MIDI-OX 6.2

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MIDI-OX 6.2 is a Windows 95/NT (also Windows 98/ME/2000) program. It is a 32 bit program which will not operate under earlier versions of Windows. MIDI-OX is a multi-purpose tool: it is both a diagnostic tool and a System Exclusive librarian. It can perform filtering of MIDI data streams. It displays incoming MIDI streams, and passes the data to a MIDI output driver or the MIDI Mapper. It can convert any type of MIDI message into almost any other type of MIDI message. You can generate MIDI data using the computer keyboard or the built-in control panel. You can even record and log MIDI data and then convert it to a Standard MIDI File for playback by a sequencer.

MIDI-OX is copyrighted freeware: this means it can be freely used by individuals in non-commercial environments. Commercial licenses are available, and can be purchased on-line at the MIDI-OX web-site: http://www.midiox.com .

Version 6.2.0 *(expanded change-history below)*

- We extended the 255 character limit for SysEx items in a map: each can now be a maximum of 1022 bytes.
- Added simple substitution for SysEx map items: you can substitute in channel, data1 and data2 values from the MIDI message that triggered the SysEx item. See the Help file for details.
- Added the capability to delay mapped SysEx buffers by the amount specified in the SysEx window.
- MIDI-OX would sometimes crash when timing clock was streaming in during driver initialization. This has been repaired.
- Repaired a problem where MIDI-OX would incorrectly map a 'pull from data 2' item when NRPNs were being mapped.
- Data entry values were being filtered when a pass-through map was in effect. They will now be passed along unhampered.

SYSEX BUFFER NOTES

The entire multimedia system under Win9x is still 16 bit. This is why there is a 16 bit DLL to handle the low level conversation with the MIDI driver. (Win NT works in a similar way, but the DLL is 32 bit.) The low level buffers are allocated and maintained by this 16 bit DLL. They are set up in a circular arrangement, meaning that as they are filled by the MIDI driver on the 16 bit side, they are emptied by the application on the 32 bit side, and returned to the MIDI driver to be filled again. The default is for 16 buffers that are 256 bytes in size.

Each open input device (port) and each open output receives a full complement of buffers. Buffers must be locked and fixed in low DOS memory for the 16 bit drivers, as they are accessed at interrupt time. Because of this, if you have *very many* input and output devices that you wish to keep open, you probably will want to reduce the number of buffers handed to each port to an absolute minimum. If low memory runs out, you may not be able to launch any more programs unless you reboot. This will be true no matter how much RAM you have installed in your machine.

INSTALLATION NOTES

W*e recommend that you de-install any version of MIDI-OX earlier than 6.0 before* installing this one, if

you are going to use the same directory. To de-install MIDI-OX press the Windows **Start** menu button, **choose Settings > Control Panel | Add/Remove Programs**. Choose MIDI-OX and press **Add/Remove.** You can also use the Windows Start menu**: Programs > MIDI-OX > unInstall MIDI-OX.** After MIDI-OX has been removed you can proceed with normal installation by launching MIDIOXSE.EXE.

MIDI-OX is distributed in a self-extracting archive that launches a normal Windows installation. Extensive help for the application is available in the MIDIOX.HLP file installed with and accessed from MIDI-OX (also MIDIOX.chm if you have HTML help installed). If you require more information or have other questions you may contact the authors. We also welcome any bug reports, and wish-list items. Bear in mind that we have somewhat limited resources for support of freeware products and free consulting though. Although we remain pretty busy, we might be available for *paid* consulting work:

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MIDI YOKE Driver Installation

Re-installation

If you are re-installing MIDI Yoke, you need to first de-install and remove the existing driver via the Multimedia applet, Devices tab (Under Windows ME, the Multimedia applet is named "Sounds and Multimedia"): Select MIDI Yoke 1, and press **[Remove]**. After you have removed MIDI Yoke, you need to reboot the system – if you don't the existing driver will still be in memory and won't let you increase your ports. After reboot, follow the installation directions, and then reboot again.

Installation

The easiest way to install MIDI Yoke is from the MIDIOX.HLP help wizard: launch MIDI-OX and choose **Help | MIDI Yoke Install**. To manually install the MIDIYOKE driver use the Windows 95 (Win98,Win Me) Control Panel. In Win 95/98, Choose **Add New Hardware** -- do *not* search for hardware. Choose 'Sound Video and Game Controllers' and press 'Have Disk...' Browse to the directory where you've unzipped MIDIYOKE.DRV -- OEMSETUP.INF should be displayed as the file name. Choose OK, and another OK, and **MIDI Yoke Junction Driver** is displayed as the device -- again OK. Choose Finish -- the MIDIYOKE configuration box should now be displayed. You can choose the number of ports you want to be available – up to 16. Press OK, and restart the machine to load the driver. Other **OS** instructions are similar, for specific instructions, see **MIDIYOKE.RTF**.

WARNING: There is a bug in Windows 95 that limits the total number of MIDI Ports to roughly 11. This total includes each MIDI Yoke port plus any other ports presented by other drivers, so set the number of MIDI Yoke ports such that the total number of MIDI ports is less than 11. If you exceed this amount it may prevent the driver from loading at boot-up time. [This has been fixed for **Windows 98**].

LICENSE AGREEMENT

MIDI-OX may be used freely by individuals for non-commercial purposes. All other users need to obtain a commercial license to use the product. A commercial license covers companies using MIDI-OX to

develop software products, QA departments using MIDI-OX to test other products, and professional musicians and engineers using MIDI-OX to help configure their systems: If you are using MIDI-OX in a professional capacity you need to obtain a license.

VENDOR INFORMATION

MIDI-OX may not be re-distributed by anyone without obtaining written permission from the authors. There are no exceptions. Since MIDI-OX is freeware, our only means of compensation will come from commercial distribution of it.

Change History

Version 6.2.0
- We extended the 255 character limit for SysEx items in a map: each can now be a maximum of 1022 bytes.
- Added simple substitution for SysEx map items: you can substitute in channel, data1 and data2 values from the MIDI message that triggered the SysEx item. See the Help file for details.
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- Data entry values were being filtered when a pass-through map was in effect. They will now be passed along unhampered.

Version 6.1.4
- This release greatly increases the number of MIDI device drivers supported. Until now MIDI-OX could only handle 24 input and 24 output devices at once. This number has been increased to 63 input and 63 output devices. In addition MIDI Yoke will now present up to 16 distinct application ports. Each MIDI Yoke port can be opened by up to 4 applications on each end (input and output).

Version 6.1.3
- This is solely a maintenance release. Attempts have been made to better deal with hot-swapping of USB devices. In general, we have found that Windows 98/ME handling of USB MIDI devices works OK as long as the devices are switched on at boot time and left attached while the system is running. When MIDI USB devices are removed while the system is running, the driver is also removed from memory (even if it is open and being used by a program!). Remaining drivers may be renumbered on the fly, when MIDI USB devices are removed or added to the system, and this can cause all sorts of problems with existing software. Having said that, we now make an attempt to clean up, close and reopen drivers when device changes are detected.

Version 6.1.2
- A File Association dialog has been added. Associations can be made with Maps and SysEx files. Associations can be added and removed. In addition an option is provided to associate MIDI files with MIDI Bar.

- MIDI-OX Command line options have been enhanced: you can now specify Map and SysEx files onm the command line, as well as profiles.
- MIDI-OX now supports drag and drop of Map files, SysEx files, and Profiles.
- MidiBar has been enhanced to (optionally) limit the applet to a single instance. If it is set to single instance and an associated MIDI file is launched, it is loaded into the running instance.
- A scripting bug was fixed: you can now reattach an instance after detaching it.

Version 6.1

- A MIDI Sync feature has been added. You can now use MIDI-OX as a MIDI Sync master controller. It can also synchronize clock start with MTC. See the help files for details.
- Mapping has been enhanced. You can now trigger SysEx data events when specified MIDI messages are received. In addition you can receive, map and transmit NRPN events. See the help files for details.
- Many small items were repaired or tweaked…

Maintenance Version 6.0.5

- Fixed a bug regarding multiple mapping items. The system had been limited to 64 active mappings – it has been increased to 256, by default. A setting has been added to MOXLIB.INI to further control this behavior. In the [Options] section create a setting named MapItems. Example: **Mapitems=384** ; Creates room for up to 384 mapping items.
- The display in the Mapping dialog has been improved: A bitmap is now used to display the All condition (asterisk). This fixes problems with non-U.S. versions of Windows.
- A feature has been added for selection and copying of text in the Monitor views to the Windows clipboard. To mark text, right-click in the monitor and choose **Mark for Clipboard**, or double-click, or ctrl-click in a monitor window. Drag a rectangle over the text to select. Next, right-click and choose, **Copy to Clipboard**, or press **Enter**. Then paste the text into any application.
- Two additional commands have been added: **Select Window** – selects all the text cuurrently displayed in a monitor. **Copy All** -- will copy the entire contents of the monitor to the clipboard. This includes displayed and non-displayed messages.
- Added a secondary method for deleting port objects. Items in the Port Mapping view (**Options | MIDI Devices...**), now support a context menu with a **Delete <item>**.

Maintenance Version 6.0.4

- Fixed a bug regarding extremely dense SysEx messages.

Maintenance Version 6.0.3

- Enhanced the mapping feature: you can now duplicate an input event to allow multiple message mapping. You can use this feature to create a NRPN value from a single MIDI controller or chords from a single input MIDI note, among other things.
- Keyboard accelerator support has been added to MidiBar. See the help file for more details.

Maintenance Version 6.0.2

- Fixed a nasty bug associated with selection and use of the MIDI Mapper.

- Added command line processing for MidiBar – it can now accept a filename on the command line. You can setup custom shortcuts to play specific MIDI files or associate all MIDI files with MidiBar in the Windows Explorer Shell.
- Fixed a Y2K problem with date display in the MIDI log.
- Changed the way dynamic menus are created for Banks and Patches in the Instrument Panel. This should fix a problem when running at very high screen resolutions.
- Added a raw MIDI messages display mode for the logfile. People have asked for a way to display Raw MIDI messages and cut and paste messages from the Monitor. This may be slightly less direct than that, but it works, and gives you a permanent record.

Maintenance Version 6.0.1

- Added some new (optional) controllers to the MIDI Status Window.
- Several fixes for the Instrument Panel for Bank Select methods other than *Normal*

New Features for Version 6

This is a list of features added after version 5

- Customizable Port Names have been added wherever MIDI Ports are displayed.
- HTML Help is now supplied (and used if you have HTML Help installed)
- Support for WSH (Windows Script Host -- see MOXScript.rtf for details).
- SysEx input event sinks and polling methods have been added to the scripting interface.
- Instrument Panel supporting Cakewalk™ Instrument Definition files.
- Enhanced Port Status – It now shows activity for each channel plus real-time and Sysx.
- Multiple Output ports and enhanced MIDI Devices dialog.
- MIDI Port Status view -- It shows activity for each channel plus real-time and Sysx
- The MIDI Status window has been enhanced. Several new controllers have been added. You can configure which columns are shown: **Options | Configure Status...** Scroll bars have been added to the Window.
- You can now display SysEx data in the Monitor Windows. You can enable and disable this feature in the filter dialog.
- MIDI-OX will now store up to 16 unique instance profiles in the registry.
- MIDI-OX supports saving and loading of user profiles: **File | Save Profile...** and **File | Load Profile...** A user profile can be specified on the MIDI-OX command line. Example:
  ```
  midiox mprof.ini
  ```
- The Monitor Window now displays known Controller types by name.
- The Monitor Window will now show GM patch names, or the currently defined instrument from the Instrument Panel. This can be turned off if desired **(Options | General…).**
- An MCI MIDI File player **(MIDIBar)** has been added to the Actions menu. This is a separate applet that can be run outside of MIDI-OX or it can send it's output to MIDI-OX if you use a routing driver such as MIDI Yoke.
- A capability of sending MIDI using running status has been added. This is useful mostly to test the behavior of MIDI drivers: it is still up to the driver whether to send the data to the hardware using running status, but output drivers are supposed to be capable of handling running status.
- A Running status info command has been added: **View | Running Status…** It displays whether running status output has been enabled, and the current status it has calculated, regardless.
- Updated versions of **MIDI Yoke** for Windows 95/98/NT. These now handle running status correctly as well as a few other bug fixes. To update your MIDI Yoke drivers, un-install the old ones and reboot. Then install the new ones and reboot.

- GM, GS, and XG Reset commands have been added to the action menu and the Taskbar context menu.
- The ability to create and run IBM Object REXX programs on MIDI data from within MIDI-OX. If you have the IBM Windows 95/NT version of Object REXX installed, a new menu option is available: **Actions | Run REXX...** See the **MIDI REXX.rtf** file for more details, as well as the help file. Several example REXX scripts are installed with the program.
- SysEx data handling has been improved considerably and made much more robust. The SysEx view will now display F7 bytes in a separate color.
- New background wall paper and a way to turn it off: **Options | Colors... Remove background bitmap.**
- The main executable has been renamed from MIDIOX32.EXE to MIDIOX.EXE. In addition several data subdirectories are now created by the installer. For this reason, we recommend that you de-install any older MIDI-OX installations before installing this one.
- Known MIDI controller messages are now named in the Monitor window.
- An updated version of the Windows 95 MIDI Yoke driver has also been included.
- A mapping feature has been added to allow swapping and extending of MIDI data bytes.
- The Map list box dialog is now color-coded.
- MIDI-OX places itself on the Cakewalk Tools menu.
- Bank select capabilities have been added to the control panel. It can send Normal (LSB, MSB), LSB only or MSB only messages and patch changes. In addition, a Bank select column has been added to the Status window.
- The Log File dialog has been enhanced..
- The monitor now displays key names for polyphonic aftertouch.
- The Control Panel has a new Patch Panel.
- Several SysEx view bugs have been repaired.
- A SMPTE/MTC Send and Receive view has been added. You can use MIDI-OX as a master MTC device.
- A raw MIDI scratchpad has been added to the SysEx View.
- MIDI-OX now offers an option to minimize to the taskbar. When it is running in this configuration, the taskbar icon is animated when MIDI data is received.
- MIDI-OX now saves and restores the windows layout for each instance.
- Sysx Buffers have been separated into Input and Output buffers: you can specify size and number for each.
- Number of user profiles can grow as the number of instances increases (8 Maximum).
- Beta drivers for MIDI Yoke NT have been supplied. See the MIDIYoke.RTF and/or help file for more information.
- MIDI-OX now works under Windows NT 4.0. It should work with NT 3.5 as well, but has not been tested with it.
- Arpeggiated chords are available when using the computer 'piano' keyboard.
- MIDI-OX now displays the current mapping state on the status bar.

DISCLAIMER

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