Controlling CueMix from an iPad using TouchOSC

The CueMix mixer in your MOTU audio interface can be controlled from an iPad using an iPad app called TouchOSC. From your iPad, you can perform all CueMix mixing functions using the on-screen faders, knobs, and buttons in TouchOSC.

This document explains how to set up and use TouchOSC to control CueMix.

COMPATIBLE MOTU INTERFACES

The following MOTU interfaces are compatible with TouchOSC:

- Any "mk3" MOTU audio interface

- Any "mkII" MOTU audio interface (including the 896HD, UltraLite, and Traveler)

- Track16

- Audio Express and 4pre

- MicroBook and MicroBook II

- PCI-424 core systems

HOW IT WORKS

The CueMix FX (or CueMix DSP) mixer in your MOTU audio interface hardware is controlled by the CueMix FX software running on your computer. The CueMix FX software is, in turn, controlled by TouchOSC running on your iPad, which is wirelessly communicating with your computer. Therefore, the following conditions are required:

- Your MOTU interface must be connected to (and working successfully with) your computer.

- The latest version of the CueMix FX software must be running on the computer.

- The TouchOSC app (with CueMix FX layout) must be installed and running on your iPad.

- Your iPad must be successfully communicating wirelessly with your computer.

iPad running
TouchOSC app

Wireless connection
from iPad to computer

Computer running
CueMix FX software

USB2, FireWire or PCI
connection to
MOTU interface

MOTU audio interface with
CueMix FX or CueMix DSP
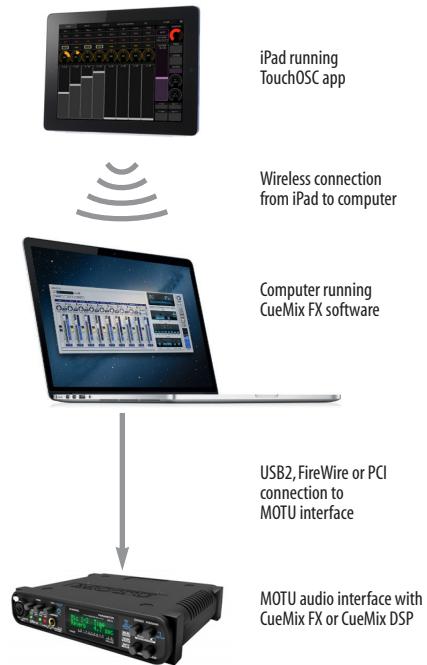
Figure 1: Use an iPad to control the CueMix FX software running on your computer, which controls the CueMix FX mixer in the MOTU audio interface.

Support for both Mac and Windows

iPad control of CueMix FX is supported on both Mac and Windows. The instructions in this guide apply to both computer platforms.

ABOUT TouchOSC

Open Sound Control (OSC) is a protocol for communication among computers, sound synthesizers, and other multimedia devices that is optimized for modern networking technology.

TouchOSC is a customizable OSC and MIDI control surface app for iPhone / iPod Touch / iPad and Android. It is available through the Apple App Store and Google Play. It allows you to control applications on your Mac or PC over Wi-Fi.

MOTU has created a custom TouchOSC iPad *layout* for controlling CueMix FX (Figure 2). When you load it into TouchOSC, your iPad becomes a customized Wi-Fi control surface for CueMix FX.

INSTALLING TouchOSC

From your iPad, visit the Apple App store to install TouchOSC and get it running on your iPad.

DOWNLOADING THE TouchOSC EDITOR

From your computer, visit the Hexler Software web site to download the TouchOSC Editor application for your Mac or PC, which allows you to upload MOTU's custom CueMix FX layout from your computer to your iPad. You can find it here:

http://hexler.net/software/touchosc

Figure 2: The CueMix FX layout for TouchOSC.

You can also use the editor to modify the CueMix FX layout to your liking. You can change colors, controls, and arrangement as desired.

OBTAINING THE CUEMIX FX TouchOSC LAYOUT

From your computer, obtain the CueMix FX TouchOSC layout from the motu web site by downloading and running the latest MOTU Universal Audio Installer found here:

http://www.motu.com/downloads

LOADING THE CUEMIX FX LAYOUT INTO TouchOSC

Now you are ready to load the CueMix FX TouchOSC layout into the TouchOSC app on your iPad. To do so:

1 On your computer, launch the TouchOSC Editor.

2 Open the CueMix FX TouchOSC layout file on your hard drive that applies to your MOTU audio interface.

You can find the layout files in a folder called *CueMix FX TouchOSC Layouts*, which is included with the Audio Installer download.

3 Optional: change the colors of the controls and make other changes, as desired. If this is your first time using TouchOSC, it might be prudent to leave the layout as is, until you get it working successfully.

4 Click the Sync button at the top of the TouchOSC Editor window.

5 On your iPad, launch the TouchOSC app.

6 Go to the Setup screen (the *i* button in the top right-hand corner).

7 Tap the current layout.

8 Tap *Add*.

The name of your computer should appear as a host.

9 Tap the name of the host.

Doing so loads the CueMix FX layout into TouchOSC.

10 Choose the CueMix FX layout that applies to your MOTU audio interface and return to the main setup screen.

CONFIGURING THE TouchOSC CLIENT

Now you need to link TouchOSC to your host computer, as follows:

1 On your computer, launch CueMix FX.

2 On your iPad, launch TouchOSC, go to the setup screen, and under *Connections*, tap the current host, which is labeled OSC followed by some numbers (an IP address).

Figure 3: The current host is labeled 'OSC' followed by an IP address.

The name of your MOTU audio interface (or interfaces, if you have several) should now appear in the list of Found Hosts.

3 Tap the name of the audio interface you want to control.

4 Go back to the main setup screen and tap *Done*.

5 Now you should see the CueMix FX layout on your iPad.

CONFIGURING THE CUEMIX FX HOST

Now you need to link the CueMix FX software (running on your computer) to your client iPad, as follows:

1   On your iPad, launch TouchOSC and make sure the CueMix FX layout is loaded, as explained earlier.

2   On your computer, launch the CueMix FX software.

3   In the Control Surfaces menu, choose *Configure OSC Devices…* to open the OSC Configuration window.
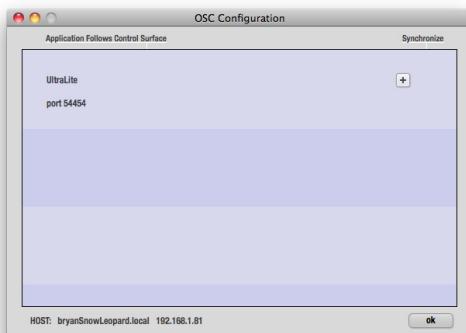

Figure 4: Configuring OSC devices.

**4**   Click the '+' button to add a new OSC client device.
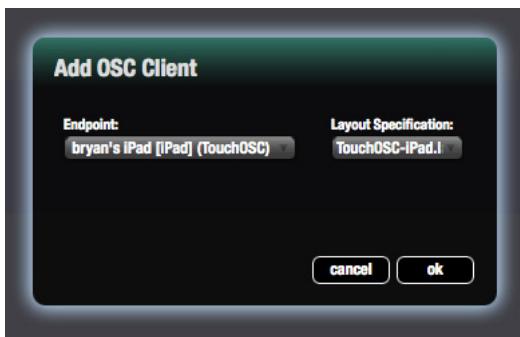
Figure 5: Adding a new OSC client device.

5   Select the name of your client device from the Endpoint menu, if your client uses Bonjour.

If your client does not use Bonjour, you can enter the IP address and port number of your client by selecting Enter IP Address Manually… from the Endpoint menu.


Figure 6: Entering the IP address manually for devices that don't use Bonjour.

6   Select a Layout Specification from the Layout Specification menu, if you are using a client other than TouchOSC. As of the writing of this document, the only Layout Specification available for CueMix FX is:

TouchOSC-iPad.layout_description

7   Click OK and now CueMix FX will be set up to communicate with your OSC client device.
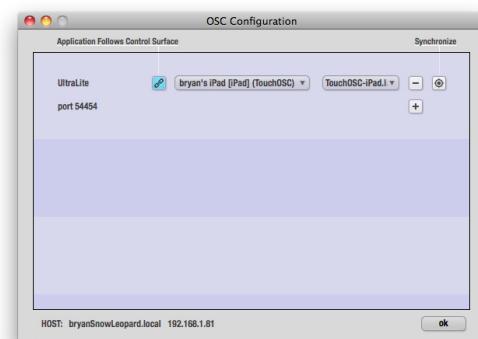

Figure 7: Configuring OSC devices.

The *Application Follows Control Surface* button determines which OSC client device controls which tabs and channels are visible in the CueMix FX Console.

The *Synchronize* button will send all parameters to the OSC client device. This is especially useful with client devices which do not support Bonjour.

You can now control CueMix FX from your iPad. In addition, you can make changes in CueMix FX on your computer, and those changes will be reflected on your iPad as well. In other words, you now have two-way, wireless communication between your iPad and computer, both of which control the CueMix FX mixer in your MOTU audio interface.

USING TouchOSC
The TouchOSC CueMix FX template operates almost identically to the CueMix FX software. The following sections discuss navigation features and other elements that are unique to the TouchOSC interface.

Bi-directional communication
Communication is bi-directional. For example, if you move a fader on your computer, it will move on your iPad, and vice versa. Changing tabs (Mixes, Inputs, Outputs, etc.) is an exception to this rule.

The Mixes tab
In the TouchOSC Mixes tab, use the *bus* buttons (Figure 8) to change which mix bus you are viewing. Use the *input* buttons to scroll the channel strips left or right (to view inputs that are currently not displayed). Press the *METERS* button to toggle the meters (above each channel strip) on or off.
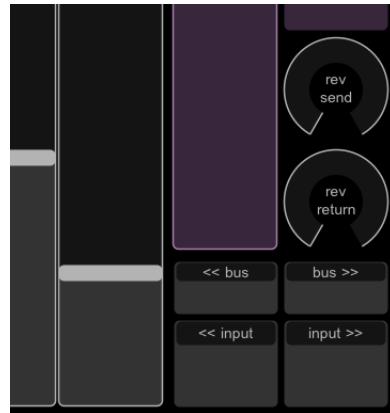

Figure 8: Navigating in the Mixes tab.

The Inputs and Outputs tabs
In the TouchOSC Inputs and Outputs tabs, use the *bank* buttons (Figure 9) to scroll the input channel display left or right by one screenful. Use the arrow buttons below the bank buttons to scroll one channel at a time.
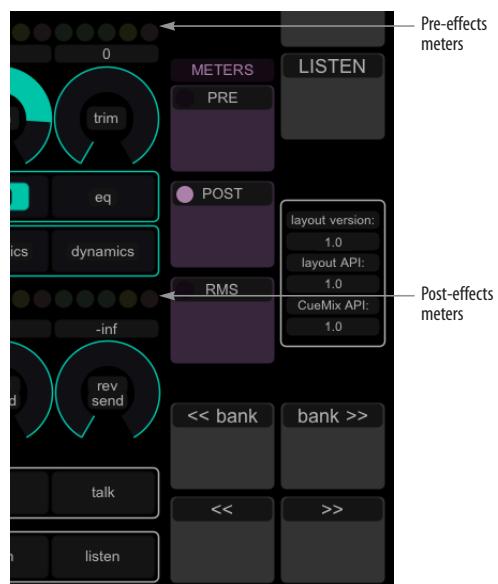
Figure 9: Navigating in the Inputs and Outputs tabs.

In the Inputs tab, the *PRE and POST* buttons (Figure 9) enable the pre- and post-effects meters, which can be enabled simultaneously.

The channel/dynamics tab

In the TouchOSC channel/dynamics tab (Figure 10), the channel settings are displayed on the left-hand side of the screen, and the dynamics tab settings are shown on the right. Each section provides left/right arrow buttons to scroll through each input channel. In addition, the dynamics section provides a *FLIP* button, which toggles the dynamics section (only) between inputs and outputs.

☞ The channel shown in the channel/dynamics tab matches the channel shown in the EQ tab (and vice versa). Use the channel buttons (<< and >>) to navigate to the desired channel.

When the compressor section is displaying outputs, the channel arrow buttons in each section are exclusive from each other. When viewing inputs in the compressor section, however, the channel buttons affect both channel settings and compressor settings.

If you wish to apply dynamics to a channel, remember to engage the global *dynamics enable* button (above the FLIP button) for the channel. In addition, the compressor and leveler sections each have their own enable/disable buttons (to the right of the title for each). All of these enable/disable buttons correspond to their counterparts in the CueMix FX software.

Figure 10: The channel/dynamics tab in TouchOSC.

The EQ tab

In the TouchOSC EQ tab (Figure 11) the arrow buttons and FLIP button in the lower right-hand corner provide channel selection for inputs and outputs, just like the channel/dynamics tab as explained in the previous section. The channel shown in the EQ tab matches the channel shown in the dynamics tab (and vice versa).

The Reverb tab

The TouchOSC Reverb tab provides controls that correspond directly to their counterparts in the CueMix FX software.

CueMix FX settings not supported in TouchOSC

In the Version 1.0 release of the TouchOSC CueMix FX layout, the CueMix FX *bus assign* feature (for interfaces that have it) is not currently supported. In addition, the *balance/width* setting for panning can only be set in the CueMix FX software.

Multiple iPads can control one MOTU device

The TouchOSC CueMix FX implementation has been designed to allow the control of your MOTU audio interface from multiple iPads. Simply set up each iPad as explained in this guide. Just click the plus (+) button in the configuration window (Figure 4 on page 4) to add more clients, as shown in Figure 12:

Figure 11: The EQ tab in TouchOSC.
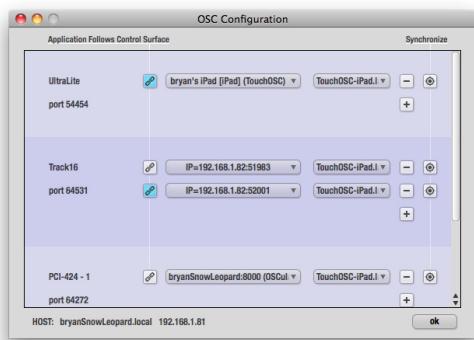
Figure 12: Configuring multiple OSC clients.

MicroBook Outputs tab

The MicroBook (and MicroBook II) outputs tab (Figure 13) displays each output pair as a column. Tap the desired mix below the output to assign the mix to that output.
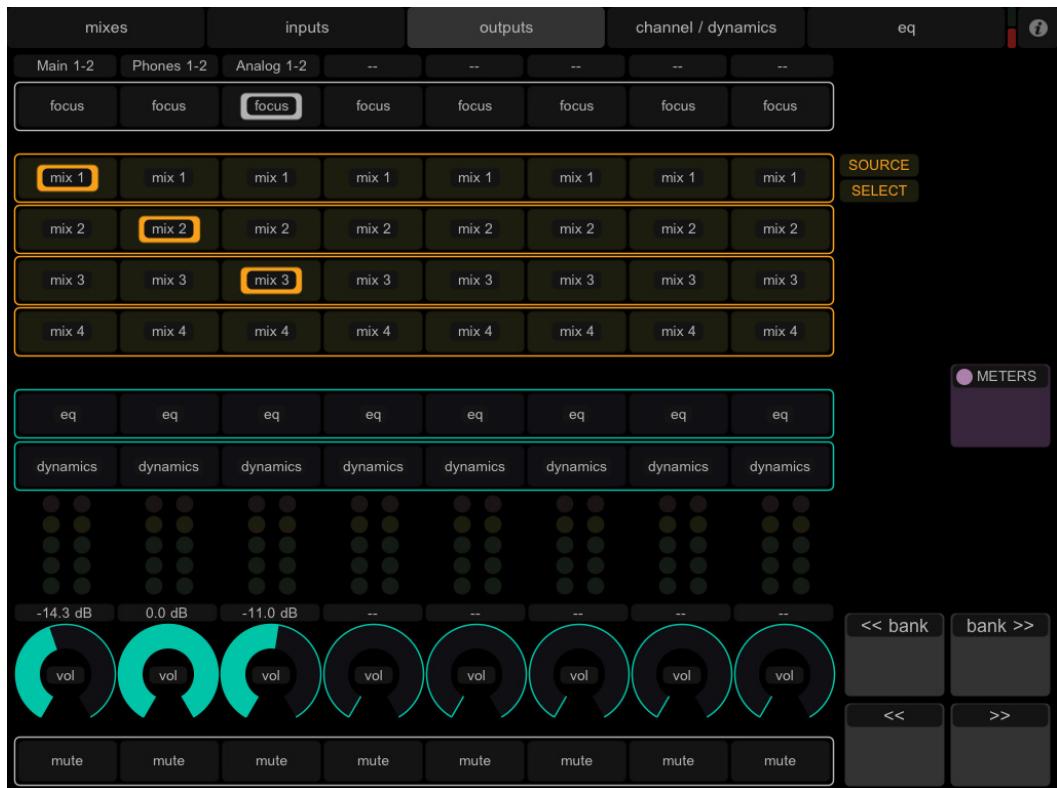

Figure 13: The Outputs tab for the MicroBook II in TouchOSC.

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