SONUUS®

i2M musicport
Desktop Editor Software Manual

Version 1.3.1

Introduction

The **sonuus i2M musicport** is a very fast, low-latency, monophonic MIDI converter for use with all musical instruments. It also features a high-impedance USB audio interface so you can directly connect your musical instrument to your computer with ease.

The MIDI converter architecture is very flexible and powerful. To enable you to make full use of this, we have provided a Desktop Editor Software application that runs on both Microsoft Windows and Apple OSX. You can run this beside your other audio applications to give you quick and simple access to any configuration parameters you want to adjust on the **i2M musicport**.

The basic operation of the **i2M musicport** is not described in this manual. Please refer to the Owner's Manual that came with your **i2M musicport** for instructions on the basic operation and features of this product.

This manual describes the features and options available within the MIDI converter and how to use the Desktop Editor Software to control these.

Application Overview

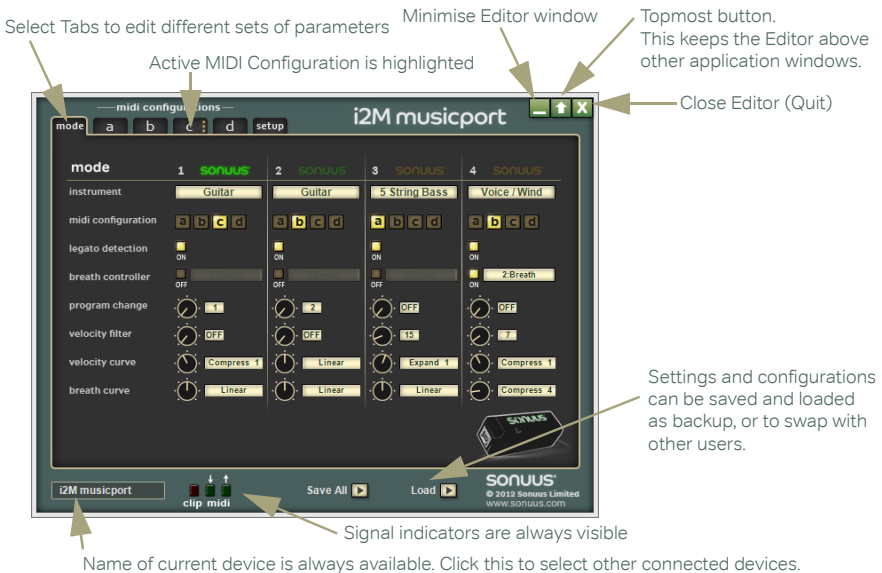When you run the Desktop Editor Software, you will see the window in Figure 1.

Figure 1: Overview of the **i2M musicport** Desktop Editor window.

The window has standard buttons similar to other applications to minimise the window, and to close the application. There is also a "topmost" button, which keeps the window floating above other applications even when the other application has focus. This feature

makes it easy to run the Desktop Editor Software alongside other applications, such as sequencers, so it appears much like any other "floating palette" of your main application.

There are several pages of information and parameters which you can configure. These are selected by clicking on the tabs at the top of the window.

Buttons and switches can be activated by left-clicking the mouse button while sliders and knobs can be adjusted by left-clicking and dragging the mouse while the button is pressed. Controls can also be adjusted by moving the mouse wheel when the mouse pointer is above the control.

Selecting which i2M musicport to configure

You can connect several **i2M musicport** devices to your computer at once, but the Desktop Editor Software can only configure one of these at a time. You can select which device is currently being edited by clicking on the device name box at the bottom-left of the application and choosing the required device from the menu.

So you can identify which device is which, you can give unique names to each of your devices: see "Device Name" on page 14.

Indicators

Next to the device name box are three indicators to show when the audio signal is clipping and when the **i2M musicport** is sending or receiving MIDI messages.

The **clip** indicator replicates the behaviour of the light on the **i2M musicport** and will illuminate when the input signal clips. This can be useful if you can't see the **i2M musicport**.

The MIDI indicators show when the **i2M musicport** is receiving, or sending MIDI messages. This can be used to verify MIDI routing to and from your software. Note that the receiving indicator only responds to MIDI that the **i2M musicport** is able to respond to, such as controller messages used for the hold and sustain controllers.

Loading and Saving

To allow you to easily backup your settings, or to transfer them to another device, all the settings of the **i2M musicport** can be saved to a file with an `"i2M_all"` file extension. This can be done my clicking the "Save All" button.

When a MIDI Configuration tab is active, this button changes to a "Save midi config" button which allows you save the currently selected MIDI Configuration to a file with the `"i2M_midi"` file extension.. This can be useful if you want to copy one configuration to another before editing it, or to let you exchange your favourite configurations with other users.

The "Load" button lets you load these files. To load a MIDI Configuration, simply select the MIDI Configuration tab into which you want to load the configuration file.

MIDI Architecture Overview

When you connect your musical instrument to the **i2M musicport**, before any MIDI messages are sent via USB-MIDI, the signal passes through several processing stages, shown in Figure 2. Understanding these stages and how they interact will allow you to get the most from your **i2M musicport**.
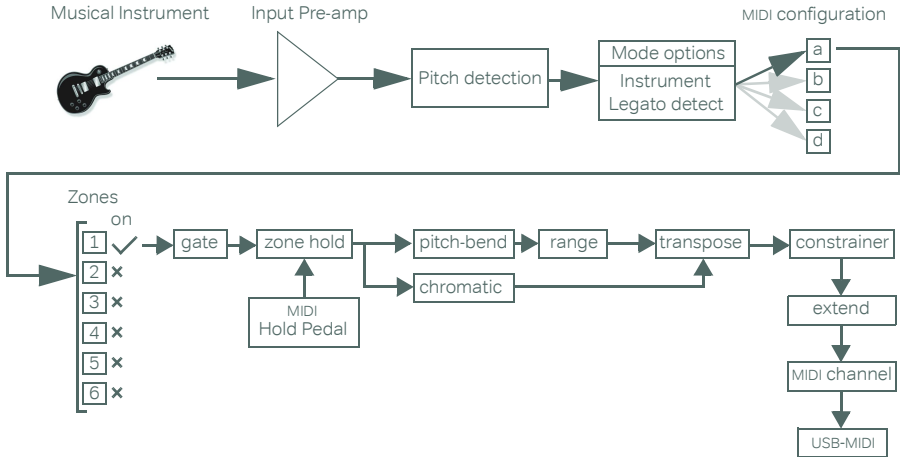

Figure 2: Overview of the **i2M musicport** MIDI architecture. This shows the signal flow from your musical instrument to your MIDI instrument.

To condition the analogue signal from your instrument without affecting its tone, a high-impedance input pre-amp is used. Its gain can be adjusted to accommodate signal levels from a wide variety of musical instruments.

After conditioning, the pitch and other relevant characteristics of the signal are determined. This forms the basis of what will be sent as MIDI messages. Exactly what MIDI messages are sent depends on how this pitch information is processed.

Operating Modes allow you to specify a group of options based on the characteristics of the musical instrument you are using and what MIDI instruments you are controlling. For example, an Operating Mode can be optimised for a particular musical instrument, such as guitar, bass guitar or voice.

Each Operating Mode allows a set of six MIDI zones (a MIDI configuration) to be assigned to it, allowing a wide range of creative possibilities to be explored. The system is flexible so that each Operating Mode can use a different MIDI configuration, or MIDI configurations can be shared with more than one Operating Mode, depending on your particular requirements.
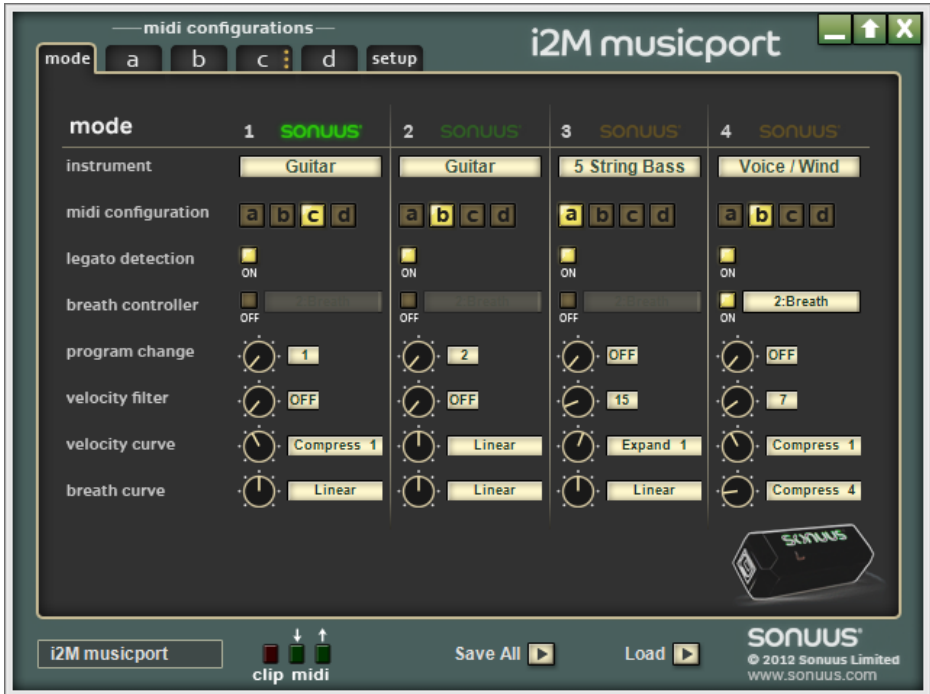
Operating Modes

Figure 3: The **mode** tab used to edit and select Operating Modes

The **i2M musicport** has four Operating Modes which affect how the MIDI conversion behaves. Audio input is not affected by these modes in any way, and is always active.

In general use, Operating Modes are selected by pressing the **mode** button on the **i2M musicport**. A short press will toggle the mode between modes 1 and 2, or between modes 3 and 4. A long press (2s) will toggle between modes 1 and 3, or between modes 2 and 4, as shown in Figure 4.

The currently active Operating Mode is shown on the **mode** tab of the **i2M musicport** desktop software. You can also change the Operating Mode by clicking the appropriate mode indicator (see Figure 3).

Operating Modes can be thought of as built-in presets, where you can configure four independent presets to use with different musical instruments or to control different MIDI instruments.

The default factory settings of the **i2M musicport** are such that for the green modes (Mode 1 and 2) are configured for Guitar, and the orange modes (Mode 3 and 4) are
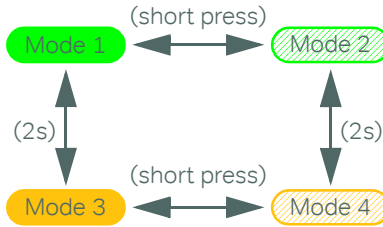
Figure 4: How to select Operating Modes when using the button on the **i2M musicport**.

configured for 5-string bass guitar, where flashing modes have chromatic mode enabled, and non-flashing modes transmit pitch-bend messages.

Instrument

The **instrument** option allows the **i2M musicport** to be optimised for the note range, or other characteristics, of a particular instrument. It is possible to configure each mode to work with different instruments to allow you, for example, to easily switch between guitar and bass guitar. Indeed, the default factory settings of the **i2M musicport** are set so that green modes are configured for the Guitar instrument setting and the orange modes are set for the 5-String Bass instrument setting.

The available instruments are shown in the table below.

Instrument	Note Range	Description
Guitar	E1–C7	General guitar (electric and acoustic). This works well with most instruments, including 4-string bass guitar, but is optimised for the note range of 6- and 7-string electric guitars.
4-String Bass	C#1–A6	Similar to "Guitar", but the note range is optimised for 4-string bass guitar.
5-String Bass	A0–F6	Optimised to detect the lowest bass notes of a 5-string bass guitar. If the lowest bass notes are not required, the "4-string bass guitar" is preferred because this can give faster note tracking.
Voice / Wind	E1–C7	Optimised for instruments that are naturally monophonic (*i.e.,* where there is no possibility of playing multiple notes simultaneously) such as the human voice and wind instruments.

MIDI Configuration

After the signal from your musical instrument has been analysed, it must be converted to MIDI messages so it can be sent to your computer. The **i2M musicport** has various features which can control exactly how this MIDI information is created. We call this group of settings a MIDI Configuration.

There are four MIDI Configurations labelled: **a**, **b**, **c**, **d**. Each Operating Mode can be set to use any of these MIDI Configurations.

The default factory settings of the **i2M musicport** (described above) are such that non-flashing modes are set to use MIDI Configuration **a** (pitch-bend mode) and flashing modes are set to use MIDI Configuration **b** (chromatic mode).

> Top Tip: When editing a MIDI Configuration, you usually want to hear the changes you make as you make them. The currently active MIDI Configuration is indicated by a hilight on the appropriate MIDI Configuration tab (see Figure 1). When you edit a MIDI Configuration, always check if the one you are editing is the active one, otherwise you may edit the wrong configuration and not hear any change to the MIDI output if that configuration is not currently active.

Legato Detection

When you transition between two notes and there is no obvious change in level, for example by hammer-ons, pull-offs, and slides, normally the new note will be detected as a pitch-bend from the first note (assuming the pitch-bend range allows this and chromatic mode is not active). This is often undesirable when you want the attack of the MIDI instrument to occur on each new note you play. When **legato detection** is enabled, these notes are detected and sent as new MIDI notes rather than pitch-bend messages.

Sometimes sending pitch-bend data is preferred, for example when using a guitar tremolo to "dive bomb". In this case, simply disable **legato detection**.

Breath Controller

The real-time loudness (envelope) of the your instrument can be monitored and MIDI breath controller messages generated from this. This is typically used for wind instruments where your "breath" is used to control aspects of the synthesized sound. However, it is also useful on other instruments where the signal level can be controlled — for example playing an electric guitar using an EBow.

> Top Tip: You can use breath controller messages to shape the sound of your soft synth where the loudness of the input signal can be used to control other apects of your sound, such as filter cut-off.

By default, the MIDI breath controller is used, but you can change this to any other MIDI controller. This is useful if your synth only responds to controllers other than the breath controller.

Program Change

It is often desirable to change modes (presets) without having to touch the **i2M musicport** or using the Desktop Editor Software, for example during a live performance when you want to change settings in different parts of a song.

To make this possible, modes can be selected using the MIDI program change message. By default, modes do not respond to these messages. To make a mode selectable via MIDI program change simply select a program number on the **program change** field. When the **i2M musicport** receives a corresponding program change message, the appropriate mode will be activated.

If you are using a sequencer, you can configure it to send the appropriate program change messages at the correct times so that mode-switching is fully automated. Alternatively, use a third-party MIDI foot controller which can be programmed to send MIDI program change messages and route these messages to the **i2M musicport**.

Velocity Filter

The **i2M musicport** is very responsive to how hard you play notes, so you can easily generate both loud and quiet MIDI notes. However, some musicians find it difficult to mute strings sufficiently to prevent unwanted quiet notes being played. These notes, when they are of very short duration, can sound like audio glitches.

To prevent this, you can enable the **velocity filter.** When set, only notes whose velocity is equal to or above the prescribed value will allowed.

> Top Tip: When using the **i2M musicport** to transcribe your music, it can be useful to set a reasonably large value for the **velocity filter**, then only notes that you play loudly and clearly will be converted to MIDI which can reduce the number of wrong notes that are transcribed.

Velocity Curve

The velocity of a MIDI note is used to indicate how hard that note was played. Correspondingly, notes with high velocity are usually played louder than notes of low velocity.

By default there is a linear relationship between how hard you play a note and the MIDI velocity used to describe this. Often, you want more control over how your playing is translated to sound on your MIDI instrument and this can be achieved by applying a **velocity curve** to transform the original MIDI velocity into a new MIDI velocity.

Figure 5 illustrates the velocity curves in the **i2M musicport** that can be selected. They vary from an extreme compressor-type behaviour (Compressor 6), to an extreme expander-like behaviour (Expander 6).
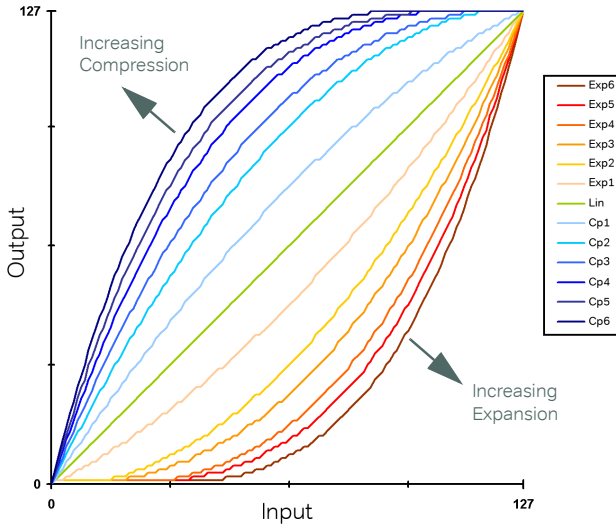

Figure 5: Curves used to adjust the MIDI response for velocity and breath controller.

Breath Curve

Similar to MIDI velocity, the real-time loudness of your instrument can be converted to MIDI control data. And for the same reasons given above for velocity, you may want to adjust how this control data is created from your playing. A **breath curve** can be selected, using the same curves described above for MIDI velocity.

MIDI Configuration (Zones)

The basic element in a MIDI configuration is a zone. For MIDI to be generated, at least one zone must be active. Six zones are provided to allow you to create elaborate sonic textures by layering different sounds from different MIDI instruments, or by creating harmonies on the same MIDI instrument.

Zone Enable (on/off)

Zones can be turned on and off independently. There is no restriction on which, nor how many, zones are enabled or disabled. Indeed you can have all zones disabled which can be a convenient way to allow a "no MIDI" Operating Mode to be selected.

Figure 6: MIDI Configuration / Zones. The currently active MIDI Configuration is highlighted so you know if the one you are editing is currently active or not

By default, only one zone is active to provide basic MIDI output functionality. Using additional zones can be a good way to control multiple MIDI instruments which require different settings.

Note Gate

The Note Gate acts as an input filter to block or allow notes from your instrument from being processed by the zone, and then sent as MIDI messages. This lets you be creative where, for example, you can have some zones that only respond to bass notes and others that only respond to treble notes. Each of these zones could be configured for different MIDI channels and then connected to different MIDI instruments. Then when you play your instrument, different MIDI instruments can be triggered when you play different notes.

By default, the Note Gate is configured to accept all notes (range = C_{-1}–G_9).

Hold Enable

As mentioned in "Setup—settings" on page 16, the Hold pedal control allows you to hold MIDI notes while you continue to play your instrument. To make this feature even more

useful, you can configure zones to respond, or to not respond, to the hold pedal. In this way, some zones will hold when you press the Hold pedal, and some zones will remain unaffected. This can be used, for example, to sustain synth-pad sounds while playing a lead synth on top of it.

If the "hold" option is on, the zone will respond to the Hold pedal. If it is off, the Hold pedal will not affect that zone.

Chromatic Mode

The **i2M musicport** accurately tracks the pitch of notes and outputs pitch-bend MIDI messages but sometimes it is preferable to send notes without pitch-bend information (*e.g.,* when playing piano sounds). This can be done by selecting the **chromatic** option. When this is selected, the **pitch bend** option will be disabled because these two options are mutually exclusive.

Chromatic mode essentially quantises notes to the nearest semitone. By enabling the **scale** option, notes can be further quantised to only those notes within a particular musical scale, so it becomes impossible to play out of key.

> Top Tip: When using the chromatic option, it is very important that your guitar is tuned accurately and has good intonation. Otherwise the MIDI notes produced may not match those you are fretting. Moreover, if you mix these chromatic notes with the original guitar sound, or with notes from other zones supporting pitch-bend, there can be dissonance which can sound unpleasant.

NOTE: When scales are used, the transpose option (see below) will not transpose the note by a fixed number of semitones, but will instead transpose by a fixed number of notes in the chosen scale.

In scale mode, when you play a note that isn't part of the selected scale, the nearest note within the scale will be played instead. By enabling **gap mode**, playing out-of-scale notes will result in no MIDI notes being sent.

> Top Tip: You can make practising musical scales simpler by using the **scale** option with **gap mode** enabled. It is then very easy to know when you play a note that's not in the scale because you won't hear anything from your synth — no MIDI is sent for out-of-scale notes.

Pitch-bend Mode

When **pitch bend** mode is activated, the pitch-bend range control becomes available. This lets you select the semitone range which corresponds to the maximum range of the MIDI pitch-bend controller. By default this is set to 2 semitones (which is the most common setting) but it can be adjusted from 1 to 36 semitones (36 semitones = 3 octaves).

NOTE: If different pitch-bend ranges are used on different zones, these zones should be configured to use different MIDI channels otherwise the pitch-bend will not (and cannot) be correct on all of these zones.

Pitch-bend information can also be sent on another MIDI controller in addition to normal pitch-bend MIDI messages. This allows you to setup more advanced modulation on your synth to control other sonic parameters when bending notes. To enable this, enable the **send ctrl** button. The MIDI controller used can be configured on the Setup page, see "Setup—settings" on page 16

Transpose

The transpose option (**trans**) lets you apply an offset to the note you played on your instrument before it is sent as MIDI. This has many uses. For example, you can set different transposes on multiple zones to produce chords by playing single notes on your instrument. Or, transpose a single zone so that it can harmonise with the original signal from your instrument. Alternatively, because tracking is always faster on higher notes, you can play the fastest parts on a higher register and transpose the MIDI notes to get the results you need. This is particularly effective when sequencing fast bass lines, for example.

NOTE: When scales are used (see above), notes will not be transposes by a fixed number of semitones, but will transposed by a fixed number of notes in the chosen scale. This makes it possible to play scale-based harmonies or chords based on the scale where each zone is configured to play a different note of the chord.

> Top Tip: Often when you use bass-synth patches, these patches are configured to play a note one octave below the MIDI note that triggered them. If you want the patch to play in the same octave as your bass guitar, set a Transpose of +12 to compensate for the synth.

Note Constrainer

The Note Constrainer allows MIDI notes to be limited to a particular note range, regardless of the note actually played on your instrument, and regardless of any transpose applied to that note (see above). This works by adjusting the octave of the note until it lies within the specified range.

Any note range can be specified, but ranges that cover 1 or 1½ octaves work particularly well.

When the **constrainer** is disabled, the specified note range will be retained so it is easy to experiment with toggling this feature on and off.

> Top Tip: Configure one zone with the Note Constrainer enabled with a note range of B0 to E2 and assign this to a bass MIDI instrument. When you play lead passages, you will get a convincing effect of a bass accompaniment. To further enhance this effect, put this zone into chromatic mode and add a ±4, 5 or 7 semitone transpose to it.

Note Extend

To mask gaps between notes when playing is not smooth (*e.g.,* if you are accentuating note gaps to avoid glitches) **note extend** can be used. When set, a note-off will be extended for the prescribed number of milliseconds, or until the next note-on is issued. In this way, very fluid melodies can be produced, even if you are playing in a staccato fashion.

If the next note is played while the old note is being sustained, the new note-on is issued before the old note-off is issued. This ensures that a receiving synth can smoothly transition between notes in "mono-legato" mode without retriggering the new note.

A value can be set from 0 ms (note extend disabled), to 996 ms. The value used must be a multiple of 4 ms, and will be rounded down to the nearest multiple of 4 ms if required.

> Top Tip: Different zones can have different **note extend** values to optimise the response for different synth patches, or to give more distinction between zones to enhance the ensemble effect when multiple zones are active simultaneously.

Sustain Enable

As mentioned in "Setup—settings" on page 16, the Sustain pedal control allows you to hold MIDI notes after you have stopped playing your instrument. To make this feature even more useful, you can configure zones to respond, or to not respond, to the sustain pedal. In this way, some zones will sustain when you press the Sustain pedal, and some zones will remain unaffected.

If the "SUS" option is on, the zone will respond to the Sustain pedal. If it is off, the Sustain pedal will not affect that zone.

MIDI Channel

The final option controls on which MIDI channel the MIDI messages should be sent. There are many uses for this.

If you set each active zone to transmit on the same MIDI channel but set different transpose values on each active zone, you can play chords and harmonies on your MIDI instrument. If your MIDI instrument has an arpeggiator you can enable this and get it to play patterns quickly and easily.

If you set each active zone to transmit on a different MIDI channel (this is the default setting), you can control several independent MIDI instruments, using different zone settings for each.

NOTE: If different pitch-bend ranges are used on different zones, these zones should be configured to use different MIDI channels otherwise the pitch-bend will not (and cannot) be correct on all of these zones.
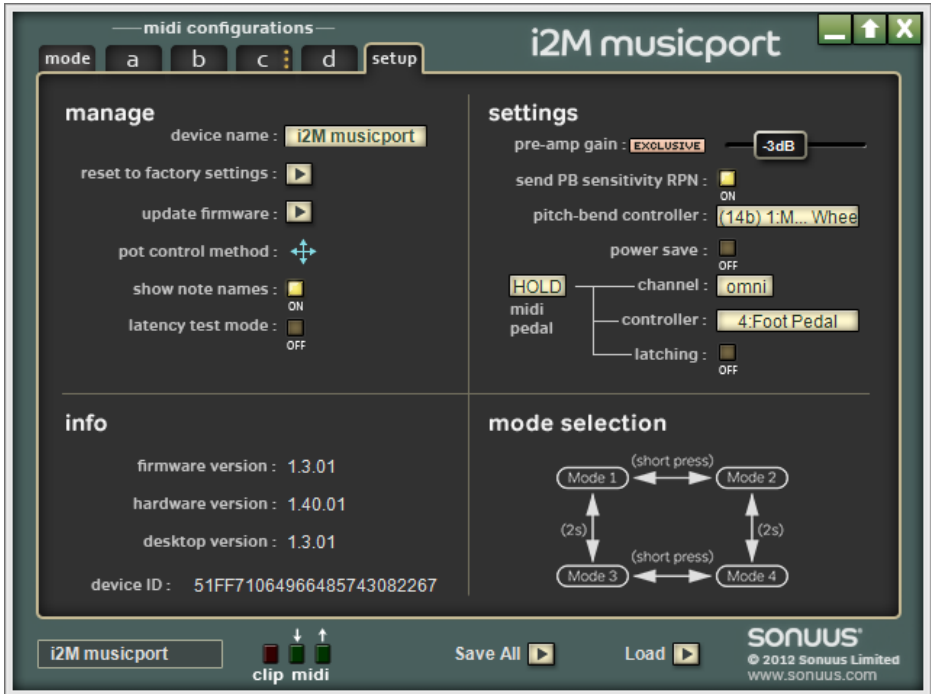
Setup—manage

Figure 7: The setup tab lets you change global settings, manage your device and gives information on the version of hardware and firmware in your **i2M musicport**.

The **setup** tab (shown in Figure 7) contains various global options and information about the currently connected **i2M musicport**. The options available in the **manage** section are described below.

Device Name

To allow you to personalise your **i2M musicport** and to make identification of it simpler, you can give it a Device Name. This can be useful when you have several **i2M musicport**'s connected to the same computer. The Device Name can be anything you choose provided it is 16 characters or less in size.

The Device Name is shown in the **manage** section of the **setup** tab . Clicking the name field will let you edit it.

Reset to Factory Settings

The **i2M musicport** has many settings which you can customise. However, you may want to restore these to the default factory settings. This can be done easily by selecting the **reset to factory settings** option.

NOTE: Once the default factory settings have been restored, you cannot recover any changes you have made. If you want to do this, make sure you have first saved your setup to an "i2M_all" file on your computer so this can be used to restore your settings again.

Update Firmware

The firmware (internal software) of the **i2M musicport** can be upgraded with new versions which fix problems or add new features. You can do this using the **sonuus** Firmware Loader application, and the **update firmware** option gives you an easy way to access this utility.

Simply select this option and choose the firmware update file that you have downloaded from the **sonuus** web site. The Firmware Loader will then launch automatically and perform the firmware upgrade. When complete, the Desktop Editor Software will reactivate and you can continue as before, with the new firmware running on your **i2M musicport**.

For more details on the upgrade process, there is a separate manual available for the Firmware Loader application.

Pot Control Method

This is an editor option (it is not stored on the device) which lets you set the method used for controlling pots (knobs) with the mouse. This can be rotary (where the pot position follows the position of the mouse) or x–y (where left-right movement gives fine position control, and up-down movement gives coarse position control). You can set this to the method you find most intuitive.

Show Note Names

Notes that are displayed can be shown in two ways: either as musical notes (*e.g.,* C2) or as MIDI note numbers (*e.g.,* 36). You can set this to the setting that is most useful to you.

Latency Test

When using the **i2M musicport**, sometimes the latency of the MIDI conversion seems longer than expected. Usually, this is the result of additional latency added by your computer when it converts the MIDI data into a sound. To help you work out where this latency arises, a special **latency test** feature can be enabled. This disables the normal MIDI conversion of the **i2M musicport** and instead outputs a periodic MIDI note (middle C). At the exact instant this MIDI note is sent to the computer, the light on the **i2M musicport** is illuminated. You can then watch this visual guide and listen for the sound from your computer: they should both be perfectly in sync, with no noticeable delay. If this is not the case, the latency setup of your computer needs to be optimised to get the best results, and lowest latency, from the **i2M musicport**.

NOTE: In this mode, the light will flash alternately green and orange, unlike any other mode, so you can clearly recognise that this mode has been activated.

> Top Tip: To quickly leave latency test mode, for example if this was enabled by mistake and you need to stop the test notes that are produced in this mode, simply press the button on the **i2M musicport** and this will immediately return you to normal operation.

Setup—settings

There are some options which always apply, regardless of the currently selected Operating Mode. These global settings are located in the **settings** section of the **setup** tab, and are described below.

Pre-amp Gain (Volume)

The gain of the input pre-amp can be adjusted to optimise the **i2M musicport** for different signal levels. The gain can be adjusted from −12 dB to +15 dB in steps of 3 dB. Standard line-level (sometimes shown as −10 dBV) corresponds to 0 dB. There are two ways to adjust the gain.

The first way to adjust the gain is to use the **i2M musicport** Desktop Editor Software. This lets you adjust the gain quickly and also lets you see the correct gain level in dB, which can sometimes be useful to know. Using the Desktop Editor Software, simply click and drag the Preamp Gain slider to select your desired gain level.

The second way to adjust the gain is to use the volume control on your operating system to contol it. However, sometimes this can be awkward to find, or it may not correctly show the gain values (for example some operating systems will only show an adjustment range of 0–100).

Usually, when you adjust the pre-amp gain using the **i2M musicport** Desktop Editor Software, your operating system will detect this change and update it's volume control to match. Unfortunately, some operating systems don't support this feature. In these cases, when you adjust the pre-amp gain slider, everything works as expected until you disconnect and reconnect the **i2M musicport**. During reconnection, the operating system may reset the volume to its last known value (which now doesn't match what you selected!). To prevent this and ensure the pre-amp gain is controlled only by the Desktop Editor Software, you can enable the **exclusive** button. When this is enabled, the pre-amp gain can no longer be controlled using the operating system's volume control, and it will not be changed unexpectedly whenever you connect the **i2M musicport** to your computer.

Send Pitch-Bend Sensitivity RPN

Pitch-bend sensitivity is the setting on a MIDI instrument which controls the semitone range that can be spanned by the pitch-bend MIDI control. The **i2M musicport** allows the pitch-bend range to be set from 1 to 36 semitones. For your MIDI instrument to sound in

tune with the **i2M musicport**, it is essential that the pitch-bend sensitivity on the MIDI instrument matches the pitch-bend range set on the **i2M musicport**.

Although there is no standard value of pitch-bend sensitivity, the most common setting is 2 semitones, this means that pitch-bend messages can bend a note up or down by 2 semitones. This is also the default setting of the **i2M musicport**. However, it is often desirable to set a larger range such as 12 or 24 semitones (1 or 2 octaves, respectively), for example to allow long pitch changes when using a guitar tremolo, a theremin, or trombone.

To make setting pitch-bend sensitivity simpler, many MIDI instruments support the "Pitch-bend sensitivity RPN" message (RPN = Registered Parameter Number). By default, whenever the pitch-bend range of the **i2M musicport** changes, this RPN message will be sent on all active zones to allow the MIDI instrument to configure itself to match the current pitch-bend range setting.

If you prefer for this RPN message not to be sent, it can be disabled by turning off the **send PB sensitivity RPN** option.

> Top Tip: When you first connect a soft synth to the **i2M musicport** MIDI output, it may not be set to use the correct pitch-bend sensitivity. To send the RPN message to configure this, simply press the **mode** button briefly to change Operating Mode, then press it again to return to the original state. The act of changing Operating Mode will send the Pitch-Bend Sensitivity RPN message to the appropriate MIDI channels.

NOTE: Not all MIDI instruments respond to this RPN message, so you may still have to configure the pitch-bend sensitivity manually.

Pitch-Bend Controller

Pitch-bend is sent using the dedicated pitch-bend MIDI controller. However, it is possible to also send this on another MIDI controller so that pitch-bend can be used to control other parameters as well as, or instead of, pitch-bend. See "Pitch-bend Mode" on page 11.

pitch-bend controller lets you select which controller(s) will be used when a MIDI zone is configured to use this feature. The data can be sent as 14-bit (MSB and LSB, using two controllers) for maximum precision or as 7-bit (MSB only, using one controller).

Power Save

The **i2M musicport** has a glowing LED indicator on the front to show status. This doesn't consume much power (< 20 mA), but sometimes you may want to minimise power consumption, for example if you are using a small battery-powered computer. Alternatively, you may be working in a dark environment where the LED could be distracting.

Enabling the **power save** option will turn off the LED indicator. If any change of state needs to be shown, for example when changing mode or when the signal clips, the LED will illuminate briefly to show the new state.

MIDI Hold/Sustain Pedal

When using MIDI and audio together, it is often desirable to be able to hold a MIDI note while continuing to play your instrument normally. For example, you can trigger bass notes on your synthesizer then play over these with your normal instrument sound.

Like "hold", a "sustain" feature can also be desirable. The difference between hold and sustain is what happens when you play a new note. With hold, a new note will be ignored allowing the held note to continue. With sustain, a new note will turn off the previously sustained note and this new note will then sustain.

The **i2M musicport** enables this by allowing a MIDI controller to act as the hold control and another MIDI controller to act as the sustain control. The default settings allow MIDI controller 4 (foot controller) on any MIDI channel to be used as the hold control and MIDI controller 64 (sustain controller) on any MIDI channel to be used as the sustain control. However, this can be changed easily.

For the hold or sustain feature to work, a MIDI zone must be configured with hold or sustain enabled. See "MIDI Configuration (Zones)" on page 9.

HOLD/SUS lets you select which controller to view and configure.

channel lets you select on which MIDI channel the **i2M musicport** should look. A special "omni" setting allows it to work with the controller received on any MIDI channel.

controller lets you select the MIDI controller which should act as the Hold/Sustain pedal. For example, it may be easier to use different controllers in some applications.

latching lets you configure whether the Hold/Sustain pedal is latching or non-latching. When set to latching, pressing then releasing the pedal will toggle the hold/sustain state. This can be useful if you want Hold/Sustain active for a long time and you don't want to keep the pedal pressed. When set to non-latching, you must keep the pedal pressed to keep hold active. As soon as you release the pedal, hold/sustain will deactivate; *i.e.,* it works like a piano sustain pedal.

> Top Tip: If you unplug the jack lead from the **i2M musicport** it will turn off all currently playing notes and reset the Hold/Sustain pedal state to "not held/sustained". This can be useful if your hold or sustain pedal stops working for any reason.

Setup—info

The **info** section gives you various pieces of information about your **i2Mmusicport** and the Desktop Editor Software. This is read-only and cannot be edited.

Firmware version

This shows the version number of the currently installed firmware. This can be updated using the **sonuus** Firmware Loader application, using appropriate firmware updates available from the **sonuus** web site.

Hardware version

This shows which version of **i2Mmusicport** hardware you have.

Desktop version

This shows the version number of the Desktop Editor Software you are using.

Device ID

The Device ID is stored on the hardware of the **i2Mmusicport** and allows your computer to uniquely identify each device.

NOTE: This is not the same number as the product serial number printed on the serial number sticker on the back of your **i2Mmusicport**.

Setup—mode selection

This section of the **setup** tab shows a graphic reminder of how to change the Operating Mode when using the button on the **i2Mmusicport**.