MPK and MPD Series Controllers - MIDI I/O Details

This guide describes the MIDI I/O functionality shared by all Akai MPD and MPK series controllers (except for the MPD18 and MPD24).

When the controller is connected to the computer via USB, it appears as three MIDI inputs and two MIDI outputs to the computer. On Windows, these inputs and outputs appear as several instances of **USB Audio Device**. On a Macintosh these inputs and outputs appear as several instances of **Akai MPxxx** (where xxx matches your specific controller's model number). This guide will explain the function of each of the input and output ports as they appear to the computer.

MIDI Input Devices

Windows	Macintosh	
USB Audio Device	**AKAI MPxxx**	The controller keys, pads, buttons, knobs, and sliders can be assigned to one of two different 16 channel USB MIDI outputs on the controller. When a key, pad or control is touched on the controller, the currently assigned output for that control (**A** or **B**) will be indicated in the lower-left corner of the controller's LCD display. On the computer, the MIDI input titled **USB Audio Device** (or **AKAI MPxxx** on the Macintosh) receives MIDI from keys, buttons, knobs, and sliders on the controller which have been assigned to USB MIDI output **A**.
USB Audio Device (2)	**AKAI MPxxx (2)**	This MIDI input on the computer receives MIDI from keys, buttons, knobs, and sliders on the controller which have been assigned to USB MIDI output **B** (on the lower-left of the controller's LCD display). This output option is only active when on the controller when it is connected to the computer via USB. When the controller is powered via an external power adapter alone, and not connected via USB, no MIDI will be generated by keys, buttons, knobs, and sliders on the which have been assigned to USB MIDI output B on the controller.
USB Audio Device (3)	**AKAI MPxxx (3)**	This MIDI input on the computer receives MIDI from physical **MIDI In** jack on the controller. Any MIDI sent into the controller's **MIDI In** jack will be sent to the computer via **USB Audio Device (3)** (or **AKAI MPxxx (3)** on the Macintosh).

MIDI Output Devices

Windows	Macintosh	
USB Audio Device	**AKAI MPxxx**	This MIDI output on the computer sends MIDI out from the computer into to the controller (directly). This output is used by software programs to send SysEx information and updates to the controller.
USB Audio Device (2)	**AKAI MPxxx (2)**	When the controller is connected to the computer via USB, the **MIDI Out** jack on the back of the controller becomes a MIDI output for the computer (see "2" above), and does not send out MIDI data from the keys, pads or controls on the controller. When the controller powered by a power adapter alone, and is not connected via USB, this output jack functions like it would on a stand-alone keyboard or MIDI controller, and will output MIDI directly from the controller's **MIDI Out** jack. When connected to the computer via USB, the MIDI output on the computer titled **USB Audio Device (2)** (or **AKAI MPxxx (2)** on the Macintosh) sends MIDI out from the computer to via the physical **MIDI Out** jack on the controller. This is used to output MIDI from software via the **MIDI Out** jack on the controller. MIDI can be sent from computer software, via **USB Audio Device (2)** (or **AKAI MPxxx (2)** on the Macintosh) to external MIDI devices (like sound modules or other keyboards) which are connected to the MIDI output on the controller.

Using the controller with the computer and external devices at the same time

When the controller is powered via the optional MP6-1 power adapter alone (and is not connected via USB), the **MIDI Out** jack functions like it would on a stand-alone (non-USB) keyboard or MIDI controller. Any MIDI generated from the keys, pads, or controls will be sent out the **MIDI Out** jack.

However, when the controller is connected to the computer via USB, the **MIDI In** and **MIDI Out** jacks on the controller become inputs and outputs for the *computer*. The advantage of this is that in this situation, its like you have a USB MIDI controller, and a separate 1-in, 1-out USB MIDI interface.

So, when the controller is connected via USB, and you want to get MIDI from it's keys, pads or controls to an external MIDI device connected to it's **MIDI Out** jack, the signal needs to go into the computer and get routed (by your software) back out **USB Audio Device (2)** (or **AKAI controller (2)** on the Macintosh) to the controller's **MIDI Out** jack, and on to your external MIDI device.

In Protools, Cubase, Sonar, or Ableton

1. In any existing project, create a new MIDI track.
2. Set the MIDI input for this track to **USB Audio Device** (or **AKAI MPxxx** on the Macintosh), or if you've set your controller to send MIDI from output **B**, choose **USB Audio Device (2)** (or **AKAI MPxxx (2)** on the Macintosh).
3. Set the MIDI output for this track to **USB Audio Device (2)** (or **AKAI MPxxx (2)** on the Macintosh)
4. Set input monitoring for this track to **On** or **In**, so that incoming MIDI from the controller will be *monitored* and sent right back out the chosen output.
5. **Note:** If you experience a delay between the time when you strike a key or a pad, and when you hear a sound from your software or external MIDI module, open your software's audio options, and reduce the buffer size of your sound card. This will reduce the overall latency, and will improve any MIDI delay you are experiencing.

In Logic

1. In any existing project, create a new **External MIDI** track.
2. Set the **Port** (MIDI output) for this track to **AKAI MPxxx (2)**
3. Turn on **Record Ready** for the MIDI track.
4. **Note:** If you experience a delay between the time when you strike a key or a pad, and when you hear a sound from your software or external MIDI module, open your software's audio options, and reduce the buffer size of your sound card. This will reduce the overall latency, and will improve any MIDI delay you are experiencing.