



FaderMate Moving Fader Automation System
Avid Pro Tools Setup Guide - v1.0.0 (October 2018)

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1 Introduction

This guide explains how to use FaderMate with Avid Pro Tools.

It was prepared with reference to Pro Tools 2018 running on Microsoft Windows 10.

Some details may vary slightly depending upon the versions of Pro Tools and operating system you are running.

NOTE: This document is not an exhaustive product guide for Pro Tools. If you need more in-depth information about operating the software, please refer to

<https://www.avid.com/static/resources/us/documents/ProToolsReferenceGuide.pdf>

2 Before You Begin

Before starting the setup process, please ensure that you have:

- Connected your MIDI interface to the computer correctly
- Connected the FaderMate MCU to the MIDI interface as outlined in the *Product Manual*.
- The HUI full scale settings for all FCUs in their default configuration (16383) as described in *FaderMate GUI User Guide*

The documents mentioned in this section can be downloaded from

<http://fadermate.co.uk/downloads.html>

3 Basic Setup

It is first necessary to configure the FCUs in your FaderMate installation as HUI banks in Pro Tools.

Select the menu item **Setup > Peripherals**.

You will see the *Peripherals* window. Select the *MIDI Controllers* tab as shown in Figure 3.1.

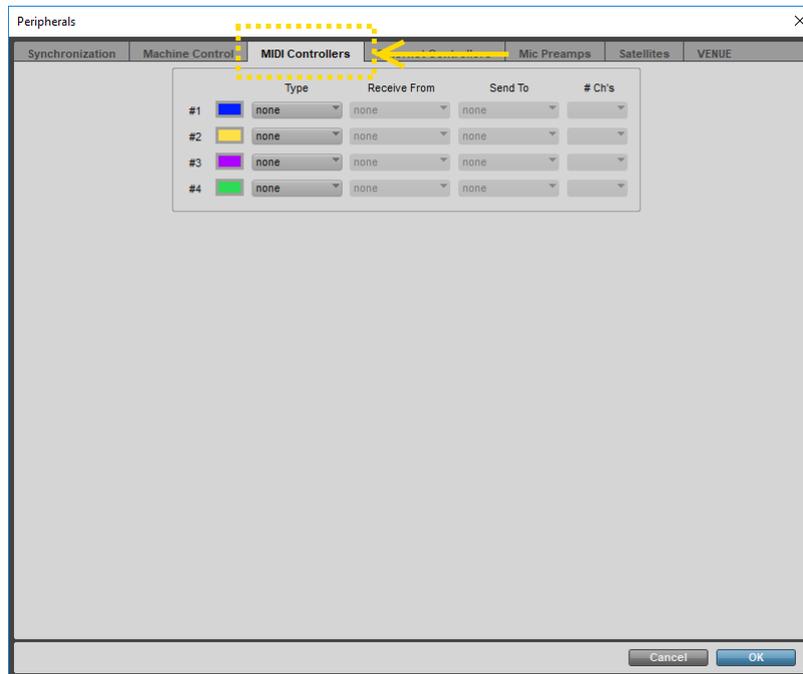


Figure 3.1 – Selecting 'MIDI Controllers' Tab in Peripherals Window

Pro Tools supports up to 4 8 channel wide HUI banks. The settings for these devices are entered in the rows of dropdown menus on the *MIDI Controllers* page labelled #1, #2, #3 and #4 as illustrated in Figure 3.2.

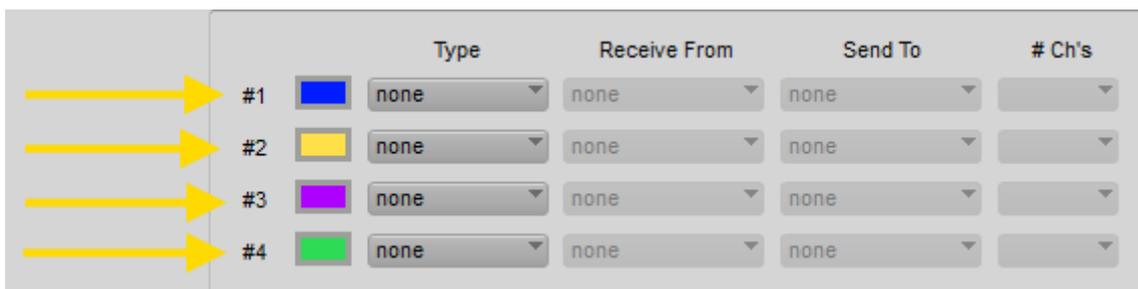


Figure 3.2 – MIDI Controllers #1 -> #4 Setup

For each FCU in your FaderMate installation, use the dropdown menus in one of the rows to select the following parameters:

- **Type.** This should be set to *HUI*.
- **Receive from.** This should be the input on your MIDI interface which is connected to the appropriate output on the FaderMate MCU.
- **Send to.** This should be the output on your MIDI interface which is connected to the appropriate input on the FaderMate MCU.
- **# Ch's.** This should always be set to 8.

Figure 3.3 shows the *MIDI Controllers* setup screen for the following example FaderMate system:

- 24 channel system (3 FCUs)
- MCU channel 1 connected to M-AUDIO MIDISPORT 4x4 channel A
- MCU channel 2 connected to M-AUDIO MIDISPORT 4x4 channel B
- MCU channel 3 connected to M-AUDIO MIDISPORT 4x4 channel C



Figure 3.3 – MIDI Controllers Screen, 24 Channel FaderMate Installation

Press **OK** to accept your settings.

You can verify that FaderMate and Pro Tools are talking to each other by adding tracks to a Pro Tools project and performing the following tests:

- Move track faders on the Pro Tools *Mixer* and verify that the corresponding physical faders on your console move in a similar way (proves that Pro Tools can transmit MIDI data to FaderMate)
- Move physical faders on your console and verify that the corresponding track faders on the Pro Tools *Mixer* move in a similar way (proves that FaderMate can transmit MIDI data to Pro Tools)

4 Automation Modes

Pro Tools offers several modes in which automation envelopes can operate.

To see the full list of modes which can be applied to a track's volume envelope, add a track to your project and then click the automation modes dropdown in the track's administrative area as shown in Figure 4.1.



Figure 4.1 – Automation Modes Menu

The modes of particular interest when using FaderMate are as follows:

- **Read.** An envelope that has already been recorded will control the physical fader when the project is played back. Although you will be able to stop the physical fader from moving along with the envelope by touching it, any changes you make will not be recorded.
- **Write.** If you play back the project, moving the physical fader will write corresponding changes to the envelope. The existing state of the envelope will not cause the physical fader to move.
- **Touch.** An envelope that has already been recorded will control the physical fader when the project is played back. If you touch the physical fader, your moves will override the existing envelope and write the changes back. When you let go of the physical fader, its movements will revert back to following the existing envelope points.

5 Synchronising With Other Applications

It is possible to synchronise the playback of a Pro Tools project with other software applications (or devices) in time using *MIDI Timecode (MTC)*.

For more details about MTC, refer to: https://en.wikipedia.org/wiki/MIDI_timecode.

Timecode synchronisation can be particularly useful in several cases:

- You are using a different DAW package, would like to do an '*Out of the Box*' mix but would like to keep your automation data in a separate project (to avoid having 'empty' tracks in your project)
- Your preferred DAW does not allow enough 8 channel HUI banks to support your automation requirements (e.g. Pro Tools only allows 32 channels of HUI-based automation) but you have 2 FaderMate MCUs and 48 moving faders installed in your console. In this case, you might want to use a different DAW to control your faders whilst using Pro Tools as your project DAW.
- You would like to use something other than a DAW to store your audio (e.g. a tape or ADAT machine) but you still want to take advantage of the automation system.

5.1 MIDI Considerations

If you wish to synchronise playback of your Pro Tools project with another MTC-compatible device, you will require a spare MIDI output (if Pro Tools will be the master) or input (if Pro Tools will be the slave). Note that the extra input or output is an additional requirement over and above the requirements for connecting FaderMate.

If your project DAW and the DAW used for fader automation reside on the same computer system, you may need to use 2 separate MIDI interfaces:

- One interface which can be 'seen' by the DAW which interacts with FaderMate. If there are sufficient spare MIDI channels on the MIDI interface after taking the FaderMate connections into account, it should be possible to use a spare input/output for synchronisation purposes
- A separate interface which can be 'seen' by the project DAW

The reason for this is that each of the DAW packages attempts to 'grab' the MIDI device driver upon loading. If one DAW has already 'grabbed' the driver, the other DAW is not able to use it at the same time.

5.2 Pro Tools as Master

In order to use Pro Tools as the MTC master, it is necessary to perform the following steps:

- Select a MIDI output from which the MTC data should be sent

- Ensure that the frame rate used by all MTC devices you wish to synchronise is identical
- Enable MTC generation

To select the output MIDI port, first select menu item **Setup > Peripherals** and then choose the *Synchronization* tab as shown in Figure 5.2.1.

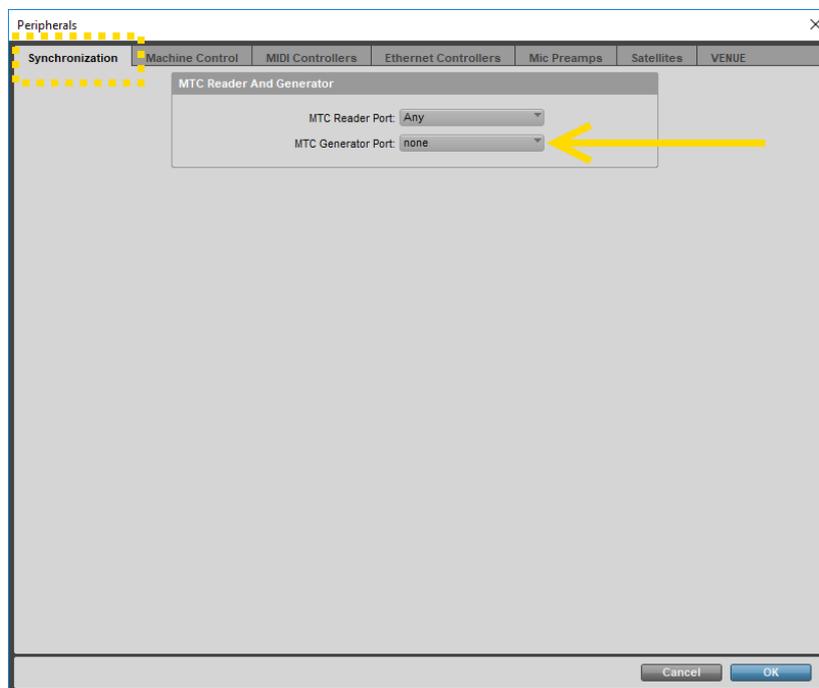


Figure 5.2.1 – Synchronization Tab

Port selection is performed using the *MTC Generator Port* dropdown as indicated in Figure 5.2.1. For example, to select output port D on an M-AUDIO MIDISPORT 4x4 as the MTC generator port, the dropdown would look similar to Figure 5.2.2.

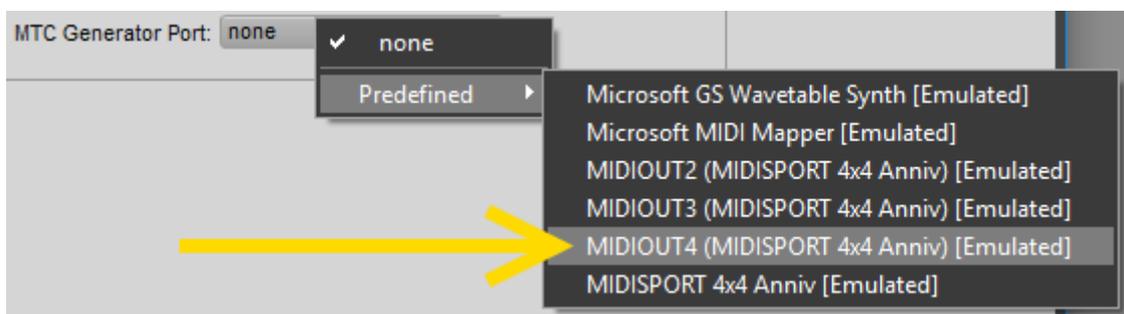


Figure 5.2.2 – Selecting an MTC Generator Port

In order to check/change the frame rate used by Pro Tools, first select menu option **Setup > Session**. You will see the *Session Setup* window as shown in Figure 5.2.3.

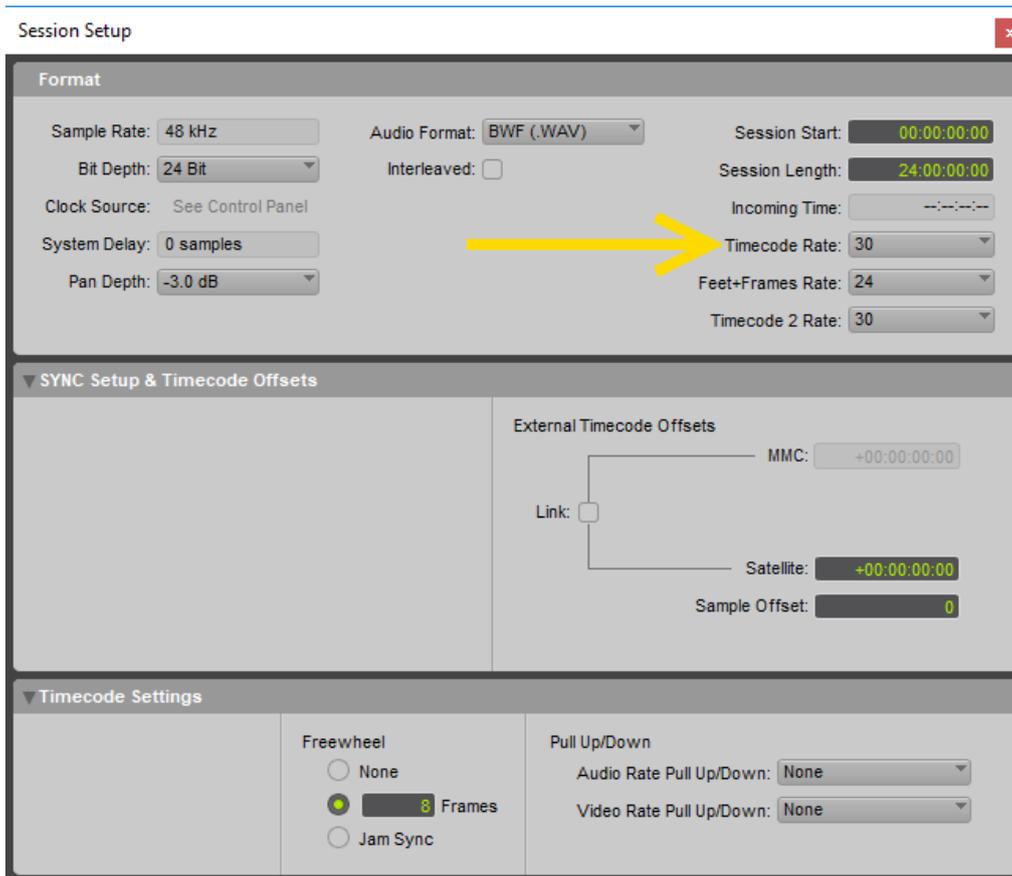


Figure 5.2.3 – Selecting Timecode Frame Rate

The frame rate can be altered by selecting the dropdown indicated in Figure 5.2.3.

MTC generation is turned on/off using the 'GEN MTC' button on the Pro Tools transport control as shown in Figure 5.2.4. If the button is currently blue as shown in Figure 5.2.4 MTC generation is enabled. If the button is grey, MTC generation is disabled.

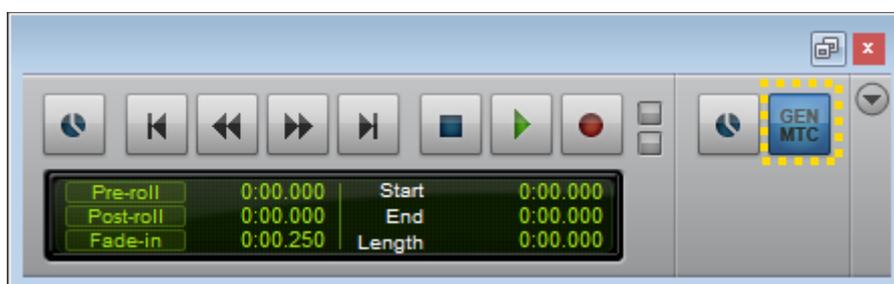


Figure 5.2.4 – Enabling MTC Generation

5.3 Pro Tools as Slave

If you would like to synchronise Pro Tools to an MTC master (e.g. a different DAW), you must complete the following steps:

- Select an MTC 'reader' MIDI port
- Ensure that the frame rate used by all MTC devices you wish to synchronise is identical
- Set the Pro Tools transport to 'online'

In order to select the MTC reader port, first choose the menu option **Setup > Peripherals** and then choose the *Synchronization* tab as shown in Figure 5.3.1

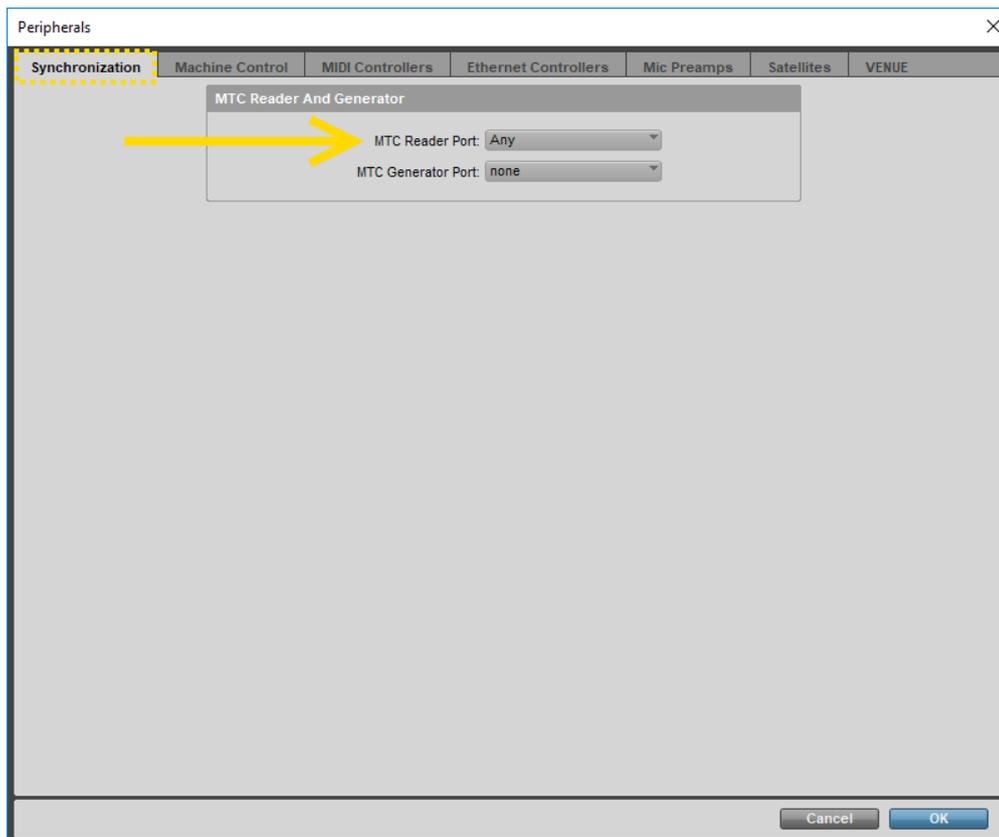


Figure 5.3.1 – Synchronization Tab

The input port used for MTC sync is selected using the *MTC Reader Port* dropdown as indicated in Figure 5.3.1.

It is possible to either listen on all available ports or specify a port as shown in Figure 5.3.2.

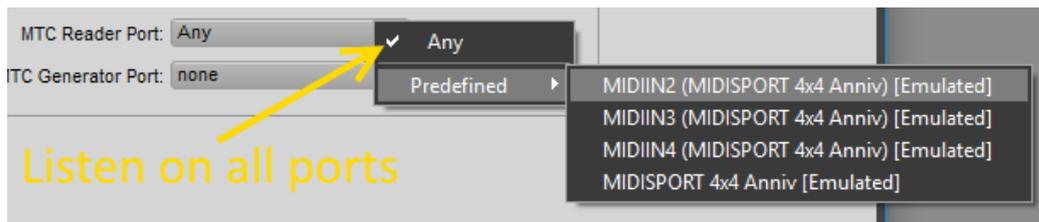


Figure 5.3.2 – Selecting an MTC Reader Port

In order to ensure that the Pro Tools sync frame rate matches that of your other devices, refer to the instructions given in section 5.2.

To 'arm' Pro Tools to respond correctly when it receives MTC via the reader port, it is necessary to set the transport to 'online' mode. This mode is controlled by the 'clock' *Online* icon on the Pro Tools transport control as shown in Figure 5.3.3.

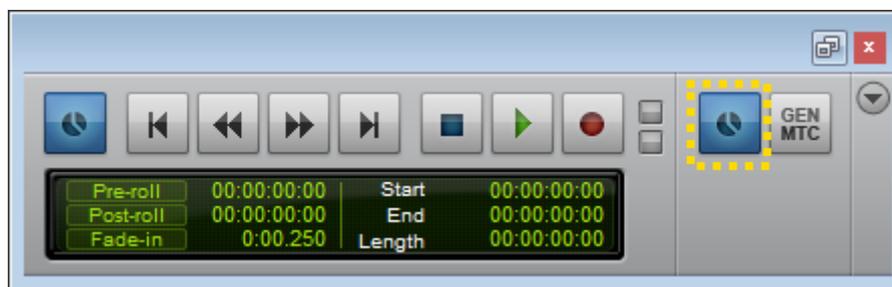


Figure 5.3.3 – Putting the Transport 'Online'

Clicking the icon indicated in Figure 5.3.3 activates the mode. With the transport in 'online' mode, the icon will periodically blink blue. You should now be able to trigger playback of your Pro Tools session using an MTC master.

Clicking the *Online* icon again will disable 'online' mode, the icon will stop blinking and session playback will no longer be triggered by the MTC master.

6 Recommended Project Setup

In order to perform an '*Out of the Box*' mix using only Pro Tools, it is advisable to configure your Pro Tools session as follows:

- **FaderMate automation tracks.** These tracks will not contain any audio. Instead they will be used solely to record and recall fader movements. Automation tracks should be the lowest-numbered tracks in your project. For example, if you have 24 channels of moving faders, allocate tracks 1-24 (inclusive) in your project as automation tracks.
- **Audio tracks.** All of the other things you would usually have in your project (e.g. audio, virtual instruments, MIDI etc) should only appear on tracks 'above' the FaderMate automation tracks. For example, if you have 24 channels of moving faders, only put actual project content on tracks numbered 25 and up.

Version History

Version	Date	Author	Details
1.0.0	02 October 2018	AJN	First release