CostaLab®

The Finest Sound Experience
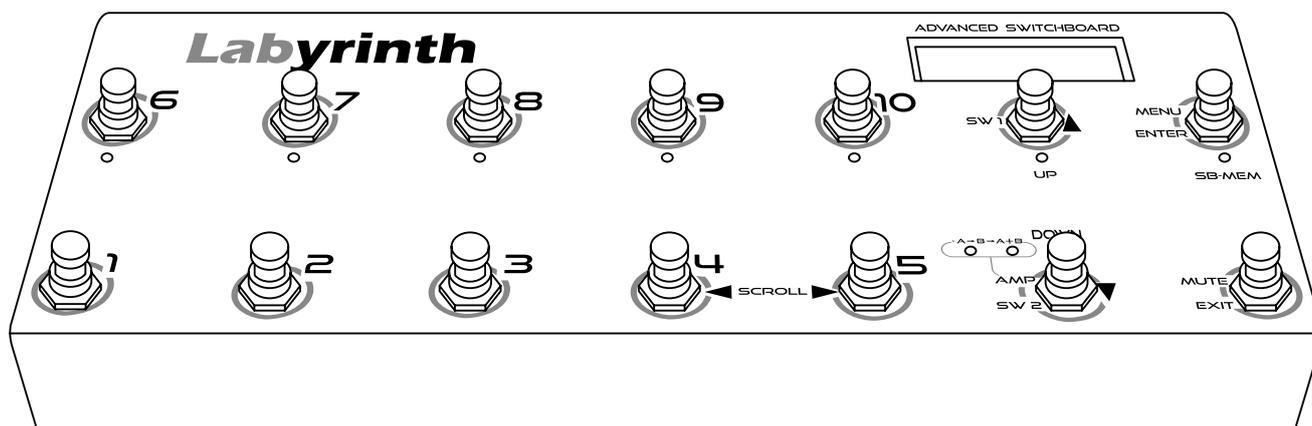
Labyrinth
Advanced-Switchboard

User Manual

INDEX

ATTENTION

Please read this user manual carefully before powering up the pedalboard and strictly adhere to the instructions.
Be sure to use only the supplied AC adapter which operates at 9-12 V DC.
Please do not open the 230-12V power supply and do not damage nor modify the power supply cord.
CostaLab will not be responsible for any damage to the product caused by unauthorised modifications to electrical and electronical parts.

COSTALAB LABYRINTH

Labyrinth pedalboard is designed to switch pedal effects in true-bypass.
You can activate/deactivate up to 10 pedals (or pedal sequences) individually (SB Mode - Stompbox Mode) or in programmed mode (MEM)

With LABYRINTH you can:
- Maintain the signal quality along the effect path.
- Easily change complex sounds without having to switch on and off individual pedals
- Switch amp channels
- Manage an external multieffect processor or pedals via MIDI

FEATURES

- 10 true bypass loops (send/return) for "front amp" effects or: 7 true bypass loops (send/return) for "front amp" effects and 3 "stereo" true bypass loops for amp send/return effects.

- 3 control switches and analog TAP TEMPO out.

- Programmable Amp A/B output.

- 10 "stomp box" buttons with status LED. These buttons directly activate effect loops. (Stomp Box Mode)

OR

- 10 preset buttons (1-10) to recall the effects combination and switch settings. MIDI (MEM Mode).

- UP/DOWN buttons for MIDI bank change (1-5, 6-10, 11-15, 16-20, 21-25, etc.). Also used for MIDI channel change and switch function selection.
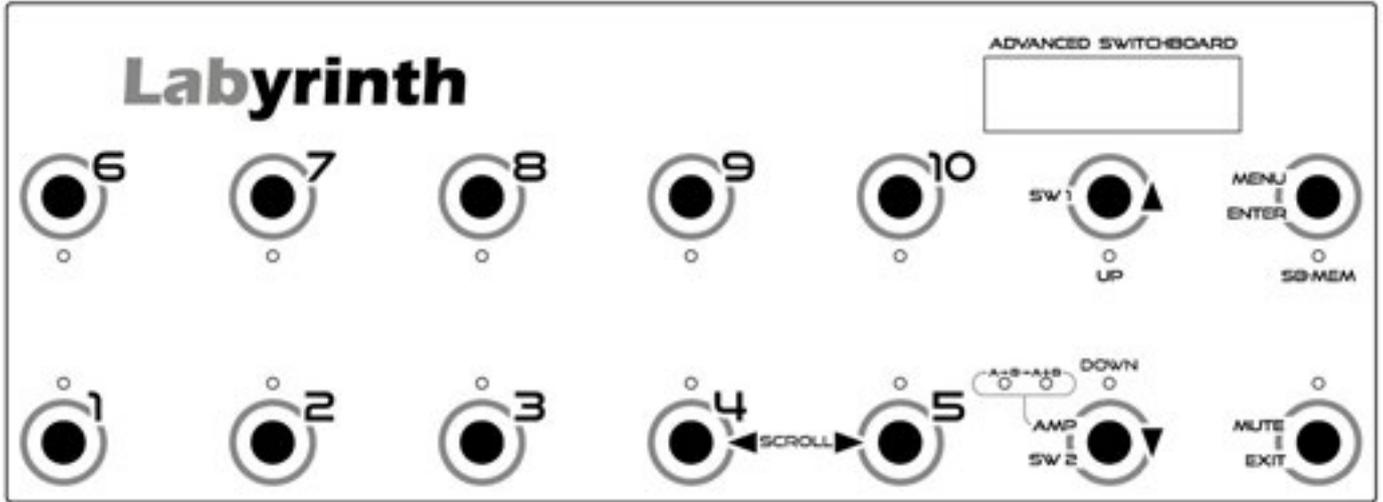
FRONT AMP LOOPS 1-7   **FRONT AMP LOOPS 8-10**
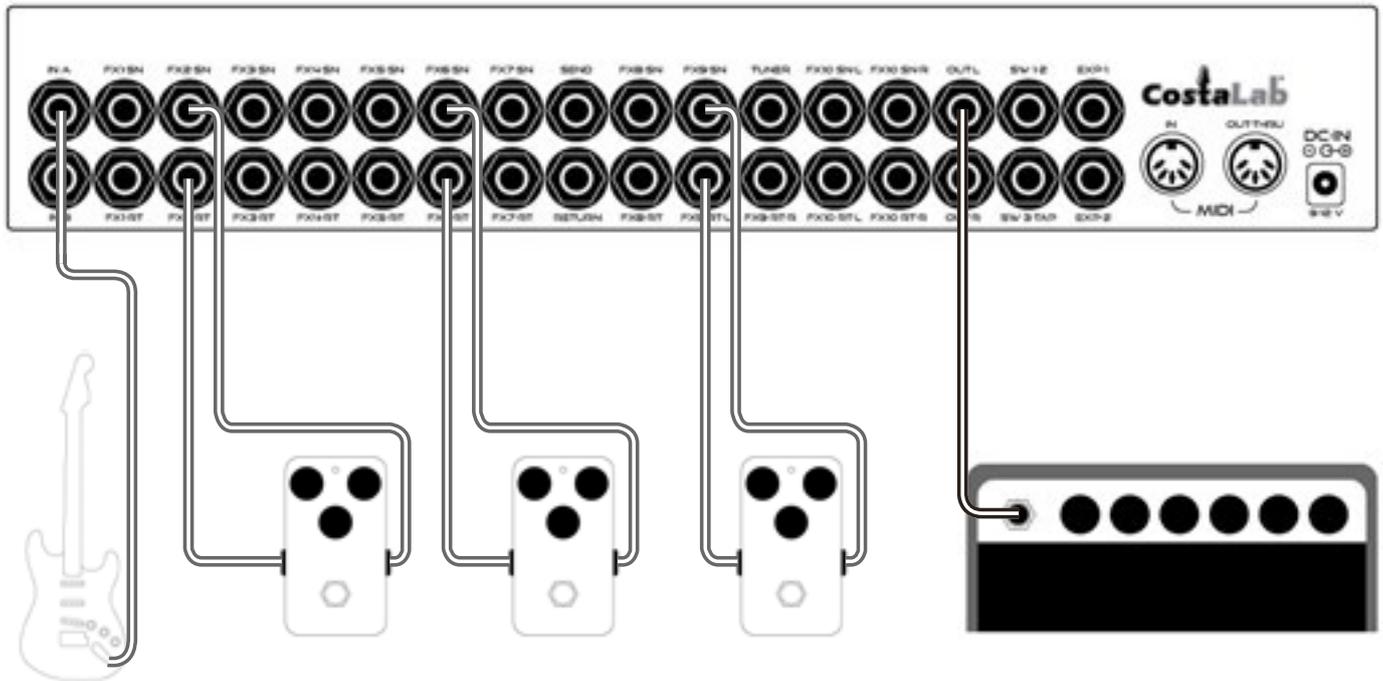
Pedals have to be connected as indicated in the above schematic. Make sure every pedal is activated and powered on. To include or exclude a pedal from the signal path, simply press the corresponding pedalboard button.

FRONT AMP LOOPS

SEND RETURN LOOPS
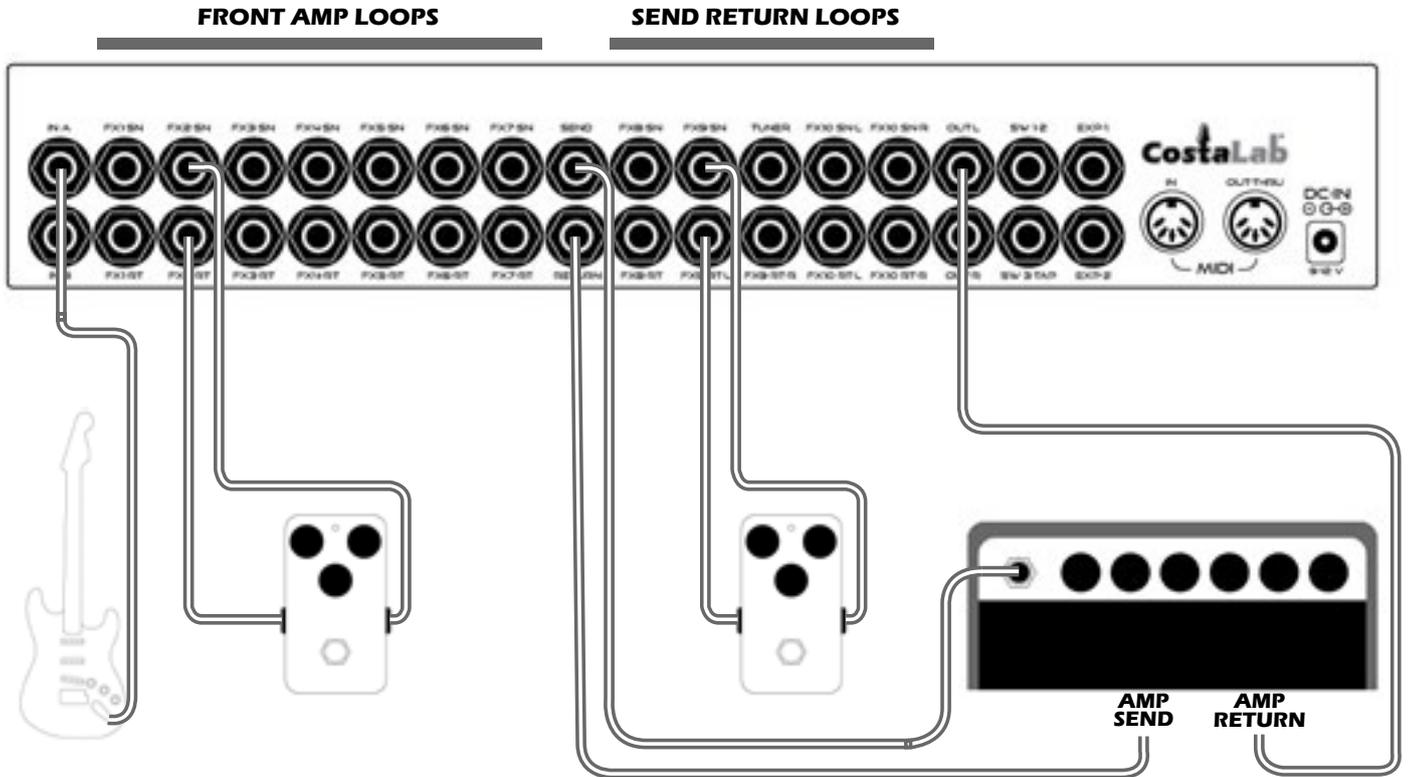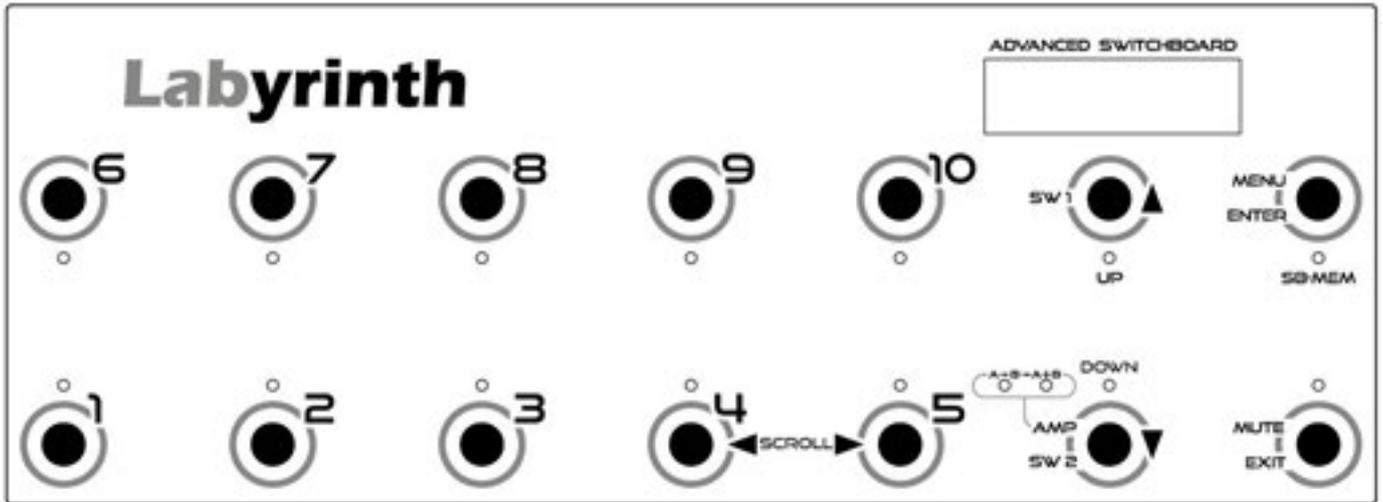
Pedals have to be connected as indicated in the above schematic. Make sure every pedal is activated and powered on. To include or exclude a pedal from the signal path, simply press the corresponding pedalboard button.

Labyrinth could be used in two different modes:

"SB" (Stomp Box) Mode
In this mode, the 10 dedicated buttons include or exclude the relative pedals in the signal path. When "SB" mode is selected, "SB" is displayed on the screen and the leds above the stomp buttons indicates which effects are in the signal path.
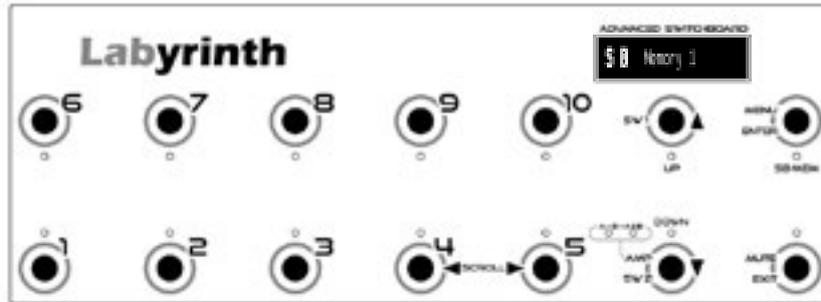
"MEM" (Preset) Mode
MEM Mode (Memory Preset) allows you to recall any effect combination previously saved. You can store up to 520 presets. Every preset can be modified in real time by switching in SB Mode and using the loop buttons.
In "MEM" mode the display shows the current preset with a letter "A-Z" (Bank) and a number from 1 to 10 (Preset).
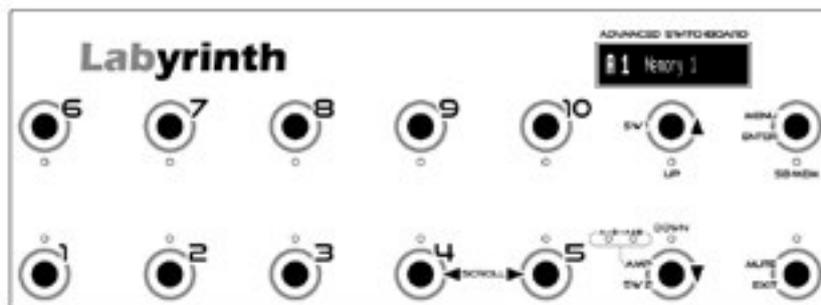
Using 1 to 10 buttons you can recall the relative preset of the current Bank. By pressing the "UP" or "DOWN" buttons you can select the bank from A to Z (1-260) or from A to Z (261-520).

N.B. When choosing a new bank, the current preset is not changed until you select a preset of the new bank.

Switching between "SB" e "MEM" mode is done by briefly pressing the "Menu/Enter/SB.MEM" button.
If the "MEM" Mode is active, the green indicator "SB-MEM" under the "Menu/Enter/SB.MEM" button is lit.

STORING A PRESET

This sequence represents an "on the fly" storing process, to save the patch that is selected in that moment.

1) Enter "SB" Mode by holding "Menu/Enter/SB-MEM"
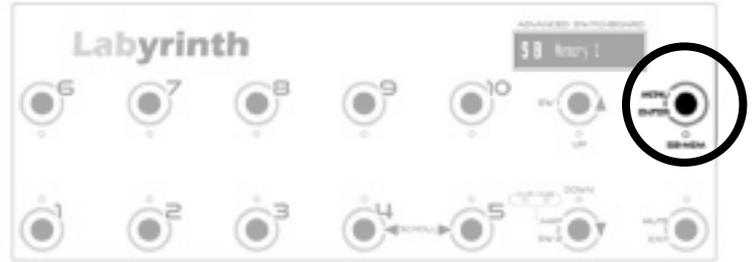
2) Press the buttons corresponding to the pedals you want to insert in the signal path. Led indicators will light up.
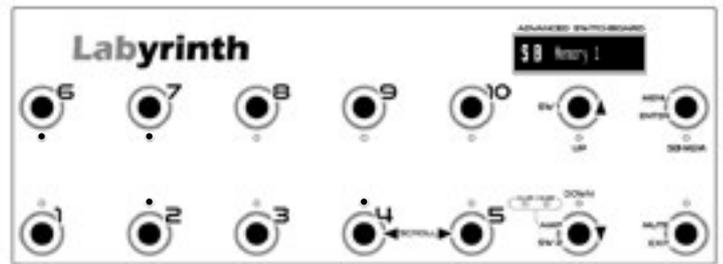
3) Press and hold the "Menu/Enter/SB-MEM" button until main menu is displayed.

4) Again, press and hold the "Menu/Enter/SB-MEM" button until "Write to" appears on the display.

5) Use UP and DOWN buttons to select the bank where to save the new patch. Use 1 to 10 button to choose in which memory location store your preset.
Simply press "ENTER" button to confirm. "COMPLETE" will appear on the display to confirm the saving of the preset in the pedalboard memory.

FRONT PANEL (SB "STOMP BOX" Mode)

Switch 1...10: activate/deactivate the relative effect loop.
Switch SW1: activate the analog switch (dry contact) for amp channel switch or similiar functions.
Switch SW2: hold this button for more than 2 sec. to activate a second analog switch (dry contact) for amp channel switch or similiar functions.
Switch AMP: press this button to sequencially cicle between amp A, B, or A+B out; use this to select the desired destination AMP.
Switch MEM: commutes between SB and MEM Mode.
Switch TAP: sends tap tempo via MIDI message or analogically using a static switch on the tip of SW3/TAP jack.
Switch MUTE: hold for more than 2 sec. to activate the MUTE Mode and enables the TUNER output of TUNER jack.

## FRONT PANEL (MEM "PRESET" Mode)

Switch 1...10: select patches in the current bank.
Switch UP e DOWN: allows to select a memory bank.
Switch MEM: cycles between SB and MEM Mode.
Switch MUTE: hold for more than 2 sec. to activate the MUTE Mode and enables the TUNER output of TUNER jack.
Switch TAP: sends tap tempo via MIDI message or analogically using a static switch on the tip of SW3/TAP jack.
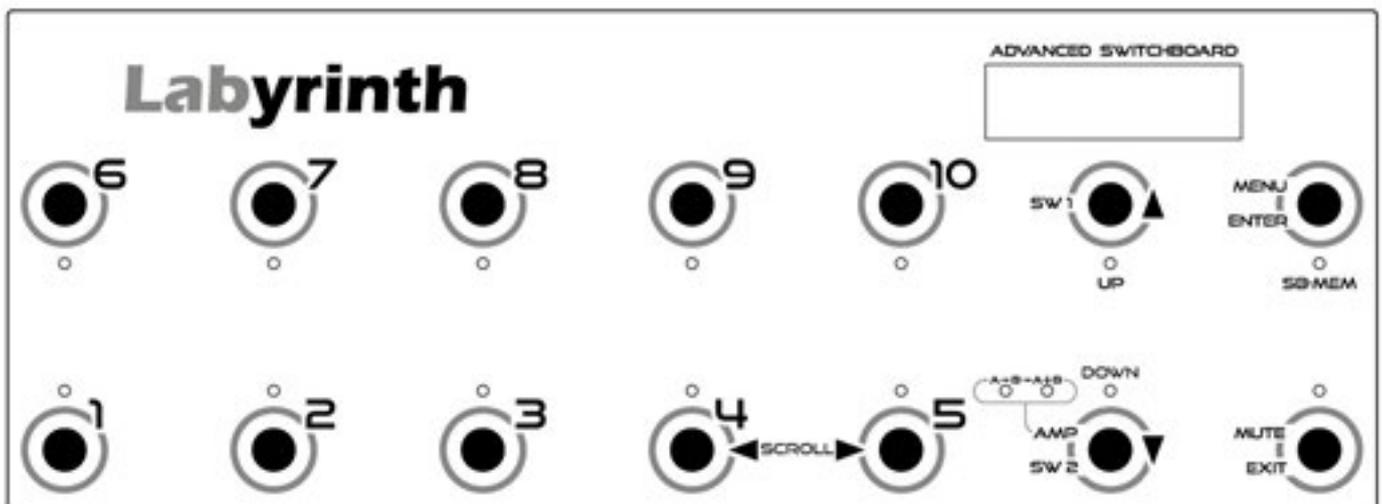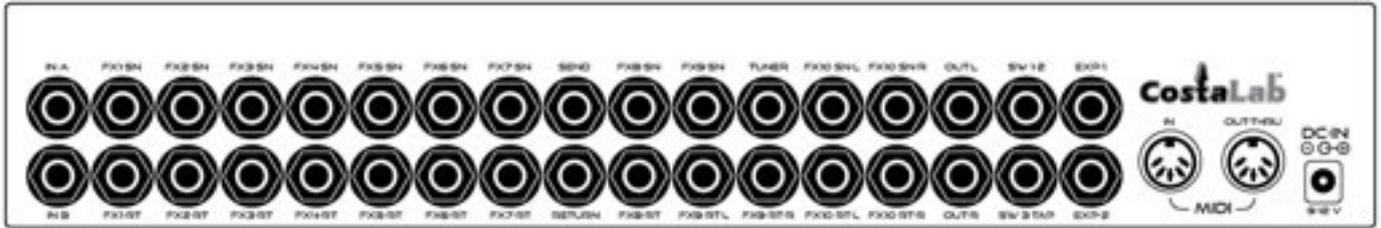
IN A	guitar input
IN B	buffered guitar input (Pedal EXP1)
FX SN 1....7	effect send jacks (connect to pedal input)
FN RT 1...7	effect return jacks (connect to pedal output)
SEND	out of the first 7 loops chain, connect to amp input (If no jack is inserted, all 10 loops are connected in series)
RETURN	loops 8, 9 and 10 input, connect to AMP SEND
FX8-SN	loop 8 send (connect to effect input)
FX8-RT	loop 8 return (connect to effect output)
FX9-SN	loop 9 send (connect to effect "mono" input)
FN9-RT-L	loop 9 left stereo return (connect to effect Left output)
TUNER	tuner out
FN9-RT-R	loop 9 right stereo return (connect to effect Right output)
FX10-SN-L	loop 10 left stereo send (connect to effect Left input)
FX10-RT-L	loop 10 left stereo return (connect to effect Left output)
FX10-SN-R	loop 10 right stereo send (connect to effect Right input)
FN10-RT-R	loop 10 right stereo return (connect to effect Right output)
SW 1-2	AMP channel switch jacks (via dry contact)
SW 3-TAP	dry contact switch (Ring) and static-switch for TAP-TEMPO (Tip) control
EXP-1	Expression pedal input (Pedal 1) to control buffer 1 volume
EXP-2	Expression pedal input (Pedal 2) to control buffer 2 volume
MIDI IN	MIDI IN socket
MIDI OUT-THRU	MIDI OUT-THRU socket
DC-IN	9-12Vdc input socket

In SB Mode, hold the MEM button until led SB/MEM blinks. Edit Menu has many configuration options. The display always shows the last option selected. Select which parameter to modify using the UP/DOWN buttons, press ENTER, then use UP/DOWN buttons to set the value and eventually press ENTER again to confirm.

A description of editable parameters is provided below.
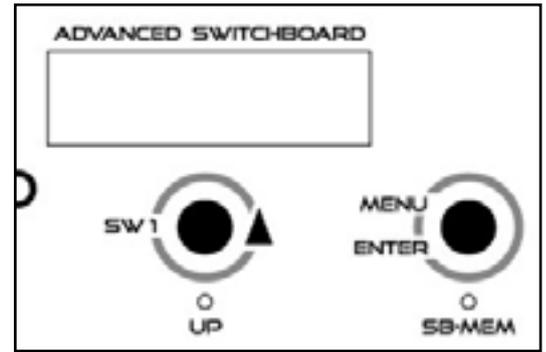
Effect On/Off

Allows effect loops (from 1 to 10) to be included in the signal path.
Press again the ENTER button, the screen shows "edit" indicating that you are in the effect choose mode.
Pressing number switches 1-10 turns each effect loop on/off.
Corresponding LEDs indicate the loops included in the signal path.

Premere Enter
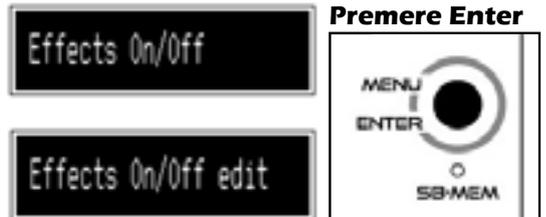
Scegliere i loop da attivare
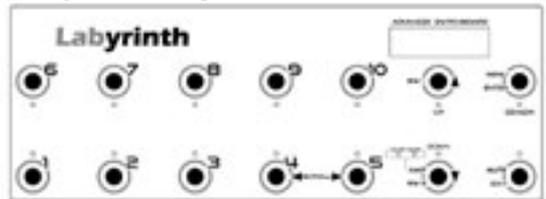
Buffer 2

Buffer located after loop 7. It can be activated/ deactivated.
If activated allows to control the signal level of the effect chain usually connected to the Send/Return of an amp via an expression pedal connected to EXP2 jack.
The pedal value controls the amount of signal flowing into the effect chain connected to the amp Send/Return maintaining reverb and delay tails.
Pedal position is stored in the patch. Therefore it is possible to set a patch main volume for each individual patch.

Master Volume
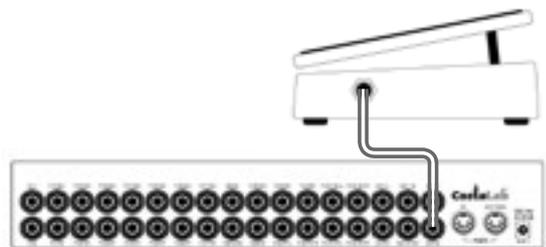
Switch 3

Analog switch on SW3-TAP jack. activable only in MEM Mode.
When this parameter is ON the analog switch is activated and allows to switch amplifier channels.
When a patch is recalled and the parameter is ON, the switch is closed.

Switch Mode
Set the working mode of the 3 analog switches:
Options are: Latch, Timer 250ms, 500ms and 1000ms.
In Latch mode the switch is closed and held closed until another patch is selected.
In the other modes, the switch is closed and held closed for the amount of time selected.
These modes are useful for devices that use "Unlatched" pedals.

Swt Mode Latch

Swt Mode Timer 250ms

Swt Mode Timer 500ms

Swt Mode Timer 1000ms

Amp Select
Labyrint features two separate outputs for two amps or as stereo outputs of stereo effects connected to loops 8, 9 or 10.
This parameter selects the active output: A, B, or A+B..
To use Labyrint in stereo select the A+B mode.

Amp. Select Amp A

EXP PEDALS

Pedal 1/2 On/Off
Activates the EXP1 pedal on the IN-B input buffer or EXP2 pedal on buffer 2.
Once the pedal is active, the signal is fully analogic controlled using the expression pedal connected to the relative jack.
Pedal position is stored into the patch and recalled when the patch is selected.

Pedal 1 On/Off On

Input Volume

Using EXP1 Pedal
This funcion is used to have different sounds depending on the pedal position.
For example let's store a patch with the loop 2 ON containing an Overdrive with a high gain.
Set ON the EXP1 pedal and move the pedal position at 1/4. The resulting sound will be a light crunch as we lowered the guitar volume knob. Then store a patch with these settings. Now move the pedal position at 3/4 so the resulting sound will be a higher gain one. Store this sound as a new patch.
Set now the pedal at maximum, the sound will be a lead sound corresponding to the Overdrive setting. Let's store this third patch.
Select these 3 different patches to recall a Lite Crunch, Crunch and Lead sound without even touch the pedal knobs.
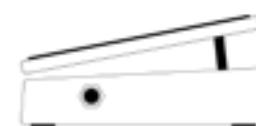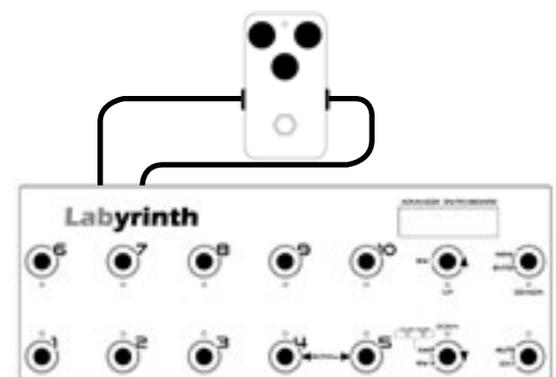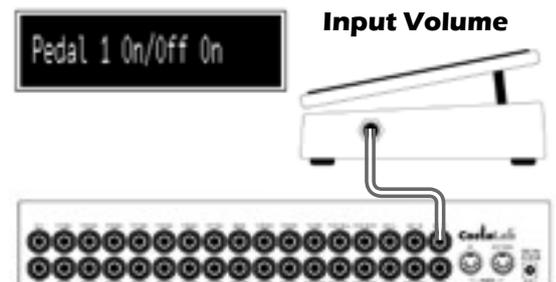
Pedal 1/4 lite crunch

Pedal 1/2 crunch

Pedal Full Lead

PEDAL MANAGEMENT

Pedal 1/2 Value
Indicates the current volume value of EXP1 or EXP2 Pedal (from 0 to 1023).
This parameter can be set also if no pedal is connected to the EXP jack.

`Pedal 1 Value 1023`

Pedal 1/2 Min:
Sets the minumum value of EXP1 or EXP2 Pedal (from 0 to 1023).

`Pedal 1 Min    0`

Pedal 1/2 Max:
Sets the maximum value of EXP1 or EXP2 Pedal (from 0 to 1023).

`Pedal 1 Max 1023`

Pedal 1/2 MIDI cc:
Sets the Control Change sent via MIDI Out with EXP1 or EXP2 Pedal.

`Pedal 1 MIDI cc  11`

Pedal 1/2 mode
Three working modes:
- Int (acts as volume pedal, EXP1 for Buffer 1, EXP2 for Buffer 2)
- Ext (sends Control Change)
- Int. Ext. (sends Control Change and acts as volume pedal simultaneously)

`Pedal 1 mode Int.Ext.`

PROGRAM E CONTROL CHANGE

PC Tx MIDI Ch
Sets the Program Change (from 1 to 128) sent via MIDI and MIDI Channel (from 1 to 16).

`PC Tx 3 MIDI Ch 1`

CC Tx N Val
Sets the number (from 0 to 127) and value (from 0 to 127) of relative Control Change.

`CC1 Tx N.0 Val.0`

CC Tx MIDI Ch
Sets the MIDI Channel (from 1 to 16) of relative Control Change.

`CC1 Tx MIDI ch.Off`

You can set up to 5 Program Change and 5 Control Change simultaneously.

TAP TEMPO

TAP MIDI Ch
These parameters set the kind of tap tempo sent via MIDI:
- Notes and value,
- Control Change and value,
- MIDI Channel
Use Scroll buttons to switch between parameters.

`Tap Cc. 0 MIDI Ch 1`

Rx Clock
If On, Labyrinth can receive MIDI clock from an external device.

`Rx Clock  Off`

Name

Set patch name. Use UP and DOWN buttons to change characters, use SCROLL button to move between letters.

`Name Memory 3`

MIDI ChTx/Rx

Set general MIDI channel for EXP1 and EXP2 pedals.

`MIDI ChTx/Rx   14`

Thru On/Off

Set MIDI OUT mode between OUT or THRU.
When in THRU, all incoming MIDI messages received on MIDI IN jack are
retransmitted on MIDI OUT jack.

`Thru On/Off  Off`

Wireless On/Off

Activates or deactivates the wireless mode.

`Wireless On/Off  Off`

ATTENTION: This parameter is set to OFF by default, if you want use the pedalboard with Iphone apps (iOS) or Android set it to "ON". When the pedalboard is switched OFF it is set to OFF automatically.

Device name

Set device name of the bluetooth device. Use UP and DOWN buttons to change characters, and SCROLL buttons to navigate.

`Device Name Labyrinth`

Write

Saves all current patch parameters and settings on a memory.
Press ENTER, the display shows the bank and memory number blinking. Use UP and DOWN buttons to select the bank and with 1 to 10 switches select the desired memory number, then press ENTER to store the patch. COMPLETE will appear on the display, indicating the succesful save. Press EXIT to return.

`Write`

Factory Restore

In order to perform a factory reset, power on the pedalboard while holding switches 1 and 6. The device will now reset, indicated by the "Init Memory" prompt in the LCD display. Wait for the factory restore procedure to finish ("Complete").

N.B. Please note that the factory restore will delete all user presets and data. It is strongly suggested to perform a backup with the **Labyrinth Editor software** before proceed to the factory restore.

Update Firmware

With "Boot Loader" software downloadable from the Costalab website is possible to update Labyrinth firmware to the latest version.
Connect Labyrinth to a PC using the Roland UM1 MK2 MIDI-USB interface via MIDI jacks.
To enter boot-loader mode, power the pedalboard while holding switches 6 and 7.
When the display shows "Bootloader", you can proceed with the update.

Firmware Version

Start the pedalboard while holding switch 2 to verify the firmware version installed.
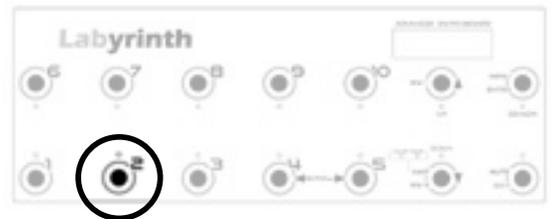
Expression Pedal calibration

Pedals connected to jack EXP-1 e EXP-2 can be calibrated by powering on the pedalboard while holding switch 4. Follow the indications on the screen to perform a complete calibration.
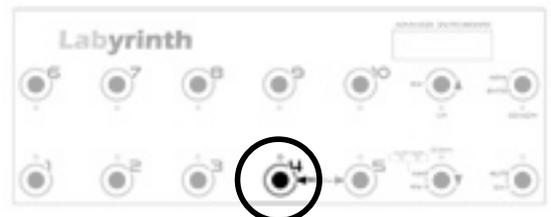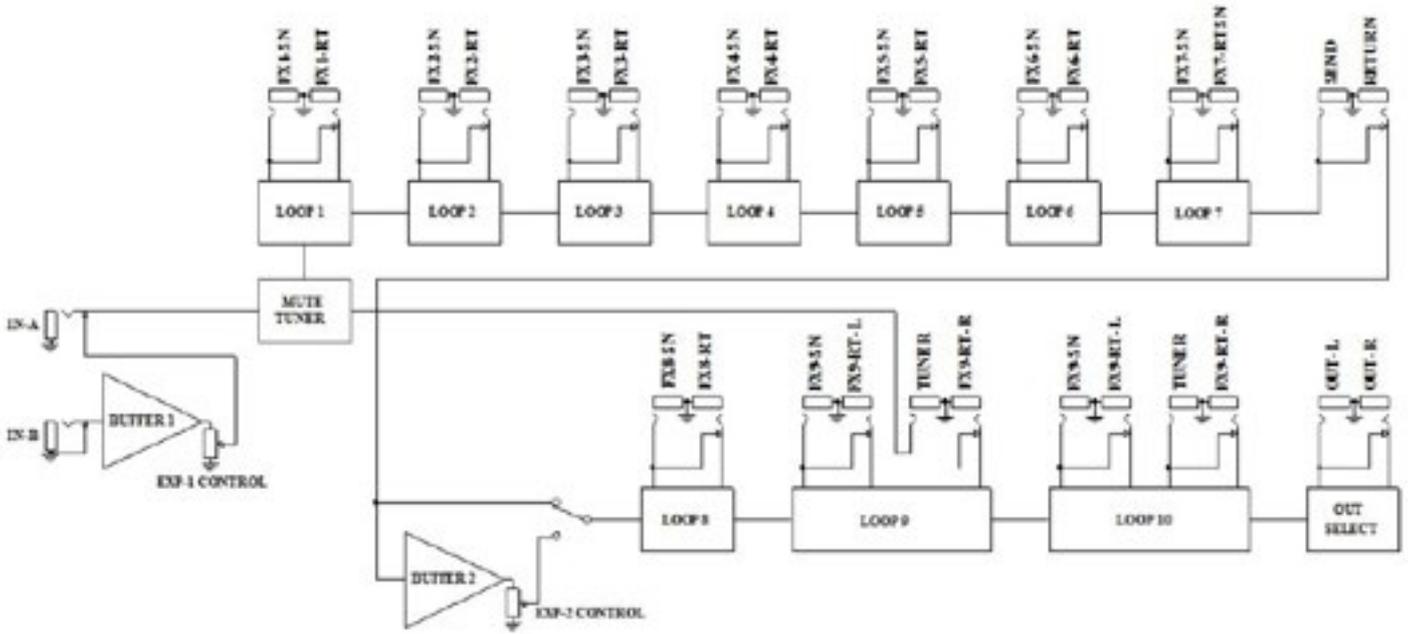
AMP SWITCH SW-2 SW-2

Switch SW-1 and SW-2 wiring for AMP remote switching:


Ring (SW-2)
Tip (SW-1)
Sleeve (SW-1 SW-2)
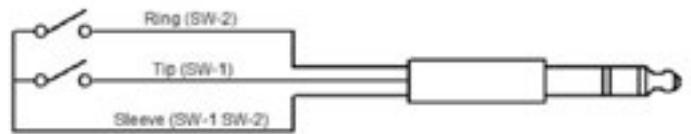
EXPRESSION PEDAL EXP-1 EXP-2

Switch SW-3 and TAP Tempo wiring:
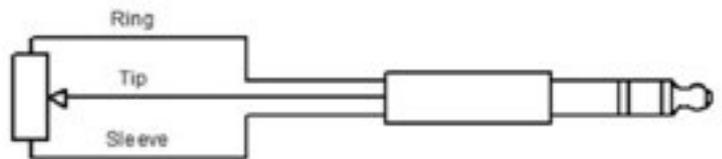
Ring
Tip
Sleeve

TAP TEMPO AMP SWITCH SW-3

EXP-1 and EXP-2 pedals wiring:

Ring (SW-3)
Tip (TAP)
Sleeve (TAP/SW-3)
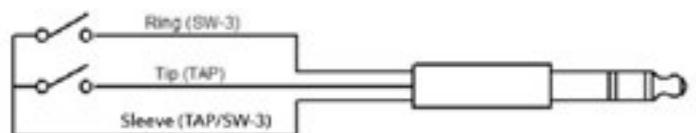
TECHNICAL SPECIFICATIONS

Power supply: 9-12 Vdc
Max current: 0,7 A (power absorption with all loops and switches on)
Dimensions (LxwxH): (360x130x61)mm
Weight: 1,58 Kg

SUPPORT

Firmware update

http://www.costalab.com/software

Video Tutorial CostaLab Labyrinth

https://www.youtube.com/
playlist?list=PLfy1VOplOzpofcxERB5uULxdyEqINBQfS

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