

SONUUS®

G2M™ (Version 3) Universal MIDI Converter Owner's Manual

Congratulations on your purchase of the G2M™. Please take the time to read through this manual to ensure you get the best from your G2M™.

Introduction

What is the G2M™?

The G2M™ is a simple to use and highly effective MIDI converter. It's the fastest, most accurate, way to turn any musical instrument into a MIDI instrument.

Your new "Version 3" G2M™ features several enhancements compared to the previous versions, including support for bass-register instruments and the latest, state-of-the-art pitch-detection algorithms only available from **sonuus**.

Designed to give accurate triggering, with ultra-low latency, it is a true plug-and-play solution for converting monophonic audio into MIDI. It can be used to sequence bass lines and guitar solos, add an edge to your live performances and to open up many creative possibilities.

Connections

Instrument In

Connect your instrument lead to the **IN** jack socket using a standard 1/4" guitar/instrument lead.

MIDI Out

Connect your MIDI device (or computer, *etc.*) to the **MIDI OUT** socket using a

standard 5-pin MIDI lead. You can also power self-powered MIDI devices such as MIDI mergers and message filters.

MIDI In

You can send MIDI controller messages to the G2M™ using a special MIDI breakout cable (available from **sonuus**) which converts the **MIDI OUT** socket to both a **MIDI OUT** and a **MIDI IN** socket.

Instrument Thru

If you want to connect your instrument to another device, or to your amplifier, connect a lead to the **THRU** jack. The G2M™ has a high-impedance input and it will not affect the sound of your instrument while it is connected.

Power

9V DC

Your G2M™ can be conveniently powered by a 9V DC power supply. Its low current requirement (<30mA) means almost any standard 9V power supply can be used (2.1mm centre-pin, positive tip).

Battery (AA)

For true portability, the G2M™ can also be powered by a single AA battery (alkaline or rechargeable). Simply open the battery door and put in a battery observing the correct polarity. If you connect it the wrong way round it won't cause any damage, but the unit won't operate until the battery is inserted correctly.

Because of its low power consumption, the unit will run for many hours (typically for more than 20) on a single battery. When the battery is close to needing to be replaced, the **LOW BATTERY** LED will light. It is not necessary to replace the battery immediately since the G2M™ will continue to function normally. When the battery is nearly exhausted, the **LOW BATTERY** LED will flash and the battery must be replaced. If

you need the G2M™ to work reliably for several hours (*e.g.*, a recording session, or when playing live) the battery should be replaced if the **LOW BATTERY** LED is lit.

When battery-powered, the G2M™ is switched on when a lead is plugged into the **IN** jack. To maximise battery life, this jack must be disconnected when you are not using the unit.

Power-Save (battery-power only)

After 30minutes of inactivity the G2M™ will enter a low-power (but not fully off) state to preserve the battery. To restart the unit, simply unplug and re-insert the lead into the **IN** jack.

Operation

Using your G2M™ couldn't be simpler:

- Plug your instrument (*e.g.*, electric guitar) into the **IN** jack socket. The **POWER** LED will light.
- Connect your MIDI device (or computer, *etc.*) to the **MIDI OUT** socket.
- If the **CLIP** LED lights, adjust your instrument's volume so that the **CLIP** LED lights only occasionally while playing normally.
- Optionally, check your guitar/bass is in tune using the built-in tuner (if you want to tune to standard tuning).
- Play your instrument to send MIDI to your MIDI device (or sequencer, *etc.*).

Tuner

For your convenience, the G2M™ includes a built-in tuner. This uses our **PULSAR™** tuning technology where the **POWER** LED doubles as a tuning indicator. This innovative tuner gives you a fast and accurate way to tune your guitar or bass.

If there is no input signal, the LED will remain lit and indicates that the unit is powered.

When there is an input signal, the LED will pulse smoothly to indicate tuning.

When the note is out of tune, the LED will pulse quickly. As you get closer to the correct pitch, this pulsing will slow. Eventually when you are perfectly in tune, the pulsing will stop. Normally, as long as the LED pulses slower than once per second, the tuning is close enough for most purposes.

It is always best to start at a lower pitch and tune upwards to the correct pitch. As you get closer to the correct pitch and the pulsing slows down, turn your tuning head more slowly to avoid overshooting the correct pitch. Because the tuner is very accurate you will find that very small movements may be all that is required to move from slightly out-of-tune to in-tune (or indeed, to go from in-tune to slightly out-of-tune). With only a little practice you will find you can tune very quickly and accurately using the **PULSAR™** tuner.

MIDI

To capture all the nuances of your playing, the G2M™ sends note-on (with velocity), note-off, pitch-bend and breath controller (#2) MIDI messages.

Chromatic

The G2M™ 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 enabling the **CHROMATIC** switch next to the **IN** jack socket.

MIDI Pitch Bend Sensitivity

For pitch-bend, the most common setting for most MIDI devices is for full-scale pitch-bend to represent ± 2 semitones, and this is also the default G2M™ setting. It can also be set to ± 5 , ± 12 and ± 36 . To ensure your

MIDI sounds are correctly in tune with your instrument, ensure the MIDI patch you use is set to match that of the **G2M™**.

For convenience, when the pitch-bend range setting is changed or when **CHROMATIC** mode is turned off, the “Pitch-Bend-Sensitivity” MIDI RPN message is sent. This allows MIDI instruments (which support this message) to configure their pitch-bend range to match the **G2M™**.

MIDI Performance Controllers

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

To allow this, the **G2M™** responds to the following MIDI controller messages:

- Hold Controller (#4)
- Sustain Controller (#64)
- Volume Controller (#7)

Configuration Options

Inside the battery compartment are 8 switches that let you configure settings of the **G2M™**. The label below is attached to the battery compartment cover.

INSTR optimises the **G2M™** for the range of a particular instrument:

- G = guitar (6 or 7 string)
- B4 = 4-string bass
- B5 = 5-string bass
- V = voice / wind

MIDI OUT selects the MIDI channel on which the **G2M™** sends MIDI messages.

BEND sets the semitone pitch-bend range.

MIDI IN selects the MIDI channel on which the **G2M™** will receive MIDI messages.

PWR SAVE enables or disables power-save.

Instr	MIDI Out	Bend	MIDI In	Pwr Save
1 2	3 4	5 6	7	8
<input type="checkbox"/> G	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> on
<input type="checkbox"/> B4	<input type="checkbox"/> 2	<input type="checkbox"/> 5	<input type="checkbox"/> all	<input type="checkbox"/> off
<input type="checkbox"/> B5	<input type="checkbox"/> 3	<input type="checkbox"/> 12	switch on <input type="checkbox"/>	
<input type="checkbox"/> V	<input type="checkbox"/> 4	<input type="checkbox"/> 36	switch off <input type="checkbox"/>	

Usage Tips for MIDI Guitar

Ensure your instrument’s level is optimally matched to the **G2M™** by turning down its volume control to avoid having the **CLIP** LED flashing most of the time. Occasional (or no) clipping will not cause any performance problems and a high signal level ensures that sounding notes will sustain for as long as possible.

Slightly mute strings with your picking hand. This helps prevent spurious MIDI notes when the wrong string is touched lightly during playing. It also improves the detection of rapidly picked notes because notes can decay slightly faster to give greater contrast between the new note and the last note.

The **G2M™** is great for sequencing natural-sounding bass lines but if you try to perform very fast notes on the lowest strings, you may have some tracking issues. To avoid this, play the notes on higher octaves where tracking is fastest and latency is the lowest. Then transpose the recorded notes in your sequencer to use as a bass line.

If you find that the wrong note (or octave) is briefly detected when you pluck a note, try the following tips for your guitar:

- Try using the neck pick-up.
- Turn down the tone control.
- Ensure there are no fret buzzes, and don’t play percussive sounds or slaps.
- Use new strings.

- Slightly adjust your playing style or playing position. Often moving where you strike the string by a small amount can give good results.

Remember the **G2M™** accurately converts the pitch of your instrument to MIDI messages. If your instrument is not in tune, the MIDI won’t be in tune either!

For more in-depth tips, visit our FAQ page:

www.sonus.com/FAQ

Further Information

Recommendations

Always disconnect the lead from the **IN** jack when you are not actively using it. This will prolong the life of the battery.

When storing your **G2M™** for an extended period, we recommend that you remove the battery. Batteries can leak corrosive materials which could damage your unit.

Do not expose the **G2M™** to rain or moisture. If this occurs, disconnect the battery and allow the unit to dry out completely before using it again.

Warranty

The **G2M™** is supported by a limited warranty for a period of one year from the date of purchase. During this period, any faults due to defective materials or workmanship will be rectified (by repair or replacement[†]) free of charge. The warranty excludes damage caused by deliberate or accidental misuse, modification, or operation with an unsuitable external power supply or an incorrect battery. It is the user’s responsibility to ensure fitness for purpose in any particular application. The warranty is limited to the original purchase price of the equipment, is limited to the original purchaser, and excludes any consequential damage or loss.

[†] A unit replaced under warranty may be replaced with a reconditioned unit.

Proof of purchase date is required for any claim under this warranty.

Warranty claims must be made through the retailer from whom the original purchase was made.

Community

To see what other **sonuus** products are available, please visit:

www.sonus.com

To get assistance or to share your experiences, tips and tricks with other **G2M™** users, register on our user forum:

www.sonus.com/forum

Specifications

	Power	9V DC (<30mA) or AA battery
	Input-Z	10MΩ
TUNER	Notes	B1, E2, A2, D3, G3, B3, E4 (G / V) B0, E1, A1, D2, G2, C3, F3 (bass)
	Accuracy	<1cent when pulsing at <1Hz
MIDI CONVERSION	Note range	(E1 – C7) Guitar (D ₁ – A6) 4-string bass (A0 – F6) 5-string bass
	Latency	5ms(E6) 19ms(E2) 32ms(E1)
PHYSICAL	Pitch bend	<1cent accuracy ±2, ±5, ±12, ±36 semitones
	Size	83mm × 58mm × 34mm
	Weight	90g (without battery)
	Inputs	6-35mm mono jack (switches unit on when jack is inserted)
	Outputs	6-35mm mono jack connected directly to input jack (THRU) Standard 5-pin MIDI DIN socket.

The above specifications are subject to change without notice.

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