Amp Gizmo

User's Manual

RJM Music Technology, Inc.

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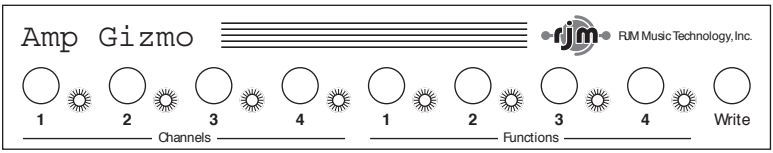
Introduction

Thank you for purchasing an AMP GIZMO. This product is designed to connect your amplifier, effects devices or other electronic equipment to other MIDI-enabled equipment. The AMP GIZMO can control any device that uses short-to-ground switching. This means that virtually any function that is controlled by a footswitch can be MIDI controlled using the AMP GIZMO. It's even possible to control more than one device at a time, depending on the number of functions you need to switch.

Devices that use ¼" mono or stereo jacks for switching purposes are supported with no special cable required. Custom cables are available to control equipment that uses non-standard connectors. Many types of custom cables are available now and we will continue to develop new cables to support other amplifiers and equipment.

Front Panel



Channel buttons 1 through 4 – These buttons control the channel functions of the connected device. The channel buttons can work in two different modes:

> **Dependent Mode** (default) – pressing one of these four buttons will turn on the associated channel switch and turn off the other three channel switches. Exactly one channel switch will be on at all times.
>
> **Independent Mode** – pressing one button will toggle its switch state (if it was on, it will turn off and vice versa). The other channel switches are unaffected. Each channel switch is independent of the others.

Refer to the setup mode section of this manual for more information on Independent and Dependent Modes.

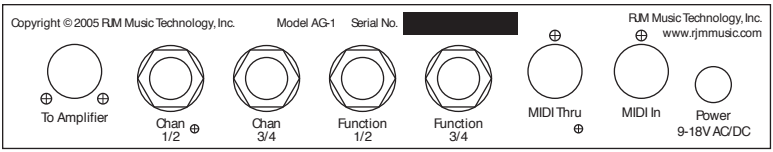
Each channel button has a red LED next to it. When a channel switch is on, its LED is lit.

Function buttons 1 through 4 – These buttons control the non-channel functions of the connected device. On a typical amplifier, these functions might be reverb, effects loop or boost. Pressing one of these buttons will toggle the state of the associated function.

Each function button has a green LED next to it. When a function switch is on, its LED is lit.

Write – When held down for 2 seconds, this button saves the current switch state to non-volatile memory. This function is not active until a Program Change message is received at the MIDI In jack. See the section on MIDI Usage for more details.

Back Panel



To Amplifier – Connect the custom amplifier interface cable here. Use the cable end that has a yellow label reading "AMP GIZMO." The other end of the cable plugs into your amp's footswitch jack. Before connecting, make sure that you have the cable that's made specifically for your amp. Cables are available for a variety of makes and models of amplifiers. Check our website for a list of currently available cables.

Chan 1/2 – This jack is for channel switches 1 and 2. You can plug a mono or stereo (TRS) ¼" cable here. The Channel 1 switch is on the tip conductor and the Channel 2 switch is on the ring conductor (when using a TRS cable).

Chan 3/4 – This jack is for channel switches 3 and 4. You can plug a mono or stereo (TRS) ¼" cable here. The Channel 3 switch is on the tip conductor and the Channel 4 switch is on the ring conductor (when using a TRS cable).

Function 1/2 – This jack is for function switches 1 and 2. You can plug a mono or stereo (TRS) ¼" cable here. The Function 1 switch is on the tip conductor and the Function 2 switch is on the ring conductor (when using a TRS cable).

Function 3/4 – This jack is for function switches 3 and 4. You can plug a mono or stereo (TRS) ¼" cable here. The Function 3 switch is on the tip conductor and the Function 4 switch is on the ring conductor (when using a TRS cable).

MIDI Thru – All of the MIDI commands that are received at the MIDI In jack are sent out through this jack.

MIDI In – Jack for incoming MIDI commands. Connect your MIDI foot controller here. The AMP GIZMO will phantom power a compatible MIDI controller if you use a 7-pin MIDI cable. The AC adapter provided with the AMP GIZMO can phantom power most MIDI controllers provided that they can run on a 9V AC supply. However, if your MIDI controller needs more than 800mA, an adapter with a higher current capacity is recommended.

Power – This unit requires power supply in the range of 9 to 18 volts, AC or DC. The plug should be a 5.5mm/2.1mm barrel connector, similar to those used in most effects pedals. The AMP GIZMO requires as much as 200mA for very short periods of time when switching functions, but most of the time requires only a couple of milliamps.

MIDI Usage

The AMP GIZMO can receive MIDI messages from any MIDI controller. You can store different switch settings for MIDI program numbers 1 through 120. Program numbers 121 through 128 are not supported and will be ignored by the AMP GIZMO. When a Program Change message is received on the correct channel, the AMP GIZMO will automatically recall the saved settings for the given program number.

To set up for MIDI use, simply connect your MIDI controller to your AMP GIZMO's MIDI In jack. The AMP GIZMO is set for MIDI Channel 1 by default. Either make sure your MIDI controller is set up to transmit commands on Channel 1, or use the AMP GIZMO's setup mode to change which MIDI channel the AMP GIZMO responds to. See the setup mode chapter for more details.

To save a program setting, perform the following steps:

1. Using your MIDI controller, select a MIDI program number.
2. Using the AMP GIZMO buttons, set the desired state of each channel and function.
3. Hold down the Write button on the AMP GIZMO until the LEDs flash. This should take about 2 seconds.

That's all it takes. You can repeat this for any or all of MIDI program numbers 1 though 120.

If the lights don't flash after a few seconds of holding down the Write button, it means that your AMP GIZMO did not receive the MIDI Program Change message. Check your MIDI cable connection, and make sure that the MIDI controller and AMP GIZMO are set to the same MIDI channel.

Now that your settings have been saved, you can recall your settings by using your MIDI controller to send a Program Change message again. The AMP GIZMO will call up your saved settings and set the channel and function switches whenever it receives a MIDI Program Change message.

Continuous Controllers

In addition to supporting MIDI Program Change messages, the AMP GIZMO supports MIDI Continuous Controller messages. The following Continuous Controllers are supported:

Continuous Controller	Value	Function
CC88	0 1 127	Channel 1 off * Channel 1 on
CC89	0 1 127	Channel 2 off * Channel 2 on
CC90	0 1 127	Channel 3 off * Channel 3 on
CC91	0 1 127	Channel 4 off * Channel 4 on
CC92	0 1 127	Function 1 off Function 1 on
CC93	0 1 127	Function 2 off Function 2 on
CC94	0 1 127	Function 3 off Function 3 on
CC95	0 1 127	Function 4 off Function 4 on

* Channel Independent Mode only (any value turns channel on in Dependent Mode).

Please note that settings such as Momentary Mode and Dependent/Independent Mode are in effect when processing Continuous Controller messages.

Controlling Multiple Devices

Each of the switching jacks on the AMP GIZMO is electrically isolated from the others. Because of this, it's possible to safely control multiple devices. For example, you could control an amplifier that has three channels and two switchable functions, plus an effects device that has two switchable functions – using just one AMP GIZMO. This could be done in several ways:

- Connect the amplifier to the "To Amplifier" jack using an appropriate custom cable. Connect the effects device to the "Function 3/4" jack using a ¼" cable.
- Connect the amplifier to the "Chan 1/2", "Chan 3/4" and "Function 1/2" jacks using ¼" cables. Connect the effects device to the "Function 3/4" jack using a ¼" cable.

These are only two possibilities – there are many more configurations that can be used. As long as you connect only one device to each jack, you have a safe configuration.

Don't use a Y cable to control two different pieces of equipment from a single jack! That could lead to ground loops or, even worse, damage your equipment.

An important thing to note is that, although they are electrically isolated, the amplifier jack and ¼" jacks are not independently switched. For example, if you press the Channel 1 button , the Channel 1 pin of the "To Amplifier" jack and the Channel 1 half of the "Chan 1/2" jack will both be turned on (i.e. shorted to connector ground) at the same time. The same is true for all of the eight switchable functions – each one simultaneously controls a pin on the "To Amplifier" jack and the corresponding conductor on one of the four ¼" jacks.

You can take advantage of this arrangement if you have two amplifiers that need to be switched at the same time. If you use the appropriate cables, you can make the two amps switch channels and functions simultaneously – one connected using a custom cable and the other using ¼" cables.

Setup Mode

Setup mode allows you to change how the AMP GIZMO's MIDI and switching functions work. To enter setup mode, make sure the AMP GIZMO is turned off. Next, hold down the Channel 4 button while applying power to the AMP GIZMO. Keep holding the button until the lights on the unit flash three times. You're now in setup mode.

Setting MIDI Channel

In setup mode, the channel buttons allow you to select which MIDI channel the AMP GIZMO responds to. Use the channel buttons to turn the channel LEDs on or off to get the desired pattern shown below:

MIDI Channel	Channel 1 LED	Channel 2 LED	Channel 3 LED	Channel 4 LED
1	OFF	OFF	OFF	OFF
2	**ON**	OFF	OFF	OFF
3	OFF	**ON**	OFF	OFF
4	**ON**	**ON**	OFF	OFF
5	OFF	OFF	**ON**	OFF
6	**ON**	OFF	**ON**	OFF
7	OFF	**ON**	**ON**	OFF
8	**ON**	**ON**	**ON**	OFF
9	OFF	OFF	OFF	**ON**
10	**ON**	OFF	OFF	**ON**
11	OFF	**ON**	OFF	**ON**
12	**ON**	**ON**	OFF	**ON**
13	OFF	OFF	**ON**	**ON**
14	**ON**	OFF	**ON**	**ON**
15	OFF	**ON**	**ON**	**ON**
16	**ON**	**ON**	**ON**	**ON**

Setting Switch Modes

In setup mode, the function switches allow you to set different switch modes. Unless changed manually, all of these modes are off by default.

Channel Momentary Mode

If the Function 1 LED is on, the channel switches operate in Momentary Mode. Any time a channel switch changes state, the channel's relay is turned on for 100 milliseconds, then turned off.

If the Function 1 LED is off, the channel switches operate normally. When a channel LED is lit, its relay is on. When a channel LED is not lit, its relay is off.

Function Momentary Mode

If the Function 2 LED is on, the function switches operate in Momentary Mode. Any time a function switch changes state, the function's relay is turned on for 100 milliseconds, then turned off.

If the Function 2 LED is off, the function switches operate normally. When a function LED is lit, its relay is on. When a function LED is not lit, its relay is off.

Channel Independent Mode

If the Function 3 LED is on, the channel switches operate in Channel Independent Mode. Each channel switch can be turned on or off independently of the others.

If the Function 3 LED is off, the channel switches operate in Channel Dependent Mode. Selecting one channel switch will turn that switch on and turn the other channel switches off. Only one channel switch is allowed to be on at a time.

Exiting Setup Mode

To exit setup mode, unplug the AMP GIZMO. Wait a couple of seconds, then apply power again. Don't hold any buttons down while powering up. The AMP GIZMO is now operating normally. The changes you made in setup mode are saved automatically.

Invert Mode

On some amplifiers, you may find that a function is on when the AMP GIZMO says it's off, and the function is off when the AMP GIZMO says it's on. This is an inverted function. To make the function switch correctly, first make sure the AMP GIZMO is unplugged. Next, hold down the Function 4 button while applying power to the AMP GIZMO. Keep holding the button until the lights on the unit flash five times. You're now in invert mode.

In invert mode, use the front panel buttons to light the LED of any channel or function that is inverted. Make sure that all other channel and function LEDs are not lit.

Once you've done this, unplug the AMP GIZMO. Wait a couple of seconds, then apply power again. Don't hold any buttons down while powering up. The AMP GIZMO is now operating normally, and the inverted channels and functions will operate correctly now.

Warranty

RJM Music Technology, Inc. warrants this product against any defects that are due to faulty material or workmanship for a period of one year from the date of original retail purchase. This warranty does not cover damage to the product resulting from accident or misuse.

This warranty is transferable provided the current owner has the original purchase receipt and can provide a copy of it when submitting the warranty claim.

Should you experience any difficulty with this RJM Music product, please contact us as described below. If it is determined that the product has become defective within the warranty period and must be returned to the factory, RJM Music Technology will issue a Returned Merchandise Authorization (RMA) number and shipping and packaging instructions.

RJM Music Technology will repair or replace the product free of charge, provided it is returned freight prepaid to RJM Music Technology with a valid receipt and RMA number. Return shipping will be paid by RJM Music Technology within the U.S. only.

This warranty shall not apply to any goods that have been repaired or altered by anyone other than the manufacturer. There are no warranties which extend beyond the terms described herein.

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