

**G LAB**  
GUITAR LABORATORY

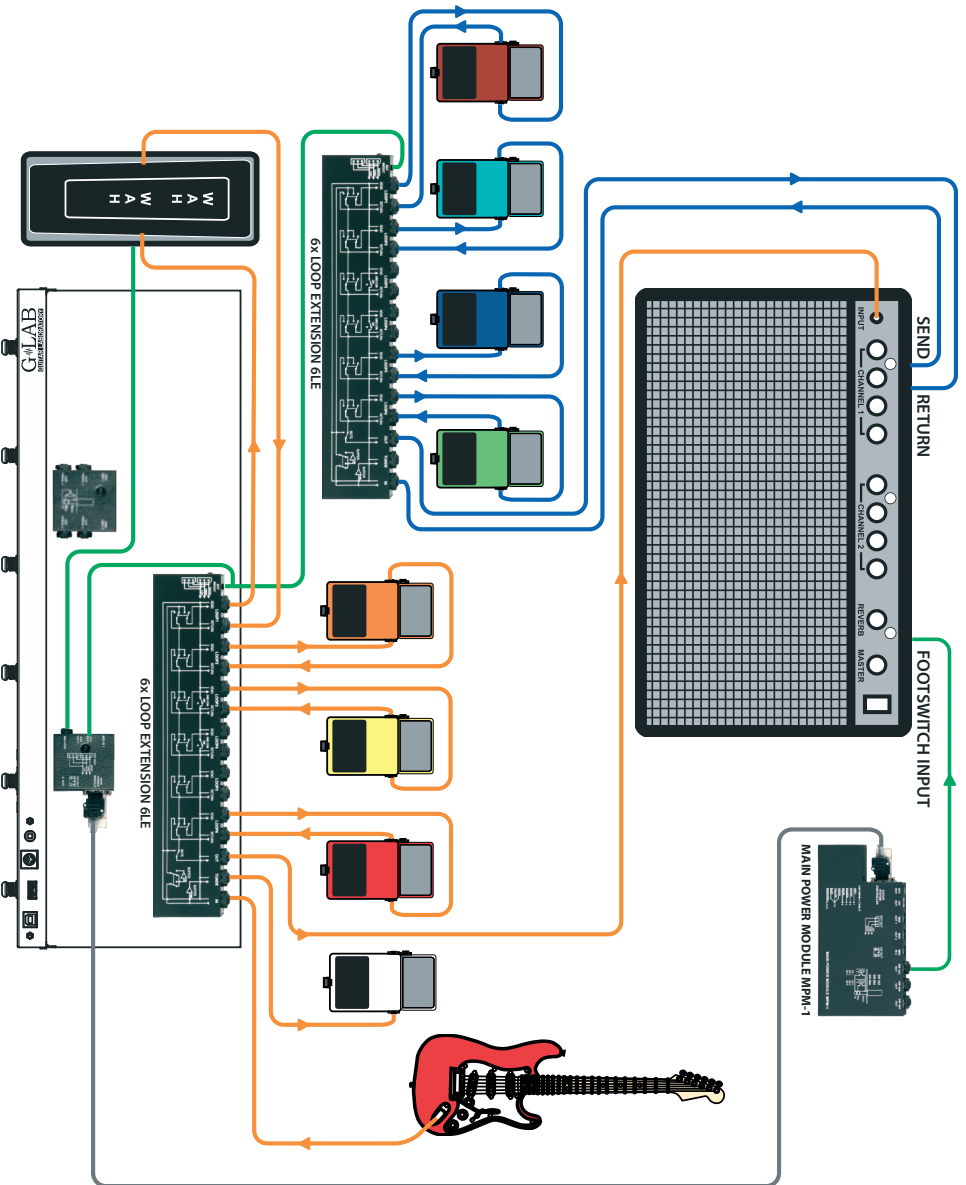
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# 6 x LOOP EXTENSION 6LE



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

# GUITAR SYSTEM CONTROLLER GSC-5



Dear Customer!

Thank you for choosing our product.

The 6 x LOOP EXTENSION (6LE) module is the effects loop switcher (looper) for the GSC controllers (e.g. GSC-5) equipped with EXTENSION OUTPUTS (EXT OUT).

Basic features:

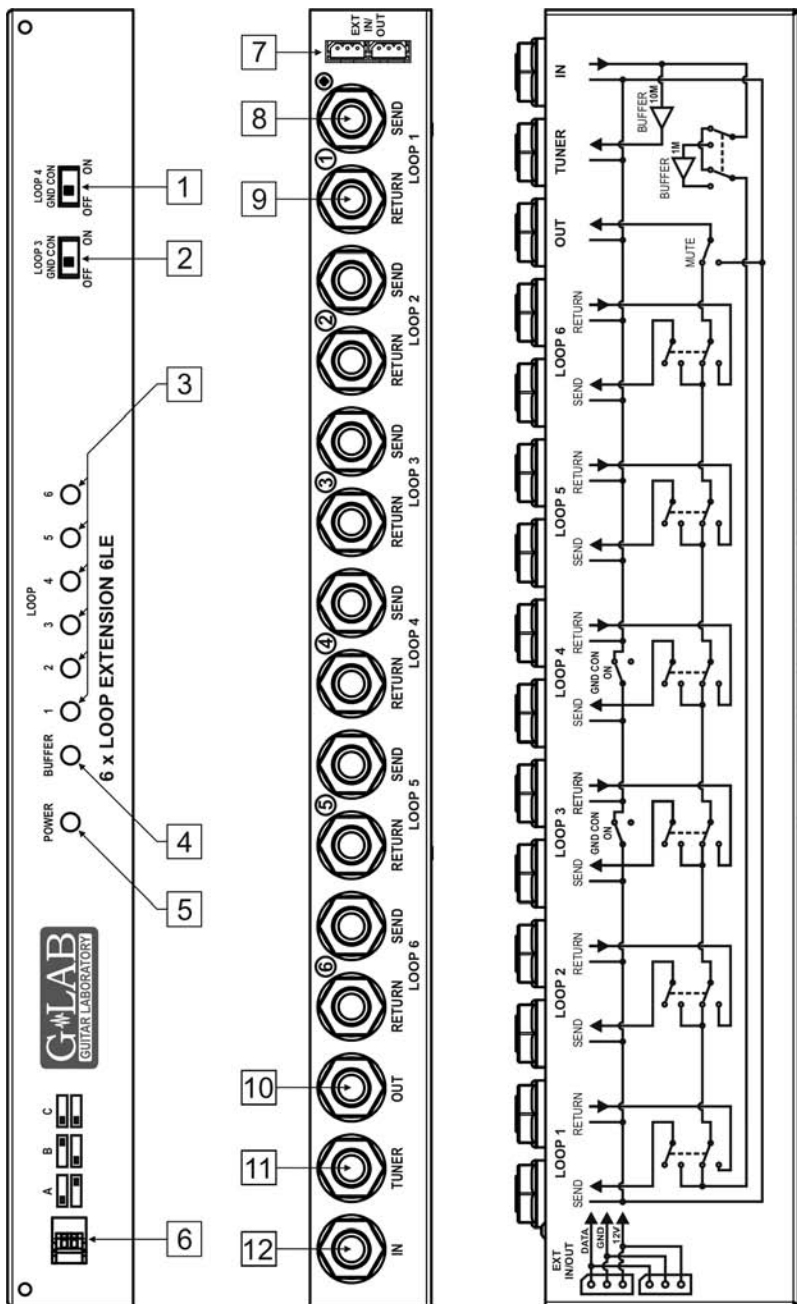
- passive signal path
- 6 effects loops with TRUE BYPASS based on electro mechanic relays
- possibility to switch on (by relay) the input buffer with impedance of 1 Mohm (the same as in the tube amps)
- TUNER output with very high input impedance buffer
- silent tuning function
- power supplying and controlling by the GSC controller with a use of a single cable
- working in the mode of 2 (or 3) effects “at the front” and 3 (or 2) effects on the amp FX loop

### Package content

6LE module	1 pc
EXT 80 cm cable	1 pc
EXT 50 cm cable	1 pc
Velcro fastener	4 pairs

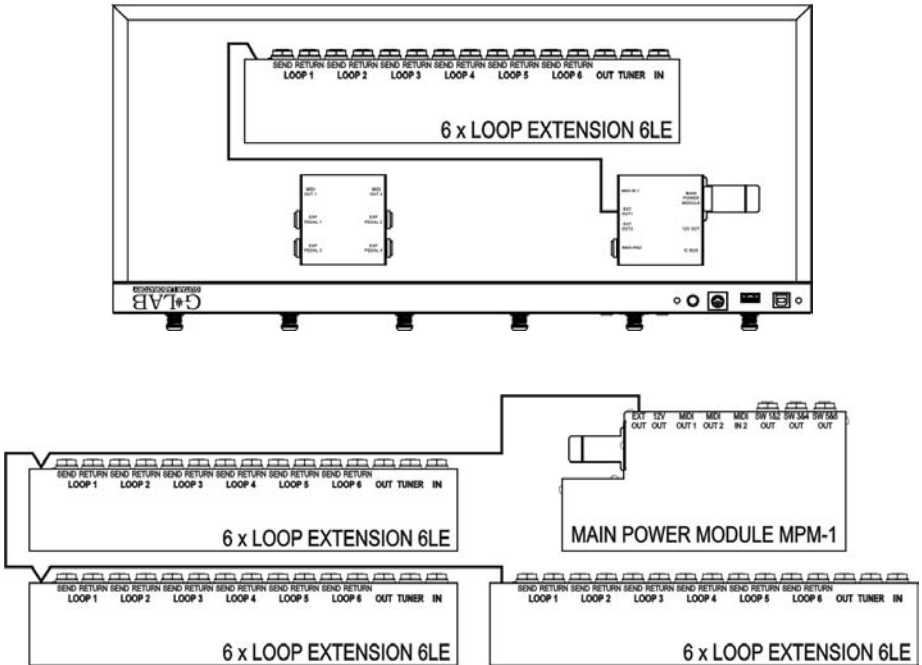
### Structure

- |                                    |                            |
|------------------------------------|----------------------------|
| 1 - LOOP4 ground connection switch | 7 - EXT IN/OUT connectors  |
| 2 - LOOP3 ground connection switch | 8 - LOOP1 SEND connector   |
| 3 - LOOP state indicators          | 9 - LOOP1 RETURN connector |
| 4 - BUFFER state indicator         | 10 - Signal OUTPUT         |
| 5 - POWER supply indicator         | 11 - TUNER signal output   |
| 6 - DIP switches                   | 12 - Signal INPUT          |

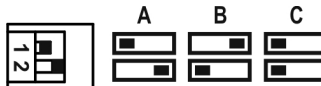


## Connecting the 6LE module to the controller

The 12V power supply and the controlling signal comes from the EXT OUT connector of the GSC-5 controller. The EXT IN/OUT connector of the 6LE module should be connected with EXT OUT output of the GSC-5 foot controller or of the MPM-1 power supply module or with EXT IN/OUT connector of already connected the 6LE module. For connecting use one of the cables supplied with the module.



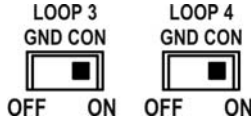
The DIP switches enable to choose a section (A, B or C) for a given 6LE module in the guitar system.



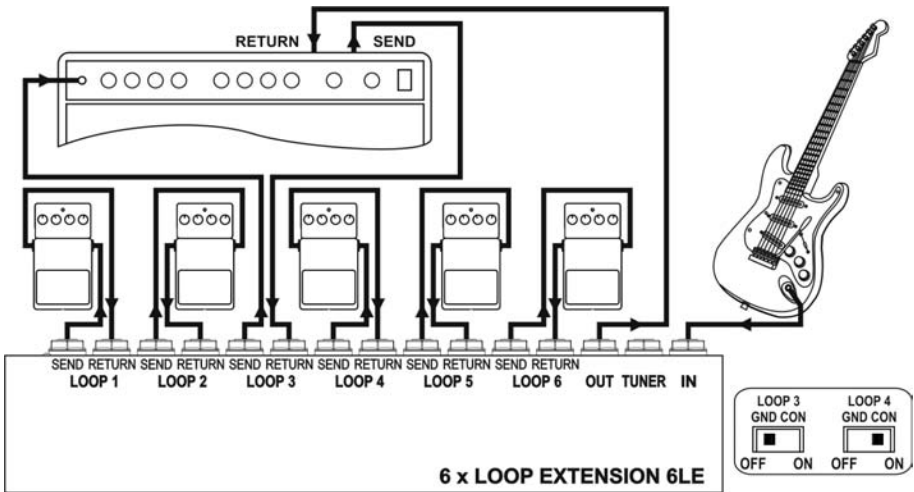
In case of building the stereophonic system the 6LE modules should be set in pairs in the same section (A, B or C). In this way the same loops will be switched simultaneously on the left and right channel.

## The LOOP3 and LOOP4 GROUND CONNECTION switches

The 6LE module can be connected between guitar and an amp input (“at the front”) or on amp serial effect loop (FX LOOP). In this cases the LOOP 3 GND and LOOP 4 GND switches should be set to ON position.



The 6LE enables to connect 2 (or 3) effects “at the front” and 3 (or 2) effects on the amp FX LOOP. In this case the SEND and RETURN connectors of the LOOP 3 (or LOOP4) play correspondingly the role of signal OUTput and INput. The LOOP3 GND CON switch (or LOOP 4 GND CON) should be set then to OFF position to avoid the ground loop occurring.



The table below shows the quantity of the loops “at the front” and on the FX LOOP depending on the quantity of used 6LE modules connected to the GSC-5.

Quantity of 6LE modules	Effects „at the front”	Effects on the FX LOOP	Quantity of 6LE modules	Effects „at the front”	Effects on the FX LOOP
1	2	3	3	2	15
	3	2		3	14
2	2	9		6	12
	3	8		8	9
	6	6		9	8
	8	3		12	6
	9	2		14	3
				15	2

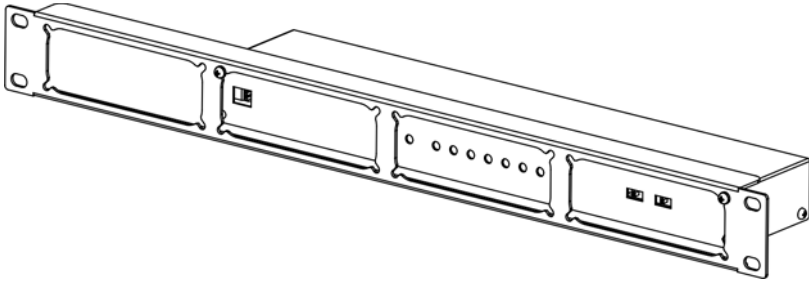
### Signal path

The buffer (z-buffer) with input impedance of 1 Mohm (same as in the guitar tube amps) enables to boost the signal power (without the voltage increase). Adding the buffer between the guitar and the effect can improve guitar sound (due to low input impedance many of the effects change the guitar tone) and enable to avoid high tones losses when using long cables between the controller and the amp (caused by cables’ parasitic capacitance appearing when all the effects are switched off). Signal from INput, retrieved by very high impedance tuner buffer (10 Mohm), is transferred to the TUNER output. It enables to use the tuner also while playing.

The SEND outputs of the effects loops should be connected with effects INputs and the RETURN inputs of the effects loops should be connected with OUTputs of individual effects. The MUTE block silents the signal during the silent tuning and mutes the switching clicks. The 6LE features three levels (LOW, MID and HIGH) of clicks muting which can be set in the SETUP > ↓ > CLICK PROTECTION function for each A, B, C section separately. For the modules placed “on the front” it is recommended to set the MID or HIGH level and for the modules connected to the effects loop it is recommended to set the LOW or MID level.

## Mounting

In case of mounting inside the foot controller or to the pedalboard use the velcro fasteners supplied with the device. The module should be mounted in the proper place to avoid accidental ground connection of JACK connectors or 6LE housing to other conducting elements. It could lead to the ground loops occurring provoking the hums in speakers. In case of mounting to the rack 19" systems it is recommended to use the GLAB 1U FRONT PANEL RMS (product code 00831) which comes together with screws and isolating masks assuring the ground separation of individual modules.



## Technical parameters

Dimensions:	width	330 mm
	depth	72 mm
	height	35 mm
Weight		0,85 kg
Buffer input impedance		1 Mohm
Maximal signal transmitted by input buffer		+17dBu (+15dBV, 16Vpp)
Output impedance of input buffer		700 ohm
Input impedance of tuner buffer		10 Mohm



## 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/6 x LOOP EXTENSION (G LAB 6LE)**

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>



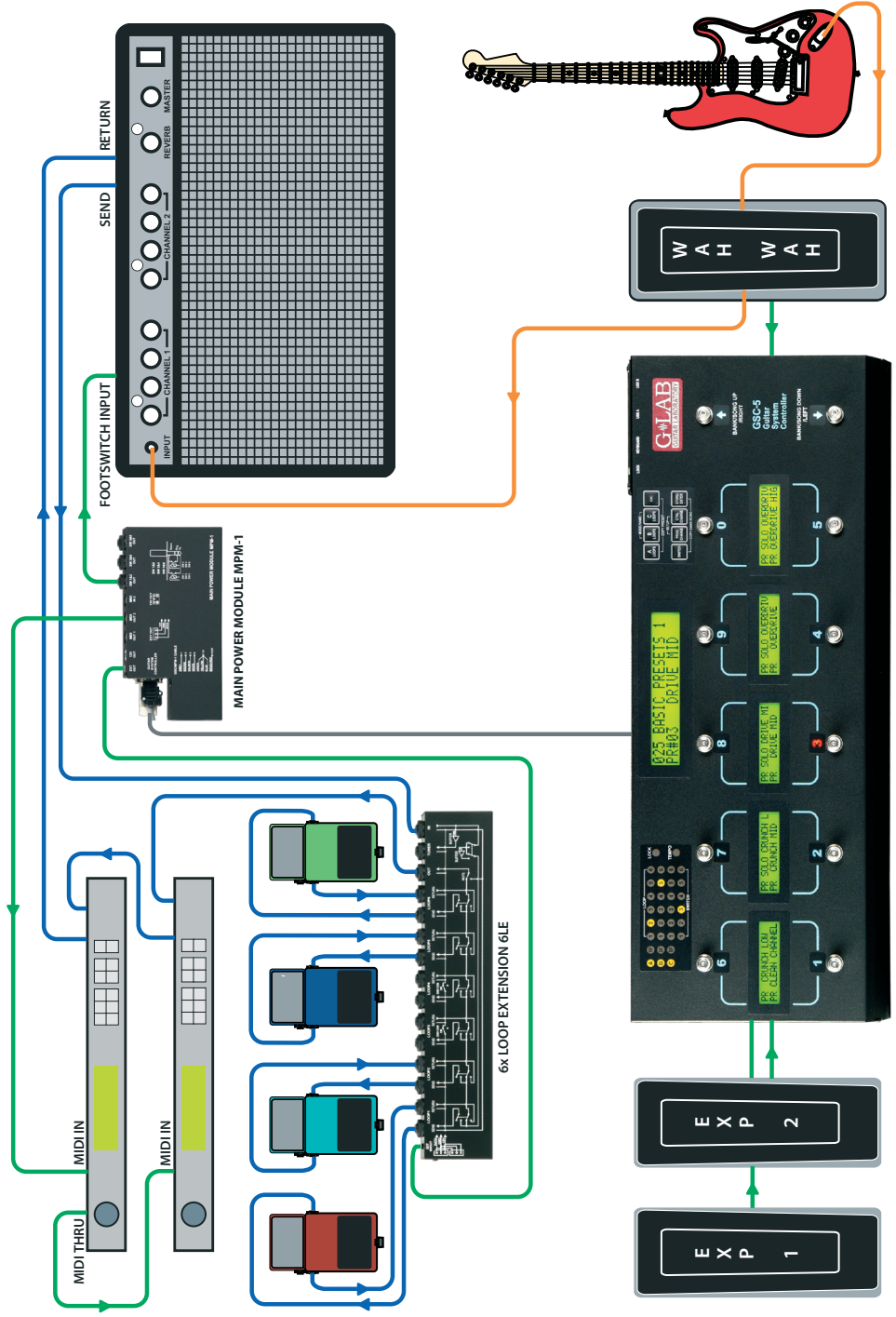
**DO NOT PLACE THIS PRODUCT INTO THE WASTE CONTAINER !**

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 organise a system, including local collection points, shops and other units, allowing to return such equipment. This Directive assures an user free of charge utilisation of such delivered equipment.

This device is made of materials which can be recycled or utilised 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 utilising of such equipment.



GUITAR SYSTEM CONTROLLER GSC-5



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G LAB is a brand of ELZAB SA

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