



Dsh4 – User Manual

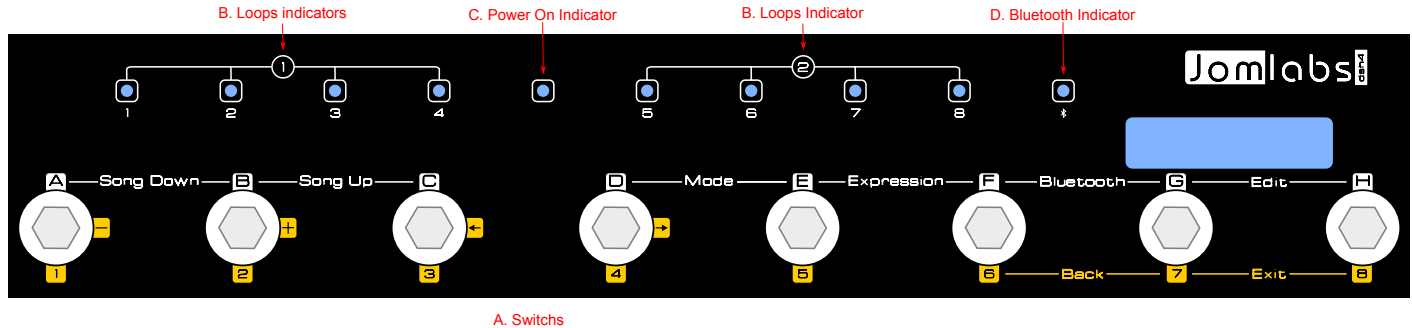
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1. Features

- 8 switches
- Connect up to 8 stomp boxes or effects (8 loops)
- Attenuator and Booster integrated (In loop 1)
- 256 banks
- 8 Midi messages for bank
- 16 Continius Control Change Toggle Command for bank (Values 0 and 127)
- Song Names
- Bank Names
- Loops Names
- Control Change Toggle Names
- Midi Input and Output
- You can configure the functions of each switch
- Expression pedal Input
- Input power supply: 12V DC 2A
- 2 Output power supply at 12V DC (600mA) and 9V DC (600mA)
- Dimensions (LxAxH in mm): 454x86x50
- Programming over Bluetooth using app JomLabs Control

2. Pedal elements



A) Switches:

The Dsh4 pedal has 8 backlit switches labelled A to H. Each of the functions assigned to the switches are configurable (see section 4.2.6. - General Settings).

B) Loops Indicator

It shows which loops are activated in each module.

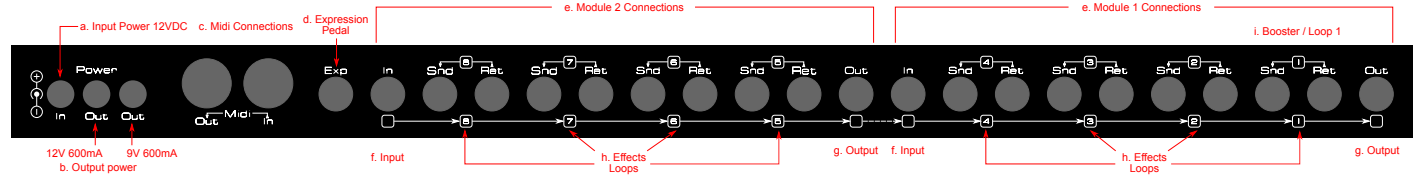
C) Power On Indicator

This Led is lit when the pedal is on.

D) Bluetooth State Indicator

It shows Bluetooth connection state (On / Off).

3. Connections



A) Power Supply Input

Connect included power supply to this input to use the pedal.

B) Power Outputs

Dsh4 pedalboard can supply 12V DC and 9V DC power. See polarity schema indicated. These outputs may provide up to 600mA.

C) Midi Connections

Connect Midi Output to the device to control Midi Input. If you have a compatible device that can send tuner info over Midi, connect device's Midi output to the Dsh4's Midi input.

D) Expression Pedal

You can connect a passive expression pedal to this port using a jack stereo cable. It is not necessary calibrate the pedal to use it.

E) Loops modules

Dsh4 has to separate loops modules. They have 4 connections for effect pedals and an Input and Output. If you do not connect the module 2 output, this is connected directly to the module 1 input.

F) Module Input

Connect Module 2 input to guitar output using a mono jack cable.

You can use module 1 with your amp loop connecting amp send to module 1 input.

G) Module Output

To use all 8 loops before the amplifier only connect module 1 output to amplifier input. In the case of wanting to use pedals before and after pre-amplifier, connect the module 2 output to the amplifier input and module 1 output to return of the amplifier.

H) Effect Loops

Connect effect pedal input into desired loop send, and its output into loop return. The connection between the loops within Dsh4 pedal is performed serially (from the loop 8 to 1).

I) Booster / Loop 1

The loop 1 is internally connected to an analog booster, whose volume can be controlled in each bank. If you do not want to use it, connect an effect or stomp box into the loop 1 to bypass it.

4. Function Modes

There are 3 function modes in Dsh4 pedal board:

- **Bank Mode:** This mode allows activate stomp boxes connected into the loops inputs, sending Midi commands and setting volume and booster level.
- **Edit Mode:** You can edit bank parameters or general pedal settings.
- **Jam Mode:** It allows direct access to the activation of the stomp boxes connected into the loops.
- **Tuner Mode:** It allows get tuner information sent by compatible Midi Devices.

Dsh4 pedal board contains 8 switches labelled A to H. These switches provide four different functions depending on current mode selected:

- **In Bank Mode:** You can change current bank or send functions configured in the switches
- **In Edit Mode:** You can modify parameters or settings
- **In Jam Mode:** Toggle On / Off stomp boxes connected
- **In Tuner Mode:** You can configure values to set tuner mode in your Midi Device

4.1. Bank Mode

After pressing change bank switch, this one lights on and the screen will show song and bank names.

After selected the bank, next actions are made:

- Toggle On loops configured
- Setting bank attenuator level
- Setting bank booster level
- Sending Midi messages configured

Additional Functions:

Following table shows the actions performed when pressing two buttons simultaneously. These functions are provided with factory setting, but they can be altered (see section 4.2.6.1 - Setting Button Functions):

Switches combination	
A y B	Increments current song
B y C	Decrements current song
D y E	Toggle Jam Mode / Bank Mode
E y F	Toggle function of expression pedal connected
F y G	Toggle On / Off Bluetooth
G y H	Change to Edit Mode for modify parameters and settings

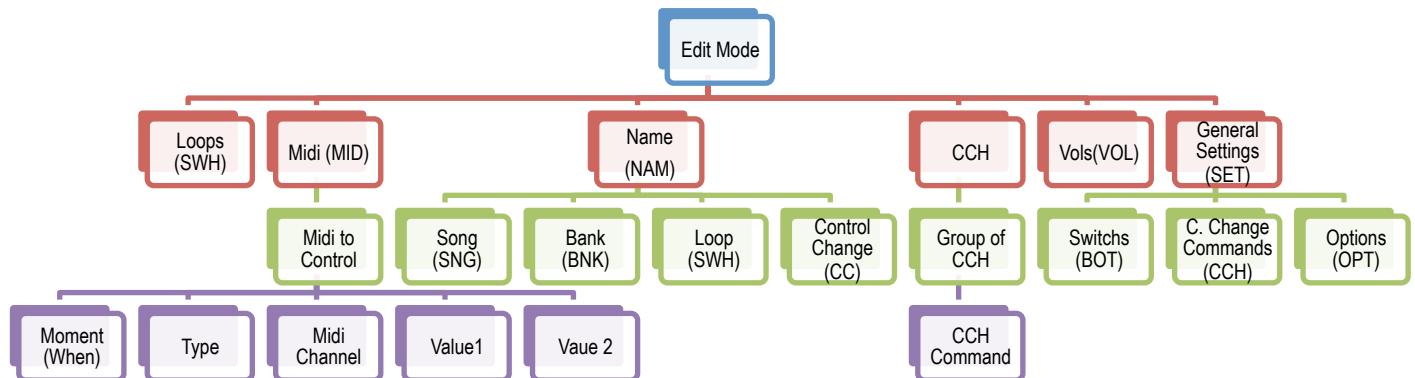
4.2. Edit Mode

In the Edit Mode you can configure bank parameters and general settings. There are 256 banks available for each of the pedals, depending switches they will be arranged in more or less songs. The default setting is 32 songs, 8 banks each one.

To edit the currently selected bank, you must press the buttons G & H simultaneously. In each editing mode screen there is information of actions that can be performed for pressing each of the switches shown.

In any screen edit mode pressing F & G returns to the previous screen and pressing switches G & H leaves edit mode (if you have changed any parameters Dsh4 will ask the user whether to save the bank).

The following diagram shows the menus and screens available in Edit mode:



The next table shows functions associated to each switch:

Edit Mode	
A	Configure loops activation
B	Configure Midi Commands
C	Set bank name, song name, effects names and Control Change Toggle names
D	Configure Control Change Commands
E	Setting attenuator and booster level for the bank
F	General Settings

4.2.1. Loops Activation / Deactivation

After selecting this option, pressing on the switches activates or deactivates the pedals connected into the loops. Once pressed, it turns on / off the switch and effect name is shown in the screen. You can change effect name in Edit Mode (see section 4.2.3 – Set Names).

4.2.2. Midi Commands

You can configure up to 8 Midi Commands in each Bank. Available commands are:

Midi Commands			
Continius Control Change	Start	Stop	Note Off
Program Change	Continue	Note On	Clock

You can associate Midi commands to events in the bank. Next table shows available events:

Events			
DISABLED	Midi command disabled	LONG PRESS	Long press, more than one second
BANK 1ST	After loading the bank	AFTER LONG	After long press
BANK 2ND	2 nd pressing	EXPRESSION	Moving expression pedal

The parameters necessary to set up a MIDI command are as follows:

1. Midi Command to Edit (1 to 8)
2. Moment when the command is launched (see table above)
3. Command Type (see table above)
4. Midi channel (only for some commands)
5. Command number (only for some commands)
6. Command value (only for some commands)

Next table shows functions associated to each switch:

Midi Commands	
A	Decrement parameter value
B	Increment parameter value
C	Select previous parameter
D	Select next parameter

It is very important to establish the event in which the Midi will be sent, otherwise it will not be sent once made the push command is launched.

4.2.3. Edit names

In this section you can set song, bank, effects and control change toggle names.

Next table shows functions associated to each switch:

Select name to edit	
A	Edit current song
B	Edit current bank
C	Edit loops names
D	Edit Control Change Toggle Names

After selected name to edit, using switches you can change each letter of the name and cursor position. Next table shows functions associated to each switch:

Edit Name	
A	Previous letter
B	Next letter
C	Move cursor to the left
D	Move cursor to the right
E	Select previous loop / CC (Only when editing loop or cc toggle names)
F	Select next loop / CC (Only when editing loop or cc toggle names)

4.2.4. Control Change Toggle Commands

Continius Control Change Toggle Commands o Control Change Toggle Commands is a simplification of the Change Control to enable or disable features of the Midi modules. They used to bypass effects or functions in the devices. For more information please read your Midi device carefully.

Using these commands you can control state (on / off) up to 16 functions.

Next table shows functions associated to each switch:

Control Change Toggle Commands	
A (Long Press)	CC1: Select switches 1 – 8
B (Long Press)	CC2: Select switches 9 – 16
A, B, C, D, E, F, G, H	Toggle Control Change Command (1- 8 or 9-16)

After selecting the group of commands, pressing each of the switches activate or deactivate the command and lighting on the switch if the command is activated. When the command is activated, Dsh4 sends value 127 to the Midi Channel and Midi Command configured (see section 4.2.7.1 Midi Values on Control Change Toggle Commands). When the command is disabled, Vlt1 sends value 0.

Pressing the switch shows the name configured in the command. (see section 4.2.6.2 – Midi Values on Control Change Toggle Commands).

4.2.5. Setting Volume levels

Using this option you can set attenuator level and Booster level for the selected bank. A level of 100 for the attenuator means no reduction in volume for the bank.

Next table shows functions associated to each switch:

Setting Volume levels	
A	Decrement value of parameter selected
B	Increment value of parameter selected
C	Select previous parameter (attenuator o booster)
D	Select next parameter (attenuator o booster)

4.2.6. General Settings

In this menu you can configure next options:

- Switches functions
- Control Change Toggle Commands values
- General options

Next table shows functions associated to each switch:

General Settings	
A	Go to switches functions settings
B	Go to Control Change Toggle Commands Values Settings
C	Go to General Options settings

4.2.7. Switches function settings

Vlt1 pedal lets you configure the behaviour of the switches of all the control options available for the switches and combinations of them. There are 4 actions that can be configured related to the type of press:

- Simple press
- Hold press
- After Hold press
- Combined switches

Next table shows functions associated to each switch:

Switch	Simple press	Hold press	After Hold Press	Combined switches
A	BTNA	BTNA.HOLD	BTNA.RLS	BTNAB
B	BTNB	BTNB.HOLD	BTNB.RLS	BTNBC
C	BTNC	BTNC.HOLD	BTNC.RLS	BTNCD
D	BTND	BTND.HOLD	BTND.RLS	BTNDE
E	BTNE	BTNE.HOLD	BTNE.RLS	BTNEF
F	BTNF	BTNF.HOLD	BTNF.RLS	BTNFG
G	BTNG	BTNG.HOLD	BTNG.RLS	BTNGH
H	BTNH	BTNH.HOLD	BTNH.RLS	

Next table shows available behaviours:

Behaviour	Description
None	No function set
Go Bank	Load the bank
Bank Up	Next Bank
Bank Down	Previous Bank
Edit Bank	Edit current selected Bank
Song Down	Previous song
Song Up	Song next
Tap Tempo	Set tap tempo
Toggle Expression	Select next Midi command assigned to the expression pedal
BT Toggle	Activate / Deactivate Bluetooth
JAM	Activate / Deactivate Jam Mode
Tuner	Activate tuner mode (Only compatible Midi Devices)
Loop i	Activate / Deactivate loop i
Toggle Cci	Send Control Change Toggle Command (1 to 16)

Some features are not supported with pressing type, function and event. Next table shows compatible features:

Press type	Function	Compatible Events	Not Compatible Events
Simple Press Combined switches	Go Bank	BANK 1ST BANK 2ND LONG PRESS AFTER LONG EXPRESSION	
Long Press After Long Press	Go Bank	BANK 1ST BANK 2ND EXPRESSION	LONG PRESS AFTER LONG
Simple Press Combined switches Long Press After Long Press	Bank Down Bank Up	BANK 1ST EXPRESSION	BANK 2ND LONG PRESS AFTER LONG

Next table shows default factory settings defined:

Press type	Function	Press type	Function
BTNA	Go Bank	BTNA.RLS	None
BTNB	Go Bank	BTNB.RLS	None
BTNC	Go Bank	BTNC.RLS	None
BTND	Go Bank	BTND.RLS	None
BTNE	Go Bank	BTNE.RLS	None
BTNF	Go Bank	BTNF.RLS	None
BTNG	Go Bank	BTNG.RLS	None
BTNH	Go Bank	BTNH.RLS	None
BTNA.HOLD	None	BTNAB	Song Down
BTNB.HOLD	None	BTNBC	Song Up
BTNC.HOLD	None	BTNCD	Tuner
BTND.HOLD	None	BTNDE	JAM
BTNE.HOLD	None	BTNEF	Toggle Expression
BTNF.HOLD	None	BTNFG	BT Toggle
BTNG.HOLD	None	BTNGH	Edit Bank
BTNH.HOLD	None		

Next table shows functions associated to each switch:

Switches functions settings	
A	Previous function
B	Next function
C	Previous switch
D	Next switch

4.2.7.1. Control Change Toggle Commands Midi Values

Use this menu for setting Midi values for the 16 Control Change Toggle Commands and their names.

The parameters required for configuration these commands are:

- Control Change Command to edit
- Midi Channel
- Command number

Next table shows functions associated to each switch:

Control Change Toggle Commands Midi Values	
A	Decrement parameter value
B	Increment parameter value
C	Select previous parameter
D	Select next parameter

4.2.7.2. General Options

In this menu you can set general options for the Vlt1 Pedal:

Available options are:

Option	Values
Use BT	Yes No

Use Bluetooth

Use this options for switch on / switch off Bluetooth function to avoid interferences.

Next table shows functions associated to each switch:

General Options	
A	Decrement selected option value
B	Increment selected option value
C	Select previous option
D	Select next option

4.3. Jam Mode

Pressing simultaneously switches D & E (factory setting), or through the definition of a function in a switch, you can set Jam mode. In this mode you have direct access to the activation / deactivation of the Loops for each switch.

After Jam mode is selected, loops activated in current bank will lit. To toggle on a loop you must press its respective switch, labelled in orange, below the switch.

Next table shows functions associated to each switch:

Jam Mode	
A,B,C,D,E,F,G,H	Toggle On / Off Switch
D+E	Toggle Jam Mode / Bank Mode
F+G	Exit Jam Mode
G+H	Save current loops combination into selected bank

4.4. Tuner Mode

You can enter this mode pressing C & D switches in Edit Mode. In this mode Dsh4 shows tuner information sent by the compatible Midi Device. You need to connect a standard Midi Cable from Midi Out in your device to Midi In port in the Dsh4.

There are some devices likes Fractal Axe which need to set tuner mode also. To set tuner mode in the device, Dsh4 can send Midi Command at the beginning and end of tuner mode.

Next table shows functions in the switches to set Midi Command to send to the compatible device:

Tuner Mode	
A	Decrement Midi Channel
B	Increment Midi Channel
C	Decrement Midi Command
D	Increment Midi Command
F+G	Exit Midi Command Edit Mode / Exit tuner Mode

After these values are set, entering in tuner mode Dsh4 will send the value 127 in Midi and commands defined. Exiting tuner mode Vlt1 will send the value 0.

5. Bluetooth Connection

Dsh4 pedal has a Bluetooth port useful to send commands and parameters using JomLabs Control app, available in Google Play.

To avoid unwanted access to Dsh4 pedal is recommended deactivate Bluetooth function after configure banks and settings (See section 4.2.6.3 – General Options).

For more information you can visit www.jomlabs.com