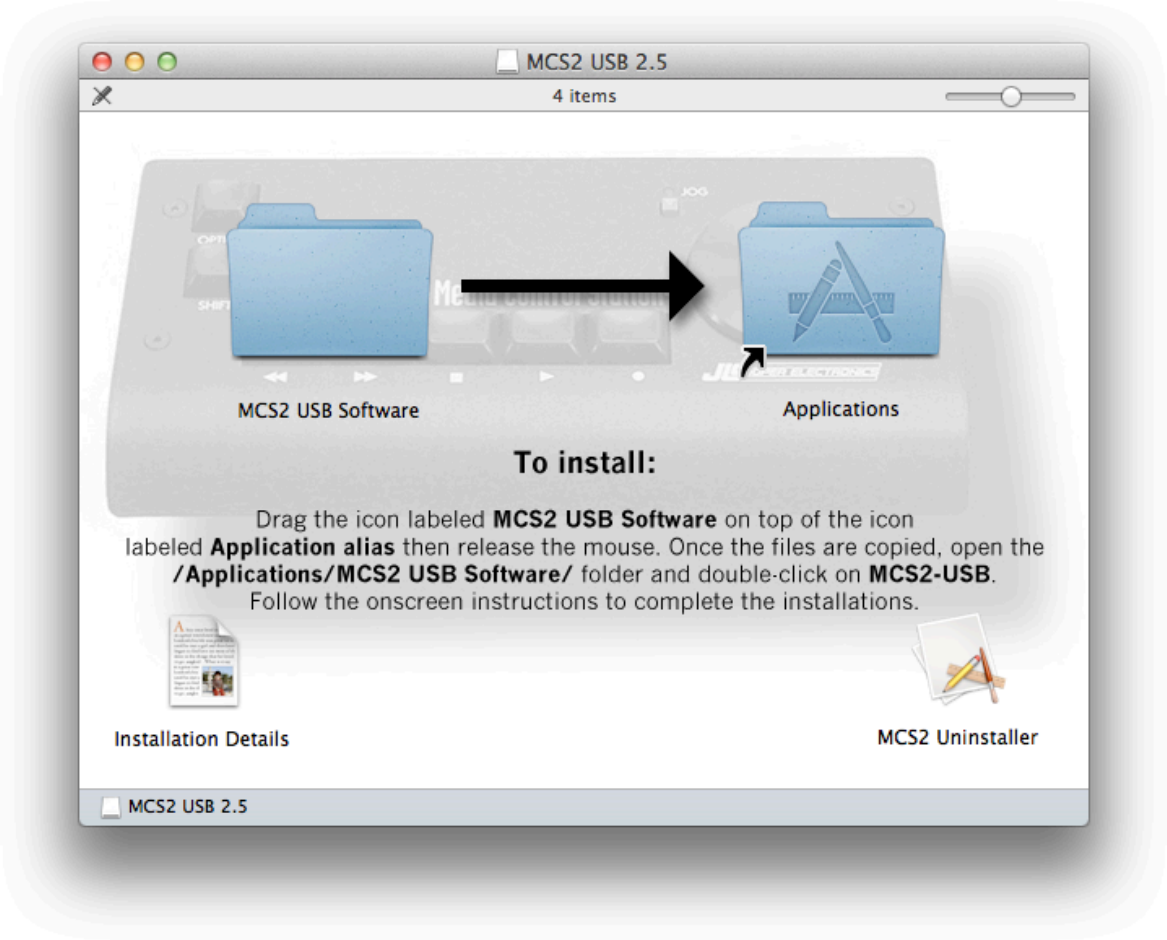
Installation

Connect the MCS2 USB to a USB port on your Mac or on a powered USB hub. It is not recommended that you connect the MCS2 to a USB port on a USB keyboard or on an unpowered hub.

***Note**: if you have previously installed a version of the MCS2 software earlier than 2.5, you must uninstall it before installing this version.*

After downloading and double-clicking the **Install_MCS2_USB_2.5.dmg** file, you should see the following window:

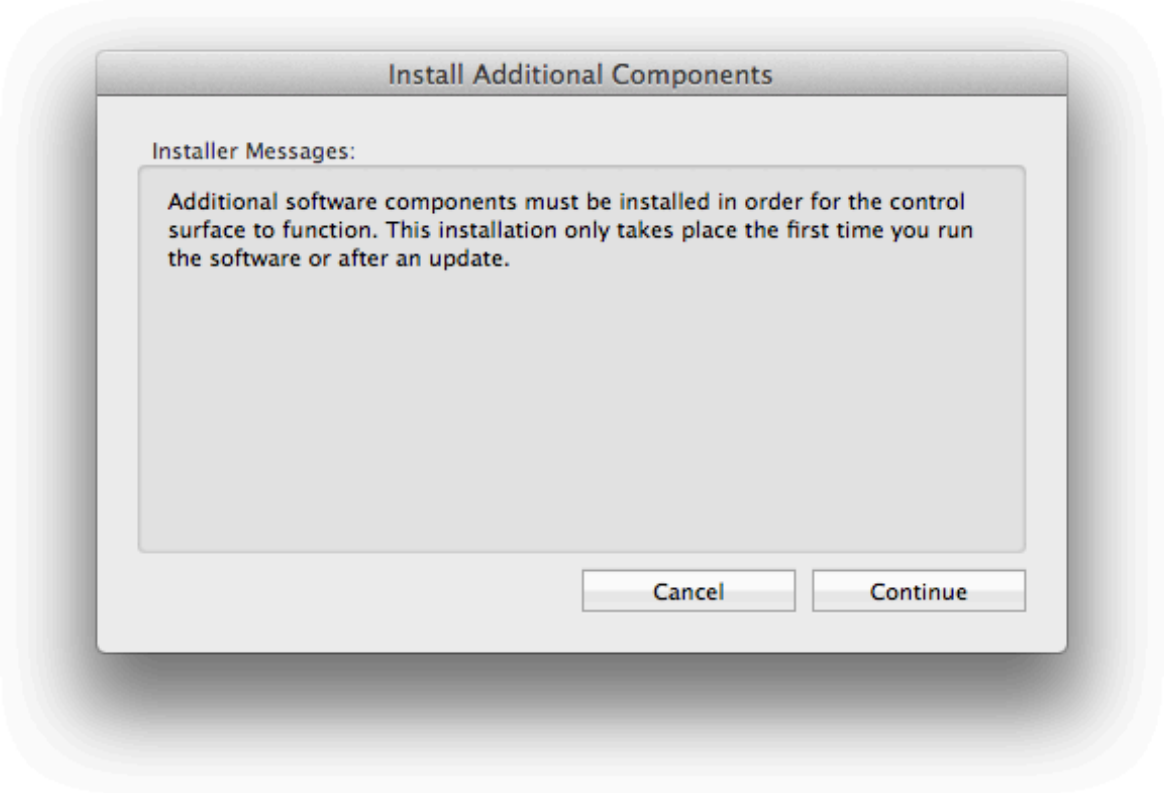


Drag the icon labeled **MCS2 USB Software** over the icon labeled **Applications alias** then release the mouse. This will cause the Finder to copy the MCS2 software to your **Applications** folder.

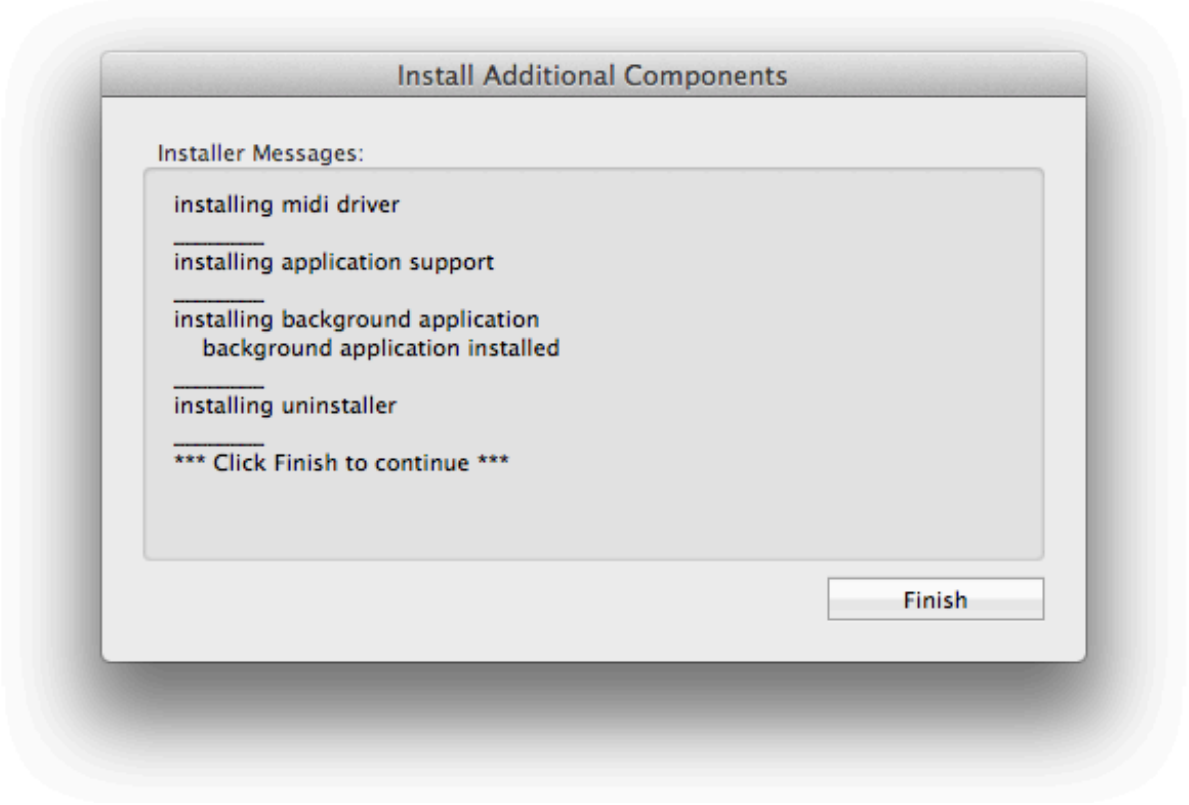
Once the copy is complete, open the `/Applications/MCS2 USB Software/` folder and double-click on the **MCS2-USB** application.

MCS2-USB

If this is the first time you are installing this software, or if you are installing a newer version, an installation dialog will appear. Click on **Continue** to finish the installation, or **Cancel** if you want to finish it the next time you run the **MCS2-USB** application. The installation must be completed before the MCS2 software will be fully functional.



Once all the software components have been installed, click on the **Finish** button. A connection will be established between the MCS2 software and the MCS2 hardware, and you can start working with the software.



Uninstalling

To uninstall run the **MCS2 Uninstaller** located in the `/Applications` folder. Click on the **Uninstall** button to begin. When the uninstall is finished, click on the **Quit** button.

If there are multiple user accounts on this Mac, there may be multiple installations of the MCS2 software, one for each user. Each user shares the **MCS2-USB** application and the **MCS2 uninstaller**, but other software components are installed separately for each user account. For this reason, the uninstaller does not remove itself or the **MCS2 USB Software** folder. Before deleting either of these, please make sure that the software has been uninstalled from all user accounts.

After uninstalling, you may notice that the MCS2 driver still appears in the **Audio/MIDI Setup** (`/Applications/Utilities/`) MIDI window. This is because the Mac OS X tries to remember the state of your MIDI setup, even if there are changes such as removing or powering down equipment or removing drivers.

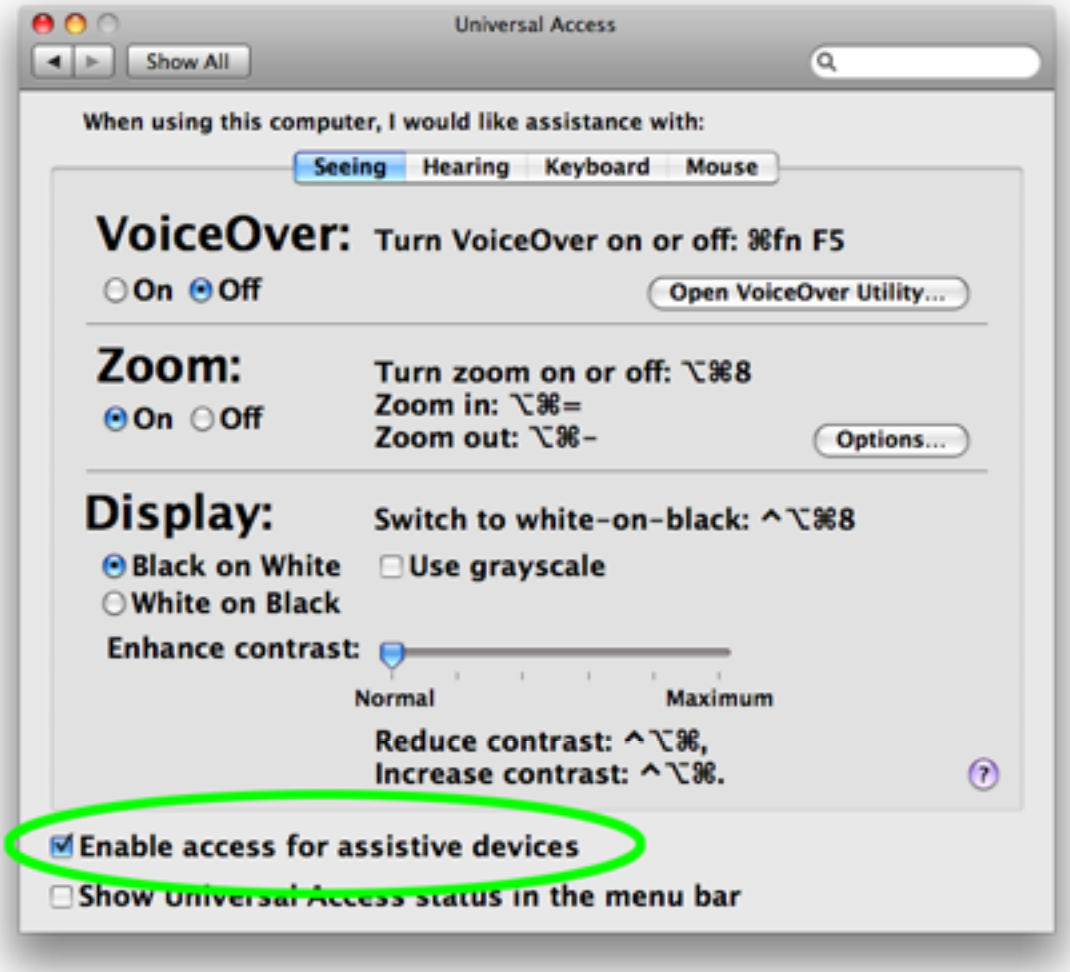
Although the driver has no effect at this point, you can remove it from **Audio/MIDI Setup** if you wish. To remove the driver, disconnect the MCS from the Mac and wait for the driver's icon in **Audio/MIDI Setup** to be dimmed as in the graphic below.

Click on the MCS2 USB icon to select it, then hit the **DELETE** key on the Mac keyboard or choose **Delete** from the **Edit** menu. Quit **Audio/MIDI Setup**.

The MCS2 software's preference file is not removed by the uninstaller. It takes up relatively little space and should have no impact on the operation of other software once the MCS2 software is uninstalled. If you want to remove it, just delete the file `~/Library/Preferences/com.jlcooper.MCS2USB.plist`.

System Setup

The MCS² software relies on Apple's Universal Access to perform mouse emulation. In order for the MCS² software to work correctly, you **must** open **System Preferences** and go to the **Universal Access** pane. Make sure "**Enable access for assistive devices**" is checked then quit **System Preferences**.


Universal Access
Show All
When using this computer, I would like assistance with:
Seeing
Hearing
Keyboard
Mouse
VoiceOver:
Turn VoiceOver on or off: ⌘fn F5
On
Off
Open VoiceOver Utility...
Zoom:
On
Off
Turn zoom on or off: ⌥⌘8
Zoom in: ⌥⌘=
Zoom out: ⌥⌘-
Options...
Display:
Switch to white-on-black: ^⌥⌘8
Black on White
White on Black
Use grayscale
Enhance contrast:
Normal
Maximum
Reduce contrast: ^⌥⌘,
Increase contrast: ^⌥⌘.
Enable access for assistive devices
Show Universal Access status in the menu bar

Introduction to the MCS² USB Software

The MCS² Software extends the MCS² hardware's ability to control various applications running on your Macintosh™. It does this by communicating with applications via MIDI, USB and other messaging protocols built into the Mac OS. It can also simulate mouse clicking and dragging, keystrokes and can even emulate other control surfaces if necessary.

Keysets

The MCS² software uses "keysets" which are sets of various actions that are taken when MCS² controls are pressed or turned. Different keysets can be applied to different applications, and the MCS² will choose the correct keyset for whichever application is in the foreground. If no keyset has been created for the current foreground application, the MCS² will use a built in keyset called the "Default" keyset.

To create or edit MCS² keysets, open the application, "**MCS2-USB**". To create a new keyset, choose **New Keyset** in the **File** menu and navigate to the application that will use the new keyset. You can also use **Import Keyset** from the File Menu to get an existing keyset. Keysets that ship with the MCS² are located at `/Applications/MCS2 Software/keysets/`. You only need to use **New Keyset** or **Import Keyset** once for a given application. After that, keysets are stored with the MCS² software's preferences.

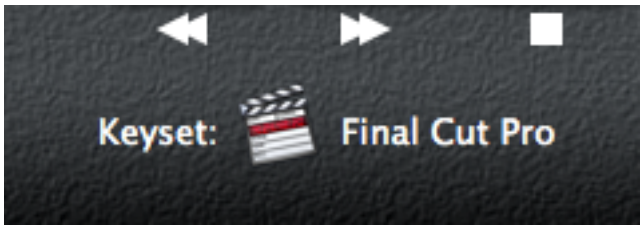
You can use **Export Keyset** from the **File** Menu to save a copy of a keyset so it can be transported to another Mac or archived for safekeeping. You don't need to use Export in your daily use of the MCS². As previously pointed out, your changes are added to the MCS² software's preferences file automatically.

There are several sample keysets included in this package, including ones for Final Cut Pro™ and Soundtrack Pro™.

Editing Keysets

The application presents a graphical representation of the MCS² front panel. When you click on an on-screen control (or move a control on the MCS² itself), that control is selected and information about it appears in the floating **Inspector** window.

You can choose which keyset to edit within the **MCS2-USB** application using the **Keysets** menu. The menu lists all keysets that you have created or imported. The name of the currently selected keyset will be displayed at the bottom of the main window.



Jog and Shuttle

The wheel on the MCS^2 can serve either as a Jog or a Shuttle control. When the **JOG** button is pressed so that the **JOG** LED is lit, then the wheel behaves as a Jog control. When the **JOG** button is pressed again so that the LED is not lit, then the wheel becomes a Shuttle control.

The MCS^2 software treats the Jog and Shuttle as two different controls which can be programmed independently of each other. While the the wheel is turning in Jog Mode, it continuously sends messages that tell how far and in what direction it has moved since the previous message.

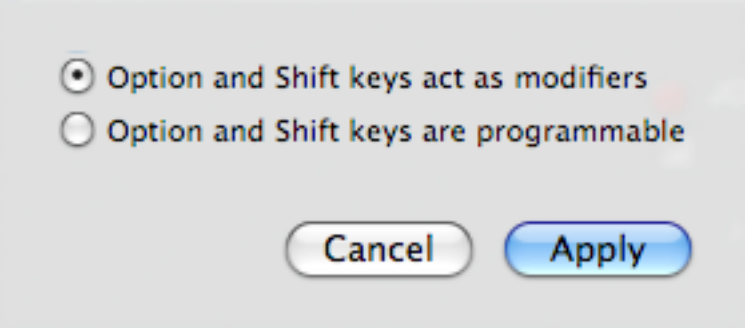
In Shuttle mode, the wheel has a “dead zone” around the position it is in when Shuttle mode is first turned on. Turning it clockwise sends values from 1 to a maximum of +15. When turning it counter clockwise the maximum value is -15.

To select the Jog control for editing, either click on the onscreen wheel, click on the onscreen **JOG** button so that the Jog LED is on, or turn the wheel on the MCS^2 while the **JOG** LED is lit.

To select the Shuttle control, either click on the word **SHUTTLE** above the onscreen wheel, click on the onscreen **JOG** button so that the Jog LED is off, or turn the wheel on the MCS^2 while the **JOG** LED is off.

Option and Shift Buttons

There are two ways to treat the **Option** and **Shift** buttons: As modifier keys, where they change the behavior of the other controls on the MCS², or as programmable buttons. You can set this up by Going to **MCS2-USB > Preferences**.



When the **Option** and **Shift** buttons are set to act as modifiers, they essentially become selectors for four banks of transport controls. They only work while they are held down. Releasing the modifiers returns to the first bank.

For a simpler setup, choose **Option and Shift Keys are Programable**. In this mode, there are no additional banks, and the **Option** and **Shift** buttons behave just like the transport buttons, giving you one bank with seven programmable buttons, a Jog control and a Shuttle control.

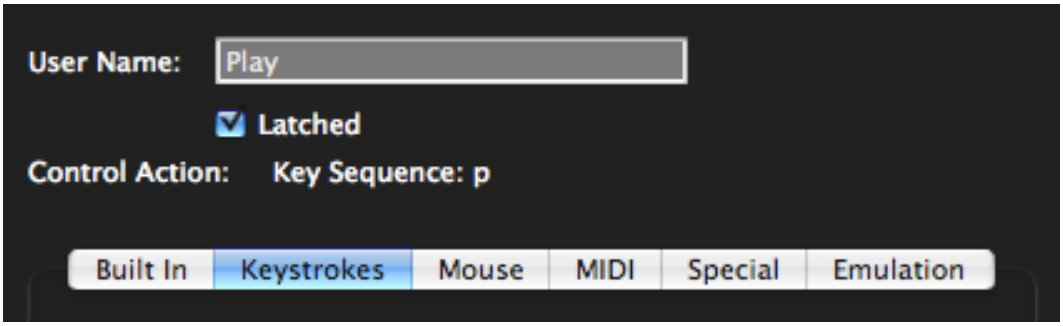
The Inspector Window

The **Inspector** window is where all your work takes place. It displays information about the currently selected control and contains the facilities for editing that information.

The **Name** text box allows you to give a control a more descriptive name that describes its precise function. In the example above, the “Play” button has been assigned an action that starts playback from the current time indicator, so naming the button “Play From Current Time” conveys more information than “Play”.

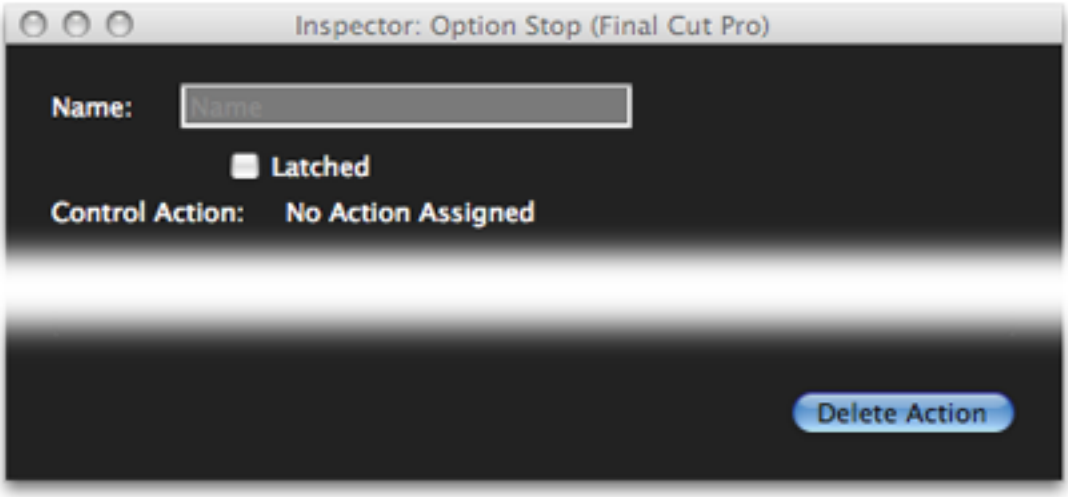
If the selected control is a button, then immediately below the Name you will see a “Latched” checkbox that lets you choose between a momentary (pressing the button turns it “on”, releasing it turns it “off”) or latched (pressing and releasing it turns it “on” and pressing and releasing it a second time turns it “off”) behavior.

Next is a description of the action that is to take place when the selected MCS² control is pressed or turned while the target application is active. Below that is the area where this action can be edited. There are a series of tabs representing the different kinds of actions that can be performed. Clicking on one of these tabs will display controls for editing its kind of action. The available actions are **Built In**, **Keystrokes**, **Mouse**, **MIDI**, **Special** and **Emulation**.



Any changes made in one of these tabs are immediately applied to the selected control. The MCS² software allows multiple levels of Undo, so you can easily get back to any starting point.

Also at the bottom of the **Inspector** window is the **Delete Action** button. When pressed it will delete the action currently assigned to the selected control. This is also undoable.



Action Tabs

Keystrokes Tab

The MCS² controls can be assigned to send a sequence of keystrokes to an application just as if they were keys on the Mac keyboard. These assignments are set up in the **Keystrokes Tab**.

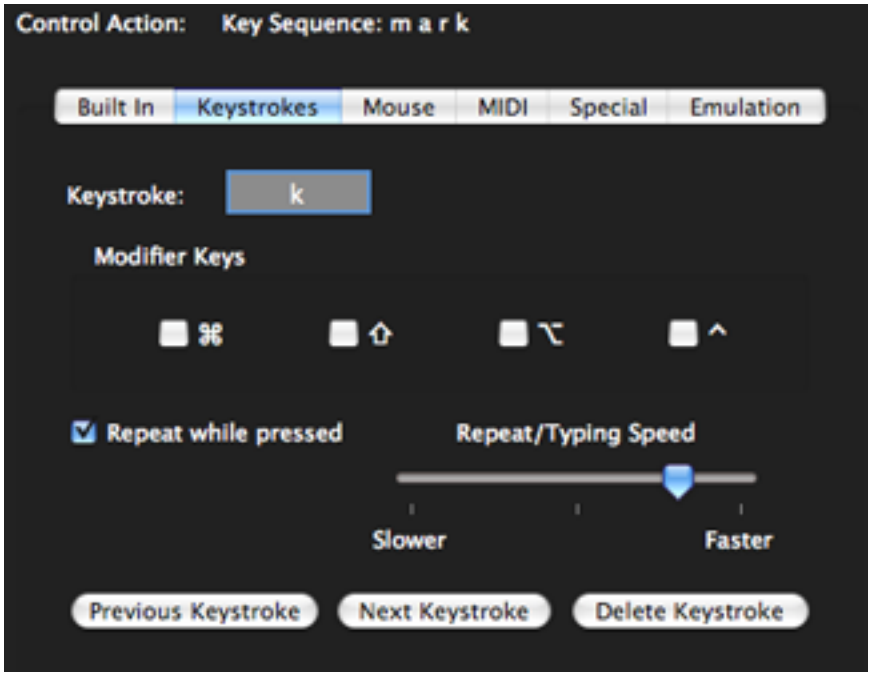
Select a control to edit, place the cursor in the **Keystroke** field and type a key. If you hold down any modifier keys (command, shift, option or control) while typing this key, the modifier checkboxes will be set up accordingly. You can also manually change the modifier checkboxes by clicking on them.

Some key/modifier combinations may be intercepted by the operating system before they reach the **Inspector** window. If this happens, just type the key without any modifiers, then click on the appropriate checkboxes to add the desired modifiers.

To add more keystrokes to the sequence, click on the **Next** button and repeat the above procedure. You can move forwards or backwards in the sequence with the **Next** and **Previous** buttons. The **Delete Keystroke** button will remove the currently displayed keystroke from the sequence.

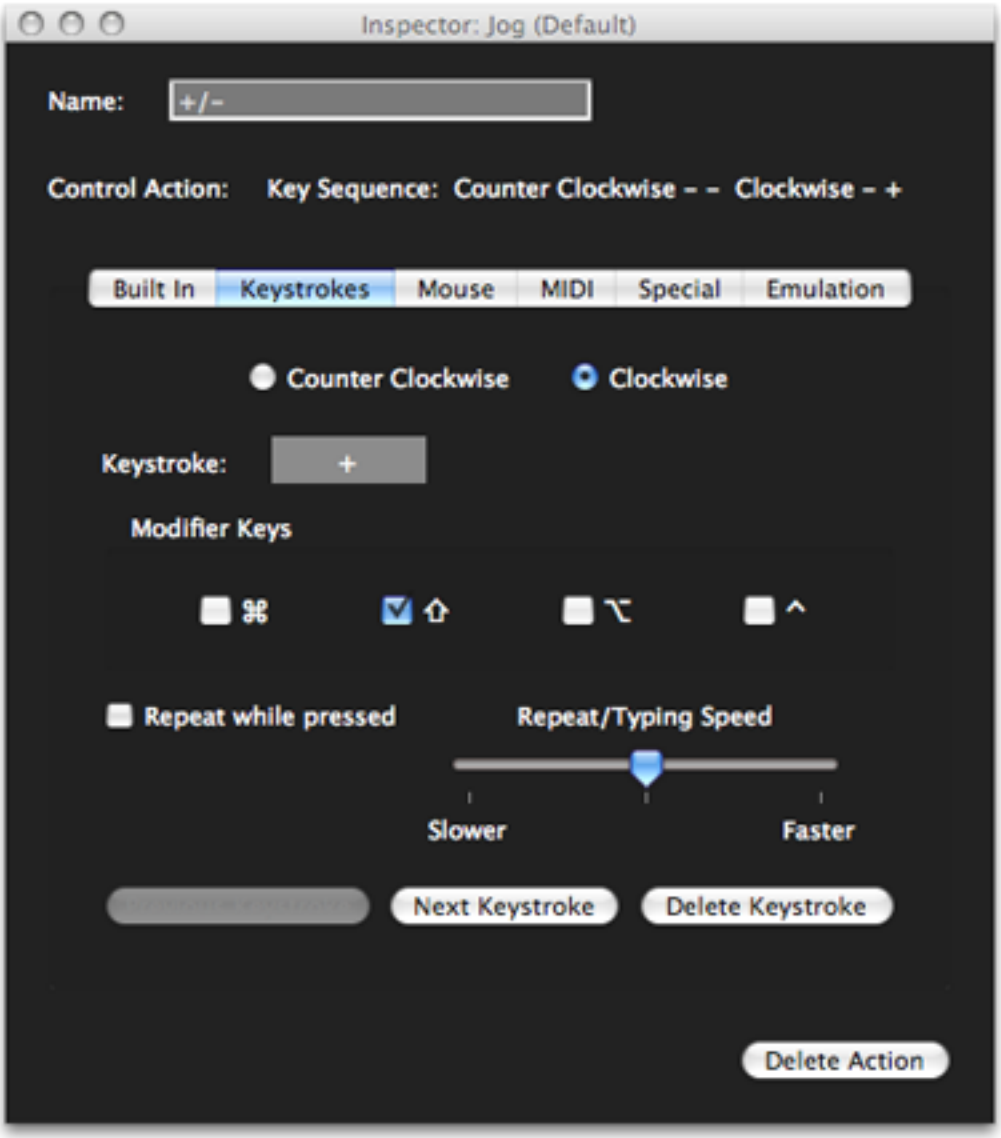
If **Repeat while pressed** is checked, the keystroke (or sequence) will repeat as long as the MCS^2 control is held down. The speed of the repeat is controlled by the **Repeat/ Typing Speed** slider. This slider also determines how much time there is between keystrokes if the sequence is more than one keystroke.

If the key sequence in the example below was assigned to the **STOP** button, pressing and holding **STOP** would be the equivalent of repeatedly typing the word “mark” until **STOP** was released.

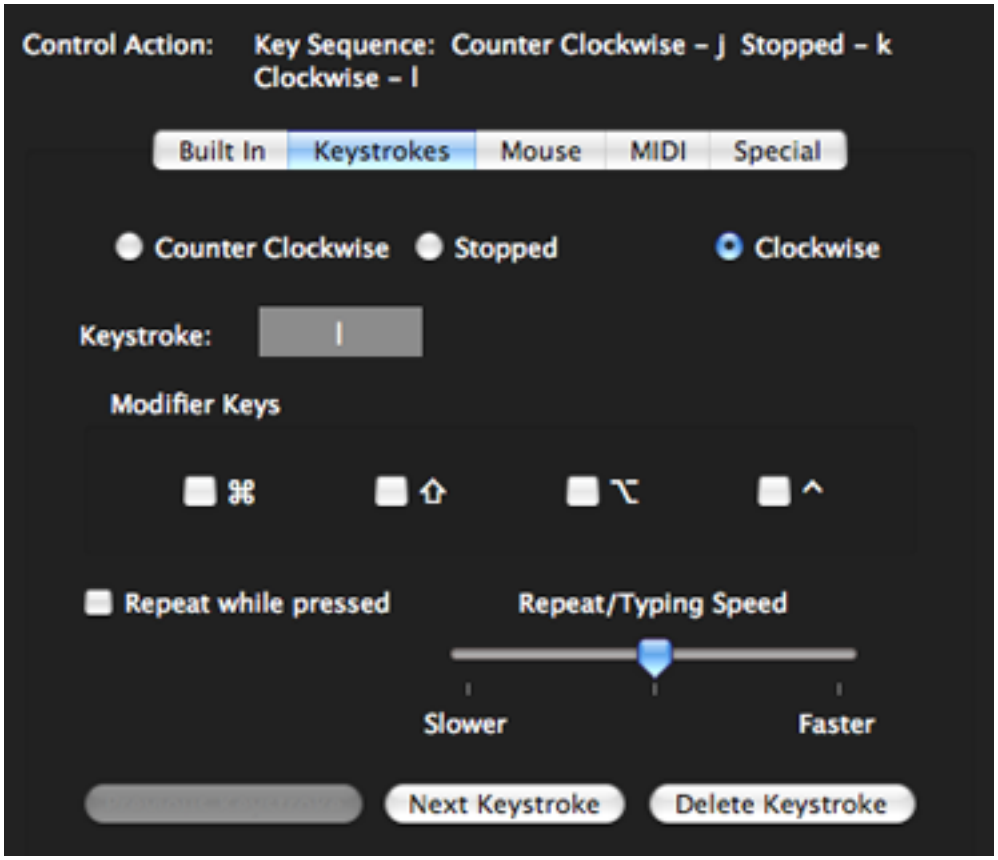


The **Keystrokes** tab can vary depending on the type of MCS^2 control selected. For the **Jog Wheel**, different key sequences can be assigned to each direction. Click on the **Counter Clockwise** or **Clockwise** radio button to choose which direction’s sequence to edit.

In the example below, a counter clockwise turn would send a “-” and a clockwise turn would send a “+”.



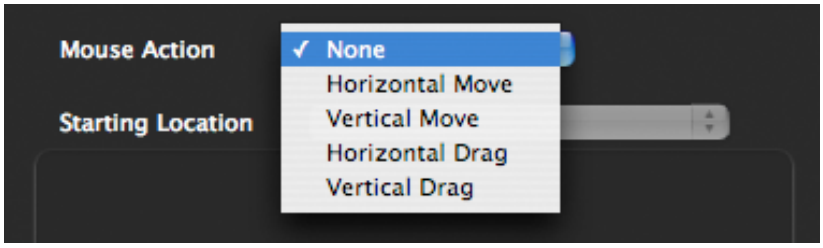
The Shuttle Control can have a key sequence assigned not only to its counter clockwise and clockwise directions, but also to it's center detent. The example below implements JKL shuttling which is used by several nonlinear video editors. In other words, the shuttle will send a "j" when being turned counter clockwise, an "l" when being turned clockwise and a "k" when it is returned to the center position.



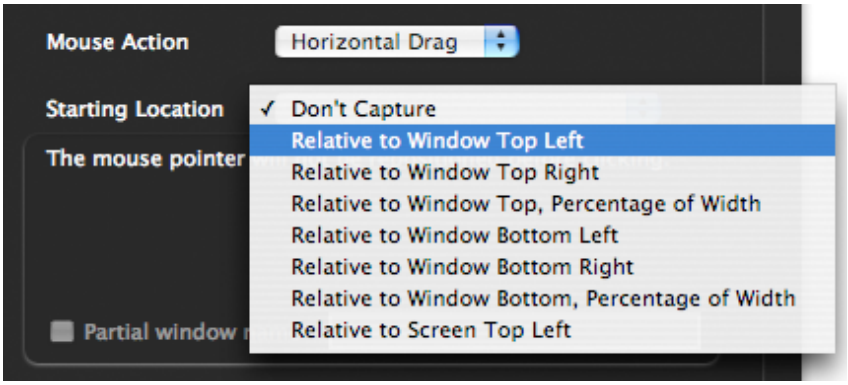
Mouse Tab

The controls on the MCS² can be made to emulate the Macintosh mouse. Buttons can perform clicks and the **Jog Wheel** and **Shuttle Control** can perform horizontal and vertical moves and drags.

The **Mouse Action** popup lists the actions available for the selected control. For example, if the **Jog Wheel** is selected the popup would look like this:



The **Starting Location** popup lets you choose where the click, move or drag will originate.



If you choose **Don't Capture**, the mouse action will always begin at the current location of the Mouse pointer. If you choose any other option, you will be prompted to pick a point in one of the target application's windows. The options in this menu determine how the MCS² will find that point in the event that the destination window has been resized or moved.

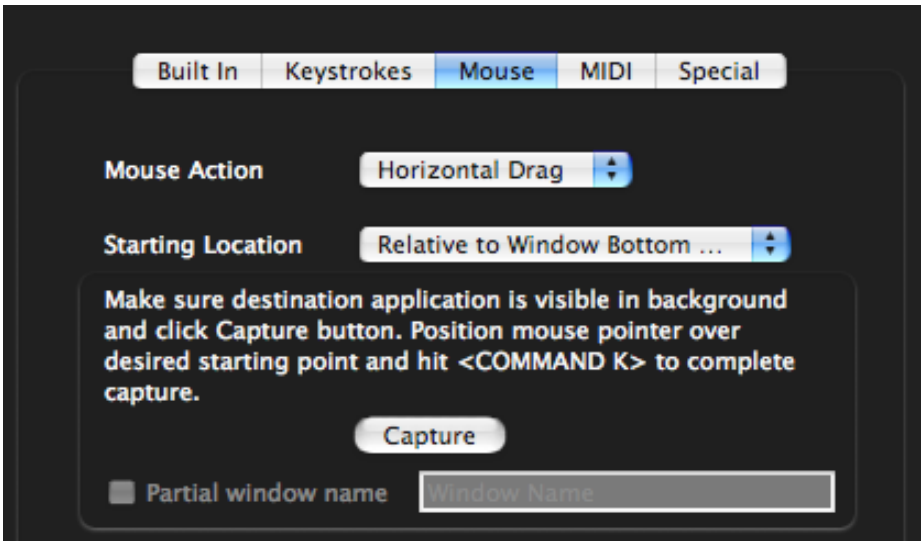
Option	When Destination Window is Resized or Moved
Relative to Window Top Left	The start point will stay the same distance from the top left corner of the window.
Relative to Window Top Right	The start point will stay the same distance from the top right corner of the window.
Relative to Window Top Percentage of Width	The start point will stay the same distance from the top of the window, but it's horizontal position will be a percentage of the window's width..

Option	When Destination Window is Resized or Moved
Relative to Window Bottom Left	The start point will stay the same distance from the bottom left corner of the window.
Relative to Window Bottom Right	The start point will stay the same distance from the bottom right corner of the window.
Relative to Window Bottom Percentage of Width	The start point will stay the same distance from the bottom of the window, but it's horizontal position will be a percentage of the window's width..
Relative to Screen Top Left	The start point will stay the same distance from the top left corner of the screen, no matter what the size or position of the window.

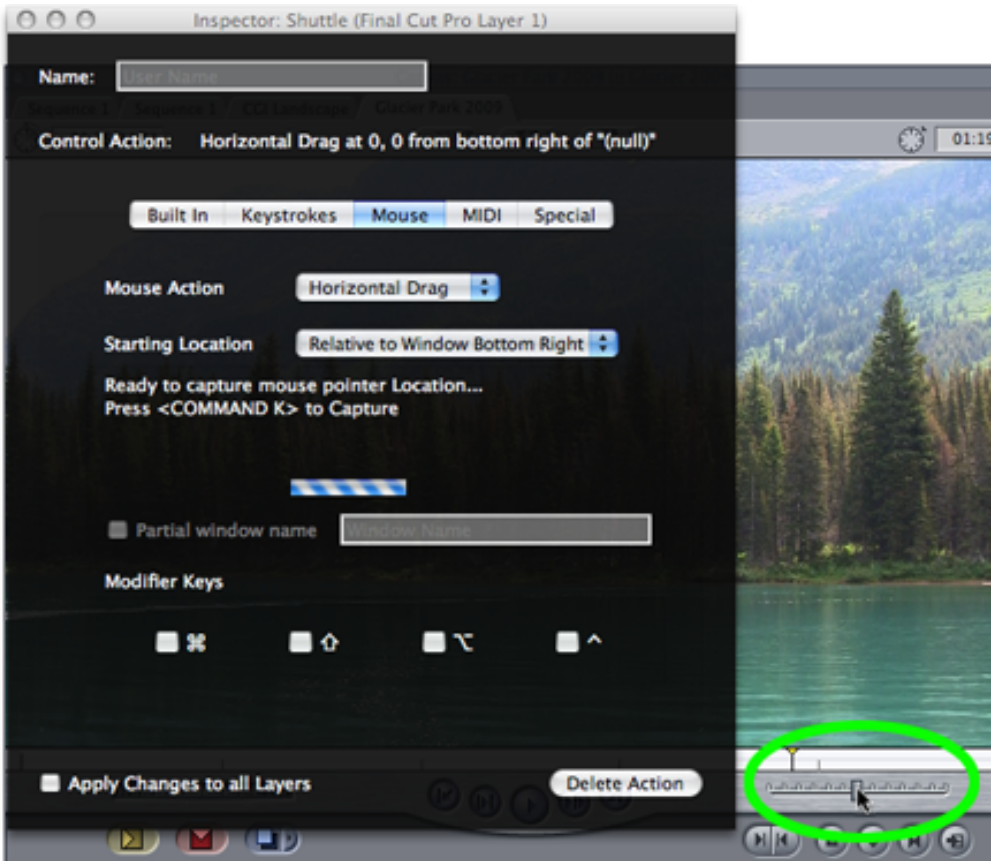
For example, let's say that a particular application has an onscreen shuttle slider in the lower right hand corner of it's Timeline window, and the center of that slider is 100 pixels from the right of the window and 20 pixels from the bottom of the window. When the window is resized, the slider stays at 100 pixels from the right and 20 pixels from the bottom of the window.

Suppose the only way to access this program's shuttle function is by dragging this slider left or right. You could program the MCS^2 **Shuttle Control** to do a horizontal drag starting at 100, 20 **Relative to Window Bottom Right**.

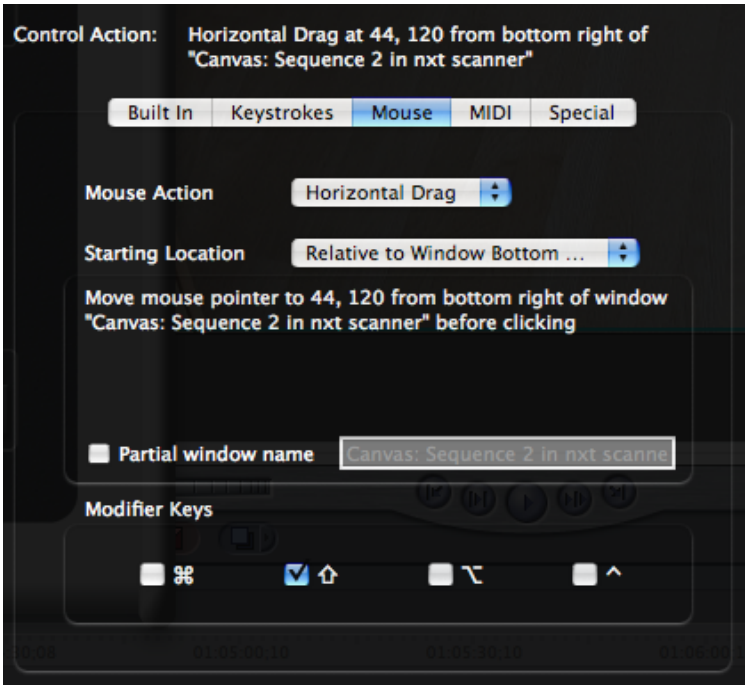
Once you have chosen from the **Starting Location** popup, you will be prompted to actually pick the starting point.



Make Sure the target application is open in the background, and that the destination window is visible. Hit the **Capture** button then position the mouse pointer over the desired starting point and type <COMMAND K>.



The **Inspector** window will be updated to show the window name and coordinates where the click, drag or move should take place.



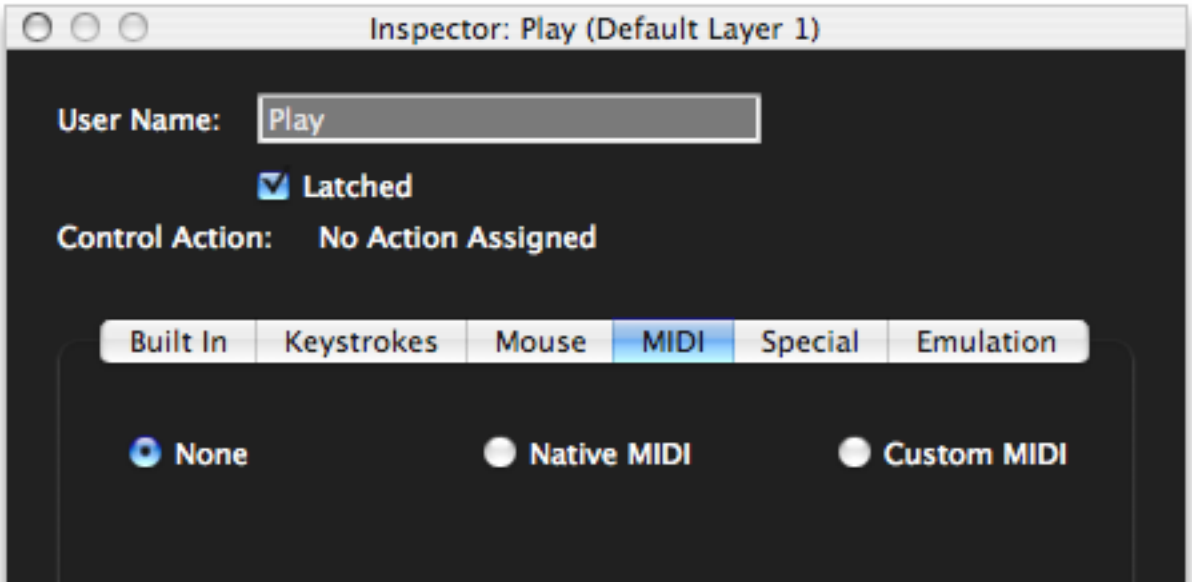
From now on, whenever you are in the target application and use the assigned control, it will move the destination window to the front, then click, move or drag at the selected location.

Once a window name and mouse location has been captured, you have the option of using a partial window name. This is useful in applications like Final Cut Pro, where the Canvas Window's title always starts with the word "Canvas" but the rest of the window title changes depending on what you're editing. Normally, the MCS² tries to find a window with the exact name as the window where the click was first captured, but if the window name has changed, it will fail. If you choose to have the MCS² just look for the word Canvas in Final Cut Pro it will always find the Canvas Window, even if the exact name of the Canvas Window changed since the click was captured.

To use the partial name feature, click on the **Partial Window Name** checkbox. In the text box on the right, change the full window name to the partial name you want the MCS² to use.

MIDI Tab

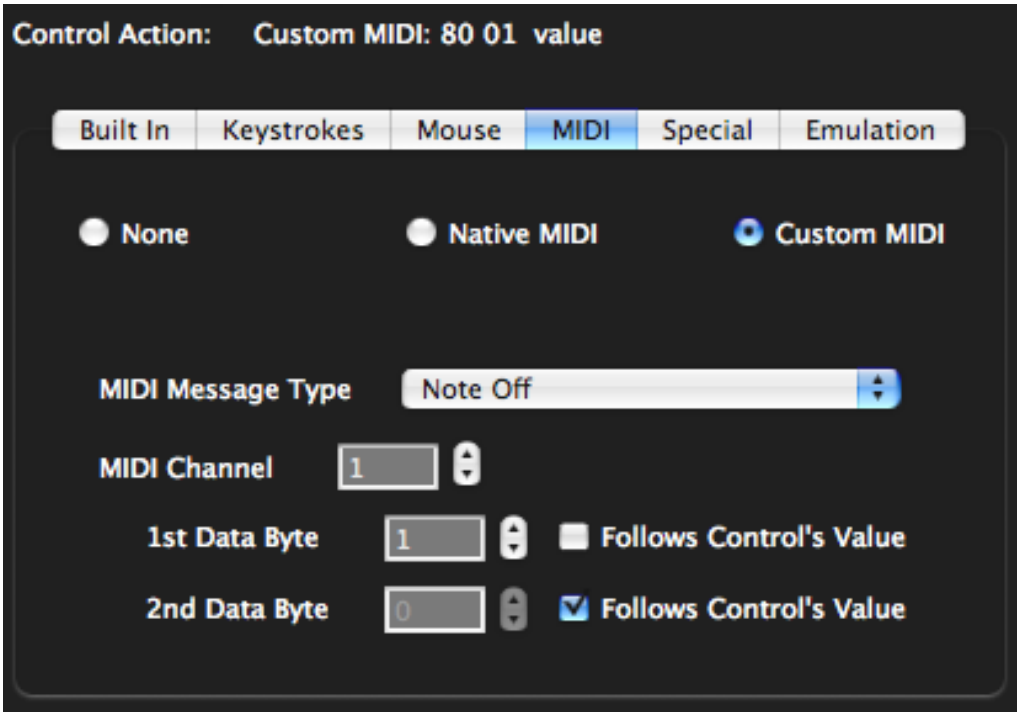
An MCS² can be made to appear as a MIDI device to MIDI applications. Any MCS² control can be programmed to send and respond to a MIDI message.



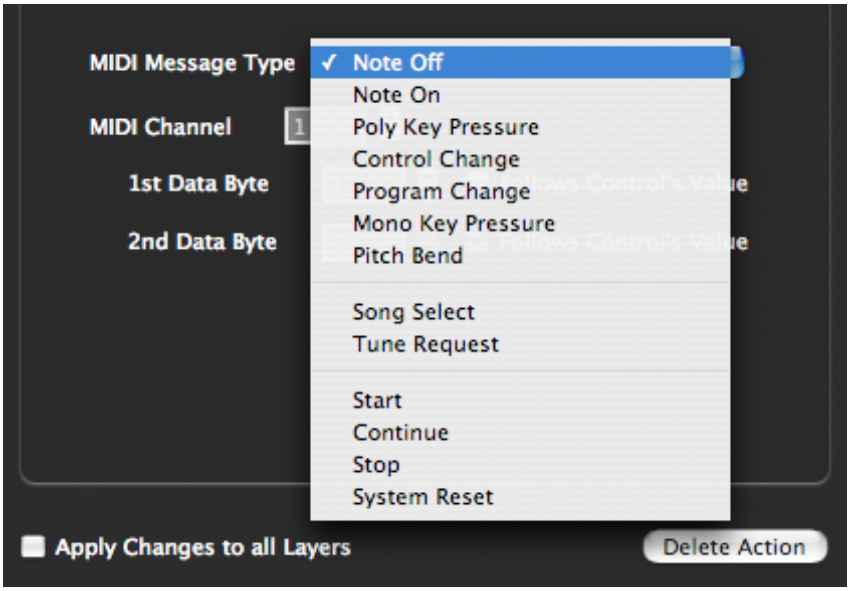
There are three radio buttons for choosing the type of MIDI message to assign.

None	No MIDI message for the selected control. If some other type of action has already been assigned, the None button will be selected. Clicking on the None button will delete the currently assigned action.
Native MIDI	Native MIDI actions send and respond to the MCS² hardware's built-in MIDI protocol. You would typically use this setting with an application which directly supports the MCS² protocol. It could also be used with an application that has a MIDI "Learn" feature. For convenience, choosing **Set all Controls to Native MIDI** in the **Actions** menu will assign Native MIDI actions to all of the MCS² controls on all layers in the current keyset.
Custom MIDI	Custom MIDI actions send and respond to user defined MIDI messages.

When **Custom MIDI** is chosen, more controls will become visible for editing the custom messages.



The **MIDI Message Type** popup lets you choose any of the basic MIDI messages except for system exclusive and MIDI Time Code.



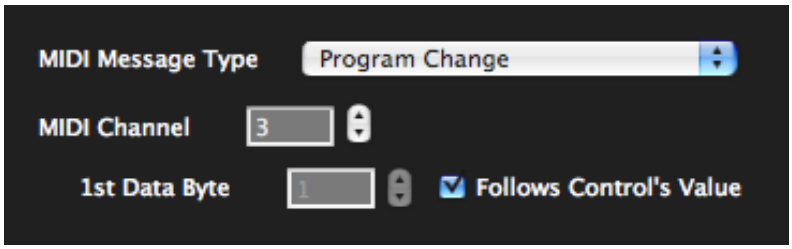
The first group of messages in the popup include a MIDI channel. If you choose one of these message types, a channel editor appears. You can either type or use the up and down arrows to set the channel. This editor accepts values from 1 through 16.

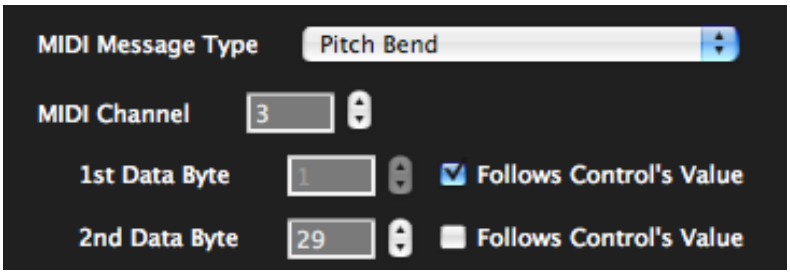
All MIDI messages except for system exclusive are either one, two or three bytes long. The first byte always is the message type, called the *status byte*. If there is a MIDI channel, it is embedded in the status byte. The bytes following the status byte, if any, are referred to as data bytes and contain additional information such as note numbers, velocities, control values, etc...

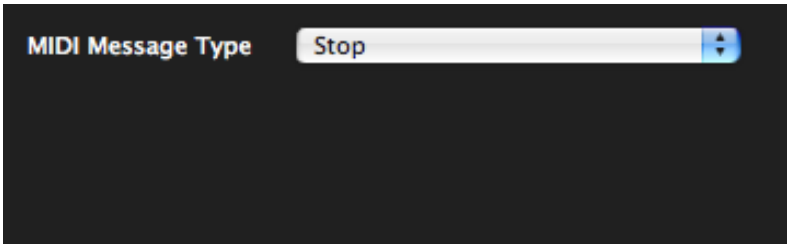
If you choose a message type that is more than one byte long the **1st Data Byte** (and possibly the **2nd Data Byte**) editor appears. You can set the data byte's value by typing or using the up/down arrows. The editor accepts values from 0 through 127.

Instead of setting an absolute value for a data byte, you can check the **Follows Control's Value** box. In this case, the value of that data byte is determined by the state of the MCS^2 hardware control this message is assigned to. In other words, if you assigned a Custom MIDI Message to the **Jog Wheel** and the 2nd data byte was set to **Follows Control's Value**, a number representing the movement of the **Jog Wheel** would be inserted as the 2nd data byte of the custom message. For MCS^2 buttons, a value of 127 will be inserted for button presses, and 0 for button releases.

Following are some samples of the **MIDI Tab's** appearance for various message types.





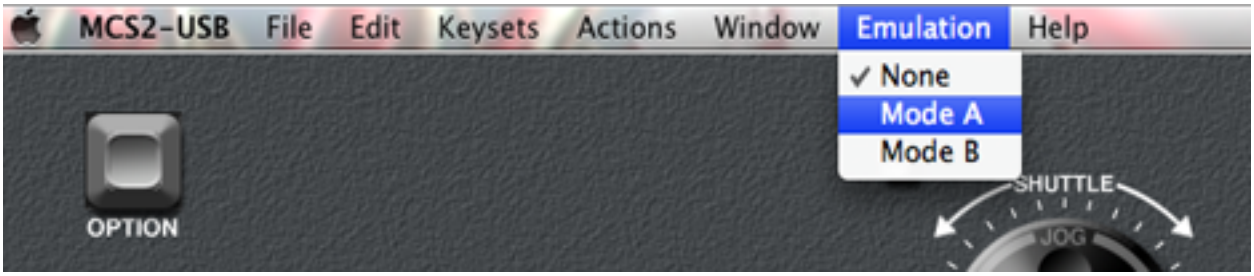


To access the MCS²'s MIDI messages in your MIDI application, connect your application's MIDI input and output ports to the ports labeled "MCS2". Depending on the application, the ports may be labeled "MCS2 USB". The exact method for connecting to MIDI ports varies from application to application. Consult the manuals of the MIDI applications you are using to learn how to do this.

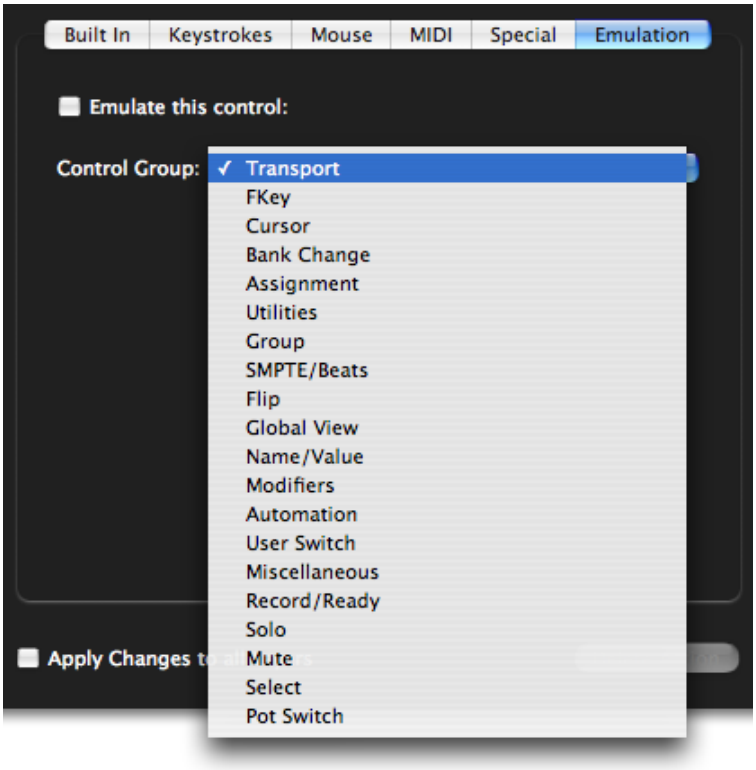
Emulation Tab

The MCS² software has the ability to emulate other MIDI based control surfaces. This feature is useful if you are using the MCS² with an application which doesn't directly support the MCS², but which supports one of these other control surfaces.

You can set any control on the MCS² to emulate a control on one of these control surfaces using the Emulation Tab. The Emulation Tab is not available until you turn on Emulation in the **Emulation** Menu. Here you can choose **None**, **Mode A**, or **Mode B**. **Mode A** and **B** represent two different control surfaces. Which one you choose depends on the application you are using with the MCS². More on this later.

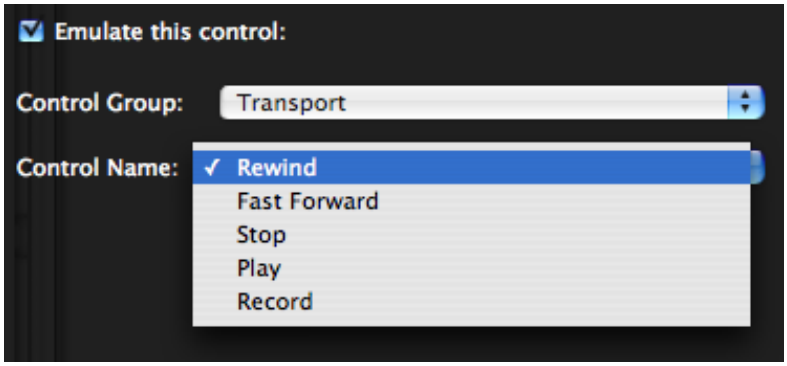


The contents of the **Emulation Tab** varies depending on the type of MCS² control that is selected. This is what you will see at first if you select a button.

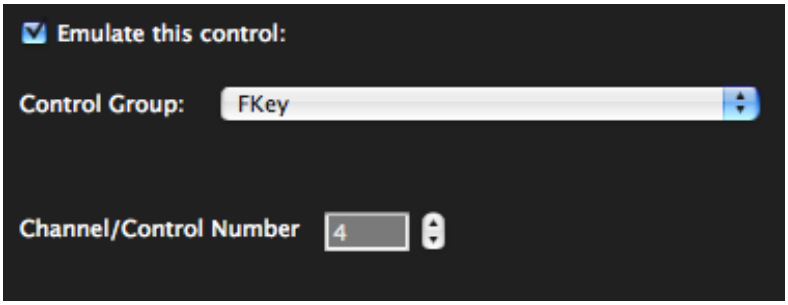


The **Control Group** popup lists the basic categories of controls that can be emulated by the selected MCS² control. Checking **Emulate this control:** or choosing from the **Control Group** popup will assign an Emulation action to the selected control. It will also display either a second popup or a numerical editor for choosing which control in the group to emulate.

For some control categories, such as **Transport**, the individual controls in that category have names, such as **Rewind**, **Fast Forward**, **Stop**, **Play** and **Record**. For these categories a second popup will list the control names.



For other categories, such as **F-Keys**, the controls are just numbered. For these categories a numerical editor will appear. This allows you to either type or use up/down arrows to set the control number.



The Jog Wheel only has one choice, **Emulate Jog Wheel**.

You cannot assign Emulation actions to the **Shuttle Control** because none of the emulated control surfaces have this function.

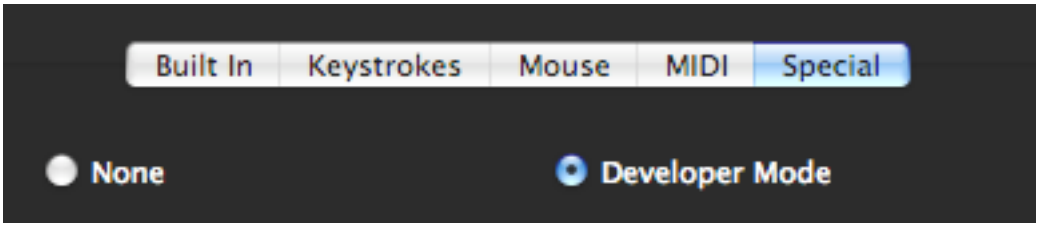
For convenience, choosing **Set all Controls to Emulation** in the **Actions** menu will assign **Emulation Actions** to many of the MCS² controls on all banks in the current keyset. Some MCS² controls do not correspond to any controls on the emulated control surfaces, so those controls are left unassigned.

The following assignments are made when **Set all Controls to Emulation** is chosen. The assignments are also applied to the Option, Shift and Option Shift banks. If **Option and Shift Keys are Programmable** is checked in the **Preferences** dialog then there is only one bank and the modifier keys are also assigned.

MCS² Control	Assignment
Jog Wheel	Jog
Rewind	Rewind
Fast Forward	Fast Forward
Stop	Stop
Play	Play
Record	Record
Option	*modifiers: option*
Shift	*modifiers: shift*

Special Tab

The **Special Tab** is a collection of actions that don't easily fit into other categories.



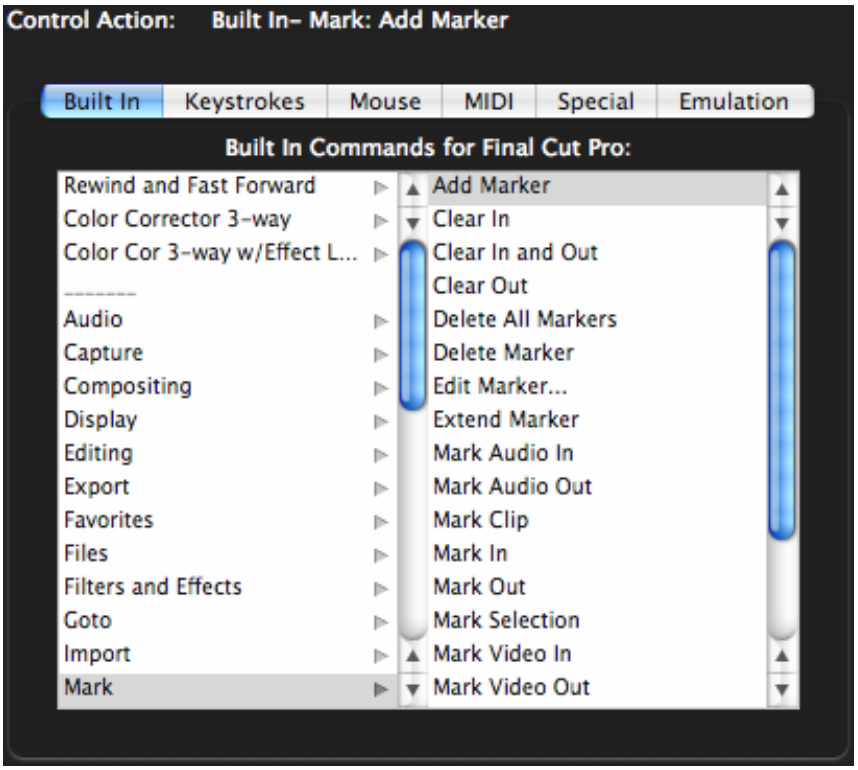
Currently, the choices are:

None	No Special Action for the selected control. If some other type of action has already been assigned, the None button will be selected. Clicking on the None button will delete the currently assigned action.
Developer Mode	This is intended for use with applications which directly support the MCS². This action uses messaging protocols built into Mac OS X to communicate with these applications. You normally wouldn't use this mode unless you knew that an application you were using supported it. 3rd party developers who support this mode would typically ship MCS² keysets along with their applications. For convenience, choosing **Set all Controls to Developer Mode** in the **Actions** menu will assign **Developer Mode Special Actions** to all of the MCS² controls on all layers in the current keyset.

Built In Actions Tab

The built in actions are actions that are predefined for specific applications. When you choose a keyset, the built in actions appropriate to that keyset's application are displayed. If no built in actions have been defined for the current application, the display will be blank.

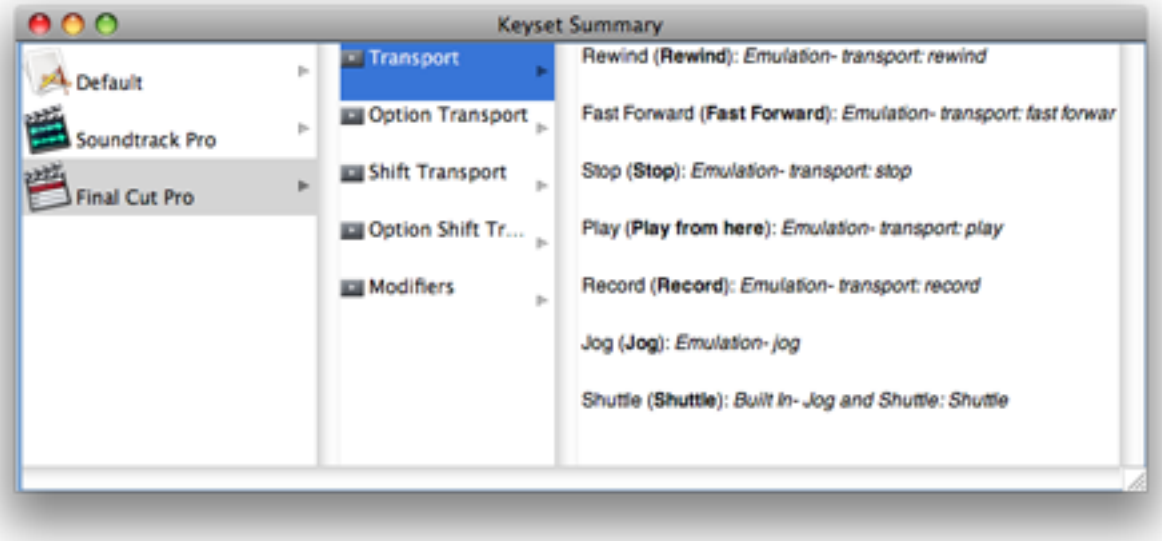
The built in actions are presented in two columns. The left hand column lists basic categories and the right hand column lists the actual actions. Clicking on a category in the left hand column will change the list of actions displayed on the right. Double-click an action name to assign it to the selected MCS^2 control.



Most of the categories and actions correspond to the keyboard shortcuts listed in the target application's manual. However, there are also actions defined by JLCooper that are not simple keyboard shortcuts. These actions will always appear at the beginning of the list, and there will be a separator line between them and other built in actions.

Keyset Summary Window

The **Keyset Summary Window** displays information about several controls at once, making it easier to tell at a glance how a particular keyset is set up. You choose the Keyset Summary from the Windows menu.



The window has three columns. The first column lists the currently active keysets. These are the same keysets that appear in the **Keysets Menu**. Clicking on a keyset in this column will change the selected keyset, just as if you had chosen a keyset from the **Keysets Menu**. Conversely, choosing a new keyset from the **Keysets Menu** will cause that keyset to be selected in the **Keyset Summary Window**.

The second column lists controls grouped by function and/or bank. Selecting one of these groups will cause the third column to display all of the controls in that group. Each control name is followed by its **Name**, if any, and a description of its assigned function. Clicking on a control in this column will cause that control to be selected in the main window and its information to be displayed in the **Inspector Window** for editing.

Final Cut Pro™ Support

Final Cut Pro™ and Control Surfaces

With FCP version 5 some support for MIDI control surfaces was added. While only audio parameters and transport functions are controllable via MIDI, the MCS^2 software not only emulates the supported control surfaces, it also can control many other parameters in FCP.

The MCS^2 is not limited to just the functions included in Final Cut's MIDI control surface support. With its built in functions and the ability to emulate the mouse and keyboard coupled with FCP's control surface support, many functions in Final Cut Pro can be controlled with the MCS^2.

Final Cut Pro™ Shuttle

The FCP Built In Shuttle command works equally well in the Timeline, Canvas, Viewer and Log and Capture windows.

Using the MCS^2 with Final Cut Pro

To use the MCS^2 with FCP, first run the MCS^2 application and import the Final Cut keyset provided by JLCooper. Now run Final Cut and open the **Control Surfaces** dialog from the **Tools** menu. Click on the "**+**" button to add a control surface and choose Mackie Control. Then choose **MCS2 USB - MCS2** for the input connection and output connections. Click OK to exit the dialog.

Final Cut requires the Audio Mixer (Tools Menu) to be open in order for control surface support to be active. You might want to save a window layout that has the Audio Mixer open.

The MCS² Final Cut Pro Keyset

The MCS² Final Cut Pro keyset uses a combination of emulated controls, mouse emulation, keystrokes and built-in commands. It is fully customizable using the techniques presented in this manual, so you can easily adapt it to your working style.

Here are the control assignments in the FCP keyset. Note that if you have chosen **Option and Shift keys are programmable** in the MCS² Preferences only the (no modifiers) bank will be active and the **Option** and **Shift** buttons will perform the actions shown below. Otherwise, all the banks will be available, and the **Option** and **Shift** buttons will act as bank selectors.

MCS² **(no modifiers)**	**FCP**	**MCS²** **(option button down)**	**FCP**
Rewind	Emulation- transport: rewind	Option Rewind	Built In- Goto: Go to Previous Marker
Fast Forward	Emulation- transport: fast forward	Option Fast Forward	Built In- Goto: Go to Next Marker
Stop	Emulation- transport: stop	Option Stop	Built In- Mark: Add Marker
Play	Emulation- transport: play	Option Play	Emulation- transport: play
Record	Built In- Render: Render All: Both	Option Record	Built In- Mark: Delete Marker
Jog	Emulation- jog	Option Jog	Emulation- jog
Shuttle	Built In- Jog and Shuttle: Shuttle	Option Shuttle	
Option	*Built In- Show Viewer*		
Shift	*Built In- Show Canvas*		

MCS² (shift button down)	FCP	MCS² (option -shift buttons down)	FCP
Shift Rewind	Built In- Goto: Go to In Point	Option Shift Rewind	Built In- View Menu: Zoom Out
Shift Fast Forward	Built In- Goto: Go to Out Point	Option Shift Fast Forward	Built In- View Menu: Zoom In
Shift Stop	Built In- Mark: Mark In	Option Shift Stop	Emulation- transport: stop
Shift Play	Built In- Mark: Mark Out	Option Shift Play	Built In- Transport: Play Around Current Frame
Shift Record	Built In- Mark: Clear In and Out	Option Shift Record	
Shift Jog	Emulation- jog	Option Shift Jog	Key Sequence: Counter Clockwise - - Clockwise - =
Shift Shuttle		Option Shift Shuttle	

Final Cut Pro X™ Support

Unlike Final Cut Pro 7, FCP X includes no built-in support for control surfaces. However, the MCS2 is still quite useful with FCP X because JLCooper has converted all of the FCP X keyboard shortcuts into MCS2 Built-In Commands.

JLCooper has included a Final Cut Pro X keyset which has assigned Built-In Commands to many of the MCS controls, but which still leaves room for customization.

Following is a list of the FCP X keyset assignments. Note that if you have chosen **Option and Shift keys are programmable** in the MCS² Preferences only the **(no modifiers)** bank will be active and the **Option** and **Shift** buttons will perform the actions shown below. Otherwise, all the banks will be available, and the **Option** and **Shift** buttons will act as bank selectors.

MCS² (no modifiers)	**FCP X**	**MCS² (option button down)**	**FCP X**
Rewind	Play Reverse	Option Rewind	Go To Previous Marker
Fast Forward	Play Forward	Option Fast Forward	Go To Next Marker
Stop	Stop	Option Stop	Add Marker
Play	Play	Option Play	Delete Marker
Jog	Jog	Option Jog	Zoom
Shuttle	Shuttle		
Option	*Color Board*		
Shift	*Audio Enhancements*		

MCS² (shift button down)	FCP X	MCS² (option -shift buttons down)	FCP X
Shift Rewind	Go To Beginning	Option Shift Rewind	Event Browser
Shift Fast Forward	Go To End	Option Shift Fast Forward	Timeline
Shift Stop	Set Selection Start	Option Shift Stop	Inspector
Shift Play	Set Selection End	Option Shift Play	Event Library
		Option Shift Record	Project Library

Soundtrack Pro™ Support

Setting up the MCS² for use with Soundtrack Pro is almost identical to setting up for Final Cut Pro.

Open the MCS² application and Import the Soundtrack Pro keyset or create a keyset of your own. If you create your own, start by setting the **Emulation Mode** to **A** then choosing **Set All Controls to Emulation** from the **Actions** menu. Later on you can customize this keyset with built-in commands, key sequences and mouse actions.

The next time you run Soundtrack Pro, open the **Preferences** dialog from the **Soundtrack Pro** menu then go to the **Control Surfaces** panel. Click on the "**+**" button to add a control surface and choose Mackie Control. Choose **MCS2 USB - MCS2** for the input connection and output connections. Click OK to exit the dialog.

The Soundtrack Pro Keyset

The Soundtrack Pro keyset is a combination of emulated actions, keystrokes and built in commands. Note that if you have chosen **Option and Shift keys are programmable** in the MCS² Preferences only the **(no modifiers)** bank will be active and the **Option** and **Shift** buttons will perform the actions shown below. Otherwise, all the banks will be available, and the **Option** and **Shift** buttons will act as bank selectors.

MCS² **(no modifiers)**	**Soundtrack Pro**	**MCS²** **(option button down)**	**Soundtrack Pro**
Rewind	Emulation- transport: rewind	Option Rewind	Built In- Add new track to Timeline
Fast Forward	Emulation- transport: fast forward	Option Fast Forward	Built In- Add new bus to Timeline
Stop	Emulation- transport: stop	Option Stop	Built In- Remove selected track, bus, or submix from Timeline
Play	Emulation- transport: play	Option Play	Built In- Select track above currently selected track
Record	Emulation- transport: record	Option Record	Built In- Select track below currently selected track

MCS² (no modifiers)	Soundtrack Pro	MCS² (option button down)	Soundtrack Pro
Jog	Emulation- jog	Option Jog	Emulation- jog
Shuttle		Option Shuttle	
Option	*Built In- Viewing the Timeline: Zoom out horizontally*		
Shift	*Built In- Viewing the Timeline: Zoom in horizontally*		

MCS² (shift button down)	Soundtrack Pro	MCS² (option -shift buttons down)	Soundtrack Pro
Shift Rewind	Built In- Move playhead to preceding marker	Option Shift Rewind	
Shift Fast Forward	Built In- Move playhead to next marker	Option Shift Fast Forward	
Shift Stop	Built In- Insert time marker at playhead	Option Shift Stop	Emulation- transport: stop
Shift Play	Built In- Insert beat marker at playhead	Option Shift Play	Built In- Start playback from beginning
Shift Record		Option Shift Record	
Shift Jog	Emulation- jog	Option Shift Jog	Emulation- jog
Shift Shuttle		Option Shift Shuttle	

Cubase™, Logic Pro™ and Nuendo™ Support

The keysets for all these programs were created using **Set all Controls to Emulation Mode A**. The assignments are listed here again for convenience.

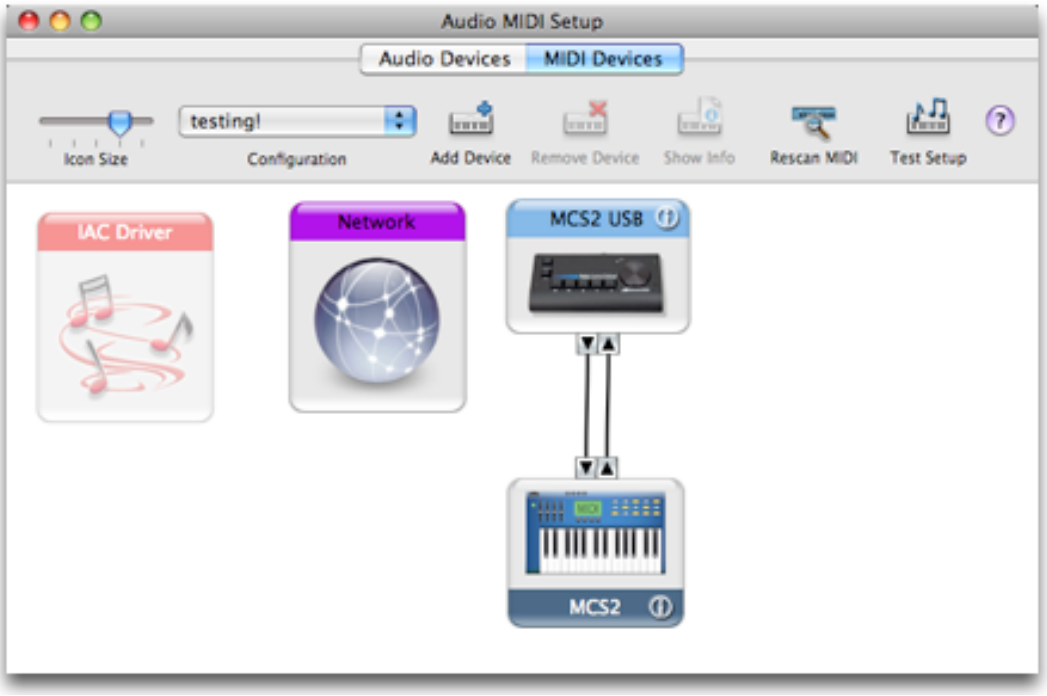
MCS² Control	Assignment
Jog Wheel	Jog
Rewind	Rewind
Fast Forward	Fast Forward
Stop	Stop
Play	Play
Record	Record
Option	*modifiers: option*
Shift	*modifiers: shift*

To use the MCS2 with any of these applications, set the application up to use the Mackie Control connected to the **MCS2** input and output ports. Refer to the manuals for these applications for details on setting up control surfaces.

Digital Performer™ Support

The Performer keyset uses a combination of Emulation Mode A actions and key sequences. If you have changed the keyboard shortcuts for **Go To Next Measure**, **Go To Previous Measure** or **Click On/Off** in Performer (**Setup > Commands**), then you will need to reprogram the keyset's **Shift** Button and **Jog Wheel** to match the changes you made in Performer.

The first step in using the MCS2 with Performer is to create an MCS2 Device in Audio/MIDI Setup. Then connect the device to the MCS2 MIDI driver. Audio/MIDI Setup can be found in the `/Applications/Utilities` folder.



Next, open Performer and choose **Control Surface Setup...** under the **Setup** menu. Choose **Mackie Control** from both the **Driver** and **Unit** popups and **MCS2-16** from the **MIDI** popup. Click **OK**.

Here are the assignments in the Performer keyset:

MCS² Control	Assignment
Jog Wheel	Jog
Rewind	Rewind
Fast Forward	Fast Forward
Stop	Stop
Play	Play
Record	Record
Option	*Toggle SMPTE/Beats Display*
Shift	*Click On/Off*

Garage Band™ Support

The keyset for Garage Band uses key sequences to trigger transport functions. The Option and Shift buttons send Up and Down Arrows and can be used for selecting items in. For example, if track 2 is selected in the main window, pressing Option will select track 1, while hitting Shift will select track 3. This works in other lists such as the Loop Browser and Effect Browser.

Here are the assignments:

MCS² Control	Assignment
Jog Wheel	Jog
Rewind	Rewind
Fast Forward	Fast Forward
Stop	Stop
Play	Play
Record	Record
Option	*Select Next Higher*
Shift	*Select Next Lower*

Pro Tools™ Support

The Pro Tools keyset uses a combination of **Native and Custom MIDI** actions.

The MCS2 Native MIDI protocol is similar to that of the JLCooper CS-10, which works with ProTools. You will need to have a CS-10 Profile which is compatible with your version of ProTools. The CS-10 profile for Pro Tools 8 can be found on Digidesign's website at Legacy MIDI Controllers - Pro Tools 8 . For earlier versions of the CS-10 profile, go to Digidesign and perform a search for "Legacy Controllers".

Follow Digidesign's instructions for installing the profile then launch ProTools. Choose **Setup > Peripherals** and click on the **MIDI Controllers** tab. Choose **CS-10** from the **Type** popup and **MCS2** from both the **Receive From** and **Send To** popups. Click on the **OK** button.

Here are the assignments for the Pro Tools keyset:

MCS² Control	Assignment
Jog Wheel	Jog
Rewind	Rewind
Fast Forward	Fast Forward
Stop	Stop
Play	Play
Record	Record
Option	*Jog Mode On*
Shift	*Shuttle Mode On*

Once you have entered **Jog** mode with the **Option** button or **Shuttle** mode with the **Shift** button you need to press the **Stop** button to return to normal transport mode.