M-AUDIO

FAST TRACK ULTRA

English

User Guide

1   Introduction

Thanks for choosing M-Audio Fast Track Ultra. Fast Track Ultra has been designed to give you a professional, portable audio and MIDI interface for your Windows or Macintosh laptop or desktop computer. Using the convenience and dependability of the industry-standard USB 2.0 bus, Fast Track Ultra provides your computer with an exceptionally flexible audio interface, offering unequalled routing power and versatility while delivering high-resolution, 24-bit audio to and from your computer at sampling rates up to 96kHz, and its on-board DSP gives you a useful selection of reverb and delay effects and versatile monitoring options. Fast Track Ultra also gives you sixteen channels of MIDI in and out – all in a sleek, rugged, lightweight and highly portable design. It connects to your computer with a single USB cable – no tools needed, no cards to install.

Fast Track Ultra was created with the home or portable studio user in mind. With two high-quality microphone/instrument preamps and two more studio-grade microphone preamps, Fast Track Ultra gives you a great sounding, easy-to-use interface for your digital audio software. The convenient front panel combo XLR/TS inputs can accommodate microphone or instrument levels, with switchable phantom power and individual 20dB pads. The rear panel offers you insert points for inputs one and two, six balanced TRS analog inputs and six balanced TRS analog outputs, as well as dedicated S/PDIF inputs and outputs, for a total of eight inputs and eight outputs.

The front panel is also set up for easy monitoring, and features two headphone outputs with independent level controls, input signal and clipping indicators, MIDI input and output LEDs, and phantom power indicators, making Fast Track Ultra an ideal solution for beginning and advanced computer recording users.

Even if you're an experienced musician and digital recording enthusiast, please take some time to read through this User Guide and familiarize yourself with the features and operation of Fast Track Ultra. You may also want to refer to your audio software's documentation to better understand how Fast Track Ultra may be integrated with the program. Your experience and enjoyment of your Fast Track Ultra will be greatly enhanced by a good working knowledge of your audio software.

2   What's in the Box

Your Fast Track Ultra package contains the following:

- ‣   Fast Track Ultra
- ‣   Printed Quick Start Guide
- ‣   M-Audio Fast Track Ultra CD, including drivers and this User Guide
- ‣   Ableton Live Lite CD
- ‣   USB Cable
- ‣   5VDC 2000mA power supply

3   Fast Track Ultra Features

▸ Two front-panel balanced/unbalanced Mic/Instrument Inputs on combo XLR/TS jacks

▸ Two front-panel balanced Mic inputs on XLR jacks

▸ Four Mic/Line input switches

▸ Four high-quality microphone preamps, based on M-Audio's acclaimed Octane technology

▸ Six balanced/unbalanced line inputs on TRS jacks

▸ Six balanced/unbalanced line outputs on TRS jacks

▸ Two inserts on TRS jacks

▸ Phantom Power switch with front-panel indicator LED

▸ Stereo S/PDIF digital I/O on coaxial jacks

▸ Two stereo headphone jacks with individual level controls

▸ MIDI Input and Output with front-panel MIDI I/O indicators

▸ Two-color front-panel Signal/Clip indicators

▸ Supports sample rates up to 96kHz, with full 24-bit resolution

▸ Four mic pre input level controls with 20dB pads

▸ Output Level control for outputs 1/2

▸ Power LED

▸ Side-panel Kensington lock port

▸ Flexible routing with 16x8 internal mixer

▸ Onboard DSP effects

▸ Driver support for WDM/MME, ASIO2 (Windows XP, Windows Vista (32-bit editions))
and CoreAudio (MacOS X (v10.3.9 / 10.4.10 or later)

> ➤ **IMPORTANT NOTE**: Fast Track Ultra has been designed as a USB 2.0 device. It may be used with a USB 1.1 port, but will then only function as a 2-in/2-out device with sample rates limited to 44.1 and 48 kHz. This is due to the limitations of the USB 1.1 bus bandwidth.

> ➤ **IMPORTANT NOTE**: Fast Track Ultra can be powered via the included AC power supply or via bus power from the host computer. However, when running on bus power, Fast Track Ultra will be limited to four inputs and four outputs. These are mapped to inputs 1/2, outputs 1/2, and the S/PDIF I/O.

4   Minimum System Requirements

Windows

Fast Track Ultra is supported under Windows XP with Service Pack 2 or later, or Windows Vista (32-bit editions). It is not supported under Windows 2000, Windows 98, 98SE or Windows ME. Visit the Windows update web pages to make certain you have the most current updates and fixes supplied by Microsoft.

Minimum System Requirements*

Windows XP with SP2	*Windows Vista (32-bit editions)*
• 1.6 GHz CPU (CPU requirements may be higher for laptops)	• 1.6 GHz CPU (CPU requirements may be higher for laptops)
• DirectX 9.0c	• USB 2.0 port
• USB 2.0 port	• 1 GB RAM
• 512 MB RAM	

Mac

Fast Track Ultra is supported by PowerPC-based Macs running Mac OS X version 10.3.9 or 10.4.10, and by Intel-based Macs running Mac OS X version 10.4.10 or later.

Minimum System Requirements*

PowerPC	*Intel*
• Mac OS X – 10.3.9 / 10.4.10	• Mac OS X 10.4.10
• USB 2.0 port	• USB 2.0 port
• 512 MB RAM	• 512 MB RAM
• G4 1GHz CPU**	• Intel CPU

* M-Audio suggests that you also check the minimum system requirements for your software, as they may be greater than the above.

** G4 accelerator cards not supported

> ➤ **IMPORTANT NOTE**: *Fast Track Ultra has been designed as a USB 2.0 device. It may be used with a USB 1.1 port, but will only function as a 2-in/2-out device with sample rates limited to 44.1 and 48kHz. This is due to the limitations of the USB 1.1 bus bandwidth.*

A Note About System Upgrades: *Please check the M-Audio driver download page at http://www.m-audio.com/drivers for the availability of an updated driver before you decide to install operating system updates.*

Before new M-Audio device drivers are released, they are tested for use with the operating system versions that are available at that time. When updates for an operating system are released by Microsoft or Apple, all M-Audio device drivers have to be re-tested and possibly updated to ensure proper operation.

M-Audio recommends refraining from installing operating system updates until a driver has been posted to the M-Audio website for that specific operating system.

5   Controls and Connectors

Front Panel
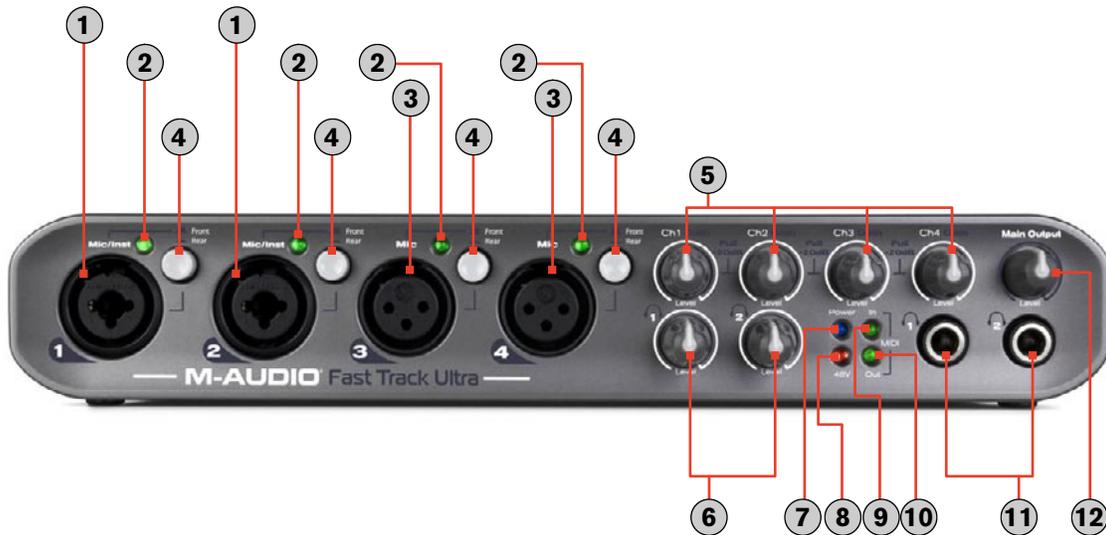
1. **Microphone/Instrument Inputs 1 and 2 (Mic/Inst) –** These combo connectors provide mic- or instrument-level inputs for analog channels 1 and 2. Each input will accept a low-impedance mic level signal on a standard three-pin balanced XLR plug, or a high-impedance instrument level signal on an unbalanced 1/4" TS plug.

2. **LED Level Meters –** these dual-color LEDs glow green when an input signal of -20dbfs is present at the corresponding channel. Reduce the Input Gain level if the LED glows red.

3. **Microphone Inputs 3 and 4 (Mic) –** these XLR connectors provide mic-level inputs for analog channels 3 and 4.

4. **Front/Rear (Mic/Line Level) Switches (■ Front /━ Rear) –** these switches select between the front-panel XLR inputs 1, 3 and rear-panel line inputs 22 as the source for analog audio channels 1 through 4.

5. **Mic/Instrument Gain/Pad 1-4 (Gain) –** these knobs adjust the mic or instrument level input gain for channels 1 through 4. Pulling the knob out will engage a 20 dB pad on the Mic and Instrument input. Pushing the knob in will disengage the pad.

6. **Headphone Output Knobs (1 / 2) –** these two knobs control the volume level for the two headphone outputs 11.

7. **Power LED (Power) –** this blue LED lights when the power button 13 has been pressed and power is being received, either from the USB bus or the external power supply.

8. **Phantom Power LED (48V) –** this red LED lights to indicate that the phantom power switch 14 has been pressed, applying +48V phantom power to the mic inputs.

9. **MIDI Input LED (MIDI In) –** this green LED lights when MIDI data is present at the MIDI input 19.

10. **MIDI Output LED (MIDI Out) –** this green LED lights when MIDI data is present at the MIDI output 18.

11. **Headphone Outputs (1 / 2) –** These two 1/4-inch stereo (TRS) jacks are independent of the main audio output level, and are controlled by the headphone output knobs 6.

12. **Main Output Knob (Main Output) –** this knob controls the main output level (outputs 1/2).

Rear Panel
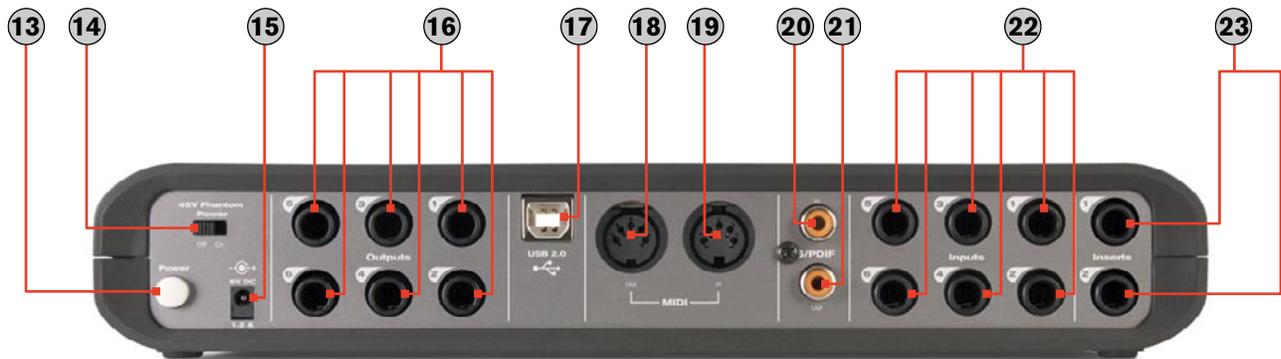
13. **Power Button (Power) –** Pressing this button will power on Fast Track Ultra, illuminating the front-panel Power LED ⑦. The unit must be connected to a host computer's USB bus, or to the external power supply.

14. **Phantom Power Switch (48V Phantom Power) –** Sliding this switch activates the phantom power circuitry, illuminating the Phantom Power LED ⑧ and sending 48V power to the four front-panel XLR inputs ① ③, for use with condenser microphones requiring external power.

15. **Power Input (5V DC) –** Connect the included 5VDC 2000mA power supply to this jack.

   • **NOTE**: *Due to the limitations of the USB bus, powering Fast Track Ultra via the USB bus will limit its functionality to 4 input/4 output operation using analog inputs and outputs 1/2 and the S/PDIF I/O.*

16. **Line Outputs (Outputs) –** These six balanced 1/4-inch (TRS) jacks provide six analog outputs. The level of outputs 1/2 is controlled by the front-panel main output knob ⑫.

17. **USB Connector (USB 2.0) –** Connect a standard USB cable to this port, connecting the other end to your host computer.

18. **MIDI Output (MIDI Out) –** Connect to the MIDI input of your controller or other MIDI device.

19. **MIDI Input (MIDI In) –** Connect to the MIDI output of your controller or other MIDI device.

20. **S/PDIF Input (S/PDIF In) –** Digital input on a coaxial (RCA-type) connector. This input will accept a digital input signal at any of the supported sample rates.

21. **S/PDIF Output (S/PDIF Out) –** Digital output on a coaxial (RCA-type) connector. This output will also support pass-through of AC-3 or DTS encoded surround formats.

   • **NOTE**: *When AC-3 or DTS encoded signals are passed through this output, all analog inputs and outputs will be muted.*

22. **Line Inputs (Inputs) –** These six balanced/unbalanced 1/4-inch (TRS) jacks provide six analog inputs for channels 1 through 6. Inputs for channels 1 through 4 are selectable between these inputs and the front-panel combo/XLR inputs ① ③ via the front/rear switches ④.

23. **Inserts (Inserts) –** These 1⁄4" TRS jacks are configured to connect to an analog outboard compressor/limiter or other effect inserting the effect between the preamp and the A/D converter. These inserts are only active when a connector is inserted, and are otherwise bypassed. The TRS jack is configured as follows: Tip=Send; Ring=Return; Sleeve=Ground.

> ➢ **IMPORTANT NOTE**: *Fast Track Ultra can be powered via the included AC power supply or via bus power from the host computer. However, when running on bus power, Fast Track Ultra will be limited to four inputs and four outputs. These are mapped to inputs 1/2, outputs 1/2, and the S/PDIF I/O.*

6   Installing Fast Track Ultra

For instructions on installing Fast Track Ultra, please refer to the accompanying Quick Start Guide.

7   Hardware Connections

Recording Microphones

Fast Track Ultra can record from up to four microphones simultaneously, connected to inputs 1 through 4 via the two front-panel XLR/TRS inputs ① and two XLR inputs ③. The front-panel front/rear selector switches ④ must be set to the "front" position.

Recording Line Inputs

Fast Track Ultra can record up to six individual line inputs simultaneously, connected to inputs 1 through 6 via the rear-panel line inputs ㉒. The front-panel front/rear selector switches ④ must be set to the "rear" position. Additionally the gain pots for the associated mic inputs should be turned down when using the line inputs to avoid unwanted noise.

Recording Instruments

Fast Track Ultra can record up to two individual instrument-level sources simultaneously, connected to inputs 1 and 2 via the two front-panel Mic/Inst combo inputs ①. The front-panel front/rear selector switches ④ must be set to "front" position.

Recording Digital Input

Fast Track Ultra can record two channels of digital input signal via the rear-panel S/PDIF input ⑳. Connect a digital S/PDIF source to the rear-panel S/PDIF input. Go to the Settings tab in the Fast Track Ultra Control Panel and select "external" as the clock source to ensure proper digital clocking. See the section about external clock for more information on digital synchronization.

Adjusting the Output Level

Connect the rear-panel line outputs ⑯ to a mixing console, amplifier or powered monitors. Outputs 1 and 2 can be directly controlled by the front-panel main output level knob ⑫. Other outputs are controlled via your DAW application or the Fast Track Ultra Control Panel.

Headphone Monitoring

The two front-panel headphone outputs ⑪ are assigned to outputs 1/2 and 3/4, respectively. The flexibility of the internal mixer allows you to route any input or DAW return to any output via the Control Panel monitor mixer. You can create identical mixes for both headphone and main outputs, or create a series of individual mixes.

8   Using Fast Track Ultra

Monitoring

The internal monitor mixer allows you to monitor any combination of sources from its hardware inputs, along with eight channels of audio from your DAW. The Control Panel gives you access to a 16 x 8 channel monitor mixer, allowing you to send any input or DAW return to any output. Four independent monitor mixes can be created for outputs 1/2 through 7/8. Headphone outputs 1 and 2 are tied to line outputs 1/2 and line outputs 3/4, respectively.

For more information on using the internal monitor mixer, refer to the section on the Control Panel.

Digital Effects Processing

The internal monitor mixer includes a built-in digital signal processor which allows you to add reverb or delay to your monitor mix. This is useful when overdubbing and setting up monitor mixes. Any input or software return channel can be routed to this internal DSP effects unit via the Control Panel.

For more information on using the DSP effects, refer to the section on the Control Panel.

Working with Fast Track Ultra

The following sections address a number of real-life situations that you may encounter while using your Fast Track Ultra. These brief tutorials should help guide you through them.

Also check the M-Audio website from time to time for additional tutorials or FAQs.

Setting Up Your Recording Levels

Using the Mic, Line or Instrument Inputs

Connect your microphone, instrument or line level source to the front or rear panel Mic/Line/Inst inputs ①, ③, ㉒. Make sure the associated channel's front/rear switch is set to the correct position for your chosen inputs, and that the input gain is turned fully counter-clockwise to the lowest level. If you are using a condenser microphone, be certain to activate the Phantom Power switch ⑭ (after connecting the microphone to the XLR input). Slowly raise the input level until the LED Level Meter shows input with a fairly steady green signal while audibly testing your input levels (i.e., strumming the guitar, or speaking into the mic). If your microphone input signal is too hot (LED Level Meter lights steadily red), pull out the Mic Input Gain knob ⑤ to activate the 20dB pad and lower the input level.

*• **NOTE**: When recording with microphones, it is best to keep the mic at some distance from the main speakers, or use headphones to monitor. Feedback may occur when microphones are too close to speakers.*

Using the Coaxial S/PDIF Input

Connect the S/PDIF output of your external audio device to the rear panel S/PDIF Input ⑳. The signal level that you receive at the S/PDIF In will be the signal level that you record. Any adjustments to that signal level must be made at the source. If you have an output level control on the device that you've connected to the S/PDIF inputs, adjust that output level control to change the recording level. Most recording software will allow you to add gain to a recorded track that was made at a level that is initially too low, but be careful that the recording level is not reaching digital clipping (signal going into the red) while recording.

You will also want to configure the sync source to "external." Refer to the section below on the Control Panel and your software's documentation for more information.

Setting the Sample Rate

The default sample rate for Fast Track Ultra is 44.1 kHz. Supported sample rates are 44.1, 48, 88.2 and 96 kHz. Most applications allow you to change the sample rate from within your audio software. You can also change the sample rate in the Control Panel. It is recommended that you do not change the sample rate from the Control Panel while your DAW application is running, as this can cause some applications to exhibit unexpected behavior.

In order to receive a digital signal via the S/PDIF input, you will need to change the Control Panel's clock setting (in the Settings tab) to "external," after which Fast Track Ultra will automatically detect an incoming digital signal and receive its sample rate from that incoming S/PDIF source.

9   The Software Control Panel

Fast Track Ultra's software Control Panel is designed to provide a simple, intuitive interface to control and monitor signals from your DAW and from Fast Track Ultra's inputs and outputs. To open the control panel:

In Windows, open the Fast Track Ultra control panel by double-clicking on the M-Audio icon ![icon] in the system tray, or from Start > Control Panel (Classic View).

Double-click on the
red M-Audio icon

Windows XP   *Windows Vista*
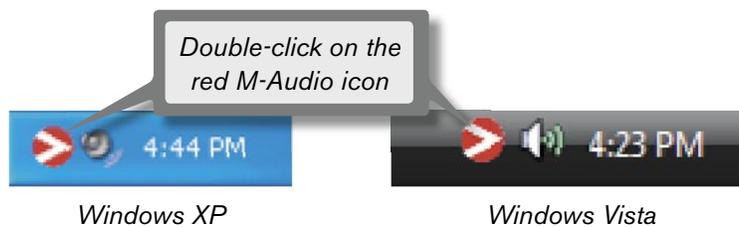
In Mac OS X, click the "M-Audio Fast Track Ultra" icon in the system preferences window.

The control panel offers eight tabs, providing monitoring options for all eight outputs as well as a number of additional features. The first four tabs provide access to each of eight monitor busses, allowing you to route any of the analog or digital inputs, as well as eight returns from your DAW, to any of its eight outputs.

Monitor Tabs
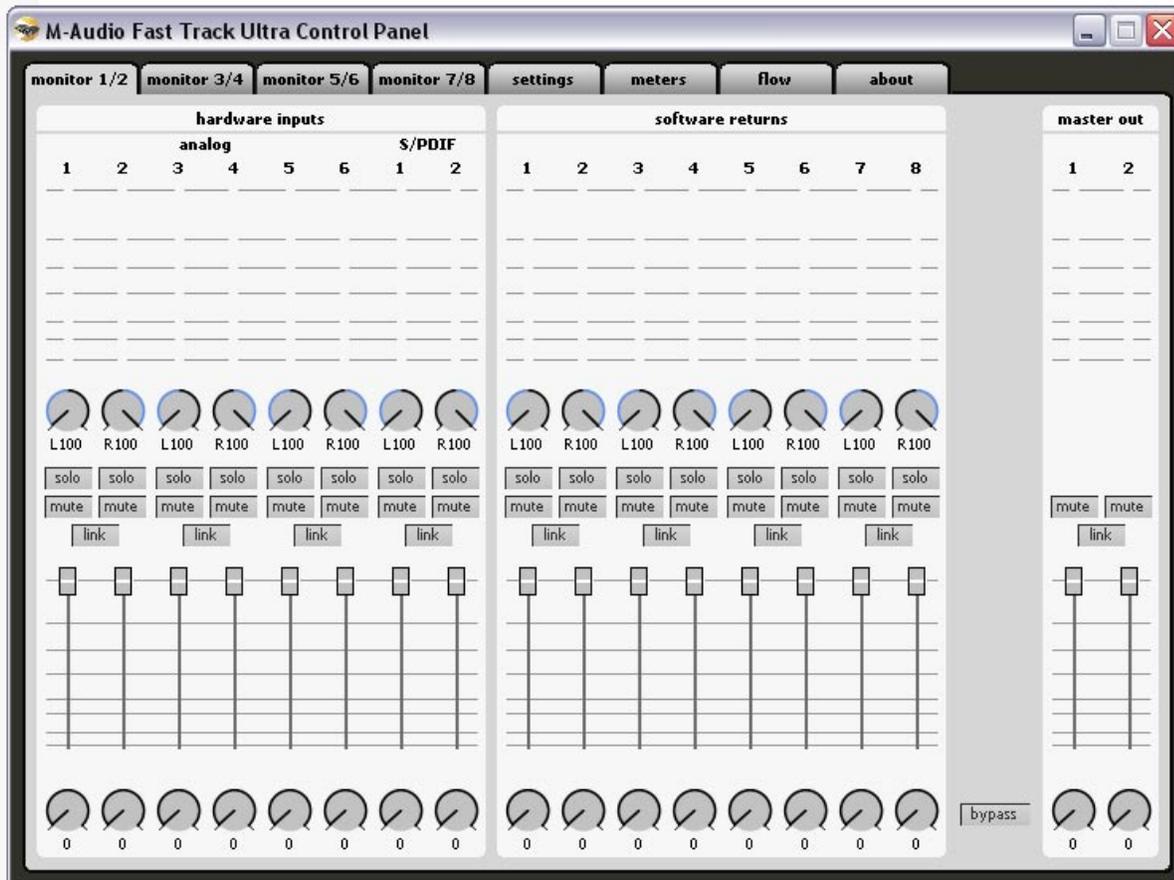
The four Monitor tabs are similar in layout and in operation. Each will allow you to monitor and control the routing of the eight hardware inputs, along with eight returns from your DAW, and send those signals to the tab's corresponding output pair.

The Monitor tabs' outputs correspond to Fast Track Ultra's hardware outputs. Monitor outputs 1/2, 3/4, and 5/6 correspond to the six analog outputs ⑯. Monitor outputs 7/8 correspond to the S/PDIF digital output ㉑.
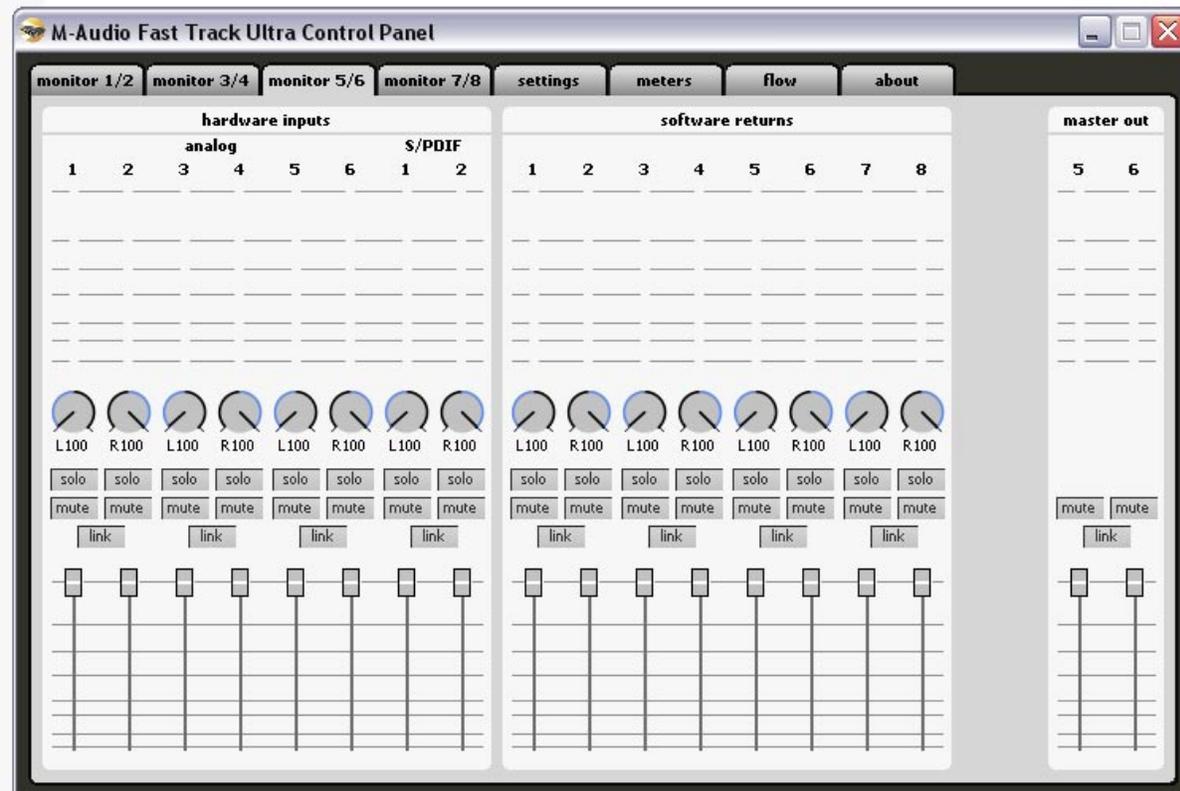
Input Channels

The first eight channels on each of the Monitor pages correspond to the six analog inputs and two S/PDIF digital inputs. The next eight channels are returns from your DAW application software. Any of these 16 channels can be sent to any of eight possible output busses by selecting the Monitor tab for the desired output pair and setting the levels for the input and software return channels respectively.

Each channel provides the following:

> **Level meter** – monitors the channel's input level
>
> **Pan control** – sets the position of the signal within the left and right output channel pair
>
> **Solo button** – solos that channel's output signal in the output channels
>
> **Mute button** – mutes that channel's output signal to the output channels
>
> **Link button** – links a pair of channels together. When the Link button is active, changes made to one channel affect the adjacent (linked) channel as well.
>
> **Level fader** – controls the level of that channel's signal sent to the output channels.
>
> **Send control** – controls the level of that channel's signal sent to the internal DSP effects.

> ➤ **Important**: *Note that changes made to the monitoring mix are completely independent from, and do not affect signals being recorded to your DAW.*

NOTE: *Only Monitor outputs 1/2 and 3/4 can utilize the internal DSP. Therefore the Monitor mixer tabs for outputs 5/6 and 7/8 do not provide Send controls.*

Output Channels

The right side of each Monitor tab provides level meters and faders for its corresponding stereo pair of outputs. Each Monitor tab's output faders control the output level sent to that pair of hardware outputs.

The Monitor tabs correspond to each pair of hardware outputs: Monitor outputs 1/2, 3/4, and 5/6 correspond to the six analog outputs ⑯. Monitor outputs 7/8 correspond to the S/PDIF digital outputs ㉑.

Between the sixteen channel inputs and the two channel outputs is a Bypass button. Activating this button will bypass the internal DSP effects, allowing you to monitor the channel returns without effects.

> • *NOTE*: *Only Monitor outputs 1/2 and 3/4 can utilize the internal DSP. Therefore the Monitor mixer tabs for outputs 5/6 and 7/8 do not provide Bypass buttons.*

Settings Tab
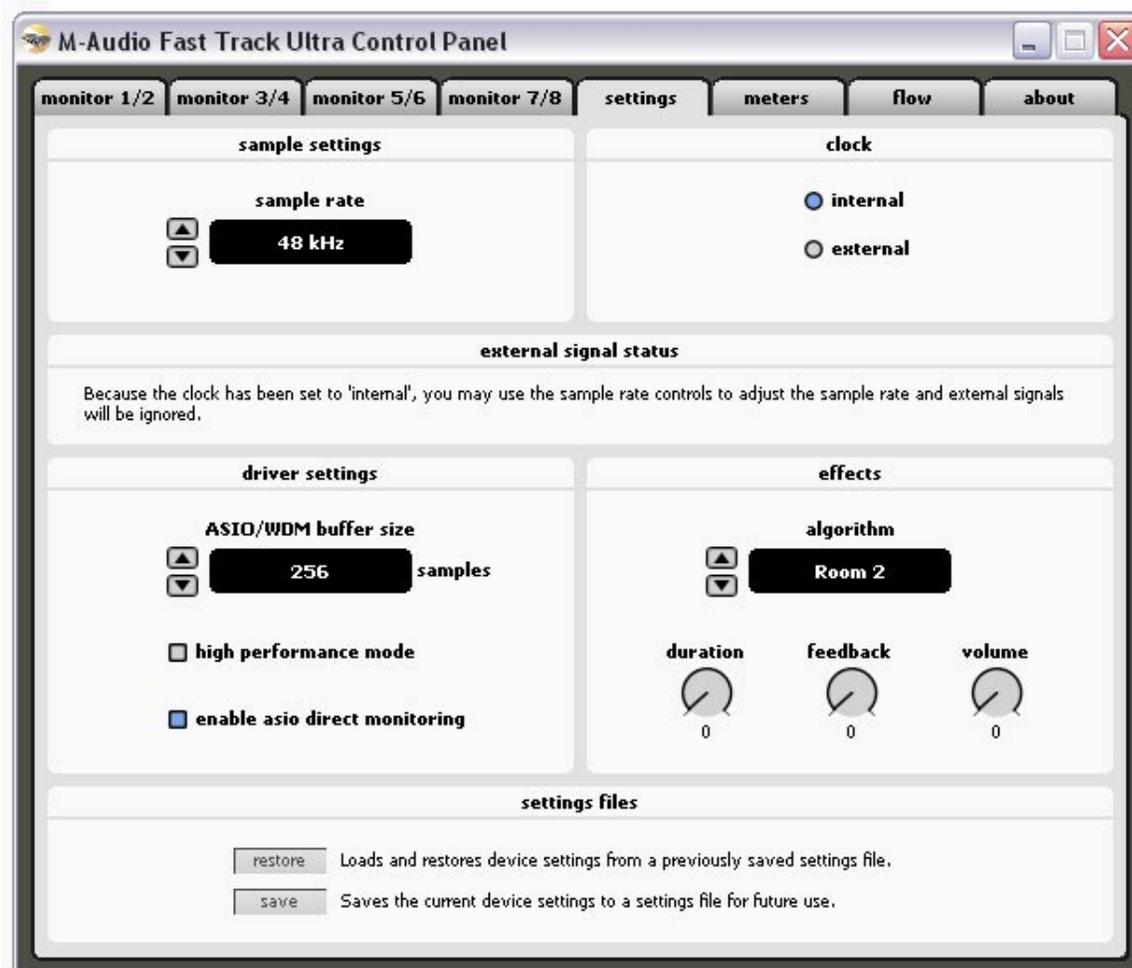
Sample Rate Settings

The up and down arrows select the current sample rate for the internal clock. Available sample rates are 44.1, 48, 88.2 and 96 kHz. The default sample rate is 44.1 kHz. Note that these arrows are disabled if Fast Track Ultra is set to sync to external clock. See the section below on External Signal Status.

External Signal Status

This box displays messages indicating the current synchronization status:.

If the status in the Clock panel (see the Clock section below) is set to "Internal," the External Signal Status panel will display this message:

> *"Because the clock has been set to 'internal' you may use the sample rate controls to adjust the sample rate and external signals will be ignored."*

You will be able to adjust the sample rate using the arrows on the Sample Rate Settings box above.

It is recommended that you do not change the sample rate from the Control Panel while your DAW application is running, as this can cause some applications to exhibit unexpected behavior.

If the status in the Clock panel (see the Clock section below) is set to "external," and a valid digital signal is received at Fast Track Ultra's S/PDIF input, the External Signal Status panel will display this message:

> *"Because the clock has been set to 'external' the sample rate controls may not be adjusted. However, because there is a valid external signal, the sample rate will automatically match that of the external signal."*

The arrows on the Sample Rate Settings box above will be disabled and the sample rate box will display the incoming sample rate.

If the status in the Clock panel (see the Clock section below) is set to "external" but no valid digital signal is received at Fast Track Ultra's S/PDIF input, the External Signal Status panel will display this message:

> *"Because the clock has been set to 'external' the sample rate controls may not be adjusted. While there is no valid external signal, the sample rate will remain 48kHz."*

Clock

These two buttons select between the internal clock or the clock from an external digital signal via the S/PDIF input ㉚. To synchronize Fast Track Ultra to an external digital source, the "external" setting must be selected. Please see the box below for more information on digital input and external clock.

About External Clock

Digital audio is based on samples. For example, a digital recording at a sample rate of 44.1 kHz contains 44,100 samples, or digital "snapshots," per second. Each digital audio device has its own internal clock, or crystal, to generate and control the exact rate and timing of these samples during every second. In order for two or more digital audio devices to function together, only one of their clocks can be in control (the Master), while any other devices must be synchronized to that device's clock (the Slave). Otherwise, the resulting audio will sound distorted, play at the wrong speed, or have clicks and pops.

You can set Fast Track Ultra to run as the Word Clock Master ("Internal") when digitally connected to other digital audio devices:

> *Connect the S/PDIF output of Fast Track Ultra to the S/PDIF input of another digital audio device and configure that device to synchronize to its S/PDIF input (making it the word clock Slave).*

Alternatively, you can set another device to act as the Word Clock Master and designate Fast Track Ultra to run as the word clock slave: Connect the S/PDIF output of a 3rd party audio device to the S/PDIF input of Fast Track Ultra. Select "external" as the clock source setting from within the Fast Track Ultra Control Panel. Fast Track Ultra now runs in sync to the digital S/PDIF signal generated by the other device. Note that Fast Track Ultra can only receive input signal from its S/PDIF input when the clock setting has been set to "external."

Driver Settings

ASIO/WDM Buffer Size
(Windows only)

Latency is defined as the time it takes for your input signal to pass through your audio software and appear at the outputs. This latency can result in a delay that is undesirable when overdubbing to existing tracks.

Smaller buffer sizes result in lower latency, but may not function well with slower systems, causing clicks, pops and dropouts in the audio playback.

The buffer size arrows select between a range of buffer sizes of 64, 128, 256, 512, 1024, 2048 and 4096 samples. The default buffer size is 256 samples. If you are experiencing clicks and pops in your audio, try increasing the buffer size.

ASIO Direct Monitoring
(Windows only)

Many Windows applications that support ASIO 2.0, also support ASIO direct monitoring. ASIO Direct Monitoring allows your ASIO-compatible software to remotely access and control some routing and monitoring functions of the Fast Track Ultra Control Panel. If you prefer to not use ASIO Direct Monitoring, uncheck the box marked "enable asio direct monitoring" on this tab. Please refer to your DAW application's user guide for more information on implementing ASIO direct monitoring.

High Performance Mode (Windows only)

Clicking this box implements High Performance Mode, which further reduces latency required to monitor the audio input signal via your DAW software, and also reduces the CPU load. While most computers support High Performance Mode, if you experience any unexpected results, disable High Performance Mode.

Effects Settings

This box controls the algorithm and parameters of the internal effects unit. Any channels routed to the internal DSP section will be effected by selections made on this page.

> ➤ **IMPORTANT**: Only "Send" signals from the Monitor tabs for output channels 1/2 and 3/4 are supported by the internal DSP section.

Effects Algorithm Presets

The up and down arrows select from a range of reverb and delay algorithms. The presets are:

• Room 1	• Room 3	• Hall 2	• Delay
• Room 2	• Hall 1	• Plate	• Echo

The three controls beneath the algorithm display offer the following controls for fine tuning the effect:

- Duration
- Feedback
- Volume

Saving and Recalling Settings Files

Clicking the Save button in the lower box will open a dialog window, allowing you to save the currently-selected routing settings to your computer.

Clicking the Restore button will open a dialog window, allowing you to recall a previously-saved setup.

Meters Tab
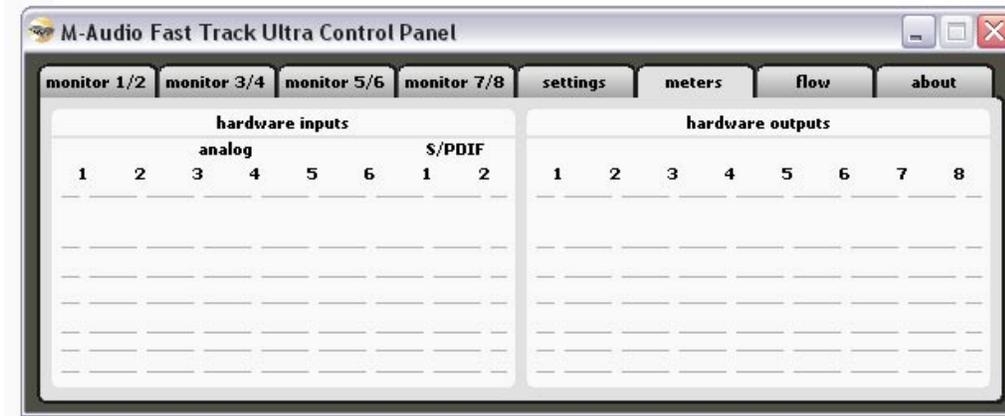
This tab provides an immediate overview of the eight hardware inputs and outputs. This is useful when setting up levels for live tracking or mixdown.

Flow Tab
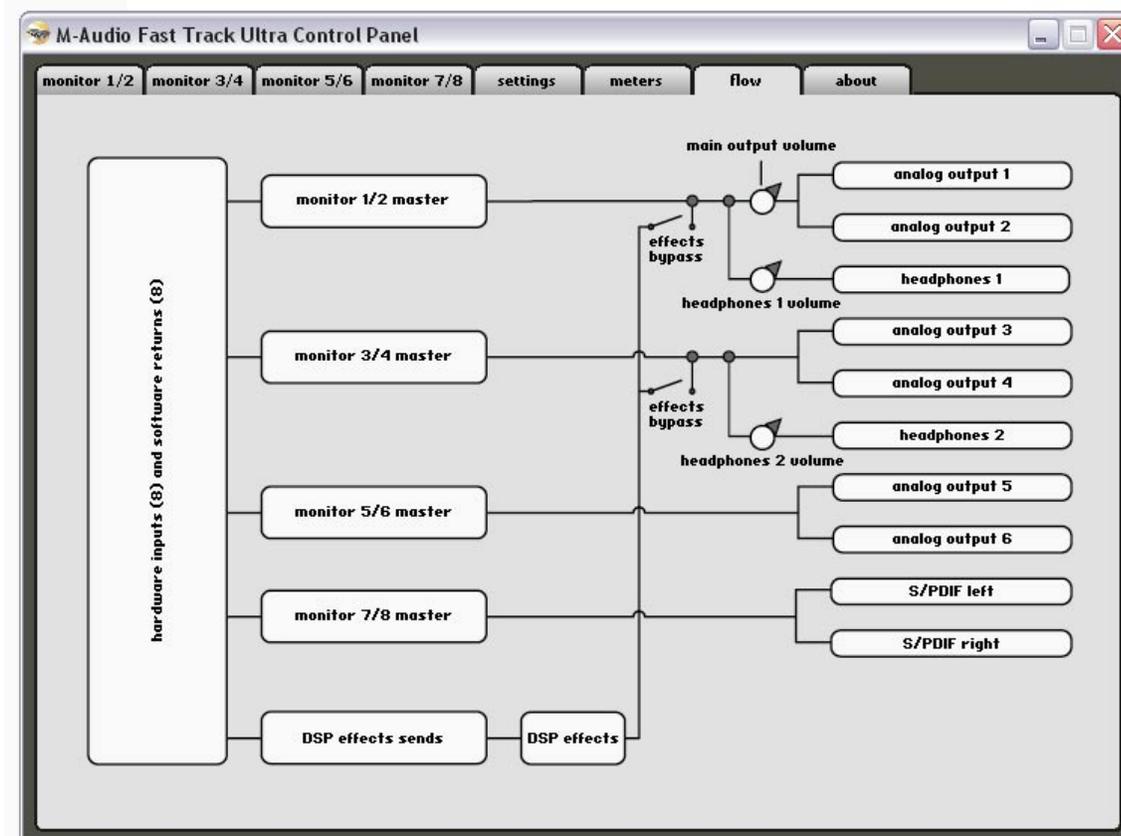
This tab displays a graphic of Fast Track Ultra signal flow.

About Tab

This page contains information on your hardware and current driver software versions. This information may be helpful, should you ever have the occasion to call for technical support. Clicking the buttons in the lower right will take you to useful pages on the M-Audio website.

If your computer does not see a valid connection to Fast Track Ultra, or if the unit is powered off, you will see a message noting that on this page.

10 Troubleshooting

Fast Track Ultra has been designed to give you high performance and professional-quality audio. It has been tested under a wide range of systems and operating conditions. However, there are a virtually limitless number of operating scenarios, any of which could affect your system's performance. Though this section cannot cover all possible issues you may encounter, we would like to offer you some suggestions for dealing with common problems.

We recommend that you avoid connecting too many devices. The USB bus is a dependable protocol that is ideally suited for digital audio. Nevertheless, it is important to remember that audio and multimedia streaming place considerable demands on your processor and the USB bus.

If you are having trouble getting audio in or out of your Fast Track Ultra, please check the following:

- *If you have no sound:*

    Check to see if Fast Track Ultra drivers are properly installed.

    - In Windows XP, go to the Control Panel and double-click the System icon (under Performance and Maintenance if you are in Category view).

    - Select the Hardware tab and click the Device Manager button.

    - Click the plus sign ("+") next to Sound, Video and Game Controllers, and locate the Fast Track Ultra listing. If you see a question mark or exclamation point next to it, or if you don't see it listed, you may need to reinstall the driver software.

    Make sure your audio software has been set up to use Fast Track Ultra.

    - Open your application's audio settings page and check to see if the correct ASIO, WDM, or Core Audio drivers have been selected.

- *If you're certain Fast Track Ultra is correctly installed and configured for your audio software, check your signal path. Make sure your inputs are routed correctly by verifying that your application is receiving audio signal. Make sure your outputs are routed correctly so that your signal is sent to your headphones, amp and/or monitors.*

    - Check your audio connections and cables to make sure everything is plugged in correctly.

    - Check the LED Level Meters to see if input signal is present.

    - Check the Control Panel to verify that the output volume levels are turned up, and that signal is present in the input meters.

    - Check to see that the power button is enabled, and that the USB cable is connected to the unit and the host computer.

    - Check the Front/Rear input selector switch to verify that you've chosen the proper input.

- *If you're trying to record a digital input to Fast Track Ultra and have no sound, or are experiencing clicks and pops in your recordings:*

    - Make sure the input source on the Settings tab of the Control Panel is set to "external." See the section about Word Clock for more information.

    - Make sure your input levels are not too hot, as this can cause distortion and clipping.

    - Check the input level meters in your audio application.

    - Try changing the buffer size (latency setting) in the Control Panel (Windows only).

    - You might want to try using a larger buffer size (higher latency setting). Larger buffer sizes can increase input latency time, but this is not an issue if you're mixing, for example. Increasing the buffer size can be helpful, particularly in the case of older or lower-powered systems.

    - If you are using a USB hub, try connecting Fast Track Ultra directly to your computer.

For more troubleshooting tips, visit the Knowledge Base at www.m-audio.com

11 Specifications

Line Outputs	
Frequency Response:	20 Hz to 22 kHz, +/- 0.1 dB @ 48 kHz sample rate
SNR and Dynamic Range:	-104 dB, A-weighted
THD+N:	0.002%@ -1dBFS, 1kHz
Signal Level:	+10 dBu balanced
	+2 dBV, unbalanced
Impedance:	300 Ohm balanced
	150 Ohm unbalanced
Crosstalk:	< -100 dB @ 1 kHz
Line Inputs	
Frequency response:	20 Hz to 22 kHz, +/- 0.3 dB @ 48 kHz sample rate
SNR and Dynamic Range:	-103 dB, A-weighted
THD+N:	0.002% @ -1dBFS, 1kHz
Signal Level:	+3.4 dBu balanced
	+1.2 dBV, unbalanced
Impedance:	20K Ohm balanced
	10K Ohm unbalanced
Crosstalk:	< -100 dB @ 1 kHz
Headphone Outputs	
Frequency Response:	20 Hz to 22 kHz, +/- 0.7 dB @ 48 kHz sample rate
SNR and Dynamic Range:	96 dB, A-weighted
THD+N:	< 0.065% at maximum volume
Working Range:	24 to 600 ohms
Maximum Output Level:	0dbv into 32ohms
Crosstalk:	55 dB @ 1 kHz
Microphone Input	
Pre-amp Gain:	60dB or greater
SNR (min gain):	-103 dB, A-weighted
Dynamic Range (min gain):	103 dB, A-weighted
THD+N (min gain):	0.003% @ -1dBFS
Freq. Response (min gain):	20 Hz to 22 kHz, +/- 0.1 dB @ 48 kHz sample rate
Sensitivity:	+1dBu max level at min gain, +21dBu max level at min gain (pad engaged)
Phantom Power:	48 Volts DC no load, 16mA max
Switchable Pad:	-20 dB
Instrument Input	
Pre-amp Gain:	0dB to 40dB or greater
Impedance:	1M Ohm unbalanced
SNR (min gain):	-103 dB, A-weighted
Dynamic Range (min gain):	103 dB, A-weighted
THD+N (min gain):	0.005% (-86 dB) @ -1 dBFS, 1 kHz
Freq. Response (min gain):	20 Hz to 22 kHz, +/- 0.3 dB @ 48 kHz sample rate
Maximum Input:	+14dbv max level at min gain (pad disengaged)
Switchable Pad:	-20 dB
Power Requirements	Power is derived from either the host computer's USB bus or from the included 5VDC 2000mA power supply.

12 Warranty Terms and Registration

Warranty Terms

M-Audio warrants products to be free from defects in materials and workmanship, under normal use and provided that the product is owned by the original, registered user. Visit www.m-audio.com/warranty for terms and limitations applying to your specific product.

Warranty Registration

Immediately registering your new M-Audio product entitles you to full warranty coverage and helps M-Audio develop and manufacture the finest quality products available. Register online at www.m-audio.com/register to receive FREE product updates and for the chance to win M-Audio giveaways.

M-AUDIO Fast Track Ultra

Tested to comply with
FCC standards

FOR HOME OR STUDIO USE

ACN 069 650 120

WARNING: This product contains chemicals, including lead, known to the State of California to cause cancer, and birth defects or other reproductive harm. ***Wash hands after handling.***

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