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MIDIBars - January 1, 1994
Version 1.13 - May 12, 1994

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MIDIBars Introduction

MIDIBars is a MIDI control program designed to provide the user with 16 faders, 16 buttons, and a keyboard.

THIS PROGRAM IS SHAREWARE.

The 16 faders can function as MIDI controls for a variety of MIDI functions which require incremental control (i.e. Program Change or Volume).

The 16 buttons can function as MIDI controls for a variety of MIDI functions which require ON/OFF control (i.e. Sustain).

The keyboard provides a simple MIDI keyboard for testing the effect of the faders and buttons.

The current version of MIDIBars provides a number of configurations. More configurations are planned for future versions of MIDIBars, as well as custom Synthesizer Programming Modules.

Synthesizer Programming Modules for MIDIBars are custom configurations which will allow real-time programming of specific synthesizers under MIDI control. By purchasing the modules for your particular synthesizers, you will be able to edit various patch parameters in REAL TIME (i.e. during a live performance). Since the edits are via MIDI, you should also be able to capture them with your sequencer. **ONLY REGISTERED MIDIBars USERS WILL BE ABLE TO PURCHASE THESE MODULES.**

Shareware

MIDIBars is a SHAREWARE program produced by Richard S. Huntrods

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THIS PROGRAM IS NOT FREE!!!

The concept of shareware is to allow the user to try the software before committing to the purchase. If you use this program and intend to continue using it (even on a VERY casual basis), you should REGISTER the software with the author.

The registration fee for MIDIBars is \$25.00 US, payable by personal cheque made out to Richard S. Huntrods

If you register, you will receive the next update of the software free, as well as any bug fixes.. Future updates MAY have a nominal cost associated with their release. You will also be eligible to purchase planned Synthesizer Programming Modules for MIDIBars.

Synthesizer Programming Modules for MIDIBars are custom configurations which will allow real-time programming of specific synthesizers under MIDI control. By purchasing the modules for your particular synthesizers, you will be able to edit various patch parameters in REAL TIME (i.e. during a live performance). Since the edits are via MIDI, you should also be able to capture them with your sequencer. ONLY REGISTERED MIDIBars USERS WILL BE ABLE TO PURCHASE THESE MODULES.

Synthesizer Programming Modules will become available for particular synthesizers in the coming months on a demand basis. The first modules planned are for the Proteus 1, Proteus 2, and Oberheim Matrix 6R and 1000.

Registration

To register MIDIBars, send a personal cheque or money order for \$25.00 US made out to:

Richard S. Huntrods

and send it along with your name, address and phone number to:

Richard S. Huntrods
c/o Richard Huntrods Systems Consulting
95 Templegreen Drive N.E.
Calgary, Alberta, Canada
T1Y 4Z1

Upon receipt and processing of your registration, you will receive a MIDIBars registration number by return mail.

Registered users are eligible for the following:

- they will receive the next version of MIDIBars free.
- they will receive all bug fixes for the current version of MIDIBars free.
- they will be able to purchase future versions of MIDIBars for a nominal fee.
- they will be able to purchase Synthesizer Programming Modules for MIDIBars.
- they will be able to request specific Synthesizer Programming Modules.

Richard S. Huntrods

Richard S. Huntrods is the genius behind MIDIBars.

He lives in Calgary, Alberta, Canada with his wife, two teenage children, and two Siamese cats. In spite of this he still has time to run the company Richard Huntrods Systems Consulting.

Richard has accounts on both Genie and Compuserve, and may also be reached by snail mail (see the registration screen). Richard's Compuserve address is 70400, 2434. His Genie mail address is R.HUNTRODS.

Mr. Huntrods has a B.Sc (1980). and an M.Eng (1986), both in Chemical Engineering, from the University of Calgary. He is also a registered Professional Engineer in the province of Alberta, Canada.

A Resume and single page Skill Sheet is available upon request.

Main Menu

The MIDIBars Main Menu is consists of the following items:

<u>Exit</u>	allows you to leave MIDIBars.
<u>Device</u>	allows you to select your MIDI device.
<u>Channel</u>	allows you to select a given MIDI channel (for single channel configurations).
<u>Octave</u>	allows you to transpose the keyboard range
<u>Config</u>	allows you to select different fader and button configurations.
<u>Help</u>	allow you to view this file, or the ABOUT MIDIBars dialog box.

The rest of the MIDIBars program screen is described in the section titled Main Screen

Exit

This menu item allows you to leave MIDIBars. A dialog box pops up to confirm your desire to leave the program. If you answer "YES", the program is terminated. If you answer "NO", you are placed back in MIDIBars.

To exit MIDIBars, click on the Exit menu item or press "ALT-X" on your computer keyboard.

You can also leave MIDIBars by double clicking on the "CLOSE BOX" (top left corner of the MIDIBars window, or single clicking on this same box and selecting "CLOSE" from the menu. As with the EXIT menu item, a dialog box will pop up to confirm your desire to leave MIDIBars.

Device

The device menu allows you to select the MIDI device you want to use with MIDIBars.

When MIDIBars starts, NO DEVICE is selected. Until you select a device from this menu, no MIDI events will be processed and sent. Also, a popup dialog box will inform you that you have not yet selected a MIDI device.

To select or change a MIDI device, click on the Device menu item or press "ALT-D" on your computer keyboard. A drop-down menu appears showing the list of available MIDI devices. A check mark shows the current MIDI device. Click on one of the MIDI devices to select it.

The list of available MIDI devices is determined by MIDIBars at program start-up. MIDIBars polls the system to determine which devices are available. This list of devices is then used to create the list of devices.

If you have a MIDI device, but it does not show up in the MIDIBars device menu, check your Windows device configuration in the Control Panel - Devices program. MIDIBars relies entirely on the Windows Multimedia extensions for its information. If you have not configured your MIDI device to respond properly in Windows, MIDIBars will not be able to find it.

Channel

The channel menu item allows you to change the MIDI channel you are using in one of two ways.

If you are using a single channel MIDIBars configuration, this menu is used to set the channel for the all items on the screen (faders, buttons, and keyboard).

If you are using one of the configurations for 16 channels, then this menu will ONLY allow you to set the channel for the keyboard.

Either way, the keyboard is always assigned to the MIDI channel selected from the Channel menu.

To change the MIDI channel, select the Channel item from the main menu by clicking on it or by pressing "ALT-C" on the computer keyboard. A drop-down menu showing all 16 MIDI channels appears. A check mark shows which MIDI channel is the current MIDI channel. Click on a MIDI channel to select it.

When you change the MIDI channel, MIDIBars sends the current position of ALL faders and buttons to the new channel.

Octave

The octave menu item allows you to change the range of notes played by the keyboard. The standard keyboard starts one octave below middle C. By selecting "Transpose up one octave" or "Transpose down one octave" from the OCTAVE menu, you can change the BASE OCTAVE of the keyboard (and consequently the keyboard's range).

To transpose the MIDI keyboard on the MIDIBars screen, click on the Octave menu item or press "ALT-O" on your computer keyboard. A drop-down menu appears showing the list of available transposition choices. A check mark shows the current transposition. Click on one of choices to select it.

When you transpose the on-screen keyboard, the location of Middle "C" changes. A capital "C" on the keyboard indicates the position of middle "C" on the keyboard. No capital "C" indicates you have transposed beyond the range of the keyboard to play a middle "C" note.

If you transpose the keyboard too far (below MIDI note 00 or above MIDI note 127), you will receive a warning POPUP message, and the keyboard range will remain at the last highest (or lowest) transposition.

To set the keyboard range to the default value, choose "Initial keyboard octave settings" from the Octave menu.

The keyboard transposition is unaffected by the [ResetAll](#) button.

Config

The Config menu allows you to alter the MIDI controllers assigned to each fader and button. A number of configurations are available to the user.

To change the on-screen configuration of MIDIBars, click on the Config menu item or press "ALT-N" on your computer keyboard. A drop-down menu appears showing the list of available MIDIBars configurations. A check mark shows the current configuration. Click on one of the configurations to select it.

The current version of MIDIBars provides the following configuration "setups":

- 16 Program change faders and 16 Sustain buttons, each assigned to one of the 16 standard MIDI channels.
(PGCH)
- 16 Volume faders and 16 Sustain buttons, each assigned to one of the 16 standard MIDI channels.
(VOLUME)
- 16 faders grouped two per MIDI channel. One fader controls Program Change, the other controls Volume for a single channel. This setup provides faders and buttons for standard MIDI channels 01 to 08
(PGVL1)
- 16 faders grouped two per MIDI channel. One fader controls Program Change, the other controls Volume for a single channel. This setup provides faders and buttons for standard MIDI channels 09 to 16
(PGVL2)
- 16 faders and 16 buttons all assigned to a single MIDI channel. A variety of standard MIDI functions are provided for the various faders and buttons.
(ALL1)
- 16 faders and 16 buttons all assigned to a single MIDI channel. A variety of standard MIDI functions are provided (most different from ALL1) for the various faders and buttons.
(ALL2)
- 16 faders and 16 buttons all assigned according to a user specified CONFIG FILE (**option not yet available**). A variety of standard MIDI functions are may be assigned for the various faders and buttons.
(USER)

All settings associated with a particular MIDI channel are when you change configurations. This allows you to use any configuration with any channel, and move freely about configurations

and channels without having to re-enter your settings.

To reset all settings for all channels (in all configurations), click on the [ResetAll](#) button.

Help

The Help menu allows you to view this help file, or to view the "ABOUT" dialog box for MIDIBars.

To access MIDIBars help or the about box, click on the Help menu item or press "ALT-H" on your computer keyboard. A drop-down menu appears showing the two help choices. Click on "Help" to activate this help document, or click on "About" to bring up the MIDIBars About dialog box..

Main Screen

The MIDIBars main screen is the location of the faders, buttons and keyboard.

By using the mouse to click the buttons or move the faders, MIDI messages can be sent to the currently selected MIDI device on the currently selected MIDI channel. The assignment of the faders and buttons is determined by the configuration chosen from the config menu.

Faders

Faders are used to transmit variable MIDI data to the selected MIDI device. Faders send MIDI values from 0 to 127. Each fader is assigned a MIDI channel. In MIDIBars, there are two basic fader channel configurations: all faders assigned to one channel, or faders assigned to MIDI channels individually or in groups.

A fader will always display its assigned MIDI channel number just above the fader. This area also displays the type of MIDI fader (SEE BELOW)

Faders may be moved by clicking the mouse on the fader "THUMB" and dragging it to a new position. Faders may also be moved by clicking the mouse on either the upper or lower arrow (above and below the fader) to change the fader value by one unit. Finally, clicking the mouse between the fader "THUMB" and one of the end arrows will move the fader by 16 units in the direction of the arrow.

MIDIBars indicates the type of MIDI information controlled by the fader using a four letter code above the fader (just above the channel number). Current MIDIBars fader configurations are as follows (see the note below for an explanation of the "*" and "***"):

1. 16 faders of one type, each fader assigned to one channel (PGCH or VOLU). The faders have one of the following assignments:

PgCh	program change or patch change.
Vol*	volume (controller 7)

2. 8 fader pairs (16 faders total), grouped two faders per channel (PGVL1 and PGVL2). The fader pairs are assigned to the following MIDI controllers:

PgCh	program change or patch change.
Vol*	volume (controller 7)

3. 16 faders assigned to one MIDI channel (ALL1). The faders are assigned to the following MIDI controllers:

PgCh	program change or patch change
Vol*	volume (controller 7)
Brth	breath control
Foot	foot controller
PTim	portamento time
Dmsb	Data MSB (most significant bit)
Expr*	expression
Gen1	general controller 1
Gen2	general controller 2
Gen3	general controller 3
Gen4	general controller 4

Efft	effect
Trem	tremolo
Chrs	chorus
Dtun	detune
Phsr	phaser

4. 16 faders assigned to one MIDI channel (ALL2). The faders are assigned to the following MIDI controllers:

PgCh	program change or patch change.
Vol*	volume (controller 7)
PBnd**	pitch bend
Pan**	pan
Cprs	channel pressure (aftertouch)

NOTES: Except for faders marked with "*" or "**", the fader is set to 0 on initialization or Reset. Faders marked with "*" have an initial value and position of 127, while faders marked with "**" have an initial value and position of 64.

Buttons

Buttons are used to transmit on/off MIDI data to the selected MIDI device. Buttons send MIDI values of either 0 or 127. Each button is assigned a MIDI channel. In MIDIBars, there are two basic button channel configurations: each buttons assigned to a single channel, all set to transmit the same MIDI controller on the specified channel, or buttons assigned to various MIDI controllers for a single MIDI channel.

A button will display its assigned MIDI channel number as part of its name, if it is configured as one button per channel (i.e. St01 for sustain, channel 1 in the PGCH configuration). If, on the other hand, the button is part of a configuration where everything is assigned to one channel (i.e. ALL1 or ALL2), then a four character name is used, with no channel number.

Buttons are selected and de-selected by clicking on them with the mouse. A selected button is displayed as a box with an "X" in it, and sends the MIDI value 127. An empty box represents an un-selected button, and sends the MIDI value 0. Buttons only send their MIDI data when selected or de-selected, or when the ResetAll button is pressed.

MIDIBars indicates the type of MIDI information sent by the button using a two or four letter code beside the button check box. Current MIDIBars button and fader configurations are as follows:

1. 16 faders of one type, with 16 buttons assigned one per MIDI channel (PGCH or VOLU). The buttons have the following assignment:

Upper and Lower banks:

St01-St16	sustain for channel 01 through channel 16.
-----------	--

2. 8 fader pairs and eight buttons for eight channels (PGVL1 and PGVL2). The buttons pairs are assigned to the following MIDI controllers:

Upper bank:

St01-St08	sustain for channel 01 through 08 on the upper bank. OR
St09-St16	sustain for channel 09 through 16 on the upper bank.

Lower bank:

Undf	lower bank of buttons undefined.
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3. 16 faders and various buttons assigned to one MIDI channel (ALL1). The buttons are assigned to the following MIDI controllers:

Upper bank:

Locl	local mode on
Omni	omni mode on (mono off)
Mono	mono mode on (omni off)
Undf	button undefined

Sust	sustain
Port	portamento
Sost	sostenuto

Lower bank:

Undf	lower bank undefined
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4. 16 faders and various buttons assigned to one MIDI channel (ALL2). The buttons are assigned exactly the same as for configuration 3, above (ALL1).

ResetAll

This button will reset EVERYTHING (all faders, buttons, notes, etc.) for all channels in all configurations. To use, click on the ResetAll button.

ResetAll will set all faders to initial values and positions (0 for everything except Volume and Expression, which are set to 127, and Pitch Bend and Pan, which are set to 64). It will un-check all buttons (0 value), and reset the keyboard by sending the MIDI All Notes Off command on all 16 standard MIDI channels.

A reset will NOT change the current Octave setting of the keyboard.

AllNtOff

This button will send the MIDI All Notes Off message on all channels in all configurations. To use, click on the AllNtOff button.

Keyboard

The keyboard displayed below the [Buttons](#) is a full function three octave MIDI keyboard. As currently configured, it will transmit a MIDI note on when the key is clicked and MIDI note off when the key is clicked again.

The text inside the key changes from the note name (for white keys) or blank (for black keys) to an exclamation mark "!" when the key is in the "note on" state, and back to the original state (note symbol or blank) when the key is in the "note off" state.

Middle "C" is designated on the keyboard by a capital letter "C", while all other note names are lower case.

The keyboard can be transposed up and down by octaves using the main menu [Octave](#) selection.

Although both key velocity and release velocity are sent with the key press or release, the current version of MIDIBars fixes both these values at 127.

It is also possible to transmit middle "C" at any time by pressing the RIGHT mouse button when the cursor is located on the MIDIBars screen outside any button, fader, or keyboard note. In this case, middle "C" note on is sent when the RIGHT mouse button is pressed, and note off is sent when the RIGHT mouse button is released. As with the keyboard, velocities are fixed at 127.

