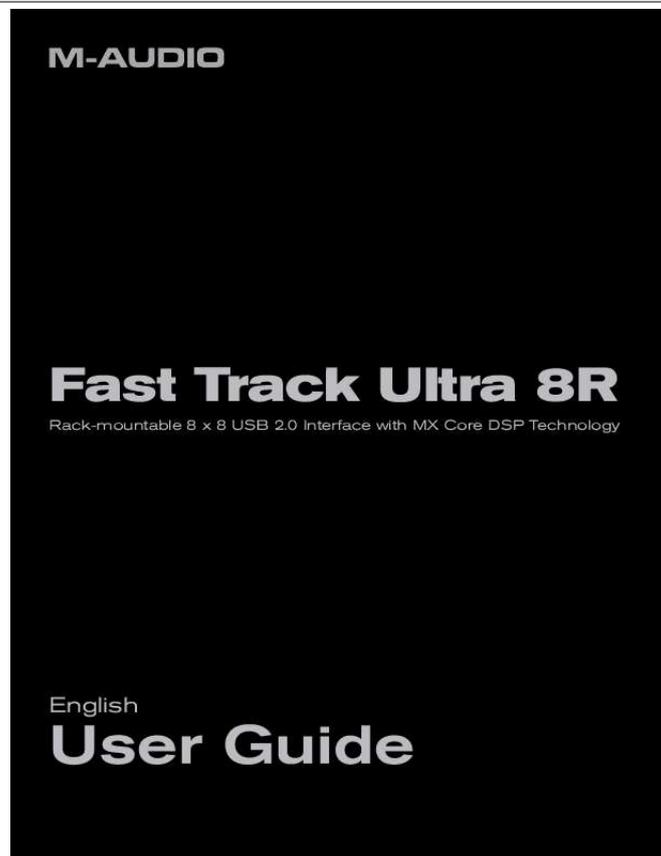




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You can read the recommendations in the user guide, the technical guide or the installation guide for M-AUDIO FAST TRACK ULTRA 8R. You'll find the answers to all your questions on the M-AUDIO FAST TRACK ULTRA 8R in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual M-AUDIO FAST TRACK ULTRA 8R
User guide M-AUDIO FAST TRACK ULTRA 8R
Operating instructions M-AUDIO FAST TRACK ULTRA 8R
Instructions for use M-AUDIO FAST TRACK ULTRA 8R
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Manual abstract:

Fast Track Ultra 8R also gives you sixteen channels of MIDI in and out all in a sleek, rugged, compact single rack space design. It connects to your computer with a single USB cable no tools needed, no cards to install. Fast Track Ultra 8R was created with the home or project studio user in mind. With eight inputs, eight outputs and eight high-quality preamps featuring M-Audio's award-winning Octane™ technology, Fast Track Ultra 8R gives you a great sounding, easy-to-use interface for your digital audio software. The eight combo XLR/TRS inputs can accommodate microphone or line levels, with phantom power switchable in groups of four and individual 20dB pads. Channels one and two also provide insert points, and are switchable to accommodate instrument level input. The rear panel also offers you MIDI input and output ports, as well as dedicated S/PDIF inputs and outputs on the included breakout cable. The front panel is also set up for easy monitoring, and features input signal and clipping indicators, two discrete headphone outputs with independent level controls, MIDI input and output LEDs, and phantom power indicators, making Fast Track Ultra 8R an ideal solution for beginning and advanced computer recording users alike. 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 8R. You may also want to refer to your audio software's documentation to better understand how

Fast Track Ultra 8R may be integrated with the program.

Your experience and enjoyment of your Fast Track Ultra 8R will be greatly enhanced by a good working knowledge of your audio software. Fast Track Ultra 8R User Guide 2 2 FastTrackUltra8RFeatures Eight balanced/unbalanced Mic/Line Inputs on combo XLR/TRS jacks Two front-panel 1/4" Instrument-level inputs Eight high-quality microphone preamps, featuring M-Audio's award-winning Octane™ technology Individual mic pre input level controls with 20dB pads Dual front-panel Signal and Clip LED indicators Eight balanced/unbalanced line outputs on TRS jacks Two 1/4" inserts on TRS jacks Phantom Power switches with front-panel indicator LEDs 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 Output Level control for main output pair 1/2 Powerful onboard DSP providing four near-zero latency 16x2 monitor mixers Built-in reverb and delay effects Supports sample rates up to 96kHz, with full 24-bit resolution Integrated rear-panel Kensington security lock port Driver support for WDM/MME, ASIO2 (Windows XP, Windows Vista (32-bit editions)) and CoreAudio (Mac OS X 10.4.11 / 10.5.

2 or later) **IMPORTANT NOTE:** Fast Track Ultra 8R is a USB 2.0 device. USB 1.1 operation is not supported. **IMPORTANT NOTE:** Fast Track Ultra 8R must be powered via the included power supply.

It will not operate on USB bus power. Fast Track Ultra 8R User Guide 3 3 MinimumSystemRequirements Windows Fast Track Ultra 8R 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.

Please see the note below regarding System Updates before making any updates to your operating system. Minimum System Requirements*

WindowsXPwithSP2 · 1.6 GHz CPU (CPU requirements may be higher for laptops) · DirectX 9.0c · USB 2.0 port · 512 MB RAM · USB 2.0 port · 1 GB RAM WindowsVista(32-biteditions) · 1.6 GHz CPU (CPU requirements may be higher for laptops) Mac OS X Fast Track Ultra 8R is supported by Intel-based and PowerPC-based Macs running Mac OS X version 10.

4.11 or 10.5.2 or later. Minimum System Requirements* PowerPC · Mac OS X 10.4.11/10.5.2 · native USB 2.0 port · 512 MB RAM · G4 1GHz CPU (G4 accelerator cards not supported) Intel · Mac OS X 10.

4.11/10.5.2 · native USB 2.0 port · 512 MB RAM · Intel CPU *M-Audio suggests that you also check the minimum system requirements for your audio software, as they may be greater than the above.

IMPORTANT NOTE: Fast Track Ultra 8R has been designed as a USB 2.0 device. USB 1.1 operation is not supported. A Note About System Updates: 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 retested 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. Fast Track Ultra 8R User Guide

4 4 ControlsandConnectors Front Panel 1 2 3 4 5 1 2 3 4 5 3 4 5 3 4 5 3 4 5 3 4 5 3 4 5 6 7 11 12 13 14 10 9 8 8 9 1. InstrumentInputs1and2(Inst) These front-panel connectors provide instrument-level inputs for channels 1 and 2. Each of these two inputs will accept a high-impedance instrument level signal on an unbalanced 1/4" plug. Set the Mic/Line - Instrument switch 2 to the "in" position to activate the corresponding front-panel input. M ic/Line-InstrumentLevelSwitches(/) These switches select the input source for channels 1/2 between the front-panel Instrument inputs 1 and the rear-panel Mic/Line inputs 20 .

L EDClipMeters(Clip) These red LEDs illuminate when an input signal reaches a sustained clipping level. Reduce the channel's Input Gain level 5 if the LED glows steadily red. L EDLevelMeters These green LEDs illuminate when an input signal of -40 dBFS is present at the corresponding input. M ic/InstrumentGain/Pad1-8(Mic/InstGainPull-20dB) These knobs adjust the input gain level for channels 1 through 8. Pulling the knob out will engage a 20 dB pad on the Mic and Instrument input. Pushing the knob in will disengage the pad. (Note that the level controls only affect the XLR mic and front panel instrument inputs, but do not affect the line-level inputs.) P hantomPowerSwitches(PhantomPower) Pressing these switches activates the phantom power circuitry for the corresponding group of four mic inputs (1 through 4 or 5 through 8), illuminating the Phantom Power LED 7 and sending 48V power to the four associated XLR inputs 20 , for use with condenser microphones requiring external power. P hantomPowerLED These red LEDs light to indicate that the corresponding phantom power switch 6 has been pressed, applying +48V phantom power to the selected group of four mic inputs.



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H eadphoneOutputLevels(1 / 2) These two knobs control the volume level for the two headphone outputs 9 .

H eadphoneOutputs(1 / 2) These two 1/4" stereo (TRS) jacks are independent of the main audio output level, and are controlled by the headphone output knobs 8 . The first headphone jack outputs the same audio signal as rear-panel outputs 1/2 while the second headphone jack outputs the same audio signal as rear-panel outputs 3/4. MainOutputLevel(Output) This knob controls the main output level (output pair 1/2). MIDIInputLED(MIDIIn)This green LED lights when MIDI data is present at the MIDI input 18 . MIDIOutputLED(MIDIOut) This green LED lights when MIDI data is present at the MIDI output 18 .

P owerSwitch() Pressing this button will power on Fast Track Ultra 8R, illuminating the front-panel Power LED 14 . The unit must be connected to the external power supply. P owerLED(Power) This blue LED lights when the power switch 13 has been pressed and power is being received from the external power supply. 2. 3.

4. 5. 6. 7. 8. 9. 10. 11. 12. 13.

14. Fast Track Ultra 8R Rear Panel 18 17 16 15 19 20 User Guide 5 21 15. PowerInput((9VDC3.5A-4A) Connect the included power supply to this jack.

NOTE: Fast Track Ultra 8R is designed to work with 9V DC power supplies with a 3.5 - 4A rating. If you need to purchase an additional power supply for your Fast Track Ultra 8R, be sure to buy one with the correct rating and polarity. Replacement power supplies are available at the M-Audio webstore. 16. U SBConnector(your host computer.

USB2.0) Connect a standard USB cable to this port, connecting the other end to NOTE: Fast Track Ultra 8R is a USB 2.0 device and must be connected to a USB 2.0 port on your computer. USB 1.

0/1.1 operation is not supported. 17. 18. K ensington®LockPort() This connector is compatible with Kensington® security cables to protect your device from theft.

M IDIands/SPDIFConnector(MIDIS/SPDIF) The accompanying breakout cable connecting to this multi-pin jack provides MIDI input and output on 5-pin DIN connectors, and S/SPDIF input and output on coaxial RCA connectors. · When the Sync Source drop-down menu is set to "External" in the Control Panel, input channels 7 and 8 will receive their signal from the S/SPDIF input instead of analog inputs 7/8. · The S/SPDIF output signal is identical to the output of Line

Outputs 7/8. · The S/SPDIF output will also support pass-through of AC-3 or DTS encoded surround formats. L ineOutputs These eight balanced/unbalanced 1/4" (TRS) jacks provide eight analog outputs. The level of output pair 1/2 is controlled by the front-panel master volume knob 10 . Signal present at outputs 7

and 8 is duplicated at the S/SPDIF outputs. M ic/LineInputs These eight combo jacks provide eight analog inputs, and can accommodate microphone or line-level sources via XLR or 1/4" TRS or TS connectors. The microphone (XLR) inputs route signals to the interface's preamplifiers while the line-level (1/4") jacks bypass the preamplifiers. The input source for channels 1 and 2 can be selected via the front-panel Mic/Line Instrument switches 2 between Mic/Line inputs 20 or the front-panel Instrument inputs 1 .

Selecting "External" from the Sync Source drop-down menu in the control panel will activate the S/SPDIF input as the signal source for input channels 7 and 8. Mic/Line inputs 7 and 8 will be disabled in this configuration. 21. I nserts Insert jacks allow you to add analog outboard effects (compressors, limiters, etc.) into the signal path of the first two channels of your Fast Track Ultra 8R. Outboard effects are "inserted" between the preamp and the A/D converter. About

Insert Cables: An insert cable is wired in a way that lets you send and receive signals over a single cable. This cable features a "TRS" (tip-ring-sleeve) connector on one side and two "TS" (tip-sleeve) connectors on the other. The TRS side connects to one of the insert jacks of Fast Track Ultra 8R. The TS connectors are usually labeled "tip" (send) and "sleeve" (return).

Attach the "tip" connector to your external device's input and the "sleeve" connector to the device's output. This allows signals to be sent to the external device and returned to the A/D converter on Fast Track Ultra 8R. 19. 20. These 1/4" TRS jacks are only active when a special "insert" cable is connected to these jacks (see the box entitled "About Insert Cables" to learn more about these cables).

If no insert cable is connected, these jacks do not affect the signal path. Fast Track Ultra 8R User Guide 6 5 InstallingFastTrackUltra8R For instructions on installing Fast Track Ultra 8R, please refer to the accompanying Quick Start Guide. 6 HardwSPDIF 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. Note: To use the S/SPDIF input, you will need configure the sync source of Fast Track Ultra 8R 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 8R 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/SPDIF input, you will need to change the Control Panel's Sync Source setting (in the Settings tab) to "External," after which Fast Track Ultra 8R will automatically detect an incoming digital signal and receive its sample rate from that incoming S/SPDIF source.

Fast Track Ultra 8R Monitor Mixing User Guide 8 Fast Track Ultra 8R features four separate 16x2 monitor mixers. These four mixers are found in the Control Panel under the tabs labeled "Monitor 1/2", "Monitor 3/4", "Monitor 5/6", and "Monitor 7/8" and route their mixed outputs to hardware outputs 1/2, 3/4, 5/6, and 7/8, respectively. Each of these mixers can be used to create a stereo, near-zero latency, "monitor mix" consisting of any combination of hardware inputs or software outputs. This is a very convenient feature to have while "overdub" recording since it allows you to easily set up customized monitor mixes for up to four different people.



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For example, you can create separate mixes for the vocalist, guitarist, bassist, and drummer of a band and provide each member with an individual mix to suit their personal preference. Furthermore, since monitor mixing is handled by the powerful MX Core DSP within Fast Track Ultra 8R, you do not have to worry about audio latency that may occur when monitoring through your audio recording application--all hardware inputs and all signals output by your recording software* can be mixed with virtually no latency and sent to the hardware outputs. * Software Output Signal Routing: When selecting output channels 1/2 from your audio application, the signal is not sent directly to the physical hardware outputs on the rear-panel of Fast Track Ultra 8R; The signal is first sent to the Monitor 1/2 section of the Control Panel. By default, the monitor mixer on this Control Panel tab then passes the unaltered signal on to hardware outputs 1/2. However, this tab gives you additional control over signals sent to hardware outputs 1/2. You can use the faders, pan knobs and other controls on the Monitor 1/2 tab to add and blend signals from the physical inputs 1-8 and from the remaining six software return channels and create a stereo mix that is then routed to the rear-panel hardware outputs 1/2.

The same principle applies when selecting output channels 3/4, 5/6 or 7/8 from your audio application. These signals are sent to their respective Control Panel tabs "Monitor 3/4", "Monitor 5/6" and "Monitor 7/8", mixed with other signals if desired, and then routed to their respective physical output pairs 3/4, 5/6 or 7/8. Fast Track Ultra 8R Inputs User Guide 9 In DAW Out 1 2 3 4 5 6 7 8 Record unaltered to Monitor Mix Inputs Analog In Software Return In DAW Out 1 2 3 4 5 6 7 8 Monitor Mixer 1/2 Record unaltered to Monitor Mix Analog In Software Return Monitor Mixer 3/4 Monitor Mixer 3/4 Inputs In DAW Out 1 2 3 4 5 6 7 8 Record unaltered to Monitor Mix Analog In Software Return Monitor Mixer 5/6 Monitor Mixer 5/6 Inputs In DAW Out 1 2 3 4 5 6 7 8 Record unaltered to Monitor Mix Analog In Software Return Monitor Mixer 7/8 Monitor Mixer 7/8 Out 1/2 (and headphone 1) Out 3/4 (and headphone 2) Out 5/6 Out 7/8 (and S/PDIF) Fast Track Ultra 8R User Guide 10 8 TheSoftwareControlPanel The software Control Panel for Fast Track Ultra 8R is designed to provide a simple, intuitive interface to control and monitor signals from your DAW and from Fast Track Ultra 8R's inputs and outputs. To open the Control Panel: In Windows, open the Fast Track Ultra 8R Control Panel by double-clicking on the M-Audio icon from Start > Control Panel (Classic View). Double-click on the red M-Audio icon in the system tray, or Windows XP In Mac OS X, click the M-Audio icon in the system preferences window.

Windows Vista Fast Track Ultra 8R User Guide 11 The Control Panel features eight tabs across the top of the screen. These tabs provide access to specific features of Fast Track Ultra 8R. These tabs are described in detail below. Monitor Tabs The four Monitor tabs are similar in layout and in operation and allow you to create four separate monitor mixes from the eight hardware inputs and eight software returns from your audio application. Each tab controls a separate pair of outputs: Monitor 1/2 Hardware Outputs 1/2 (and Headphone Out 1) Monitor 3/4 Hardware Outputs 3/4 (and Headphone Out 2) Monitor 5/6 Hardware Outputs 5/6 Monitor 7/8 Hardware Outputs 7/8 (and S/PDIF output) The Monitor tabs' outputs correspond to Fast Track Ultra 8R's hardware outputs.

Monitor outputs 7/8 are duplicated at the analog Line Outputs 19 and the S/PDIF digital output 18 . Fast Track Ultra 8R Input Channels User Guide 12 The first eight channels on each of the Monitor pages correspond to the eight analog inputs. Inputs 7 and 8 are switchable between the analog inputs and the S/PDIF digital inputs, via the Sync Source drop-down menu in the Control Panel. When the sync source is set to "External," input channels 7 and 8 receive their signal from the S/PDIF input. 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: < < < < Levelmeter monitors the channel's input level Pancontrol sets the position of the signal within the left and right output channel pair Solobutton solos that channel's output signal in the output channels Mutebutton mutes that channel's output signal to the output channels Linkbutton links a pair of channels together. When the Link button is active, changes made to one channel affect the adjacent (linked) channel as well. Levelfader controls the level of that channel's signal sent to the output channels. Sendcontrol controls the level of that channel's signal sent to the internal DSP effects.

NOTE: Only Monitor outputs 1/2, and 3/4 can utilize the Fast Track Ultra 8R's internal DSP. Therefore the Monitor mixer tabs for outputs 5/6 and 7/8 do not provide Send controls. IMPORTANT: Note that changes made to the monitoring mix are completely independent from, and do not affect signals being recorded to your DAW. < < 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 Line outputs 19 . Monitor outputs 7 and 8 are duplicated at the analog Line Outputs 19 and the S/PDIF digital output 18 . 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 signal without effects.

NOTE: Only Monitor outputs 1/2 and 3/4 can utilize the Fast Track Ultra 8R's internal DSP. Therefore the Monitor mixer tabs for outputs 5/6 and 7/8 do not provide Bypass buttons. Fast Track Ultra 8R Settings Tab Sample Rate Settings User Guide 13 The "Sample Rate" drop-down menu lets you select the current sample rate for the internal clock of Fast Track Ultra 8R. Available sample rates are 44.1, 48, 88.2 and 96 kHz.

The default sample rate is 44.1 kHz. @@@@About External Clock Digital audio is based on 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.



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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 8R Control Panel. If you prefer to not use ASIO Direct Monitoring, uncheck the box marked "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 engages High Performance Mode, which further reduces software monitoring latency and also reduces the load placed on your CPU. Most computers support High Performance Mode, however, if you experience any unexpected results (e.g., system instability, unresponsiveness, etc.), disable High Performance Mode.

By default, this box is left unchecked. Fast Track Ultra 8R User Guide 15 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 the Monitor tabs for channels 1/2 and 3/4 have "send" knobs. Signals from tabs 5/6 or 7/8 cannot be sent to the internal DSP. Effects Algorithm Presets This drop-down menu lets you select from a range of reverb and delay algorithms. The presets are: · Room 1 Room 2 · Room 3 Hall 1 · Hall 2 Plate · Delay Echo The three controls beneath the algorithm display offer the following controls for fine tuning the effect: · Duration · Feedback** · Volume **Feedback is only available for Delay and Echo effects Metering and Knob Control Options: PeakMeterHold: The meters of Fast Track Ultra 8R feature a "peak hold" function designed to assist in finding the loudest transients of a signal. This drop-down menu determines how long the peak indicator will remain before resetting. Select "Off" to disable the peak hold function. Select "1 Second" or "3 Seconds" to enable one or three seconds of peak holding, respectively.

Select "Infinite" to indefinitely hold peak levels until the meters are cleared. KnobMouseAxis: The knobs of the Fast Track Ultra 8R Control Panel can be adjusted by using up-down, left-right, or both up-down and left-right mouse movements. Selecting "Vertical" allows you to turn a knob clockwise by clicking and dragging upward (the knob can be turned counter-clockwise by clicking and dragging downward). Similarly, selecting "Horizontal" allows you to turn a knob clockwise by clicking and dragging to the right. Selecting "Both" allows you to adjust a knob setting by clicking and dragging on either axis (e.g., up-down or left-right). Saving and Recalling Settings The "Save Settings" and "Load Settings" options under the File menu allow you to save and load all of the parameters of the Control Panel. This is useful if you'd like to save various configurations (i.e.

, a multi-tracking setup, a surround mixing setup, etc.) so that you do not have to manually reconfigure your system each time you work on a different type of project. The "Load Recent Settings" sub-menu lists up to five of the most recent Control Panel configurations that you have loaded. The "Clear Menu" option clears the list of recently loaded files (this option does not affect the actual configuration files--it simply removes the recent file names from the sub-menu).

The "Revert to Factory Settings" option allows you to reset all of the Fast Track Ultra 8R Control Panel parameters to their factory default settings. TIP: Peak levels can be cleared at any time by clicking the meters in the DSP mixer. Fast Track Ultra 8R Meters Tab User Guide 16 This tab features 16 meters that display levels of your eight hardware inputs and eight hardware outputs. This is useful in setting up levels for live tracking or mixdown. Flow Tab This tab displays a graphic of the Fast Track Ultra 8R signal flow. Fast Track Ultra 8R About Tab User Guide 17 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 8R, or if the unit is powered off, you will see a message noting that on this page. Fast Track Ultra 8R User Guide 18 9 About Overdub Recording and Monitor Mixing Much of the popular music that you hear today is created using a method called "overdub" recording. Overdub recording allows artists to record their music while listening to previously recorded parts of the song. For example, a vocalist may record his or her parts while listening to the previously recorded guitar, bass, and drum parts in his/her headphones. This method is popular because each recorded part is completely separate from the other parts and can be more easily edited and mixed into a "polished" song.

For example, if the guitarist is not happy with the solo, it is possible to edit problematic notes, re-record the entire solo, or even "splice" together the best parts of multiple takes to create one seamless performance. This kind of detailed editing is generally not possible with "live" recording situations in which all sounds are captured at once. To record overdubs, each artist must have a monitor or "cue" mix sent to his/her headphones.

This mix contains the previously recorded tracks combined with the "live" signal that is being recorded. For example, the vocalist would need to hear the guitar, bass, and drum tracks along with his/her own vocal performance as it is being recorded into the computer. Fast Track Ultra 8R allows you to create up to four stereo monitor mixes using the first four tabs of the Control Panel. Each tab controls a stereo mixer with 16 inputs (eight hardware inputs plus eight outputs from your audio software). The "Software Output Signal Routing" section of this User Guide covers this topic in greater detail.

Each tab routes signals to a separate pair of outputs as shown in the following table: TabName: Monitor 1/2 Monitor 3/4 Monitor 5/6 Monitor 7/8 The output of this tab is routed to: Hardware Output 1/2 and Headphone Output 1 Hardware Output 3/4 and Headphone Output 2 Hardware Output 5/6 Hardware Output 7/8 and S/PDIF Output Using the Monitor Mixer To use the Fast Track Ultra 8R Monitor Mixer: 1. Select the tab that corresponds to the hardware outputs to which you would like to send your monitor mix. For example, if you wish to create a mix that routes to analog outputs 7/8, select the "Monitor 7/8" tab. Adjust the level faders for the hardware input and software return channels to create a comfortable monitor mix for the listener.



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TIP: Keep in mind that the first and second headphone outputs are hardwired to analog outputs 1/2 and 3/4.

If you would like to route your monitor mixes to the first or second headphone outputs, select the "Monitor 1/2" or "Monitor 3/4" tabs, respectively. 2. The eight channels on the left side of the mixer represent the "live" hardware inputs. For example if you have connected a microphone and guitar to the first two inputs, signals from these devices will appear on channels one and two of the mixer. The eight "Software Return" channels correspond to the outputs of your audio application. The last two channels on the right side represent the monitor mixer's master outputs that are sent to the mixer's associated hardware output pair (on the rear-panel of Fast Track Ultra 8R). Keep in mind that this mixer is for monitoring purposes only. All signals received at the hardware inputs are also sent directly to the recording application without being altered. The Monitor Mixer receives duplicates of these input signals to allow you to create a near-zero latency monitor mix. Changes made to the monitor mixer do not affect your recordings (or your audio software), since the Monitor Mixer's output is not actually being recorded.

For example, if the singer would prefer to not hear guitars while recording, the guitar channel of the singer's monitor mixer can simply be muted without affecting the recording application in any way. Fast Track Ultra 8R 3. 4. User Guide 19 Use the pan knob to adjust the position of a sound between the left and right channels. Note that double-clicking a knob will "center" it. When creating monitor mixes via the "Monitor 1/2" or "Monitor 3/4" tabs, you have the option of adding reverb or delay effects to any of the channels by using the "Effects Send" knobs located at the bottom of the tab: Turning a channel's send knob clockwise will increase the amount of signal that is routed to the digital effects processor; turning the send knob counter-clockwise will reduce the amount of signal sent to the processor. To hear the effects, make sure that the right-facing arrow button is illuminated (i.e., the effects are enabled) and the effects return knobs are turned up, as shown below: Why use effects in a monitor mix? Closely mic'ed sources often sound very detailed, dry, and unnatural to performers who are monitoring on headphones. This can make performers uncomfortable and may adversely impact the recording session.

Many performers (particularly vocalists) find it much easier to record overdubs when there is a small amount of reverb present on the recorded voice or instrument. This is because the reverb "smoothes out" the sounds that the vocalist hears in the headphones and makes him/her feel more comfortable (and confident) about their performances. This often results in better takes being captured during the session. Note that effects added through the Fast Track Ultra 8R Control Panel will not be present in your recordings. You will only hear the effects in real-time while monitoring.

The actual recordings will be captured "dry." If you would like to change the effect type or to adjust its parameters, click the "Settings" tab and make any desired adjustments to the "Effect Program", "Duration", "Feedback" and "Volume" parameters. This section is covered in detail in the Settings Tab section of this manual. 5. If you are routing signals to Headphone Outputs 1 and 2, make sure the Headphone Level Knobs 4 are set to a comfortable listening level. Alternatively, if you are routing monitor mixes to external headphone amplifiers, make sure those amplifiers are configured properly. NOTE: When using the Fast Track Ultra 8R Monitor Mixer to create monitor mixes, be sure to mute your DAW application's active recording channels (or, if possible, turn off the application's monitor mixing functionality altogether) to prevent two separate cue mixes from being created (this can cause undesirable effects such as phasing and slap-back delays). Conversely, if you wish to use your application's own monitor mixing capabilities, you will need to bypass the Fast Track Ultra 8R Monitor Mixer to prevent "double-monitoring" from taking place. This can be done by simply muting the input channels of the Monitor Mixer. Fast Track Ultra 8R User Guide 20 10MIDI Fast Track Ultra 8R provides 16 channels of MIDI I/O over standard 5-pin DIN connectors found on the breakout cable. These I/O ports can be used to connect MIDI-compatible devices to your computer such as controller keyboards, drum machines, or sound modules. Alternatively, these ports can be used to send and receive MIDI Time Code (MTC) and other synchronization formats for locking to a hardware or software sequencer. MIDI is an extensive protocol and covering it in detail is beyond the scope of this guide. If you would like to learn more, please refer to one of the many books and articles that have been written about this subject and are available online or through your local music retailer. The diagram below demonstrates a scenario in which a controller keyboard and a sound module are connected to Fast Track Ultra 8R: MIDI S/PDIF Fast Track Ultra 8R MIDI Out MIDI In MIDI Out MIDI In MIDI Keyboard Sound Module 1.

2. 3. Make sure the breakout cable is connected to the back of Fast Track Ultra 8R. Connect the controller keyboard's MIDI output to the Fast Track Ultra 8R MIDI input. Connect the Fast Track Ultra 8R's MIDI output to the MIDI input of the sound module. Once the hardware connections have been made, you may need to configure your music software to make use of the Fast Track Ultra 8R MIDI input and output ports. This configuration process varies from program to program; Please see your audio application's user guide to learn how to do this. Fast Track Ultra 8R User Guide 21 11Troubleshooting Fast Track Ultra 8R 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 via USB. 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 8R, please check the following: < If you have no sound: Check to see if Fast Track Ultra 8R drivers are properly installed.



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... 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. @@@@ 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 4 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 at the input meters. Check to see that the power adapter is connected to an outlet and to Fast Track Ultra 8R, the power button is enabled, and that the USB cable is connected to the unit and the host computer. Check the 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 8R 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 titled "About External Clock" for more information about digital synchronization. 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 using a larger buffer size (higher latency setting) in the Control Panel (Windows only). 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 8R directly to your computer. . For more troubleshooting tips, visit the Knowledge Base at www.m-audio.com Fast Track Ultra 8R User Guide 22 12 Specifications Line Outputs Frequency response: SNR and Dynamic Range: THD+N: Signal Level:

Impedance: Crosstalk: Line Inputs Frequency response: SNR and Dynamic Range: THD+N: Signal Level: Impedance: Crosstalk: Headphone Outputs Frequency response: SNR and Dynamic Range: THD+N: Working Range: Maximum Output Level Crosstalk: Microphone Input Pre-amp Gain: SNR (min gain): Dynamic Range (min gain): THD+N (min gain): Freq. Response (min gain): Sensitivity: Phantom Power Instrument Input Pre-amp Gain: Impedance SNR (min gain): Dynamic Range (min gain): THD+N (min gain): Freq. Response (min gain): Maximum Input Power Requirements Supported Sampling Rates 0dB to 40dB or greater 1M Ohm unbalanced -103 dB, A-weighted 103 dB, A-weighted 0.005% (-92.3 dB) @ -1 dBFS, 1 kHz 20 Hz to 22 kHz, +/- 0.3 dB @ 48 kHz sample rate 14dbv Power is derived from the included 9VDC 4000mA power supply. 44.

1, 48, 88.2, 96 kHz 0dB to 60dB or greater. -103 dB, A-weighted 103 dB, A-weighted 0.003% @ -1dBFS 20 Hz to 22 kHz, +/- 0.1 dB @ 48 kHz sample rate +1dBu max level at min input 48 Volts DC @ 16mA 20 Hz to 22 kHz, +/- 0.

7 dB @ 48 kHz sample rate 96 dB, A-weighted < 0.065% at maximum volume 24 to 600 ohms 0dbv into 32ohms < -65 dB @ 1 kHz 20 Hz to 22 kHz, +/- 0.3 dB @ 48 kHz sample rate -103 dB, A-weighted 0.002% @ -1dBFS, 1kHz +3.4 dBu balanced +1.

2 dBV, unbalanced 20K Ohm balanced 10K Ohm unbalanced < -100 dB @ 1 kHz 20 Hz to 22 kHz, +/- 0.1 dB @ 48 kHz sample rate -104 dB, A-weighted 0.002% @ -1dBFS, 1kHz +10 dBu balanced +2 dBV, unbalanced 300 Ohm balanced/150 Ohm unbalanced 150 Ohm unbalanced < -100 dB @ 1 kHz Fast

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