

## User Guide

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# Introduction

Congratulations on your purchase of the Oxygen 8, part of the USB Keystation series of MIDI controllers brought to you by M-Audio. You may use your Oxygen 8 in conjunction with a USB equipped PC or Macintosh computer and appropriate music software to enter a full range of MIDI note and controller information. You will be able to discover the wonderful world of Computer Music with a set of complete musical instruments from your sound card, sound modules, or workstation. The Oxygen 8 gives you full control over MIDI parameters, while utilizing proven M-Audio USB MIDI interface technology. The Oxygen 8 will also serve your needs as a standalone MIDI controller.

This manual will help you become familiar with the powerful features of the Oxygen 8. After reading the manual carefully, you will have a clear understanding of how to transmit different MIDI messages to other instruments and equipment. For ease of use of MIDI implementation, we strongly recommend that you have the manual at hand when you are using the keyboard, especially if you are new to the world of MIDI.

## Oxygen 8 Features

- The Oxygen 8 MIDI controller keyboard provides 25 dynamic keys, pitch and mod wheels, a data slider, and 8 assignable rotary controllers.
- Connects easily to your computer's USB port. No tools, and no disassembly is required. When used with USB, the Oxygen 8 may be parasitically powered by your computer's USB port.
- The Oxygen 8 may also be used as a completely portable standalone controller when powered by 6 AA-size batteries.
- The Oxygen 8 provides two MIDI OUT jacks for connecting to MIDI devices from either your computer, or as a standalone MIDI controller.
- There is also a socket for an optional sustain-footswitch.
- Although the Oxygen 8 has no built-in sound capabilities, it offers a great variety of useful MIDI functions.

## Oxygen 8 Overview

The Oxygen 8 is a fully functional MIDI controller. Its 25 keys can be set to play any octave or transposed pitch, while the Oxygen 8's pitch wheel, mod wheel and data slider with the addition of eight programmable rotary knobs make it the most versatile MIDI controller of its class. Its compact size and ability to run on battery power make it the ultimate in portable keyboard controllers. Virtually any type of MIDI controller information can be sent from the Oxygen 8 to your computer, using the power and convenience of the Mac or PC computer's USB port. Additionally, the Oxygen 8 can operate as a "standalone" MIDI controller, independent of the computer. The rear panel MIDI port marked "keyboard" is used for this purpose.

Contained within the Oxygen 8 is a USB MIDI interface. Simply plug the Oxygen 8 into your computer's USB port, install the included drivers and enable the MIDI interface within your music software. This combination of a versatile keyboard controller and a USB MIDI interface allows you record and control MIDI information within your music application, plus adds a MIDI output port to which you can connect a MIDI sound module or drum machine. The rear panel MIDI port marked "USB" is used for this purpose.

The Oxygen 8 may be powered by one of three sources: external power supply, internal batteries, or "parasitically" from the voltage it receives from the USB port. For the most consistent performance, we recommend using a power supply or batteries, even when using the Oxygen 8 with your computer's USB port. To power from the USB port only, plug the Oxygen 8 directly into the computer's USB port, or into a powered USB hub. When using the Oxygen 8 in standalone mode, a power supply or batteries must be used. Six AA-size batteries are required when using battery power. When using an external power supply (optional), it is important to use only a supply with the proper 9vDC, 500ma rating. These may be purchased locally or through MIDIMAN.

**On a PC:** You must be running Windows 98 or higher to properly use the Oxygen 8. Also, your motherboard must support USB or you will need to install a PCI to USB host adapter to provide the USB ports. It is possible for a motherboard to support USB and yet not have the physical port connectors installed. A simple USB back panel extender can be purchased at a computer supply store and can be installed easily to provide USB port connectors.

**On an Apple Computer:** Your Apple must support USB with the built-in native ports present. Standard iMac's or G3/G4's with USB ports will work just fine. A Mac OS that supports USB will also be required. We recommend OS 9.2.2 or higher. We cannot guarantee performance of device when using non-Apple USB ports.

**IMPORTANT:** For MacOS 9, an OMS MIDI driver is provided. You **MUST** have a sequencer program that supports OMS, and have OMS properly installed in order to use the Oxygen 8.

## What's in the Box

Included in your Oxygen 8, you should find:

1. Oxygen 8 USB Keystation MIDI Controller
2. One (1) standard USB cable
3. PC and Mac driver disk
4. Owner's manual and warranty card

# Guide to Getting Started

Here's an outline of steps to begin using your Oxygen 8 on either Mac or PC:

1. Attach the Oxygen 8 to your computer (see "Hardware Installation").
2. Install the Driver (see "Software Installation").
3. Hook your sound module to the Oxygen 8 (see "Setting Up Your MIDI Studio").
4. Configure the Oxygen 8 in your application software (see "Using the Oxygen 8 in your Application Software").

## Hardware Installation

Installing your Oxygen 8 means simply attaching it to your USB port using the standard USB cable that is included. We recommend that you power down (turn off) your computer for a first time installation. If you are using the Oxygen 8 in USB mode, a power supply is not required—the computer's USB port provides the power to run the Oxygen 8. The "wall-wart" or battery supply is only necessary for use in the standalone mode. However, when the Oxygen 8 receives its power from the USB port, we recommend either plugging directly into the computer's USB port (not into the keyboard's port or a powered USB hub.)

Find a good spot around your computer station to place the Oxygen 8. The USB port on your computer is a small (1/8" x 3/8"), rectangular connector (A) and is usually found in a group of two. The other end (B) of your USB cable is 'more square' (1/4" x 1/4") in shape, and should fit easily into the USB connector on your Oxygen 8. Take the (A) end of the USB cable and plug it into the USB port on the back of your computer. Take the (B) end of the USB cable and plug it in to the USB port on the back panel of the Oxygen 8.

Next, power up your computer and proceed to the next section, "Software Installation."

## Software Installation

MIDI application software communicates with devices such as the MIDI interface contained within the Oxygen 8 via software known as "drivers." This software driver is a special, dedicated program that makes a MIDI interface accessible to an application. On the included driver disk, M-Audio supplies the drivers that enable you to use Oxygen 8 with either Windows, Mac OS9 or Mac OSX. Oxygen 8 drivers are supplied on the included dual format CD.

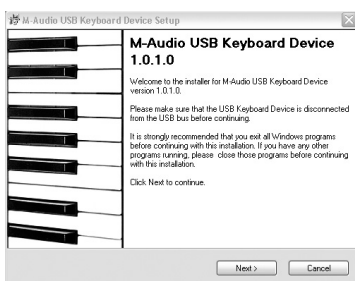
### USB Driver Installation for Windows

This driver for the Oxygen 8 USB interface requires Windows 98 or higher. Please make sure that Windows 98SE, ME, 2000 or XP is installed on your system, and that your USB port is enabled. Check your computer manual for more information.

To verify your Windows installation after you have carefully followed these instructions, you may check your system's "Device Manager," located in the Control Panel under "System." If you look in the Device Manager, you will find 2 parts for the Oxygen 8 KEYSTATION driver; one under the "Universal Serial Bus" controller group and the other under the "Sound, video, & game controllers" group.

## Windows XP:

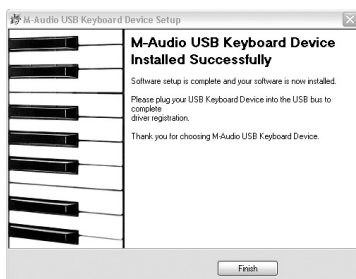
1. Insert the 'Oxygen 8' CD-ROM into your CD-ROM drive.
2. Open 'My Computer' or 'Windows Explorer' to locate your CD-ROM drive. Double-click the CD-ROM drive that contains the Oxygen 8 CD-ROM. Double-click the 'Oxygen 8' folder.
3. Double-click the driver icon to launch the installation procedure.
4. You will see an installer window advising you to have your Oxygen 8 DISCONNECTED from the USB bus before continuing. After you verify that your device is disconnected, click 'Next' to continue.



5. You will see a warning that this device has not passed Windows logo testing. Click "Continue anyway".



6. When the installer has completed installation, click "Finish". Plug in your Oxygen 8.



7. You will see a "New Hardware found" dialog. (If you don't see this dialog at first, unplug your Oxygen 8 and try again.) Click Next.



8. You will see another warning that the product has not passed Windows logo testing. Click "Continue anyway".



9. The installer will finish. Click "Finish" to continue.



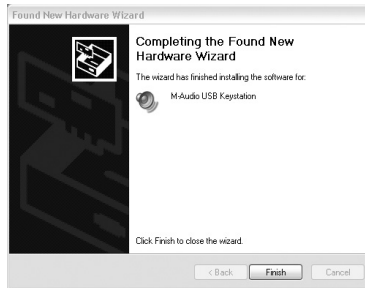
10. You will see another window telling you that New Hardware has been found. Click "Next".



11. Again, the computer reminds you that the product has not passed Windows Logo testing. Click "Continue anyway".



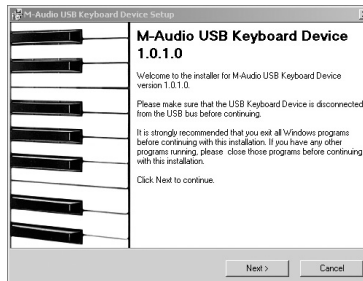
12. The driver has been installed.



Windows XP Installation is now complete.

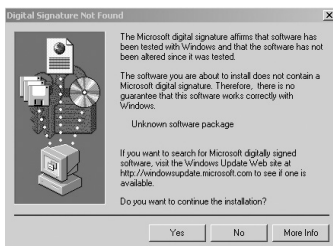
## Windows 2000

1. Service Pack 2 or higher is required for proper operation of the Oxygen 8 driver. This service pack is available from Microsoft Downloads at [www.microsoft.com/downloads](http://www.microsoft.com/downloads).
2. Insert the M-Audio Driver CD into your CD-ROM drive. Open 'My Computer' or 'Windows Explorer' to locate your CD-ROM drive. Double-click the CD-ROM drive that contains the Oxygen 8 CD-ROM.
3. Double-click the Oxygen 8 Folder to open it.
4. Double-click on the Oxygen 8 Installer icon
5. A dialog box will appear, reminding you to exit all currently running programs and to disconnect the Oxygen 8 from the USB port. Do this, and click "Next" to continue.

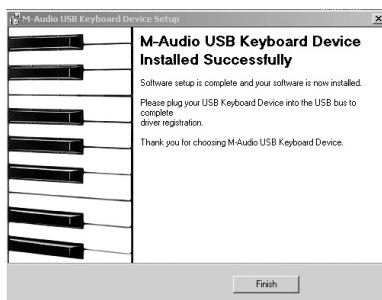


The installer will scan your hard drive (this can take some time) and will then install the necessary files and perform setup actions on your system. A series of progress bars will show you how the process is going.

- At the next prompt, the installer will warn you that this product does not have a Windows Digital Signature. Click "Yes" to continue.



- A dialog box will appear, stating that the installation has succeeded. Click "Finish" to complete the driver installation.



- Plug the Oxygen 8 into your computer's USB port. Be sure to either have the power supply connected and power switch set to 9V, or if not using power supply, be sure to set the power switch to USB Power. Upon doing so, the computer will find and install the necessary drivers.
- The installer will warn you that this product does not have a Windows Digital Signature. Click "Yes" to continue.





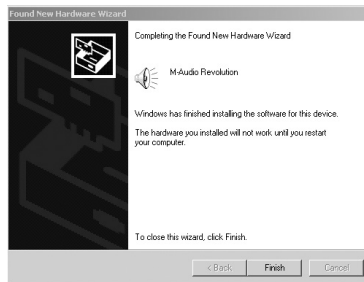
10. The installer will warn you again, a second time, that this product does not have a Windows Digital Signature - again, click "Yes."



11. The next screen informs you that the installer has completed. Click "Finish" to continue.



12. Windows 2000 will prompt you to restart the computer, in order to complete the installation. Click "Yes" to restart with new settings.

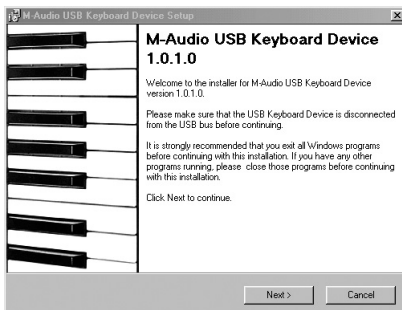


Windows 2000 Installation is now complete.

## Windows Me and Windows 98 Second Edition

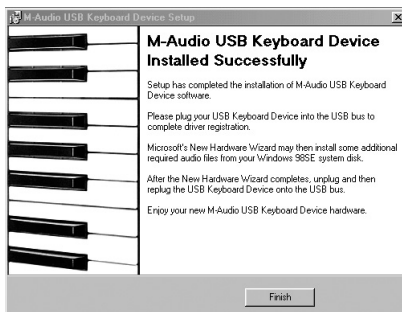
1. Insert the M-Audio Driver CD into your CD-ROM drive. Open 'My Computer' or 'Windows Explorer' to locate your CD-ROM drive. Double-click the CD-ROM drive that contains the Oxygen 8 CD-ROM.
2. Double-click the Oxygen 8 Folder to open it.
3. Double-click on the Oxygen 8 Installer icon.
4. A dialog box will appear, reminding you to exit all currently running programs and to disconnect the Oxygen 8 from the USB port. Do these things and

click "Next" to continue.



The installer will scan your hard drive (this can take some time) and will then install the necessary files and perform setup actions on your system. A series of progress bars will show you how the process is going.

5. A dialog box will appear, stating that the installation has succeeded. Click "Finish" to complete the driver installation.



6. Plug the Oxygen 8 MIDI interface into your USB port. Be sure to either have the power supply connected and power switch set to 9V, or if not using power supply, be sure to set the power switch to USB Power. Upon doing so, the computer will find and install the necessary drivers.

Windows Me or 98SE Installation is now complete.

## USB Driver Installation for Macintosh

If you are using OS 9, you must first install Opcode's OMS. This is available on the MIDISPORT drivers page of our website, or can be installed from the driver CD by opening the OMS folder and then double clicking the OMS install icon that asks for the driver signature.

This release version of the Oxygen 8 driver requires Macintosh operating

system OS 9.2.2 or higher. Some updates are offered free to Apple owners. Please check the Apple website at <http://www.info.apple.com> for update information.

OMS is a MIDI manager program that is made by Opcode. We have included it on the CD disk for your convenience, and also offer it as a free download from our website's MIDISPORT drivers page. OMS is required to run the Oxygen 8 on the Macintosh in OS 9, and it is important that you install OMS before running the Oxygen 8 Installer. Locate the OMS installer program on this CD in the OMS 2.3.7 folder, and simply double click its icon to install OMS. Once this has been successfully completed, you can move on to the next step- the KEYSTATION Installer.

**FOR FIRST TIME INSTALLS: If you power up your Mac with the Oxygen 8 attached and powered up (or with "USB" selected on the power switch), you will receive a message that an "unknown USB device has been detected." Click OK, and proceed with the driver installation. You may also install the drivers first, and then plug in the Oxygen 8.**

### **Mac OSX:**

The drivers for MacOS X are found on the Driver CD, which comes with the product. You may also wish to check the MIDISPORT drivers page of our website to make sure you have the most recent version. The driver may be labeled "Keystation" or "MIDIMAN USB". The OSX Installer Package icon looks like "a cube of Jello rising out of a cardboard box" and usually ends with the suffix ".pkg".

1. Double-click on the installer package.
2. Click on the lock icon and enter the administrator password you chose when you installed OSX.
3. Follow the prompts to install the software.

### **Mac OS 9:**

1. Insert the Driver Software CD. Open the KEYSTATION folder, then the USB folder. There, you will find the KEYSTATION Installer program.
2. Run the KEYSTATION Installer by double clicking on it. This installs all of the KEYSTATION's extensions as well as the KEYSTATION OMS Driver. However, YOU MUST HAVE OMS INSTALLED FIRST BEFORE YOU RUN THIS INSTALLER PROGRAM. Otherwise, the KEYSTATION OMS Driver will not be placed in the OMS folder.

Once installed, you should have 2 files, one is in System Folder:Extensions (MIDIMAN USB MIDI Support) and the other is in System Folder: OMS Preferences (MIDIMAN USB OMS Support.) For more information, scroll through the Readme text which is presented on your screen during the installation process.

## First Time OMS Configuration Instructions

If you have installed the Oxygen 8 in Mac OS 9, it is now time to configure OMS (this is not necessary in Mac OS X). Go to the Chooser under the Apple Menu, and make sure AppleTalk is turned off (this is recommended, although OMS will sense that it is on and prompt you to turn it off). If you are installing your Oxygen 8's KEYSTATION driver and configuring OMS for the first time, follow these instructions to configure OMS.

1. In the Opcode folder, which you will find on your hard drive, locate the OMS Applications folder, then OMS Setup. Double click on OMS Setup.
2. OMS will inform you that it has not yet been configured. Click OK.
3. The Create A New Studio Setup dialog box now appears. Click OK.
4. The "OMS Driver Search" box asks you to choose the port on which you've attached the Oxygen 8 (either Modem or Printer). DO NOT choose a port (since we're using USB), just click "Search." OMS begins Searching.

**IMPORTANT: If the USB cable is not correctly hooked up to the Oxygen 8, setup will fail.**

5. "OMS Driver Setup" shows the Oxygen 8 KEYSTATION in a list when OMS successfully finds the driver. Click OK. OMS will now define (shows "Identifying") the Oxygen 8 output port.
7. The "OMS MIDI Device Setup" dialog box will appear showing the Oxygen 8's output port (labeled KEYSTATION) with an open check box to the left of the port. You will now have to check this open box to enable the output port. Click on OK.
8. Next, the "My Studio Setup" appears with a file save dialog box over it. You will now need to name and save your new Studio Setup (or use the default name) before you can assign an instrument to the Oxygen 8's output (labeled KEYSTATION). Assign your instrument (this step is optional) and you are done.

You can run the OMS 'Test Studio' utility by going to the 'Studio' menu and releasing the mouse on "Test Studio." Playing a note on your keyboard will give you an audio message from your computer, "MIDI received," while the arrow pointing to the keyboard icon flashes. Clicking on the keyboard icon with the mouse pointer will send a tone cluster to the Oxygen 8 output port. The LED will light, and the sound module connected to the Oxygen 8 MIDI Out port should play the chord.

You may now exit OMS Setup by quitting the application. The rest is up to the configuration within your music software. Generally, this means selecting "OMS Compatibility," or "Open Music System" for your MIDI system setup.

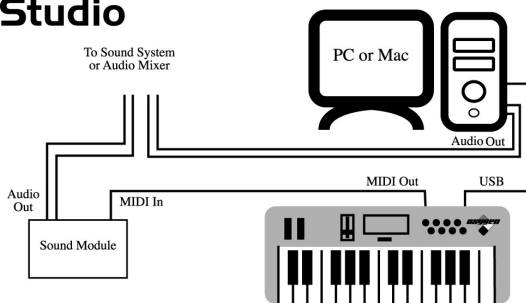
## Setting Up Your MIDI Studio

A typical MIDI system set-up would include your Oxygen 8, a computer, MIDI sequencing software and/or a MIDI compatible sound module. This type of set-up can be connected as follows:

1. The Oxygen 8 is connected to the computer via the USB port connectors, using the supplied USB standard cable.
2. The Oxygen 8 can play the synthesizer that is part of an internal sound card, as well as any software synthesizers that are installed in your system. This will depend on how you set up your software (see section "Using the Oxygen 8 in your Application Software.") The audio output of the sound card can be plugged directly into a sound system, or into a mixer, which is then connected to a sound system.
3. The MIDI Output of the Oxygen 8 is connected to the MIDI In of a sound module. The audio output of the sound module can be plugged directly into a sound system, or into a mixer, which is then connected to a sound system.

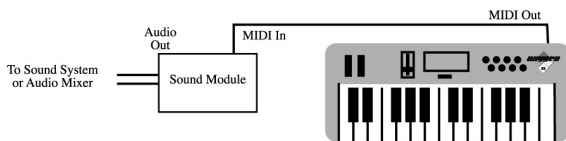
In the following set-up, the Oxygen 8 is being used as a MIDI controller as well as a MIDI interface, inputting MIDI data to the computer and its application software, and outputting MIDI to a sound module from which sounds will be produced. The Oxygen 8 as a controller may also send MIDI information to an existing internal soundcard's MIDI synthesizer or any installed software synthesizer, outputting the audio from the computer soundcard.

## MIDI Studio



In this scenario, it may not be necessary to apply external power to the Oxygen 8. With the power switch set to "Power Off," the Oxygen 8 receives power from the USB port on your computer. It is recommended that you either plug directly into the USB port on the computer, or use a powered USB hub. You may also choose to use power from batteries or an external power supply.

Additionally, the Oxygen 8 may be used as a "standalone" keyboard controller, independent of the computer and its USB port. In this case, the Oxygen 8 must receive power from either a power supply or batteries, by switching the power setting on from the rear panel. Also, you will want to use the MIDI out port that is labeled "Keyboard." A setup such as this may be used in a performance situation, or when you wish to use the keyboard without the computer.



## Using the Oxygen 8 in your Application Software

Once the Oxygen 8 driver has been installed, you will need to configure your MIDI application software to utilize the Oxygen 8. The manner in which this is done varies between applications, so we can just cover the basics here.

Generally with both the Mac and PC, most MIDI applications have a MIDI port configuration or settings dialog box, sometimes called "MIDI Devices" or "MIDI Setup." It is within this dialog box that you will select or enable your MIDI input and output devices.

If the Oxygen 8 drivers are properly installed, then the port selection in this case will be the KEYSTATION In-1 (or "Port 1" on the Mac) in the input column, and then KEYSTATION Out-1 (or Port 1) in the output column. Input 1 (or Port 1), corresponds to the information that will be sent from the Oxygen 8 keyboard to your computer. Output 1 (or Port 1), corresponds to the MIDI information sent from your music application to the physical MIDI output on your Oxygen 8 that is marked "USB." Make sure that those items are highlighted or checked. The output port that you select on a specific MIDI track within your sequence will output MIDI information to the keyboard or sound module that is attached to that port.

## Oxygen 8 MIDI Functions

**MIDI** is the acronym for **Musical Instrument Digital Interface**, which makes all digital musical instruments equipped with this standardized interface able to exchange their MIDI data or "talk to each other."

To explain how MIDI works on your instrument in more detail, the following descriptions outline the MIDI functions of the Oxygen 8, which allow you to connect the keyboard to other MIDI instruments and to your computer. The versatile MIDI capability of the Oxygen 8 will offer you tremendous power in a MIDI environment.

The keys on the Oxygen 8, in conjunction with the MIDI/SELECT button, give you the extra programming capability that is unique to the Keystation series of MIDI controllers. You can use the Data Entry key to enter in values, or the keys that are labeled with numbers. The keys labeled for specific MIDI functions can be used to assign that function to the data slider. The "Set Ctrl" key can be used with the numeric value keys to program the rotary faders to send MIDI controller information on specific MIDI channels.

## MIDI Functions In Standalone Mode

To transmit MIDI data from your keyboard to other professional MIDI instruments, purchase a standard MIDI cable and use it to connect the MIDI OUT jack of your Oxygen 8 labeled "Keyboard" to the MIDI IN jack of the other instrument.

1. Power up the Oxygen 8, using either a 9vDC adapter or using 6 AA batteries. Set the power switch to the the 9V/Battery setting. If a 9V power adapter is present, the Oxygen 8 will use power from the adapter. If a 9V adapter is not present, and the Oxygen 8 has the required battery power, the unit will power up using the batteries.
2. Make sure that the MIDI port "transmit" channel within you music application matches the MIDI "receive" channel of the other instrument.
3. Please refer to the diagram in the section, "Setting Up Your MIDI Studio" for audio connections.

## Default Settings of The Oxygen 8

The Oxygen 8 will always select the following values for their parameters when the power is turned on.

- Transmit MIDI Channel no. 1
- Default Octave will be from C4(60) to C6(84)
- Default After Touch value will be 0
- Default Velocity value will be 0
- Default Reverb Depth value will be 64
- Default Pan Pot value will be 64
- Default Volume value will be 127
- Default CC Data value will be 0
- Default CC no. value will be 0
- Default Control Change (CC-00=0, CC-32=0) message to be transmitted
- Default Program Change (PG=1) message to be transmitted
- Default MIDI-controller knob-assignments (10-17) on MIDI ch. 1

## Oxygen 8 Panel Features



### Top Panel

1. Using the Pitch Bend Wheel: The Pitch Bend wheel is used for raising or lowering the pitch of a voice during performance, starting from and always returning to a center "detent" point. The range of pitch values depends on the sound generator (sound card or module) being used. Please refer to the

manuals of your devices for information on how to change the Pitch Bend range. To bend the pitch up, move the wheel away from you. To bend the pitch down, move the wheel towards you.

2. **Using the Modulation Wheel:** It is very common to use the modulation wheel to change the intensity of effects, such as Vibrato (pitch change), Tremolo (change in volume), and Modulation (change in tone). The Modulation Wheel produces a vibrato effect shortly after the sound is generated, and is most effective for solo instruments such as saxophone, strings, and oboe. Similar to the pitch wheel, the actual effect and range of that effect will be set within your MIDI sound module.
3. **Data Entry Slider:** This slide controller allows you to adjust the value of parameters such as Volume, Velocity, Aftertouch, and virtually any assignable MIDI control parameter directly from your keyboard. Setting the data slider is covered in the next section.
4. **MIDI/SELECT button:** Use this button to select different MIDI commands using certain keys from your keyboard. Activating this key is indicated by a lit LED on the MIDI/Select button. When MIDI/SELECT is activated, the keyboard becomes a set of function keys for setting MIDI parameter commands.
5. **Octave Up & Down / Preset buttons:** Pressing these buttons during normal use will allow you to select the octave orientation of the Oxygen 8's keyboard. Following a pressing of the MIDI/SELECT button, they allow you, instead, to select the preset-bank setting (P1-P5) of the Oxygen 8's keyboard. Pressing the MIDI/SELECT button again, after a preset-bank selection, will return these buttons to their normal octave-select function.
6. **Rotary Controller Knobs:** These eight programmable rotary knobs can be used to send any MIDI controller data on any MIDI channel. This is perfect for use with hardware and software synthesizers, for automating software mixers, or for controlling any devices that will respond to MIDI commands. In the next section, the "Set Controller Key" instructions will show you how to program this special feature.
7. **Key Programming Assignments:** After pressing the MIDI/SELECT button, the keys on the Oxygen 8 become function keys that allow you to assign particular MIDI parameters as well as Program Change and MIDI Channel selections using the numbered key group.

## Utilizing the Key Programming Assignment Keys

This section contains the information you will need to program the Oxygen 8, and to send any MIDI parameter data from the Oxygen 8 keyboard. You may set the data slider to send MIDI controller data of your choice, send program change data from the keyboard, select the MIDI transmit channel of the Oxygen 8, set the octave or pitch of the keyboard, and program the eight rotary controllers.

**DATA ENTRY assignments:** Pressing the MIDI/SELECT button then pressing a key labeled by its MIDI function (such as velocity offset, aftertouch, reverb depth, pan pot, volume, CC data) and then moving the data entry slider, allows you to select the transmitting value of the chosen function.



For example, if you want to change the value of the velocity offset, first press the MIDI/SELECT button and then the velocity key. Second, change the data entry slider to the value you want. Finally, press the MIDI/SELECT button again to finish the change.

To assign any MIDI control value to the data slider:

1. Press the MIDI/Select button
2. Press the CC No. key (low B)
3. Press the number keys to choose the MIDI controller number
4. Press the Enter key
5. Press the MIDI/Select button to finish your selection.

For a chart of MIDI control change values, see Appendix A of this manual.

You can also use the data slider to send this MIDI controller information in realtime. When the Oxygen 8 powers up, the DATA ENTRY slider defaults to a MIDI controller value of 7. A Controller 7 message is the equivalent of a MIDI volume message. Once you've selected one of the keys that represents a controller value, i.e., velocity, aftertouch, pan pot, etc., or assigned a value using the number keys, the DATA ENTRY key then takes on that value and will transmit that type of controller information when the slider is moved

**SET CTRL key:** Pressing the MIDI/SELECT button and then the SET CTRL key will allow you to begin programming the rotary control knobs. In order to change the value of each knob (1 - 8), you need to do as follows:

1. Press MIDI/SELECT, then the Set Controller key, F3 (marked "SET CTRL.")  
The display will show a small "n" to indicate that the desired controller knob "number" should be entered next.
2. Choose the number of the desired controller knob using the number key group (1 - 8). Then press the Enter key. The display will show a "P" in anticipation of the "parameter" number.
3. Assign the desired MIDI controller parameter number using the number key group (1-127), then press Enter. The display will show a "C" in anticipation of the MIDI "channel" number. See chart, "Appendix A."
4. Assign the MIDI channel number on number key group (1-16) then press Enter. This channel assignment will apply only to the controller knob that you are programming.
5. You can select up to five banks of presets for the Oxygen 8's keyboard, P1-P5, by pressing the MIDI/SELECT button. This is primarily effective for stand-alone mode, not for all soft-synth presets.

Finally, Press MIDI/SELECT key again to finish assigning values to the controller knob.

**RESET key:** Pressing the MIDI/SELECT button, the RESET key, then the Enter key will send out a message to return all external MIDI instruments to their default setting. Press the MIDI/SELECT button again to complete the process.

**“Flat” & “Sharp” keys:** By pressing the MIDI/SELECT button and the flat or the sharp key, you will shift the active keyboard pitch one note (half-step) higher, or lower. For example, if you want to change the pitch 2 notes down, press MIDI/SELECT button and the “flat” key twice. Press the MIDI/SELECT button to finish the change.

To change the Oxygen 8's octave range, press the MIDI/SELECT button, then the “Octave Up” or “Octave Down” button however many times you wish to shift the octave range. Press the MIDI/SELECT button to finish the change.

**MIDI CHANNEL select:** Pressing the MIDI/SELECT button and then pressing the MIDI CHANNEL key allows you to select the transmitting channel for your keyboard. The default Channel is 1 when the keyboard's power is turned on. To set the MIDI channel to 2, for example:

1. Press the MIDI/SELECT button.
2. Press the key labeled “MIDI CHANNEL”, on the keyboard.
3. Press the key labeled “2”, on the keyboard, then press the key labeled “Enter”, also on the keyboard. Lastly, press the MIDI/SELECT button one more time (this will change the MIDI transmit channel from 1 to 2.)

**Control Change data entry by numeric keypad:** Oxygen 8 allows you to use the numeric keys, instead of the data entry slider, to specify the Control Change parameter data. This is done by pressing the MIDI/SELECT button, CC (No. or Data) key, required number key(s), and the Enter key. As an example, to assign a Control Change value of 7, and CC Data value of 123:

1. Press the MIDI/SELECT button.
2. Press the CC No. key.
3. Press the key labeled “7”.
4. Press the Enter key, in order to specify the Control Change as 7.
5. Press the CC Data key.
6. Press the number keys 1, 2 and 3, in order.
7. Press the Enter key, to specify the value 123, then press the MIDI/SELECT button. This completes the process.

**Program key:** Pressing the MIDI/SELECT button and the Program key, then numeric keys, and finally the Enter key, you can select any patch number between 1 and 128. For example, if you want to change the voice to 67 (General MIDI TenorSax), Press the MIDI/SELECT button and 6, 7 on the numeric keys, then press the enter key and MIDI/SELECT button again to finish this action.

**Please note:** After you press the enter key, the LED display will show “—” and will not disappear until you press the MIDI/SELECT button to finish your choice. After you press the Cancel key,, the LED display will also show blank, and will not disappear until you press the MIDI/SELECT button to finish your choice.



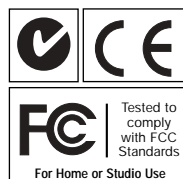
## Rear Panel

1. Sustain jack: This jack allows you to connect an optional footswitch to the keyboard. When the footswitch is depressed, notes played on the keyboard will continuously sound as long as the footswitch is held, while MIDI controller information is sent from the Oxygen 8.
2. MIDI Out jack, "Keyboard": This standard MIDI jack is a direct MIDI out from the keyboard in "standalone" mode, and is used to send MIDI messages to another MIDI instrument (such as sound module).
3. MIDI Out jack, USB": This standard MIDI jack receives its source from the computer when software is set to Oxygen 8 MIDI Out, and is used to send MIDI messages to another MIDI instrument (such as sound module).
4. USB port: This USB connector jack is used to connect the Oxygen 8 to the computer's USB port using a standard USB cable (included).
5. Power switch: The 3-way power switch selects the keyboard's power mode—powered by USB connection, external power supply/battery power, or powered off. When set to "USB Power" the KEYSTATION receives power only after the computer is powered on. When the KEYSTATION's power is turned on, the keyboard will reset to its default settings.
6. Power jack: This jack is used to connect the keyboard to an optional 9vDC, 500mA "wall-wart" type power supply.

# Specifications

Model: Oxygen 8

Keyboard Type	25 dynamic key
Simultaneous Output	10 note (reverse priority)
Control Switches	MIDI Channel Reset Octave -2, -1, center , +1, +2 Program Change CC-00/CC-32 (GS Bank Selection) CC-No. (Generic CC Assignment) CC-Data Data Entry Velocity Assignment Data Entry Reverb Send Level Assignment Data Entry Chorus Send Level Assignment Pan Pot Assignment (CC-10) Volume Assignment (CC-07) Numerical Keys (x 10) Enter Cancel Pitch Bender Wheel Modulation Wheel Data Entry Slider
Rear Terminals	MIDI Out jacks (Kybd & Comptr - DIN) Sustain jack (1/4") USB port (to Comptr - pwr & MIDI) Power Select switch Power jack
Display Type	7-segment LED (x 3)
Dimensions	42 x 23.7 x 7.62 (cm)
Weight	1.4 kg
Power Source Options	External supply (9VDC, 500ma) USB Battery (6 AA)



# Technical Support & Contact Information

For additional technical assistance, contact M-Audio Technical Support by telephone (626-445-8495, 9-5 PST M-F), by fax (626-445-7564) or by e-mail (techsupt@m-audio.com).

If you have questions, comments or suggestions about this product, or any M-Audio product, we invite you to contact us directly at:

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# Appendix A-Midi Charts

## MIDI Controllers:

Number	Definition	Parameter
0	Bank Select	0-127
1	Modulation Wheel	0-127
2	Breath Control	0-127
3	Undefined	0-127
4	Foot Controller	0-127
5	Portamento Time	0-127
6	Data Entry	0-127
7	Channel Volume	0-127
8	Balance	0-127
9	Undefined	0-127
10	Pan	0-127
11	Expression Controller	0-127
12	Effect Control 1	0-127
13	Effect Control 2	0-127
14	Undefined	0-127
15	Undefined	0-127
16	General Purpose Controller #1	0-127
17	General Purpose Controller #2	0-127
18	General Purpose Controller #3	0-127
19	General Purpose Controller #4	0-127
20-31	Undefined	0-127
32-63	LSB Controllers (0-31)	0-127
64	Damper Pedal on/off (sustain)	0-127
65	Portamento on/off	<63=off; >64=on
66	Sostenuto on/off	<63=off; >64=on
67	Soft Pedal on/off	<63=off; >64=on
68	Legato Footswitch	<63=off; >64=on
69	Hold 2	<63=off; >64=on
70	Sound Controller 1	0-127
71	Sound Controller 2 (Resonance)	0-127
72	Sound Controller 3 (Release Time)	0-127
73	Sound Controller 4 (Attack Time)	0-127
74	Sound Controller 5 (Cutoff)	0-127
75	Sound Controller 6 (Decay Time)	0-127
76	Sound Controller 7 (Vibrato Rate)	0-127
77	Sound Controller 8 (Vibrato Depth)	0-127
78	Sound Controller 9 (Vibrato Delay)	0-127
79	Sound Controller 10	0-127
80	General Purpose Controller #5	0-127
81	General Purpose Controller #6	0-127
82	General Purpose Controller #7	0-127
83	General Purpose Controller #8	0-127
84	Portamento Control	0-127
85-90	Undefined	0-127
91	Effects 1 Depth (Reverb Send Level)	0-127
92	Effects 2 Depth (Tremolo Depth)	0-127
93	Effects 3 Depth (Chorus Send Level)	0-127
94	Effects 4 Depth (Celeste Depth)	0-127
95	Effects 5 Depth (Phaser Depth)	0-127
96	Data Entry +1	n/a
97	Data Entry -1	n/a
98	Non-Registered Parameter Number LSB	0-127
99	Non-Registered Parameter Number MSB	0-127
100	Register Parameter Number LSB	0-127
101	Register Parameter Number MSB	0-127
102-119	Undefined	?
120	All Sound Off	0
121	Reset All Controllers	0
122	Local Controller on/off	0=off; 127=on
123	All notes off	0
124	Omni mode off (+ all notes off)	0
125	Omni mode on (+all notes off)	0
126	Monophonic Mode	0-16
127	Polyphonic Mode	0

MIDI Implementation:

Model: Oxygen 8 Version: 1.0

Function	Transmitted	Recognized	Remarks
<b>Basic Channel</b> Default Changed	1 1-16	x x	
<b>Mode</b> Default Messages Altered	Mode 3 x *****	x x x	
<b>Note Number</b> <b>True Voice</b>	12-108 *****	x x	With Octave Change
<b>Velocity</b> Note ON Note OFF	o x	x x	
<b>After Touch</b> Key's Ch's	x x	x x	
<b>Pitch Bender</b>	o	x	
<b>Control Change</b>	o	x	
<b>Prog Change</b> :True # :CC-00, :CC-32	1-128 ***** 0-127	x x x	
<b>System Exclusive</b>	x	x	
<b>System Common</b> :Song Pos :Song Sel :Tune	x x x	x x x	
<b>System Real Time</b> :Clock :Commands	x x	x x	
<b>Aux Message</b> :Local ON/OFF :All Notes OFF :Active Sense :Reset	x o o o	x x x x	Send with Reset. Send with Reset.
<b>Notes:</b>			o=Yes,x=No

## Oxygen 8 Warranty Information

M-Audio warrants that this product is free of defects in materials and workmanship under normal conditions for 90 days, so long as the product is: owned by the original purchaser; the original purchaser has proof of purchase from an authorized M-Audio dealer; and the purchaser has registered his/her ownership of the product by sending in the completed warranty card.

In the event that M-Audio receives written notice of defects in materials or workmanship from such an original purchaser, M-Audio will either replace the product, repair the product, or refund the purchase price at its option. In the event any repair is required, shipment to and from M-Audio and a nominal handling charge shall be born by the purchaser. In the event that repair is required, a Return Authorization number must be obtained from M-Audio. After this number is obtained, the unit should be shipped back to M-Audio in a protective package with a description of the problem and the Return Authorization clearly written on the package.

In the event that M-Audio determines that the product requires repair because of user misuse or regular wear, it will assess a fair repair or replacement fee. The customer will have the option to pay this fee and have the unit repaired and returned, or not pay this fee and have the unit returned unrepai red.

The remedy for breach of this limited warranty shall not include any other damages. M-Audio will not be liable for consequential, special, indirect, or similar damages or claims including loss of profit or any other commercial damage, even if its agents have been advised of the possibility of such damages, and in no event will M-Audio's liability for any damages to the purchaser or any other person exceed the price paid for the product, regardless of any form of the claim. M-Audio specifically disclaims all other warranties, expressed or implied. Specifically, M-Audio makes no warranty that the product is fit for any particular purpose.

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