

LINE MIDI SWITCHER LMS-1



- User Manual
- Mode d'emploi
- Instrukcja obsługi
- Bedienungsanleitung

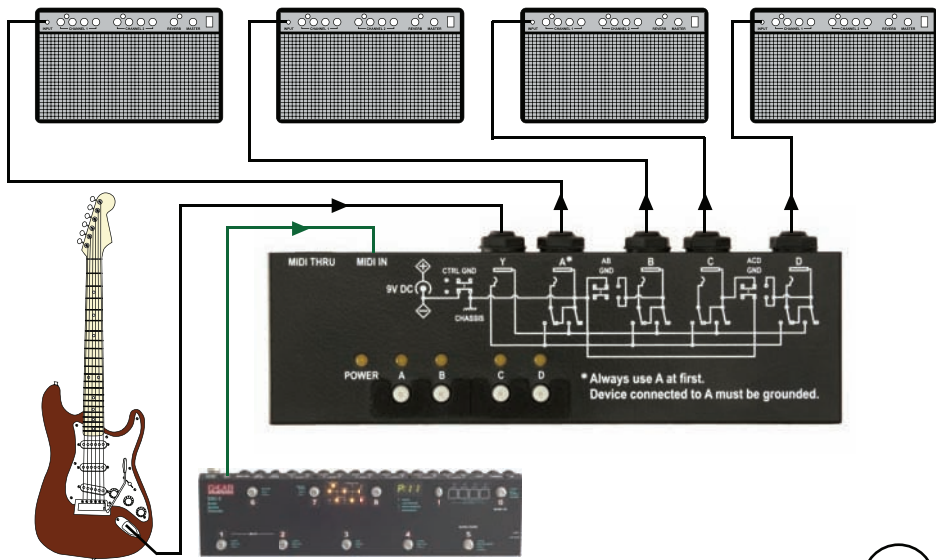


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Dear Customer!

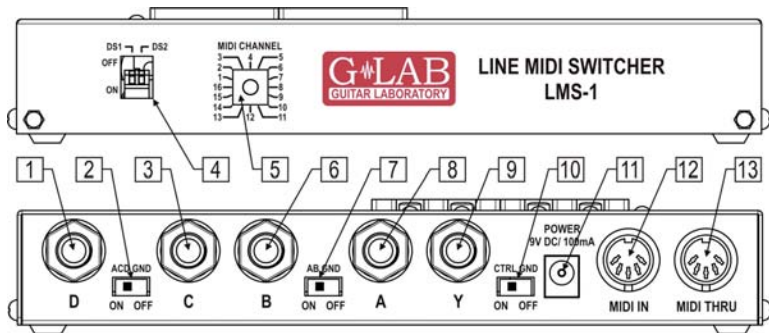
Thank you for choosing our product.

LINE MIDI SWITCHER (LMS-1) is a bidirectional, passive switcher of the audio signal with galvanic separation between A, B, C, D outputs/inputs. The LMS-1 can be used as amps switcher in “one of four” mode (guitar connected to an input of selected amp) without occurring of the ground loops. The LMS-1 is controlled via MIDI interface and buttons on the top of the device.

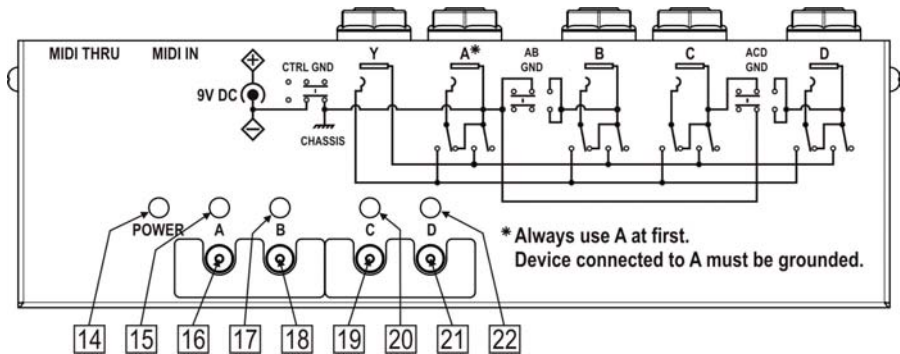
Basic features:

- working modes: 1) one IN input – four A,B,C,D outputs,
 2) four A,B,C,D inputs – one OUT output,
- signalization of the power supply and connections state,
- four buttons for manual control,
- fully passive signal path (without active components and separating transformers)
 assuring no influence of the switcher on the guitar sound
- switching based on the electro mechanic relays with silent switching system,
- ground connections optimization switchers,
- MIDI THRU connector,
- 9V DC power supply

Structure



- | | |
|---|--------------------------------|
| 1 - output/input D | 8 - output/input A |
| 2 - ACD GND grounds switch | 9 - input/output Y |
| 3 - output/input C | 10 - CTRL GND ground switch |
| 4 - DS1 and DS2 – working mode switches | 11 - 9V power supply connector |
| 5 - MIDI channel settings switch | 12 - MIDI IN input |
| 6 - output/input B | 13 - MIDI THRU output |
| 7 - AB GND grounds' switch | |



- 14 - power supply indicator
- 15 - A output/input activity indicator
- 16 - A output/input „ON” switch
- 17 - B output/input activity indicator
- 18 - B output/input „ON” switch

- 19 - C output/input „ON” switch
- 20 - C output/input activity indicator
- 21 - D output/input „ON” switch
- 22 - D output/input activity indicator

Power supply

LMS-1 should be supplied from 9V (DC) regulated source with capacity 100 mA or more. Before plugging the power supply please check the pin polarization.



The device is protected against opposite polarity. If this protection switches on it is needed to disconnect the power supply and wait few minutes before reactivation of the device.

ATTENTION: Damages caused by improper power supply causes the loss of the warranty.

Control Ground Lift (CTRL GND) switch

If the 9V power supply is fully separated (not connected with signal ground or grounding) the CTRL GND switch should be set to ON position. If the 9V negative wire is connected with other signal ground or grounding the Control Ground Lift switch should be set to OFF.

Working mode switches

The LMS-1 posses two working modes set by DS1 switch

- DS1=OFF, one input/four outputs, Y IN/ABCD OUT, this working mode enables for example to choose the amp to which the guitar will be plugged in

- DS1=ON, four inputs/one output, ABCD IN/Y OUT, this working mode enables to choose signal source (e.g. guitar) connected to the amp.

In working mode one input/four outputs the DS2 switch decides about working mode of the switches:

- DS2=OFF, „one of four” mode, pressing of chosen switch makes a connection between input Y and chosen output,

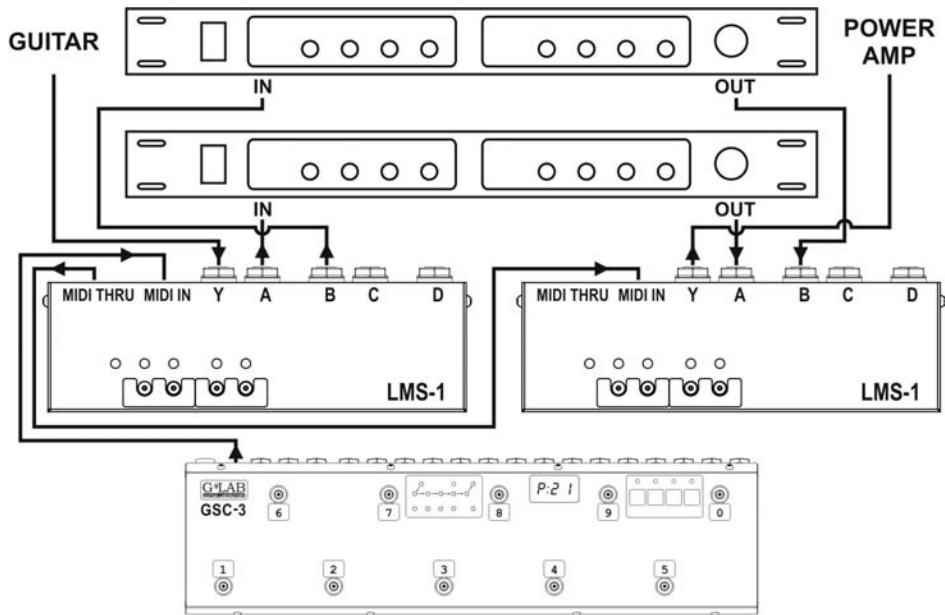
- DS2=ON, „one or more” mode, pressing of chosen switch toggles the state (correspondingly turning on or off) of chosen output what enables to send the signal to several devices. It is not recommended to use this mode for guitar with two or more amps because it creates the ground loop which can (especially on high gain tones) provoke audible hum in speakers.

Way of connecting

Scheme No. 1 (on the inside front cover of the manual) shows the way of connecting in mode one input – four outputs (Y IN/ABCD OUT).

Scheme No. 2 (on the inside back cover of the manual) shows the way of connecting in mode four inputs – one output (ABCD IN/Y OUT).

The scheme on next page shows the use of two Line Midi Switchers for preamps switching, especially those of them possessing the connection between signal ground and grounding. In both of LMS-1 switchers should be set the same MIDI channel what will assure synchronic switching.



AB GND and ACD GND ground switches

In the mode one input/four outputs (Y IN/ABCD OUT).

The AB GND and ACD GND grounds switches enable to set the grounds connections in the way that eliminates ground loops occurring or to connect the grounds in order to eliminate hums and switching noises. In order the device works properly always use the A output at first (the A connector should always be used as the first one) The amp connected to A output should possess the connection between the signal ground and grounding wire. If all of amps possess the connection between the signal ground and grounding the AB GND and ACD GND switches should be set to OFF position. If to the given output is connected an amp without connection between signal ground and grounding the ground switch of this output should be set to ON. The AB GND switch connects the A output ground with B output ground and the ACD GND switch connects the A output ground with the C and D outputs ground.

You will find the tips how to build guitar system without ground loops at www.glab.com.pl.

In the mode four inputs/one output (ABCD IN/Y OUT).

When the guitars (or other signal sources not connected to the grounding) are connected to the ABCD inputs the AB GND and ACD GND switches should be set to ON position.

MIDI functions

To set the MIDI channel on which the LMS-1 receives the commands serves the MIDI CHANNEL rotatable knob. To switch the channel use the small screwdriver to turn smoothly central part of the switcher to the right or to the left. The arrow-head indicates set channel.

The LMS-1 can be controlled via Program Change and Control Change commands.

The table below shows the functionality of Program Change commands.

Prog Ch No	OUT/IN			
	A	B	C	D
1	ON	-	-	-
2	-	ON	-	-
3	-	-	ON	-
4	-	-	-	ON
5	ON	-	-	-
6	-	ON	-	-
7	ON	ON	-	-
8	-	-	ON	-
9	ON	-	ON	-
10	-	ON	ON	-

Prog Ch No	OUT/IN			
	A	B	C	D
11	ON	ON	ON	-
12	-	-	-	ON
13	ON	-	-	ON
14	-	ON	-	ON
15	ON	ON	-	ON
16	-	-	ON	ON
17	ON	-	ON	ON
18	-	ON	ON	ON
19	ON	ON	ON	ON

Prog Ch No = 4+1(when A=ON)+2(when B=ON)+4(when C=ON)+8(when D=ON)

The table below shows the functionality of Control Change commands.

CONTROL CHANGE		
NUMBER	VALUE	
113	0 – 31	A
	32 – 63	B
	64 – 95	C
	96 – 127	D
114	0	A
	Prog Ch No *	
	127	B

*- according to the table above

Technical parameters

Dimensions:	width	205 mm
	depth	70 mm
	height	38 mm
Weight		0,45 kg
Maximal input signal		30 dBu
Power supply		9V DC (8,6 up to 9,5V regulated)
Current consumption		100 mA

FCC Compliance

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer for help.

Declaration of Conformity

ELZAB S.A., ul. Kruczkowskiego 39, 41-813 Zabrze, Poland,
declare under sole responsibility, that the following product:

G LAB Line Midi Switcher LMS-1

conforms with requirements of the EC Council Directives:

- 2006/95/EEC Low Voltage Directive,
- 2004/108/EEC Electromagnetic Compatibility,

and holds CE mark. Above named product conforms with the following standards:

- PN-EN 60065:2004 /EN 60065:2002/ Audio, video and similar apparatus - Safety requirements.
- PN-EN 55103-1:2000 /EN 55103-1:1996/ Electromagnetic compatibility - Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use - Part 1: Emission
- PN-EN 55103-2:2001 /EN 55103-2:1996/ Electromagnetic compatibility - Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use - Part 2: Immunity

Jerzy Biernat

President of the ELZAB S.A. Board of Directors

Copy of original EC declaration of conformity is available for download on our
website <http://www.glab.com.pl>



DO NOT PLACE THIS PRODUCT INTO THE WASTE CONTAINER !

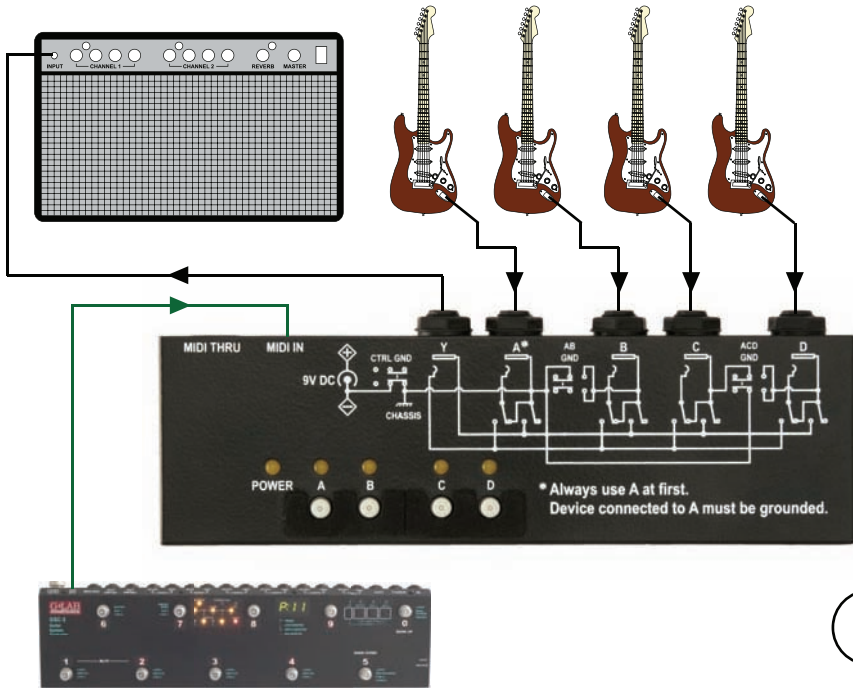
This device is marked with a cross-lined waste container symbol according to 2002/96/EU Directive on Waste Electric and Electronic Equipment.

Such marking informs that after usage equipment can not be trashed together with other household waste.

An user obligation is to return wasted equipment to a party collecting wasted electric and electronic equipment. Parties collecting such equipment organize a system, including local collection points, shops and other units, allowing to return such equipment. This Directive assures an user free of charge utilization of such delivered equipment.

This device is made of materials which can be recycled or utilized after becoming out of use. Proper handling of wasted electric and electronic equipment reduce demand for raw materials and contribute in avoiding harmful consequences for environment and health of people caused by dangerous components and not proper storing and utilizing of such equipment.

User's manual Drawing No. G76INA00





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G LAB is a brand of ELZAB SA

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