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## AN003 : Bitstream 3X – Mackie/Logic control emulation

The purpose of this application note is to describe the implementation of the Mackie/Logic control emulation in the Bitstream 3X

### Requirements

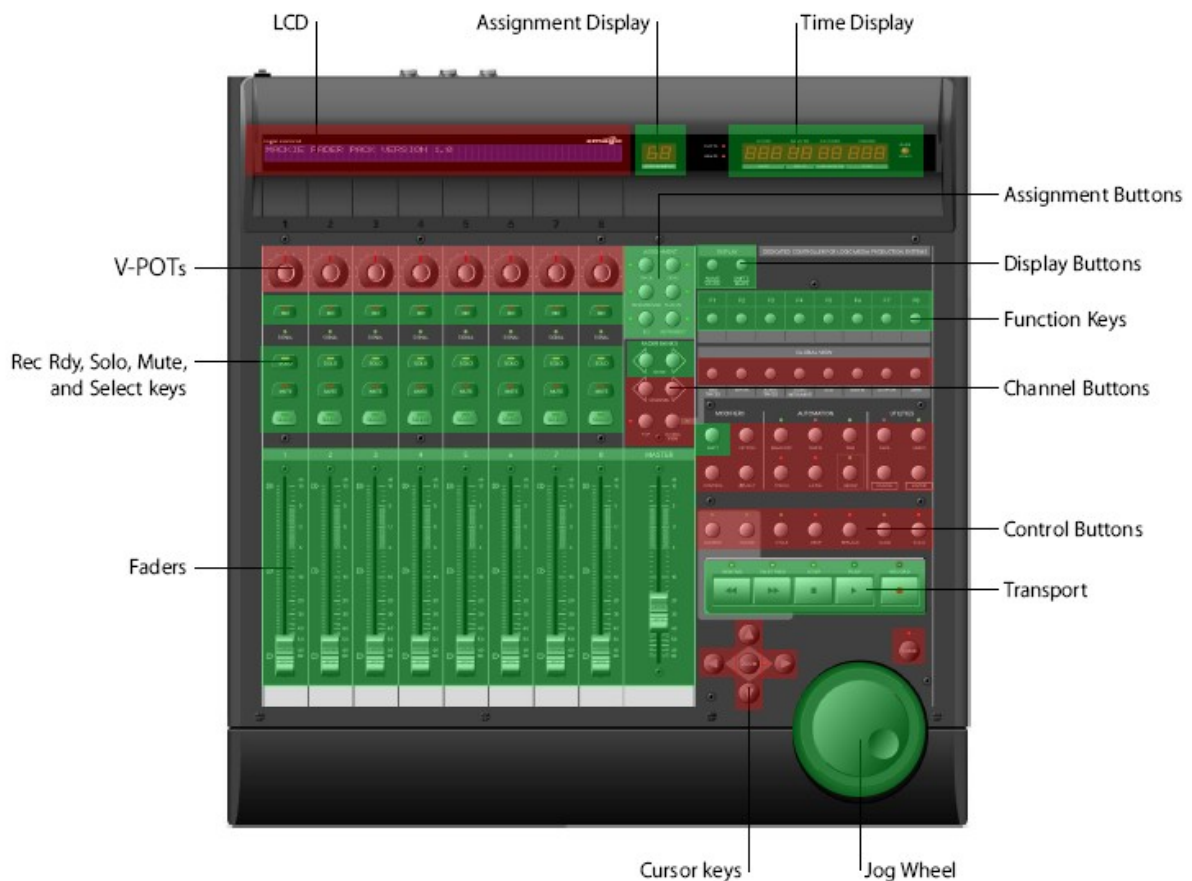
This document only concerns owners of Bitstream 3X featuring built-in **ROM V1.6 or higher**, for older versions, please contact Wave Idea in order to know how to get an up to date firmware version.

To check Bitstream 3X ROM version, please refer to the user's manual.

It is also necessary to download the *Mackie\_control\_v3.bs3* library file to the Bitstream 3X (download is done using the Bitstream 3X configuration software)

See the end of this document to know how to program the Bitstream 3X with the Mackie library file using the configuration software.

### Overview of the Mackie/Logic control available controls



The red areas are currently not emulated by the Bitstream 3X (some of them should be emulated in future firmware versions).

The green areas are emulated by the Bitstream 3X.

**List of controls emulated by the Bitstream 3X**

Mackie control	Bitstream 3X control	Emulation
LCD	-	-
Assignment display	Display	√
Time display	Display	√
V-pots	-	-
V-select buttons	Programmable buttons (group 4)	√
Assignment buttons	Programmable buttons (group 5)	√
Display buttons	Programmable buttons (group 6)	√
Function keys	Programmable buttons (group 7)	√
Fader banks L/R	Group buttons	√
Channel buttons	-	-
Control buttons	-	-
Transport buttons	Transport buttons	√
Jog wheel	Endless encoder (while encoder button pressed)	√
Cursor keys	-	-
Faders 1-8	Faders	√
Rec/Rdy buttons	Programmable buttons (group 0)	√
Solo buttons	Programmable buttons (group 1)	√
Mute buttons	Programmable buttons (group 2)	√
Select buttons	Programmable buttons (group 3)	√
Master fader	Cross-fader	√
Faders feedback	Faders with hook mode enabled	√

In addition to the above controls, the Bitstream 3X emulates the different SYSEXs received and transmitted by the Mackie/Logic Control to perform connection with the Host computer.

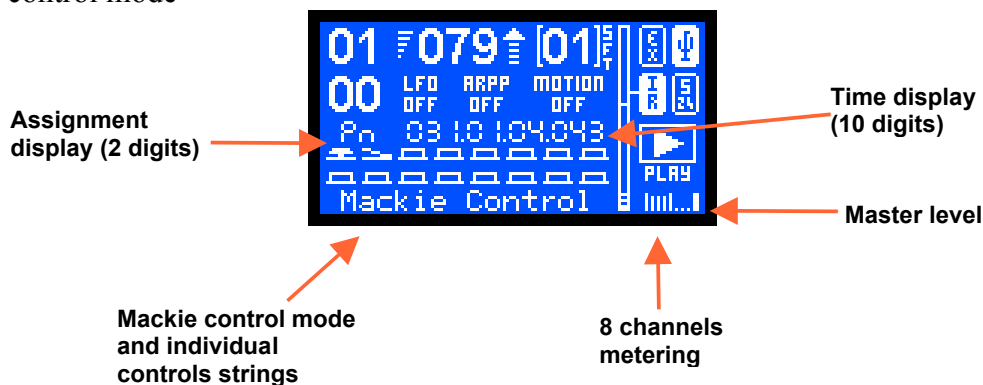
From the firmware version 1.6 and higher, the Mackie control communication is done on MIDI Out 1 and USB Out 1, while all other controls of the Bitstream 3X are generating standard Ccs on MIDI Out 2 and USB Out 2.

**Entering the Mackie/Logic control mode**

To Enter into the Mackie control emulation operating mode, simply press the Bitstream 3X “mode” button until the LCD displays “Mackie Control”.

To Enter into the Logic control emulation operating mode, simply press the Bitstream 3X “mode” button until the LCD displays “Logic Control”.

The following screen copy indicates the new displayed parameters while the Bitstream 3X is in Mackie control mode



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All the other information displayed on the above screen are common to the other Bitstream 3X operating modes, these other displayed parameters are described in the Bitstream 3X user manual.

Please note the Bitstream 3X must contain the Mackie\_control\_V3.bs3 library file to properly emulate the Mackie/Logic control.

### **Leaving the Mackie/Logic control mode**

To exit from the Mackie or Logic control emulation operating mode, simply press the Bitstream 3X “mode” button until the LCD displays another operating mode of the Bitstream 3X.

### **Emulation in details**

Here is a list and explanation of the Mackie/Logic control emulation by the Bitstream 3X.

All the following controls are sent/received on MIDI Out 1 and USB Out 1.

The others controls of the Bitstream 3X that are not emulating Mackie/Logic controls are sent on MIDI Out 2 and USB Out 2, these controls send standard Ccs, please refer to the Mackie control library file to know what Ccs are assigned to these controls.

#### ***MIDI exclusive systems***

The Bitstream 3X emulates the Mackie/Logic control Sysex used to communicate with the host computer. Among these Sysex, the following Ids have been implemented:

Received      Host Connection Reply  
                    Go Offline  
                    Firmware Version request

Transmitted    Host Connection Query  
                    Host Connection Confirmation  
                    Firmware Version reply

#### ***Display information***

The Bitstream 3X emulates the Mackie/Logic control displays as follow:

##### Time display

Fully implemented, the Bitstream 3X displays the timing information sent by the host. The format displayed is similar to the Mackie/Logic control :

*000\_00\_00\_000*

##### Assignment display

Fully implemented, the Bitstream 3X displays the assignment display of the Mackie/Logic control. The format

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is similar to the Mackie/Logic control, 2 digits 7 segments are displayed on the Bitstream 3X LCD

$P_n$

### LCD display

Not implemented in the current firmware version

### Channels metering

The Bitstream 3X displays all 8 channels metering information. These information represent the peak level information sent by the host.

The Bitstream 3X decrease these peak levels information with a decay time of 300ms, as mentioned in the Mackie/Logic control specification.

### Master fader level

The Bitstream 3X displays the master fader level. It is not a part of the Mackie/Logic control specification but very useful. This information is displayed on the bottom right of the Bitstream 3X LCD.

### Leds information

Not implemented in the current firmware version

### V-pots led rings

Not implemented in the current firmware version

## ***Emulated controls***

The Bitstream 3X emulates the Mackie/Logic control controls as follow:

### V-pots

Not implemented in the current firmware version

### Channel faders 1-8

The Bitstream 3X faders 1-8 emulate these controls. This emulation is available on the 21 groups of the Bitstream 3X.

### Master fader 9

The Bitstream 3X crossfader emulates this control. This emulation is available on the 21 groups of the Bitstream 3X.

Please note the crossfader generates a single MIDI event while the Bitstream 3X is in Mackie/Logic mode.

### Rec-Rdy buttons 1-8

The Bitstream 3X programmable buttons emulate these controls. This emulation is available on the group 0 of the Bitstream 3X.

The behavior of the Bitstream 3X programmable buttons has been set to “push” mode as the Mackie/Logic control buttons (as opposed to the “toggle” button behavior)

### Solo buttons 1-8

The Bitstream 3X programmable buttons emulate these controls. This emulation is available on the group 1 of the Bitstream 3X.

The behavior of the Bitstream 3X programmable buttons has been set to “push” mode as the Mackie/Logic control buttons (as opposed to the “toggle” button behavior)

### Mute buttons 1-8

The Bitstream 3X programmable buttons emulate these controls. This emulation is available on the group 2 of the Bitstream 3X.

The behavior of the Bitstream 3X programmable buttons has been set to “push” mode as the Mackie/Logic control buttons (as opposed to the “toggle” button behavior)

### Select buttons 1-8

The Bitstream 3X programmable buttons emulate these controls. This emulation is available on the group 3 of the Bitstream 3X.

The behavior of the Bitstream 3X programmable buttons has been set to “push” mode as the Mackie/Logic control buttons (as opposed to the “toggle” button behavior)

### Cursor keys

Not implemented in the current firmware version

### Jog wheel

The Bitstream 3X endless encoder emulates this control while the Bitstream 3X encoder button is pressed. This emulation is available on the 21 groups of the Bitstream 3X.

Please note the endless encoder generates a MIDI event while the Bitstream 3X is in Mackie/Logic mode and while the Bitstream 3X encoder button is pressed (as opposed to all other modes)

*Bitstream 3X encoder button pressed and encoder turned* : The Bitstream 3X will emulate the Mackie/Logic control jogwheel.

*Bitstream 3X encoder button NOT pressed and encoder turned* : The Bitstream 3X will NOT emulate the Mackie/Logic control jogwheel, the Bitstream 3X encoder will be used as a selector function, as all other Bitstream 3X operating modes.

### Transport buttons

The Bitstream 3X transport buttons emulate these controls. This emulation is available on the group 0 of the Bitstream 3X.

### Display buttons

The Bitstream 3X programmable buttons emulate these controls. This emulation is available on the group 6 of the Bitstream 3X.

The behavior of the Bitstream 3X programmable buttons has been set to “push” mode as the Mackie/Logic control buttons (as opposed to the “toggle” button behavior)

### Function keys

The Bitstream 3X programmable buttons emulate these controls. This emulation is available on the group 7 of the Bitstream 3X.

The behavior of the Bitstream 3X programmable buttons has been set to “push” mode as the Mackie/Logic control buttons (as opposed to the “toggle” button behavior)

### V-select buttons

The Bitstream 3X programmable buttons emulate these controls. This emulation is available on the group 4 of the Bitstream 3X.

The behavior of the Bitstream 3X programmable buttons has been set to “push” mode as the Mackie/Logic control buttons (as opposed to the “toggle” button behavior)

### Assignment buttons

The Bitstream 3X programmable buttons emulate these controls. This emulation is available on the group 5 of the Bitstream 3X.

The behavior of the Bitstream 3X programmable buttons has been set to “push” mode as the Mackie/Logic control buttons (as opposed to the “toggle” button behavior)

### Fader Left-Right bank buttons

The Bitstream 3X Up and Down buttons emulate these controls while the Bitstream 3X current function is 'Group'.

When changing group on the Bitstream 3X, Fader Left right bank change MIDI events are sent by the Bitstream 3X (Left = Down / Right = Up)

### Channel bank buttons

The Bitstream 3X programmable buttons emulate these controls. This emulation is available on the group 6 of the Bitstream 3X.

The behavior of the Bitstream 3X programmable buttons has been set to “push” mode as the Mackie/Logic control buttons (as opposed to the “toggle” button behavior)

### Control buttons

Not implemented in the current firmware version

### Shift button

The Bitstream 3X SHIFT button emulates this control

### Faders feedback

The Bitstream 3X emulates faders feedback feature of the Mackie/Logic control.

When faders are updated directly from the software (Logic, Ableton Live, ...) the new value is sent to the Bitstream 3X. The controller will update the new fader position and set the fader as unhooked so there will be no jump in value as soon as the physical fader will be updated again.

This feature can be enabled/disabled from the configuration software as well as from the controller menus.

### **Example using Ableton Live 5 / 6**

Ableton Live is compatible with the Mackie Control mode. You can use the Bitstream 3X Mackie emulation mode to control Ableton Live.

Please note the V-pots of the Mackie control are not emulated by the Bitstream 3X because of the different nature of the controls (Bitstream pots are analog potentiometers, on the other hand, Mackie pots are endless encoders). The Bitstream cannot emulate these V-Pots.

When using the Bitstream 3X in Mackie mode and connected to Ableton Live, the parameters mentioned in this document are already programmed, while the other parameters need to be assigned directly from Ableton Live (Edit MIDI map).

In this way, the Bitstream 3X will emulate several controls of the Mackie, it will also generate standard Ccs to control the other non-assigned parameters in Ableton Live.

Another advantage of using the Mackie mode to control Live is the audio channels metering and time information that are displayed on the Bitstream 3X LCD.

### Ableton Live configuration

Open the preference menu in Ableton Live and select the MIDI configuration tab.

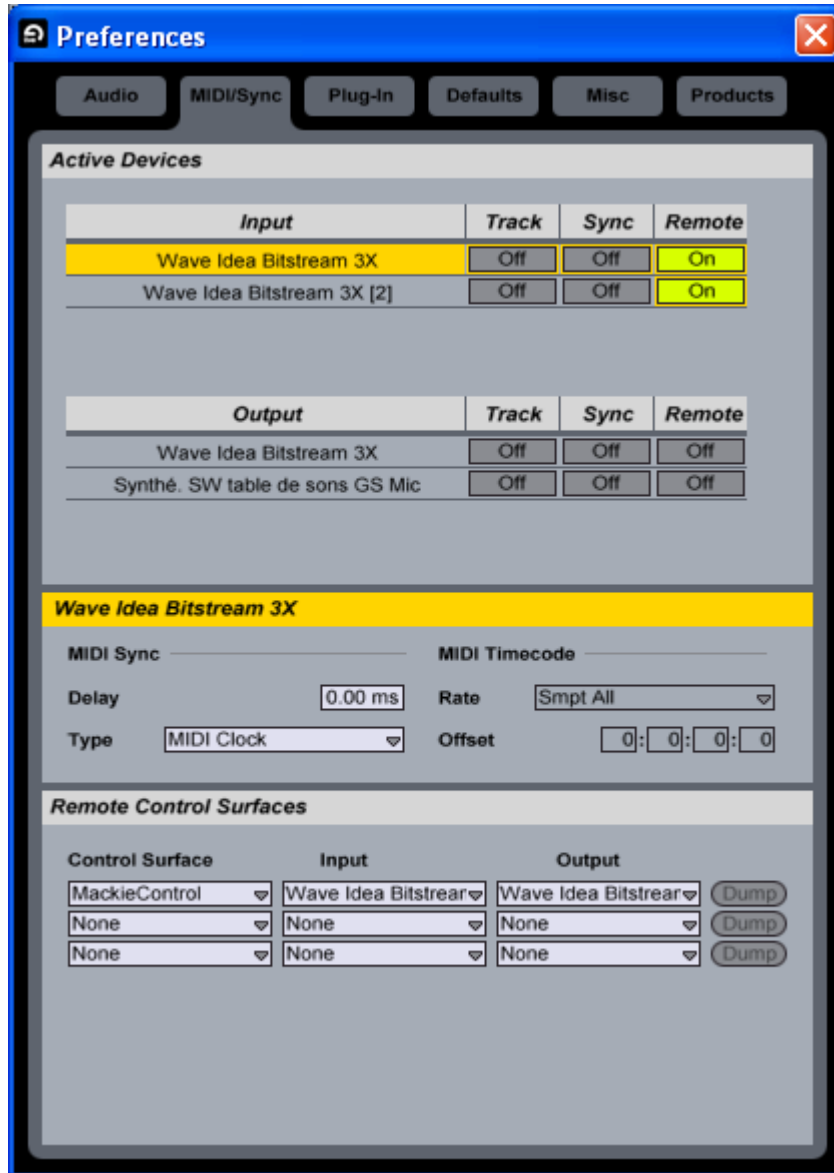
On the screen shot below, we can see the Bitstream 3X USB port 1 has been selected as the active MIDI input for remote controls (this allows to mix the Mackie control mode with the User defined mode of the Bitstream 3X)

No MIDI sync has been selected since it is already implicit to the Mackie control mode.

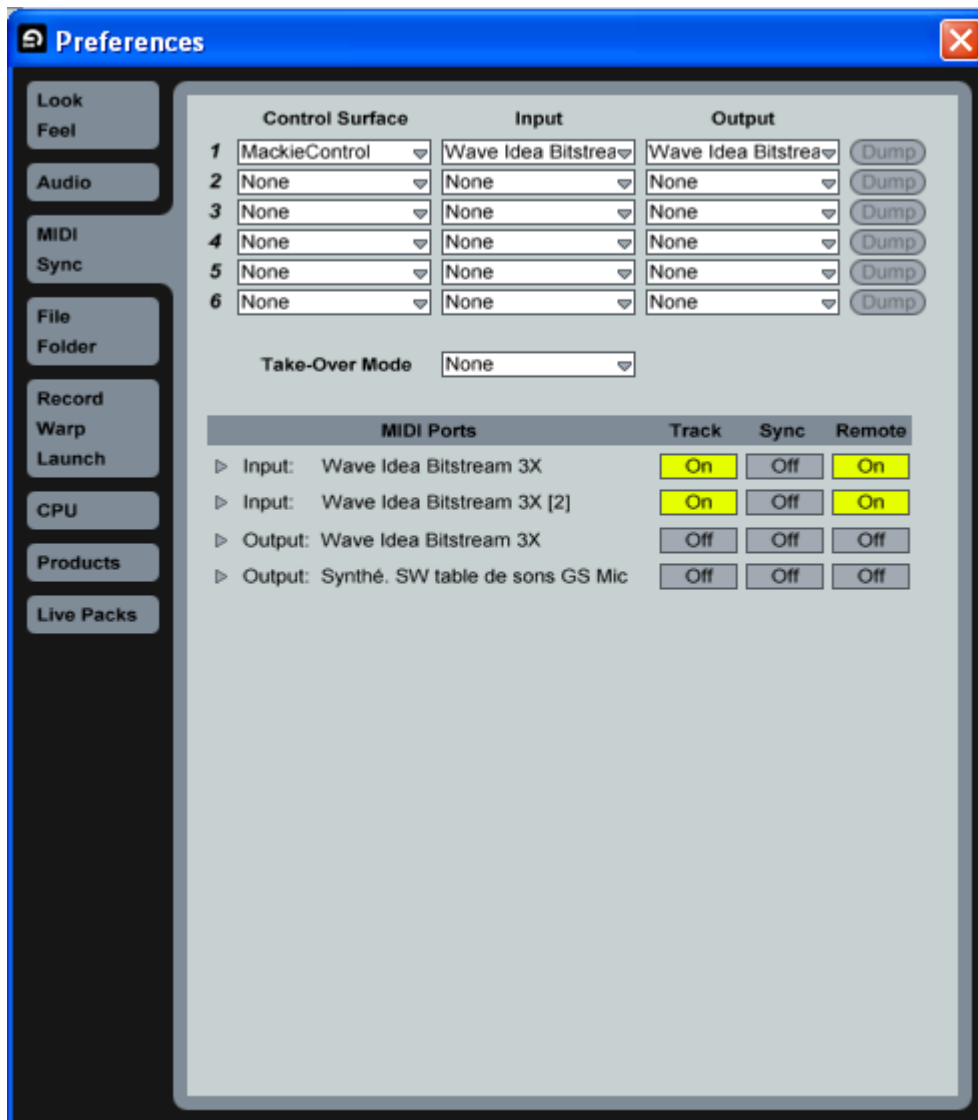
In the menu at the bottom of the windows, the Mackie control mode has been selected, and MIDI In and MIDI Out selected are the USB port 1 In and Out of the Bitstream 3X.



Ableton Live 5



Ableton Live 6



In the two above screenshots, Input and Output associated to the Mackie control are “Wave Idea Bitstream 3X”, and **not** “Wave Idea Bitstream 3X [2]” which is dedicated to the non emulated controls

In order to avoid any MIDI loopback (resulting in MIDI overflow), the Bitstream 3X MIDI merger output connected to Ableton Live must be disabled (this is already the case if the Mackie library file has been downloaded to the Bitstream 3X)

From the Bitstream 3X menus : MIDI Config -> MIDI Merge -> Merger Outputs -> USB Out 1 -> Off

Please note if you are using the MIDI Output instead of the USB output, the merger configuration described above must be changed accordingly.

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Once this configuration has been done, it is not finished yet. At this phase, the controller should be able to control the sequencer of Ableton Live (from the transport functions of the Bitstream 3X), also the time information should be displayed as well as the audio channels metering, faders and other emulated functions should work.

To complete the configuration, standard MIDI assignments can be performed from Live using the Learn mode (Edit MIDI map), as follow :

Click on MIDI Map from Ableton Live, then select the control to map, then move the control you want to assign on the Bitstream 3X. Ableton Live should display the controller received and it becomes automatically assigned.

Repeat the above for all additional controls to assign.

Please note these manual assignments are received from the USB or/and MIDI outs 2 of the Bitstream 3X (while the USB or/and MIDI outs 1 are dedicated to controls emulating Mackie/Logic)



### Example using Logic Pro/Express V7

Logic is compatible with the Mackie Control mode or the Logic control mode. You can use the Bitstream 3X Logic emulation mode to control Logic.

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Please note the V-pots of the Logic control are not emulated by the Bitstream 3X because of the different nature of the controls (Bitstream pots are analog potentiometers, on the other hand, Logic pots are endless encoders). The Bitstream cannot emulate these V-Pots.

When using the Bitstream 3X in Logic mode and connected to Logic, the parameters mentioned in this document are already programmed, while the other parameters need to be assigned directly from Logic (Controller assignments window).

In this way, the Bitstream 3X will emulate several controls of the Logic control, it will also generate standard Ccs to control the other non-assigned parameters in Logic.

Another advantage of using the Logic mode to control Logic is the audio channels metering and time information that are displayed on the Bitstream 3X LCD.

### Logic configuration

Go to the control surface setup windows, if the Logic control is not listed in the auto-detected surface, simply press the Bitstream 3X mode button until you reach the Logic control mode.

Logic should automatically recognizes the Bitstream 3X as a Logic control surface.

Now the Logic control configuration is done, and all sliders, buttons, transport buttons, master fader, channel metering, time code and so on should work properly.

To manually assign the other controls of the Bitstream 3X that are not emulated (rotary knobs for instance), simply open the control surface controller assignments windows, click “learn” and move one of the controls of the Bitstream 3X.

Repeat the above operation for all controls you want to assign and save your configuration.

## **Example using Cubase SX**

Cubase is compatible with the Mackie Control mode or the Logic control mode. You can use the Bitstream 3X Mackie emulation mode to control Cubase.

Please note the V-pots of the Mackie control are not emulated by the Bitstream 3X because of the different nature of the controls (Bitstream pots are analog potentiometers, on the other hand, Logic pots are endless encoders). The Bitstream cannot emulate these V-Pots.

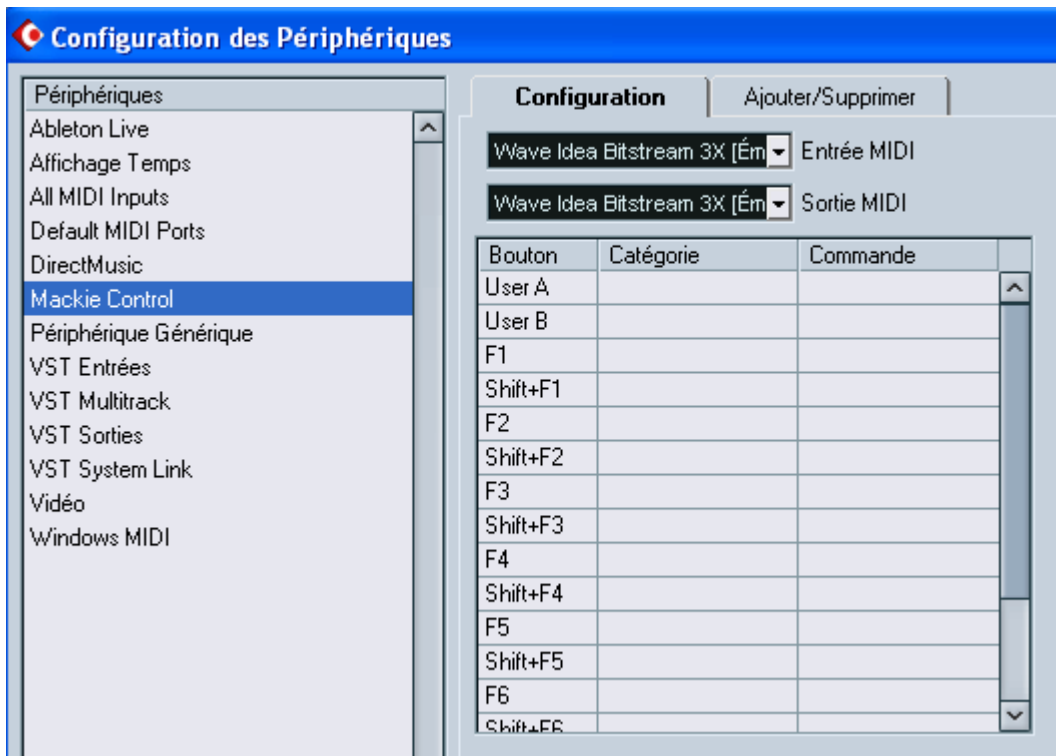
When using the Bitstream 3X in Mackie mode and connected to Cubase, the parameters mentioned in this document are already programmed, while the other parameters need to be assigned directly from Cubase (Controller assignments window).

In this way, the Bitstream 3X will emulate several controls of the Mackie control, it will also generate standard Ccs to control the other non-assigned parameters in Cubase.

Another advantage of using the Mackie mode to control Cubase is the audio channels metering and time information that are displayed on the Bitstream 3X LCD.

### Cubase configuration

Go to the MIDI devices list and add a Mackie control device.



Select MIDI/USB In 1 and MIDI/USB Out 1 to connect this device.

Now the Mackie control configuration is done, and all sliders, buttons, transport buttons, master fader, channel metering, time code and so on should work properly.

To manually assign the other controls of the Bitstream 3X that are not emulated (rotary knobs for instance), simply go to the MIDI devices list and add a Generic MIDI device.

Connect this generic MIDI device to the MIDI/USB input 2, since all non emulated controls of the Bitstream are generating MIDI on USB Out 2.

Once this configuration is done, you can start to add controls, the top part of the following windows allows to define the type of events that are received from the Bitstream 3X MIDI Out 2, here must be selected standard Continuous controllers (Ccs), the channels and numbers must be set according to the library Mackie control that has been downloaded to the Bitstream 3X.

To know the Ccs channels and numbers, please refer to the annex of this document, all Ccs generated by the non emulated controls are mentioned.

**Configuration des Périphériques**

**Configuration** Ajouter/Supprimer

Wave Idea Bitstream 3X [2] 1 Entrée MIDI

Non Connecté Sortie MIDI

Nom du Contrô	Statut MIDI	Canal MIDI	Adresse	Valeur Max.	Flags
Send-2 10	Contrôleur	10	13	127	R..
Send-2 11	Contrôleur	11	13	127	R..
Send-2 12	Contrôleur	12	13	127	R..
Send-2 13	Contrôleur	13	13	127	R..
Send-2 14	Contrôleur	14	13	127	R..
Send-2 15	Contrôleur	15	13	127	R..
Send-2 16	Contrôleur	16	13	127	R..
Knob 0	Contrôleur	1	0	127	R..
Knob 1	Contrôleur	2	0	127	R..
Knob 2	Contrôleur	3	0	127	R..
Knob 3	Contrôleur	4	0	127	R..
Knob 4	Contrôleur	5	0	127	R..

Nom du Contrô	Périphérique	Voie/Catégorie	Valeur/Action	Flags
Send-2 10	VST Mixer	Gruppe 02	1180190513	..
Send-2 11	VST Mixer	Gruppe 03	1180190513	..
Send-2 12	VST Mixer	Gruppe 04	1180190513	..
Send-2 13	VST Mixer	FX 1-TrackPlug	1180190513	..
Send-2 14	VST Mixer	IN 1	1180190513	..
Send-2 15	VST Mixer	BUS 1	1180190513	..
Send-2 16	VST Mixer	15	1180190513	..
Knob 0	VST Mixer	FX 1-TrackPlug	Effets d'Insert 1 TrackPlug EQ1	..
Knob 1	VST Mixer	FX 1-TrackPlug	Effets d'Insert 1 TrackPlug EQ2	..
Knob 2	VST Mixer	FX 1-TrackPlug	Mètre Max	..
Knob 3	VST Mixer	FX 1-TrackPlug	Mètre	..
Knob 4	VST Mixer	FX 1-TrackPlug	Effets d'Insert 1 TrackPlug EQ1	..

The above screen illustrates the configuration of Cubase SX for all controls that are not emulated by the Mackie control mode.

4 knobs have been added, the first knob (Knob 0) is configured to receive MIDI continuous controllers on channel 1, number 0, Knob 1 is configured to receive MIDI continuous controllers on channel 2, number 0, and so on.

The bottom part of the window allows to assign these added knobs to the parameters you want to control in Cubase, for instance FX1 Track Plug VST.

Repeat the above operation for all controls you want to assign and save your configuration.

### Downloading the Mackie/Logic control library

You need to use the configuration software to download the Mackie/Logic control library to the Bitstream 3X. This step by step guide is not specific to the Mackie/Logic control library but can be used to download any library to the Bitstream 3X.

#### **Download and Install the configuration software**

The configuration software can be downloaded for free from the Waveidea website, at the Bitstream 3X download area : [http://www.waveidea.com/en/products/bitstream\\_3x/downloads.php](http://www.waveidea.com/en/products/bitstream_3x/downloads.php)

Depending on your computer, you can download the Mac, Win, or Linux version.

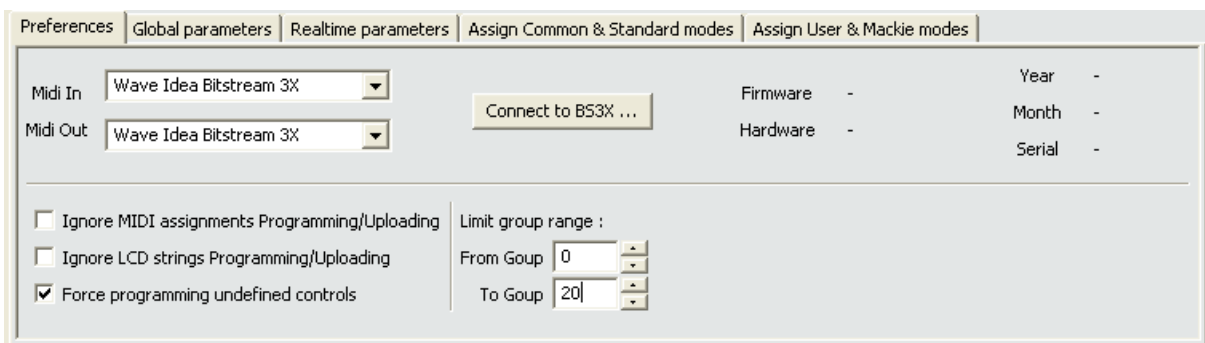
For further information regarding how to install the software, please refer to the documentation.

#### **Setup the configuration software to communicate with the Bitstream 3X**

The configuration software can be launched from the Start menu on Windows, or clicking the application file on Mac.

Once launched, go to the preference panel and configure the different fields as follow :

MIDI In and Out devices where the Bitstream is currently attached must be selected.



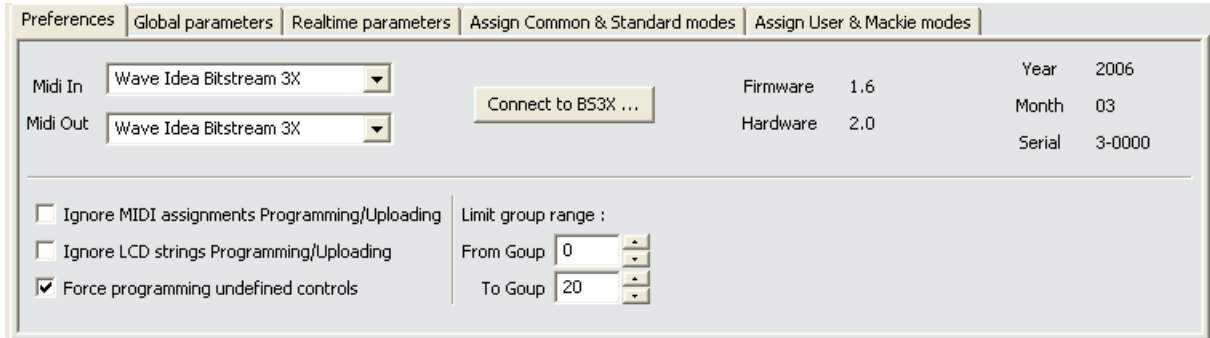
If you have installed the Bitstream 3X Xp drivers, you will see the above MIDI peripherals, otherwise you will see “USB audio device” strings.

Be sure the “Ignore MIDI assignments ...” and “Ignore LCD strings ...” are **UNCHECKED** before you start programming or uploading. (These two options are used to prevent the software from downloading/uploading MIDI or LCD assignments), they should be left unchecked by default.

In addition, be sure the group range is not limited (from 0 to 20 for 21 groups), so all 21 groups of the Bitstream 3X will be properly programmed/uploaded.

As soon as the above configuration is done, click on “**connect to bs3x**” button, if the communication is properly set, the Bitstream 3X information will be displayed as follow :

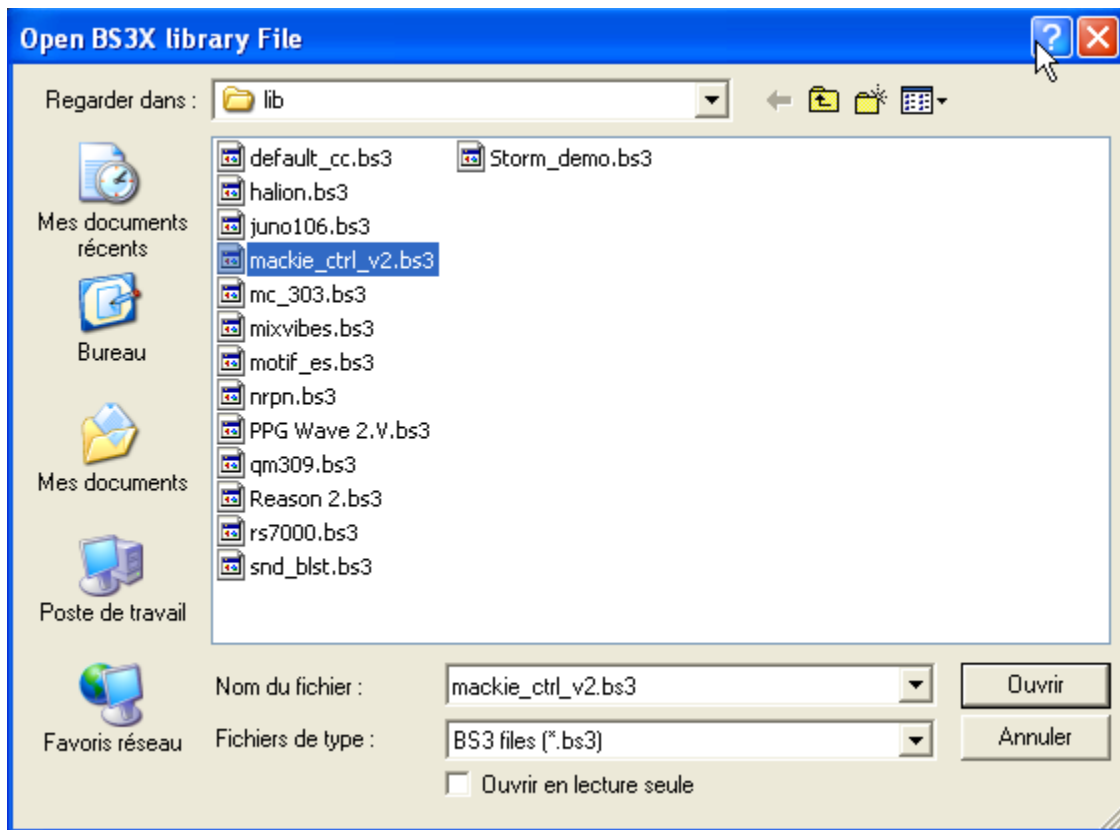
## AN003 : Bitstream 3X – Mackie/Logic control emulation



You can now load the library file you want to download to the Bitstream 3X. All the available libraries are located under the Bitstream 3X configuration software folder, under the sub folder “**lib**”.

To load the library file, click on the **library file** menus and select open.

Please note you can select any library file .bs3 to be downloaded to the Bitstream 3X.



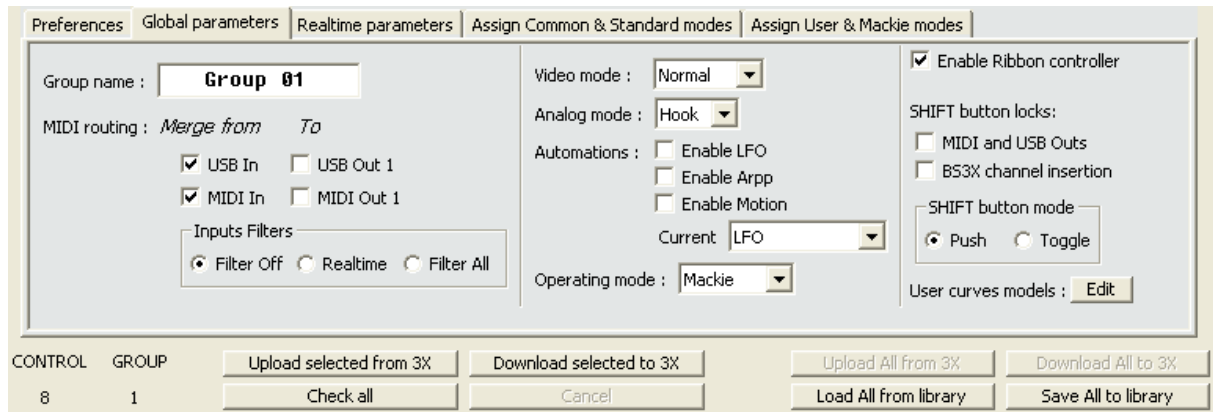


### ***Download the global and realtime parameters to the Bitstream 3X***

Once the communication is properly established, you can download the global and realtime parameters to the Bitstream 3X.

Select the Global or Realtime parameters panel and click “**Download selected to 3x**”

Once the button is clicked, all realtime and global parameters will be downloaded to the Bitstream 3X, please note the Bitstream 3X display indicates the global and realtime parameters are being programmed.



### ***Download the whole assignments to the Bitstream 3X***

Once the global and realtime parameters have been downloaded, you can download the MIDI and LCD assignments to the Bitstream 3X.

MIDI and LCD assignments are the configuration of all controls of the Bitstream 3X, as opposed to the configuration of global and realtime parameters, these assignments are available and independent for each of the controls of the Bitstream 3X.

Select the “**Assign common ..**” or “**Assign User & Mackie ..**” panel and click “**Download All to 3x**”

Once the button is clicked, all assignments for all the 21 groups will be downloaded to the Bitstream 3X, please note the Bitstream 3X display indicates the assignments are being programmed.

Downloading the whole assignments on all 21 groups requires about 1 minute.

## AN003 : Bitstream 3X – Mackie/Logic control emulation

The screenshot shows the 'Assign User & Mackie modes' tab in the Bitstream 3X software. The interface is divided into several sections:

- Use preset:** A dropdown menu.
- Use standard template:** A dropdown menu set to 'User Defined'.
- Midi delay (milliseconds):** A dropdown menu set to 'None'.
- Chained control:** A dropdown menu set to 'None'.
- Crossfade chained:** An unchecked checkbox.
- Min value:** A numeric input field set to '0'.
- Max value:** A numeric input field set to '127'.
- MIDI channel position (N):** A numeric input field set to '0', with a dropdown menu set to '0=Fixed'.
- Control value position 1 (V1):** A numeric input field set to '3', with a dropdown menu set to '0=None'.
- Control value position 2 (V2):** A numeric input field set to '0', with a dropdown menu set to '0=None'.
- Control Curve model:** A dropdown menu set to 'Linear', with an 'Edit' button.
- Send value as 2 nibbles:** An unchecked checkbox.
- Insert Sysex checksum:** An unchecked checkbox.
- Calculate from byte:** A dropdown menu set to '0'.
- MIDI string:** A text input field containing 'E00000'.
- Length:** A numeric input field set to '3'.
- LCD string:** A text input field containing 'Fader 1'.

At the bottom of the window, there are several buttons:

- CONTROL GROUP:** A table with '40' in the CONTROL column and '1' in the GROUP column.
- Upload selected from 3X** and **Download selected to 3X** buttons.
- Check all** and **Cancel** buttons.
- Upload All from 3X** and **Download All to 3X** buttons.
- Load All from library** and **Save All to library** buttons.

Alternatively you can download a single control to the Bitstream 3X, simply select it using your mouse and click **“Download selected to 3x”**

Please note the Mackie control library can be updated with your own assignments, the provided file corresponds to a minimal library that can be updated by your own requirements.

## MIDI parameters of the Mackie control library version 3

The following information are generated from the Bitstream 3X configuration software, these information indicate the Ccs numbers and other MIDI events assigned to the Mackie/Logic control library version 3

\* BITSTREAM 3X ASSIGNMENTS SUMMARY \*

Library file: C:\Program Files\Wave Idea\Bitstream 3X Configuration software V1.3\lib\mackie\_ctrl\_v3.bs3

Date: 2006-12-14

\*\*\*\*\* TRANSPORT BAR \*\*\*\*\*

Control 00 [Rec button] >> [MIDI] 905F00  
Control 01 [Play button] >> [MIDI] 905E00  
Control 02 [Backward button] >> [MIDI] 905B00  
Control 03 [Stop button] >> [MIDI] 905D00  
Control 04 [Forward button] >> [MIDI] 905C00

\*\*\*\*\* Mackie grp 00 \*\*\*\*\*

Control 05 [Ribbon controller] >> [LCD] CC # 005 [MIDI] B00500  
Control 06 [Joystick X] >> [LCD] CC # 006 [MIDI] B00600  
Control 07 [Joystick Y] >> [LCD] CC # 007 [MIDI] B00700  
Control 08 [Knob 0 (row 0 - col 0)] >> [LCD] CC#000 Channel 1 [MIDI] B00000  
Control 09 [Knob 1 (row 0 - col 1)] >> [LCD] CC#000 Channel 2 [MIDI] B10000  
Control 10 [Knob 2 (row 0 - col 2)] >> [LCD] CC#000 Channel 3 [MIDI] B20000  
Control 11 [Knob 3 (row 0 - col 3)] >> [LCD] CC#000 Channel 4 [MIDI] B30000  
Control 12 [Knob 4 (row 0 - col 4)] >> [LCD] CC#000 Channel 5 [MIDI] B40000  
Control 13 [Knob 5 (row 0 - col 5)] >> [LCD] CC#000 Channel 6 [MIDI] B50000  
Control 14 [Knob 6 (row 0 - col 6)] >> [LCD] CC#000 Channel 7 [MIDI] B60000  
Control 15 [Knob 7 (row 0 - col 7)] >> [LCD] CC#000 Channel 8 [MIDI] B70000  
Control 16 [Knob 8 (row 1 - col 0)] >> [LCD] CC#001 Channel 1 [MIDI] B00100  
Control 17 [Knob 9 (row 1 - col 1)] >> [LCD] CC#001 Channel 2 [MIDI] B10100  
Control 18 [Knob 10 (row 1 - col 2)] >> [LCD] CC#001 Channel 3 [MIDI] B20100  
Control 19 [Knob 11 (row 1 - col 3)] >> [LCD] CC#001 Channel 4 [MIDI] B30100

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 20 [Knob 12 (row 1 - col 4)] >> [LCD] CC#001 Channel 5 [MIDI] B40100  
Control 21 [Knob 13 (row 1 - col 5)] >> [LCD] CC#001 Channel 6 [MIDI] B50100  
Control 22 [Knob 14 (row 1 - col 6)] >> [LCD] CC#001 Channel 7 [MIDI] B60100  
Control 23 [Knob 15 (row 1 - col 7)] >> [LCD] CC#001 Channel 8 [MIDI] B70100  
Control 24 [Knob 16 (row 2 - col 0)] >> [LCD] CC#002 Channel 1 [MIDI] B00200  
Control 25 [Knob 17 (row 2 - col 1)] >> [LCD] CC#002 Channel 2 [MIDI] B10200  
Control 26 [Knob 18 (row 2 - col 2)] >> [LCD] CC#002 Channel 3 [MIDI] B20200  
Control 27 [Knob 19 (row 2 - col 3)] >> [LCD] CC#002 Channel 4 [MIDI] B30200  
Control 28 [Knob 20 (row 2 - col 4)] >> [LCD] CC#002 Channel 5 [MIDI] B40200  
Control 29 [Knob 21 (row 2 - col 5)] >> [LCD] CC#002 Channel 6 [MIDI] B50200  
Control 30 [Knob 22 (row 2 - col 6)] >> [LCD] CC#002 Channel 7 [MIDI] B60200  
Control 31 [Knob 23 (row 2 - col 7)] >> [LCD] CC#002 Channel 8 [MIDI] B70200  
Control 32 [Knob 24 (row 3 - col 0)] >> [LCD] CC#003 Channel 1 [MIDI] B00300  
Control 33 [Knob 25 (row 3 - col 1)] >> [LCD] CC#003 Channel 2 [MIDI] B10300  
Control 34 [Knob 26 (row 3 - col 2)] >> [LCD] CC#003 Channel 3 [MIDI] B20300  
Control 35 [Knob 27 (row 3 - col 3)] >> [LCD] CC#003 Channel 4 [MIDI] B30300  
Control 36 [Knob 28 (row 3 - col 4)] >> [LCD] CC#003 Channel 5 [MIDI] B40300  
Control 37 [Knob 29 (row 3 - col 5)] >> [LCD] CC#003 Channel 6 [MIDI] B50300  
Control 38 [Knob 30 (row 3 - col 6)] >> [LCD] CC#003 Channel 7 [MIDI] B60300  
Control 39 [Knob 31 (row 3 - col 7)] >> [LCD] CC#003 Channel 8 [MIDI] B70300  
Control 40 [Slider 0 (col 0)] >> [LCD] Fader 1 [MIDI] E00000  
Control 41 [Slider 1 (col 1)] >> [LCD] Fader 2 [MIDI] E10000  
Control 42 [Slider 2 (col 2)] >> [LCD] Fader 3 [MIDI] E20000  
Control 43 [Slider 3 (col 3)] >> [LCD] Fader 4 [MIDI] E30000  
Control 44 [Slider 4 (col 4)] >> [LCD] Fader 5 [MIDI] E40000  
Control 45 [Slider 5 (col 5)] >> [LCD] Fader 6 [MIDI] E50000  
Control 46 [Slider 6 (col 6)] >> [LCD] Fader 7 [MIDI] E60000  
Control 47 [Slider 7 (col 7)] >> [LCD] Fader 8 [MIDI] E70000  
Control 48 [Crossfader L] >> [LCD] Master fader [MIDI] E80000  
Control 49 [Crossfader R] >> [LCD] CC # 049 [MIDI] B03100  
Control 50 [Backward[Shift]] >> [LCD] Record [MIDI] 905F00  
Control 51 [Forward[Shift]] >> [LCD] Play [MIDI] 905E00  
Control 52 [Stop[Shift]] >> [LCD] Rewind [MIDI] 905B00  
Control 53 [Play[Shift]] >> [LCD] Stop [MIDI] 905D00  
Control 54 [Rec[Shift]] >> [LCD] fast fwd [MIDI] 905C00  
Control 55 [Joystick button] >> [LCD] CC # 055 [MIDI] B03700

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 56 [Foot-Switch] >> [LCD] CC # 056 [MIDI] B03800  
Control 57 [Encoder button] >> [LCD] CC # 057 [MIDI] B03900  
Control 58 [Button 0] >> [LCD] Rec/rdy Chann 1 [MIDI] 900000  
Control 59 [Button 1] >> [LCD] Rec/rdy Chann 2 [MIDI] 900100  
Control 60 [Button 2] >> [LCD] Rec/rdy Chann 3 [MIDI] 900200  
Control 61 [Button 3] >> [LCD] Rec/rdy Chann 4 [MIDI] 900300  
Control 62 [Button 4] >> [LCD] Rec/rdy Chann 5 [MIDI] 900400  
Control 63 [Button 5] >> [LCD] Rec/rdy Chann 6 [MIDI] 900500  
Control 64 [Button 6] >> [LCD] Rec/rdy Chann 7 [MIDI] 900600  
Control 65 [Button 7] >> [LCD] Rec/rdy Chann 8 [MIDI] 900700  
Control 66 [LFO] >> [LCD] CC # 066 [MIDI] B04200

\*\*\*\*\* Mackie grp 01 \*\*\*\*\*

Control 05 [Ribbon controller] >> [LCD] CC # 013 [MIDI] B00D00  
Control 06 [Joystick X] >> [LCD] CC # 014 [MIDI] B00E00  
Control 07 [Joystick Y] >> [LCD] CC # 015 [MIDI] B00F00  
Control 08 [Knob 0 (row 0 - col 0)] >> [LCD] CC#004 Channel 1 [MIDI] B00400  
Control 09 [Knob 1 (row 0 - col 1)] >> [LCD] CC#004 Channel 2 [MIDI] B10400  
Control 10 [Knob 2 (row 0 - col 2)] >> [LCD] CC#004 Channel 3 [MIDI] B20400  
Control 11 [Knob 3 (row 0 - col 3)] >> [LCD] CC#004 Channel 4 [MIDI] B30400  
Control 12 [Knob 4 (row 0 - col 4)] >> [LCD] CC#004 Channel 5 [MIDI] B40400  
Control 13 [Knob 5 (row 0 - col 5)] >> [LCD] CC#004 Channel 6 [MIDI] B50400  
Control 14 [Knob 6 (row 0 - col 6)] >> [LCD] CC#004 Channel 7 [MIDI] B60400  
Control 15 [Knob 7 (row 0 - col 7)] >> [LCD] CC#004 Channel 8 [MIDI] B70400  
Control 16 [Knob 8 (row 1 - col 0)] >> [LCD] CC#005 Channel 1 [MIDI] B00500  
Control 17 [Knob 9 (row 1 - col 1)] >> [LCD] CC#005 Channel 2 [MIDI] B10500  
Control 18 [Knob 10 (row 1 - col 2)] >> [LCD] CC#005 Channel 3 [MIDI] B20500  
Control 19 [Knob 11 (row 1 - col 3)] >> [LCD] CC#005 Channel 4 [MIDI] B30500  
Control 20 [Knob 12 (row 1 - col 4)] >> [LCD] CC#005 Channel 5 [MIDI] B40500  
Control 21 [Knob 13 (row 1 - col 5)] >> [LCD] CC#005 Channel 6 [MIDI] B50500  
Control 22 [Knob 14 (row 1 - col 6)] >> [LCD] CC#005 Channel 7 [MIDI] B60500  
Control 23 [Knob 15 (row 1 - col 7)] >> [LCD] CC#005 Channel 8 [MIDI] B70500  
Control 24 [Knob 16 (row 2 - col 0)] >> [LCD] CC#006 Channel 1 [MIDI] B00600  
Control 25 [Knob 17 (row 2 - col 1)] >> [LCD] CC#006 Channel 2 [MIDI] B10600  
Control 26 [Knob 18 (row 2 - col 2)] >> [LCD] CC#006 Channel 3 [MIDI] B20600

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 27 [Knob 19 (row 2 - col 3)] >> [LCD] CC#006 Channel 4 [MIDI] B30600  
Control 28 [Knob 20 (row 2 - col 4)] >> [LCD] CC#006 Channel 5 [MIDI] B40600  
Control 29 [Knob 21 (row 2 - col 5)] >> [LCD] CC#006 Channel 6 [MIDI] B50600  
Control 30 [Knob 22 (row 2 - col 6)] >> [LCD] CC#006 Channel 7 [MIDI] B60600  
Control 31 [Knob 23 (row 2 - col 7)] >> [LCD] CC#006 Channel 8 [MIDI] B70600  
Control 32 [Knob 24 (row 3 - col 0)] >> [LCD] CC#007 Channel 1 [MIDI] B00700  
Control 33 [Knob 25 (row 3 - col 1)] >> [LCD] CC#007 Channel 2 [MIDI] B10700  
Control 34 [Knob 26 (row 3 - col 2)] >> [LCD] CC#007 Channel 3 [MIDI] B20700  
Control 35 [Knob 27 (row 3 - col 3)] >> [LCD] CC#007 Channel 4 [MIDI] B30700  
Control 36 [Knob 28 (row 3 - col 4)] >> [LCD] CC#007 Channel 5 [MIDI] B40700  
Control 37 [Knob 29 (row 3 - col 5)] >> [LCD] CC#007 Channel 6 [MIDI] B50700  
Control 38 [Knob 30 (row 3 - col 6)] >> [LCD] CC#007 Channel 7 [MIDI] B60700  
Control 39 [Knob 31 (row 3 - col 7)] >> [LCD] CC#007 Channel 8 [MIDI] B70700  
Control 40 [Slider 0 (col 0)] >> [LCD] Fader 1 [MIDI] E00000  
Control 41 [Slider 1 (col 1)] >> [LCD] Fader 2 [MIDI] E10000  
Control 42 [Slider 2 (col 2)] >> [LCD] Fader 3 [MIDI] E20000  
Control 43 [Slider 3 (col 3)] >> [LCD] Fader 4 [MIDI] E30000  
Control 44 [Slider 4 (col 4)] >> [LCD] Fader 5 [MIDI] E40000  
Control 45 [Slider 5 (col 5)] >> [LCD] Fader 6 [MIDI] E50000  
Control 46 [Slider 6 (col 6)] >> [LCD] Fader 7 [MIDI] E60000  
Control 47 [Slider 7 (col 7)] >> [LCD] Fader 8 [MIDI] E70000  
Control 48 [Crossfader L] >> [LCD] Master fader [MIDI] E80000  
Control 49 [Crossfader R] >> [LCD] CC # 057 [MIDI] B03900  
Control 50 [Backward[Shift]] >> [LCD] CC # 058 [MIDI] B03A00  
Control 51 [Forward[Shift]] >> [LCD] CC # 059 [MIDI] B03B00  
Control 52 [Stop[Shift]] >> [LCD] CC # 060 [MIDI] B03C00  
Control 53 [Play[Shift]] >> [LCD] CC # 061 [MIDI] B03D00  
Control 54 [Rec[Shift]] >> [LCD] CC # 062 [MIDI] B03E00  
Control 55 [Joystick button] >> [LCD] CC # 063 [MIDI] B03F00  
Control 56 [Foot-Switch] >> [LCD] CC # 064 [MIDI] B04000  
Control 57 [Encoder button] >> [LCD] CC # 065 [MIDI] B04100  
Control 58 [Button 0] >> [LCD] Solo Chann 1 [MIDI] 900800  
Control 59 [Button 1] >> [LCD] Solo Chann 2 [MIDI] 900900  
Control 60 [Button 2] >> [LCD] Solo Chann 3 [MIDI] 900A00  
Control 61 [Button 3] >> [LCD] Solo Chann 4 [MIDI] 900B00  
Control 62 [Button 4] >> [LCD] Solo Chann 5 [MIDI] 900C00

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 63 [Button 5] >> [LCD] Solo Chann 6 [MIDI] 900D00  
Control 64 [Button 6] >> [LCD] Solo Chann 7 [MIDI] 900E00  
Control 65 [Button 7] >> [LCD] Solo Chann 8 [MIDI] 900F00  
Control 66 [LFO] >> [LCD] CC # 074 [MIDI] B04A00

\*\*\*\*\* Mackie grp 02 \*\*\*\*\*

Control 05 [Ribbon controller] >> [LCD] CC # 021 [MIDI] B01500  
Control 06 [Joystick X] >> [LCD] CC # 022 [MIDI] B01600  
Control 07 [Joystick Y] >> [LCD] CC # 023 [MIDI] B01700  
Control 08 [Knob 0 (row 0 - col 0)] >> [LCD] CC#008 Channel 1 [MIDI] B00800  
Control 09 [Knob 1 (row 0 - col 1)] >> [LCD] CC#008 Channel 2 [MIDI] B10800  
Control 10 [Knob 2 (row 0 - col 2)] >> [LCD] CC#008 Channel 3 [MIDI] B20800  
Control 11 [Knob 3 (row 0 - col 3)] >> [LCD] CC#008 Channel 4 [MIDI] B30800  
Control 12 [Knob 4 (row 0 - col 4)] >> [LCD] CC#008 Channel 5 [MIDI] B40800  
Control 13 [Knob 5 (row 0 - col 5)] >> [LCD] CC#008 Channel 6 [MIDI] B50800  
Control 14 [Knob 6 (row 0 - col 6)] >> [LCD] CC#008 Channel 7 [MIDI] B60800  
Control 15 [Knob 7 (row 0 - col 7)] >> [LCD] CC#008 Channel 8 [MIDI] B70800  
Control 16 [Knob 8 (row 1 - col 0)] >> [LCD] CC#009 Channel 1 [MIDI] B00900  
Control 17 [Knob 9 (row 1 - col 1)] >> [LCD] CC#009 Channel 2 [MIDI] B10900  
Control 18 [Knob 10 (row 1 - col 2)] >> [LCD] CC#009 Channel 3 [MIDI] B20900  
Control 19 [Knob 11 (row 1 - col 3)] >> [LCD] CC#009 Channel 4 [MIDI] B30900  
Control 20 [Knob 12 (row 1 - col 4)] >> [LCD] CC#009 Channel 5 [MIDI] B40900  
Control 21 [Knob 13 (row 1 - col 5)] >> [LCD] CC#009 Channel 6 [MIDI] B50900  
Control 22 [Knob 14 (row 1 - col 6)] >> [LCD] CC#009 Channel 7 [MIDI] B60900  
Control 23 [Knob 15 (row 1 - col 7)] >> [LCD] CC#009 Channel 8 [MIDI] B70900  
Control 24 [Knob 16 (row 2 - col 0)] >> [LCD] CC#010 Channel 1 [MIDI] B00A00  
Control 25 [Knob 17 (row 2 - col 1)] >> [LCD] CC#010 Channel 2 [MIDI] B10A00  
Control 26 [Knob 18 (row 2 - col 2)] >> [LCD] CC#010 Channel 3 [MIDI] B20A00  
Control 27 [Knob 19 (row 2 - col 3)] >> [LCD] CC#010 Channel 4 [MIDI] B30A00  
Control 28 [Knob 20 (row 2 - col 4)] >> [LCD] CC#010 Channel 5 [MIDI] B40A00  
Control 29 [Knob 21 (row 2 - col 5)] >> [LCD] CC#010 Channel 6 [MIDI] B50A00  
Control 30 [Knob 22 (row 2 - col 6)] >> [LCD] CC#010 Channel 7 [MIDI] B60A00  
Control 31 [Knob 23 (row 2 - col 7)] >> [LCD] CC#010 Channel 8 [MIDI] B70A00  
Control 32 [Knob 24 (row 3 - col 0)] >> [LCD] CC#011 Channel 1 [MIDI] B00B00  
Control 33 [Knob 25 (row 3 - col 1)] >> [LCD] CC#011 Channel 2 [MIDI] B10B00

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 34 [Knob 26 (row 3 - col 2)] >> [LCD] CC#011 Channel 3 [MIDI] B20B00  
Control 35 [Knob 27 (row 3 - col 3)] >> [LCD] CC#011 Channel 4 [MIDI] B30B00  
Control 36 [Knob 28 (row 3 - col 4)] >> [LCD] CC#011 Channel 5 [MIDI] B40B00  
Control 37 [Knob 29 (row 3 - col 5)] >> [LCD] CC#011 Channel 6 [MIDI] B50B00  
Control 38 [Knob 30 (row 3 - col 6)] >> [LCD] CC#011 Channel 7 [MIDI] B60B00  
Control 39 [Knob 31 (row 3 - col 7)] >> [LCD] CC#011 Channel 8 [MIDI] B70B00  
Control 40 [Slider 0 (col 0)] >> [LCD] Fader 1 [MIDI] E00000  
Control 41 [Slider 1 (col 1)] >> [LCD] Fader 2 [MIDI] E10000  
Control 42 [Slider 2 (col 2)] >> [LCD] Fader 3 [MIDI] E20000  
Control 43 [Slider 3 (col 3)] >> [LCD] Fader 4 [MIDI] E30000  
Control 44 [Slider 4 (col 4)] >> [LCD] Fader 5 [MIDI] E40000  
Control 45 [Slider 5 (col 5)] >> [LCD] Fader 6 [MIDI] E50000  
Control 46 [Slider 6 (col 6)] >> [LCD] Fader 7 [MIDI] E60000  
Control 47 [Slider 7 (col 7)] >> [LCD] Fader 8 [MIDI] E70000  
Control 48 [Crossfader L] >> [LCD] Master fader [MIDI] E80000  
Control 49 [Crossfader R] >> [LCD] CC # 065 [MIDI] B04100  
Control 50 [Backward[Shift]] >> [LCD] CC # 066 [MIDI] B04200  
Control 51 [Forward[Shift]] >> [LCD] CC # 067 [MIDI] B04300  
Control 52 [Stop[Shift]] >> [LCD] CC # 068 [MIDI] B04400  
Control 53 [Play[Shift]] >> [LCD] CC # 069 [MIDI] B04500  
Control 54 [Rec[Shift]] >> [LCD] CC # 070 [MIDI] B04600  
Control 55 [Joystick button] >> [LCD] CC # 071 [MIDI] B04700  
Control 56 [Foot-Switch] >> [LCD] CC # 072 [MIDI] B04800  
Control 57 [Encoder button] >> [LCD] CC # 073 [MIDI] B04900  
Control 58 [Button 0] >> [LCD] Mute Chann 1 [MIDI] 901000  
Control 59 [Button 1] >> [LCD] Mute Chann 2 [MIDI] 901100  
Control 60 [Button 2] >> [LCD] Mute Chann 3 [MIDI] 901200  
Control 61 [Button 3] >> [LCD] Mute Chann 4 [MIDI] 901300  
Control 62 [Button 4] >> [LCD] Mute Chann 5 [MIDI] 901400  
Control 63 [Button 5] >> [LCD] Mute Chann 6 [MIDI] 901500  
Control 64 [Button 6] >> [LCD] Mute Chann 7 [MIDI] 901600  
Control 65 [Button 7] >> [LCD] Mute Chann 8 [MIDI] 901700  
Control 66 [LFO] >> [LCD] CC # 082 [MIDI] B05200

\*\*\*\*\* Mackie grp 03 \*\*\*\*\*



## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 05 [Ribbon controller] >> [LCD] CC # 029 [MIDI] B01D00  
Control 06 [Joystick X] >> [LCD] CC # 030 [MIDI] B01E00  
Control 07 [Joystick Y] >> [LCD] CC # 031 [MIDI] B01F00  
Control 08 [Knob 0 (row 0 - col 0)] >> [LCD] CC#012 Channel 1 [MIDI] B00C00  
Control 09 [Knob 1 (row 0 - col 1)] >> [LCD] CC#012 Channel 2 [MIDI] B10C00  
Control 10 [Knob 2 (row 0 - col 2)] >> [LCD] CC#012 Channel 3 [MIDI] B20C00  
Control 11 [Knob 3 (row 0 - col 3)] >> [LCD] CC#012 Channel 4 [MIDI] B30C00  
Control 12 [Knob 4 (row 0 - col 4)] >> [LCD] CC#012 Channel 5 [MIDI] B40C00  
Control 13 [Knob 5 (row 0 - col 5)] >> [LCD] CC#012 Channel 6 [MIDI] B50C00  
Control 14 [Knob 6 (row 0 - col 6)] >> [LCD] CC#012 Channel 7 [MIDI] B60C00  
Control 15 [Knob 7 (row 0 - col 7)] >> [LCD] CC#012 Channel 8 [MIDI] B70C00  
Control 16 [Knob 8 (row 1 - col 0)] >> [LCD] CC#013 Channel 1 [MIDI] B00D00  
Control 17 [Knob 9 (row 1 - col 1)] >> [LCD] CC#013 Channel 2 [MIDI] B10D00  
Control 18 [Knob 10 (row 1 - col 2)] >> [LCD] CC#013 Channel 3 [MIDI] B20D00  
Control 19 [Knob 11 (row 1 - col 3)] >> [LCD] CC#013 Channel 4 [MIDI] B30D00  
Control 20 [Knob 12 (row 1 - col 4)] >> [LCD] CC#013 Channel 5 [MIDI] B40D00  
Control 21 [Knob 13 (row 1 - col 5)] >> [LCD] CC#013 Channel 6 [MIDI] B50D00  
Control 22 [Knob 14 (row 1 - col 6)] >> [LCD] CC#013 Channel 7 [MIDI] B60D00  
Control 23 [Knob 15 (row 1 - col 7)] >> [LCD] CC#013 Channel 8 [MIDI] B70D00  
Control 24 [Knob 16 (row 2 - col 0)] >> [LCD] CC#014 Channel 1 [MIDI] B00E00  
Control 25 [Knob 17 (row 2 - col 1)] >> [LCD] CC#014 Channel 2 [MIDI] B10E00  
Control 26 [Knob 18 (row 2 - col 2)] >> [LCD] CC#014 Channel 3 [MIDI] B20E00  
Control 27 [Knob 19 (row 2 - col 3)] >> [LCD] CC#014 Channel 4 [MIDI] B30E00  
Control 28 [Knob 20 (row 2 - col 4)] >> [LCD] CC#014 Channel 5 [MIDI] B40E00  
Control 29 [Knob 21 (row 2 - col 5)] >> [LCD] CC#014 Channel 6 [MIDI] B50E00  
Control 30 [Knob 22 (row 2 - col 6)] >> [LCD] CC#014 Channel 7 [MIDI] B60E00  
Control 31 [Knob 23 (row 2 - col 7)] >> [LCD] CC#014 Channel 8 [MIDI] B70E00  
Control 32 [Knob 24 (row 3 - col 0)] >> [LCD] CC#015 Channel 1 [MIDI] B00F00  
Control 33 [Knob 25 (row 3 - col 1)] >> [LCD] CC#015 Channel 2 [MIDI] B10F00  
Control 34 [Knob 26 (row 3 - col 2)] >> [LCD] CC#015 Channel 3 [MIDI] B20F00  
Control 35 [Knob 27 (row 3 - col 3)] >> [LCD] CC#015 Channel 4 [MIDI] B30F00  
Control 36 [Knob 28 (row 3 - col 4)] >> [LCD] CC#015 Channel 5 [MIDI] B40F00  
Control 37 [Knob 29 (row 3 - col 5)] >> [LCD] CC#015 Channel 6 [MIDI] B50F00  
Control 38 [Knob 30 (row 3 - col 6)] >> [LCD] CC#015 Channel 7 [MIDI] B60F00  
Control 39 [Knob 31 (row 3 - col 7)] >> [LCD] CC#015 Channel 8 [MIDI] B70F00  
Control 40 [Slider 0 (col 0)] >> [LCD] Fader 1 [MIDI] E00000

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 41 [Slider 1 (col 1)] >> [LCD] Fader 2 [MIDI] E10000  
Control 42 [Slider 2 (col 2)] >> [LCD] Fader 3 [MIDI] E20000  
Control 43 [Slider 3 (col 3)] >> [LCD] Fader 4 [MIDI] E30000  
Control 44 [Slider 4 (col 4)] >> [LCD] Fader 5 [MIDI] E40000  
Control 45 [Slider 5 (col 5)] >> [LCD] Fader 6 [MIDI] E50000  
Control 46 [Slider 6 (col 6)] >> [LCD] Fader 7 [MIDI] E60000  
Control 47 [Slider 7 (col 7)] >> [LCD] Fader 8 [MIDI] E70000  
Control 48 [Crossfader L] >> [LCD] Master fader [MIDI] E80000  
Control 49 [Crossfader R] >> [LCD] CC # 073 [MIDI] B04900  
Control 50 [Backward[Shift]] >> [LCD] CC # 074 [MIDI] B04A00  
Control 51 [Forward[Shift]] >> [LCD] CC # 075 [MIDI] B04B00  
Control 52 [Stop[Shift]] >> [LCD] CC # 076 [MIDI] B04C00  
Control 53 [Play[Shift]] >> [LCD] CC # 077 [MIDI] B04D00  
Control 54 [Rec[Shift]] >> [LCD] CC # 078 [MIDI] B04E00  
Control 55 [Joystick button] >> [LCD] CC # 079 [MIDI] B04F00  
Control 56 [Foot-Switch] >> [LCD] CC # 080 [MIDI] B05000  
Control 57 [Encoder button] >> [LCD] CC # 081 [MIDI] B05100  
Control 58 [Button 0] >> [LCD] Select Chann 1 [MIDI] 901800  
Control 59 [Button 1] >> [LCD] Select Chann 2 [MIDI] 901900  
Control 60 [Button 2] >> [LCD] Select Chann 3 [MIDI] 901A00  
Control 61 [Button 3] >> [LCD] Select Chann 4 [MIDI] 901B00  
Control 62 [Button 4] >> [LCD] Select Chann 5 [MIDI] 901C00  
Control 63 [Button 5] >> [LCD] Select Chann 6 [MIDI] 901D00  
Control 64 [Button 6] >> [LCD] Select Chann 7 [MIDI] 901E00  
Control 65 [Button 7] >> [LCD] Select Chann 8 [MIDI] 901F00  
Control 66 [LFO] >> [LCD] CC # 090 [MIDI] B05A00

\*\*\*\*\* Mackie grp 04 \*\*\*\*\*

Control 05 [Ribbon controller] >> [LCD] CC # 037 [MIDI] B02500  
Control 06 [Joystick X] >> [LCD] CC # 038 [MIDI] B02600  
Control 07 [Joystick Y] >> [LCD] CC # 039 [MIDI] B02700  
Control 08 [Knob 0 (row 0 - col 0)] >> [LCD] CC#016 Channel 1 [MIDI] B01000  
Control 09 [Knob 1 (row 0 - col 1)] >> [LCD] CC#016 Channel 2 [MIDI] B11000  
Control 10 [Knob 2 (row 0 - col 2)] >> [LCD] CC#016 Channel 3 [MIDI] B21000  
Control 11 [Knob 3 (row 0 - col 3)] >> [LCD] CC#016 Channel 4 [MIDI] B31000

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 12 [Knob 4 (row 0 - col 4)] >> [LCD] CC#016 Channel 5 [MIDI] B41000  
Control 13 [Knob 5 (row 0 - col 5)] >> [LCD] CC#016 Channel 6 [MIDI] B51000  
Control 14 [Knob 6 (row 0 - col 6)] >> [LCD] CC#016 Channel 7 [MIDI] B61000  
Control 15 [Knob 7 (row 0 - col 7)] >> [LCD] CC#016 Channel 8 [MIDI] B71000  
Control 16 [Knob 8 (row 1 - col 0)] >> [LCD] CC#017 Channel 1 [MIDI] B01100  
Control 17 [Knob 9 (row 1 - col 1)] >> [LCD] CC#017 Channel 2 [MIDI] B11100  
Control 18 [Knob 10 (row 1 - col 2)] >> [LCD] CC#017 Channel 3 [MIDI] B21100  
Control 19 [Knob 11 (row 1 - col 3)] >> [LCD] CC#017 Channel 4 [MIDI] B31100  
Control 20 [Knob 12 (row 1 - col 4)] >> [LCD] CC#017 Channel 5 [MIDI] B41100  
Control 21 [Knob 13 (row 1 - col 5)] >> [LCD] CC#017 Channel 6 [MIDI] B51100  
Control 22 [Knob 14 (row 1 - col 6)] >> [LCD] CC#017 Channel 7 [MIDI] B61100  
Control 23 [Knob 15 (row 1 - col 7)] >> [LCD] CC#017 Channel 8 [MIDI] B71100  
Control 24 [Knob 16 (row 2 - col 0)] >> [LCD] CC#018 Channel 1 [MIDI] B01200  
Control 25 [Knob 17 (row 2 - col 1)] >> [LCD] CC#018 Channel 2 [MIDI] B11200  
Control 26 [Knob 18 (row 2 - col 2)] >> [LCD] CC#018 Channel 3 [MIDI] B21200  
Control 27 [Knob 19 (row 2 - col 3)] >> [LCD] CC#018 Channel 4 [MIDI] B31200  
Control 28 [Knob 20 (row 2 - col 4)] >> [LCD] CC#018 Channel 5 [MIDI] B41200  
Control 29 [Knob 21 (row 2 - col 5)] >> [LCD] CC#018 Channel 6 [MIDI] B51200  
Control 30 [Knob 22 (row 2 - col 6)] >> [LCD] CC#018 Channel 7 [MIDI] B61200  
Control 31 [Knob 23 (row 2 - col 7)] >> [LCD] CC#018 Channel 8 [MIDI] B71200  
Control 32 [Knob 24 (row 3 - col 0)] >> [LCD] CC#019 Channel 1 [MIDI] B01300  
Control 33 [Knob 25 (row 3 - col 1)] >> [LCD] CC#019 Channel 2 [MIDI] B11300  
Control 34 [Knob 26 (row 3 - col 2)] >> [LCD] CC#019 Channel 3 [MIDI] B21300  
Control 35 [Knob 27 (row 3 - col 3)] >> [LCD] CC#019 Channel 4 [MIDI] B31300  
Control 36 [Knob 28 (row 3 - col 4)] >> [LCD] CC#019 Channel 5 [MIDI] B41300  
Control 37 [Knob 29 (row 3 - col 5)] >> [LCD] CC#019 Channel 6 [MIDI] B51300  
Control 38 [Knob 30 (row 3 - col 6)] >> [LCD] CC#019 Channel 7 [MIDI] B61300  
Control 39 [Knob 31 (row 3 - col 7)] >> [LCD] CC#019 Channel 8 [MIDI] B71300  
Control 40 [Slider 0 (col 0)] >> [LCD] Fader 1 [MIDI] E00000  
Control 41 [Slider 1 (col 1)] >> [LCD] Fader 2 [MIDI] E10000  
Control 42 [Slider 2 (col 2)] >> [LCD] Fader 3 [MIDI] E20000  
Control 43 [Slider 3 (col 3)] >> [LCD] Fader 4 [MIDI] E30000  
Control 44 [Slider 4 (col 4)] >> [LCD] Fader 5 [MIDI] E40000  
Control 45 [Slider 5 (col 5)] >> [LCD] Fader 6 [MIDI] E50000  
Control 46 [Slider 6 (col 6)] >> [LCD] Fader 7 [MIDI] E60000  
Control 47 [Slider 7 (col 7)] >> [LCD] Fader 8 [MIDI] E70000

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 48 [Crossfader L] >> [LCD] Master fader [MIDI] E80000  
Control 49 [Crossfader R] >> [LCD] CC # 081 [MIDI] B05100  
Control 50 [Backward[Shift]] >> [LCD] CC # 082 [MIDI] B05200  
Control 51 [Forward[Shift]] >> [LCD] CC # 083 [MIDI] B05300  
Control 52 [Stop[Shift]] >> [LCD] CC # 084 [MIDI] B05400  
Control 53 [Play[Shift]] >> [LCD] CC # 085 [MIDI] B05500  
Control 54 [Rec[Shift]] >> [LCD] CC # 086 [MIDI] B05600  
Control 55 [Joystick button] >> [LCD] CC # 087 [MIDI] B05700  
Control 56 [Foot-Switch] >> [LCD] CC # 088 [MIDI] B05800  
Control 57 [Encoder button] >> [LCD] CC # 089 [MIDI] B05900  
Control 58 [Button 0] >> [LCD] V-select Chann 1 [MIDI] 902000  
Control 59 [Button 1] >> [LCD] V-select Chann 2 [MIDI] 902100  
Control 60 [Button 2] >> [LCD] V-select Chann 3 [MIDI] 902200  
Control 61 [Button 3] >> [LCD] V-select Chann 4 [MIDI] 902300  
Control 62 [Button 4] >> [LCD] V-select Chann 5 [MIDI] 902400  
Control 63 [Button 5] >> [LCD] V-select Chann 6 [MIDI] 902500  
Control 64 [Button 6] >> [LCD] V-select Chann 7 [MIDI] 902600  
Control 65 [Button 7] >> [LCD] V-select Chann 8 [MIDI] 902700  
Control 66 [LFO] >> [LCD] CC # 098 [MIDI] B06200

\*\*\*\*\* Mackie grp 05 \*\*\*\*\*

Control 05 [Ribbon controller] >> [LCD] CC # 045 [MIDI] B02D00  
Control 06 [Joystick X] >> [LCD] CC # 046 [MIDI] B02E00  
Control 07 [Joystick Y] >> [LCD] CC # 047 [MIDI] B02F00  
Control 08 [Knob 0 (row 0 - col 0)] >> [LCD] CC#020 Channel 1 [MIDI] B01400  
Control 09 [Knob 1 (row 0 - col 1)] >> [LCD] CC#020 Channel 2 [MIDI] B11400  
Control 10 [Knob 2 (row 0 - col 2)] >> [LCD] CC#020 Channel 3 [MIDI] B21400  
Control 11 [Knob 3 (row 0 - col 3)] >> [LCD] CC#020 Channel 4 [MIDI] B31400  
Control 12 [Knob 4 (row 0 - col 4)] >> [LCD] CC#020 Channel 5 [MIDI] B41400  
Control 13 [Knob 5 (row 0 - col 5)] >> [LCD] CC#020 Channel 6 [MIDI] B51400  
Control 14 [Knob 6 (row 0 - col 6)] >> [LCD] CC#020 Channel 7 [MIDI] B61400  
Control 15 [Knob 7 (row 0 - col 7)] >> [LCD] CC#020 Channel 8 [MIDI] B71400  
Control 16 [Knob 8 (row 1 - col 0)] >> [LCD] CC#021 Channel 1 [MIDI] B01500  
Control 17 [Knob 9 (row 1 - col 1)] >> [LCD] CC#021 Channel 2 [MIDI] B11500  
Control 18 [Knob 10 (row 1 - col 2)] >> [LCD] CC#021 Channel 3 [MIDI] B21500

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 19 [Knob 11 (row 1 - col 3)] >> [LCD] CC#021 Channel 4 [MIDI] B31500  
Control 20 [Knob 12 (row 1 - col 4)] >> [LCD] CC#021 Channel 5 [MIDI] B41500  
Control 21 [Knob 13 (row 1 - col 5)] >> [LCD] CC#021 Channel 6 [MIDI] B51500  
Control 22 [Knob 14 (row 1 - col 6)] >> [LCD] CC#021 Channel 7 [MIDI] B61500  
Control 23 [Knob 15 (row 1 - col 7)] >> [LCD] CC#021 Channel 8 [MIDI] B71500  
Control 24 [Knob 16 (row 2 - col 0)] >> [LCD] CC#022 Channel 1 [MIDI] B01600  
Control 25 [Knob 17 (row 2 - col 1)] >> [LCD] CC#022 Channel 2 [MIDI] B11600  
Control 26 [Knob 18 (row 2 - col 2)] >> [LCD] CC#022 Channel 3 [MIDI] B21600  
Control 27 [Knob 19 (row 2 - col 3)] >> [LCD] CC#022 Channel 4 [MIDI] B31600  
Control 28 [Knob 20 (row 2 - col 4)] >> [LCD] CC#022 Channel 5 [MIDI] B41600  
Control 29 [Knob 21 (row 2 - col 5)] >> [LCD] CC#022 Channel 6 [MIDI] B51600  
Control 30 [Knob 22 (row 2 - col 6)] >> [LCD] CC#022 Channel 7 [MIDI] B61600  
Control 31 [Knob 23 (row 2 - col 7)] >> [LCD] CC#022 Channel 8 [MIDI] B71600  
Control 32 [Knob 24 (row 3 - col 0)] >> [LCD] CC#023 Channel 1 [MIDI] B01700  
Control 33 [Knob 25 (row 3 - col 1)] >> [LCD] CC#023 Channel 2 [MIDI] B11700  
Control 34 [Knob 26 (row 3 - col 2)] >> [LCD] CC#023 Channel 3 [MIDI] B21700  
Control 35 [Knob 27 (row 3 - col 3)] >> [LCD] CC#023 Channel 4 [MIDI] B31700  
Control 36 [Knob 28 (row 3 - col 4)] >> [LCD] CC#023 Channel 5 [MIDI] B41700  
Control 37 [Knob 29 (row 3 - col 5)] >> [LCD] CC#023 Channel 6 [MIDI] B51700  
Control 38 [Knob 30 (row 3 - col 6)] >> [LCD] CC#023 Channel 7 [MIDI] B61700  
Control 39 [Knob 31 (row 3 - col 7)] >> [LCD] CC#023 Channel 8 [MIDI] B71700  
Control 40 [Slider 0 (col 0)] >> [LCD] Fader 1 [MIDI] E00000  
Control 41 [Slider 1 (col 1)] >> [LCD] Fader 2 [MIDI] E10000  
Control 42 [Slider 2 (col 2)] >> [LCD] Fader 3 [MIDI] E20000  
Control 43 [Slider 3 (col 3)] >> [LCD] Fader 4 [MIDI] E30000  
Control 44 [Slider 4 (col 4)] >> [LCD] Fader 5 [MIDI] E40000  
Control 45 [Slider 5 (col 5)] >> [LCD] Fader 6 [MIDI] E50000  
Control 46 [Slider 6 (col 6)] >> [LCD] Fader 7 [MIDI] E60000  
Control 47 [Slider 7 (col 7)] >> [LCD] Fader 8 [MIDI] E70000  
Control 48 [Crossfader L] >> [LCD] Master fader [MIDI] E80000  
Control 49 [Crossfader R] >> [LCD] CC # 089 [MIDI] B05900  
Control 50 [Backward[Shift]] >> [LCD] CC # 090 [MIDI] B05A00  
Control 51 [Forward[Shift]] >> [LCD] CC # 091 [MIDI] B05B00  
Control 52 [Stop[Shift]] >> [LCD] CC # 092 [MIDI] B05C00  
Control 53 [Play[Shift]] >> [LCD] CC # 093 [MIDI] B05D00  
Control 54 [Rec[Shift]] >> [LCD] CC # 094 [MIDI] B05E00

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 55 [Joystick button] >> [LCD] CC # 095 [MIDI] B05F00  
Control 56 [Foot-Switch] >> [LCD] CC # 096 [MIDI] B06000  
Control 57 [Encoder button] >> [LCD] CC # 097 [MIDI] B06100  
Control 58 [Button 0] >> [LCD] Assign : track [MIDI] 902800  
Control 59 [Button 1] >> [LCD] Assign : send [MIDI] 902900  
Control 60 [Button 2] >> [LCD] Assign : pan [MIDI] 902A00  
Control 61 [Button 3] >> [LCD] Assign : plugin [MIDI] 902B00  
Control 62 [Button 4] >> [LCD] Assign : Eq [MIDI] 902C00  
Control 63 [Button 5] >> [LCD] Assign : instr [MIDI] 902D00  
Control 64 [Button 6] >> [LCD] CC # 104 [MIDI] B06800  
Control 65 [Button 7] >> [LCD] CC # 105 [MIDI] B06900  
Control 66 [LFO] >> [LCD] CC # 106 [MIDI] B06A00

\*\*\*\*\* Mackie grp 06 \*\*\*\*\*

Control 05 [Ribbon controller] >> [LCD] CC # 053 [MIDI] B03500  
Control 06 [Joystick X] >> [LCD] CC # 054 [MIDI] B03600  
Control 07 [Joystick Y] >> [LCD] CC # 055 [MIDI] B03700  
Control 08 [Knob 0 (row 0 - col 0)] >> [LCD] CC#024 Channel 1 [MIDI] B01800  
Control 09 [Knob 1 (row 0 - col 1)] >> [LCD] CC#024 Channel 2 [MIDI] B11800  
Control 10 [Knob 2 (row 0 - col 2)] >> [LCD] CC#024 Channel 3 [MIDI] B21800  
Control 11 [Knob 3 (row 0 - col 3)] >> [LCD] CC#024 Channel 4 [MIDI] B31800  
Control 12 [Knob 4 (row 0 - col 4)] >> [LCD] CC#024 Channel 5 [MIDI] B41800  
Control 13 [Knob 5 (row 0 - col 5)] >> [LCD] CC#024 Channel 6 [MIDI] B51800  
Control 14 [Knob 6 (row 0 - col 6)] >> [LCD] CC#024 Channel 7 [MIDI] B61800  
Control 15 [Knob 7 (row 0 - col 7)] >> [LCD] CC#024 Channel 8 [MIDI] B71800  
Control 16 [Knob 8 (row 1 - col 0)] >> [LCD] CC#025 Channel 1 [MIDI] B01900  
Control 17 [Knob 9 (row 1 - col 1)] >> [LCD] CC#025 Channel 2 [MIDI] B11900  
Control 18 [Knob 10 (row 1 - col 2)] >> [LCD] CC#025 Channel 3 [MIDI] B21900  
Control 19 [Knob 11 (row 1 - col 3)] >> [LCD] CC#025 Channel 4 [MIDI] B31900  
Control 20 [Knob 12 (row 1 - col 4)] >> [LCD] CC#025 Channel 5 [MIDI] B41900  
Control 21 [Knob 13 (row 1 - col 5)] >> [LCD] CC#025 Channel 6 [MIDI] B51900  
Control 22 [Knob 14 (row 1 - col 6)] >> [LCD] CC#025 Channel 7 [MIDI] B61900  
Control 23 [Knob 15 (row 1 - col 7)] >> [LCD] CC#025 Channel 8 [MIDI] B71900  
Control 24 [Knob 16 (row 2 - col 0)] >> [LCD] CC#026 Channel 1 [MIDI] B01A00  
Control 25 [Knob 17 (row 2 - col 1)] >> [LCD] CC#026 Channel 2 [MIDI] B11A00



## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 26 [Knob 18 (row 2 - col 2)] >> [LCD] CC#026 Channel 3 [MIDI] B21A00  
Control 27 [Knob 19 (row 2 - col 3)] >> [LCD] CC#026 Channel 4 [MIDI] B31A00  
Control 28 [Knob 20 (row 2 - col 4)] >> [LCD] CC#026 Channel 5 [MIDI] B41A00  
Control 29 [Knob 21 (row 2 - col 5)] >> [LCD] CC#026 Channel 6 [MIDI] B51A00  
Control 30 [Knob 22 (row 2 - col 6)] >> [LCD] CC#026 Channel 7 [MIDI] B61A00  
Control 31 [Knob 23 (row 2 - col 7)] >> [LCD] CC#026 Channel 8 [MIDI] B71A00  
Control 32 [Knob 24 (row 3 - col 0)] >> [LCD] CC#027 Channel 1 [MIDI] B01B00  
Control 33 [Knob 25 (row 3 - col 1)] >> [LCD] CC#027 Channel 2 [MIDI] B11B00  
Control 34 [Knob 26 (row 3 - col 2)] >> [LCD] CC#027 Channel 3 [MIDI] B21B00  
Control 35 [Knob 27 (row 3 - col 3)] >> [LCD] CC#027 Channel 4 [MIDI] B31B00  
Control 36 [Knob 28 (row 3 - col 4)] >> [LCD] CC#027 Channel 5 [MIDI] B41B00  
Control 37 [Knob 29 (row 3 - col 5)] >> [LCD] CC#027 Channel 6 [MIDI] B51B00  
Control 38 [Knob 30 (row 3 - col 6)] >> [LCD] CC#027 Channel 7 [MIDI] B61B00  
Control 39 [Knob 31 (row 3 - col 7)] >> [LCD] CC#027 Channel 8 [MIDI] B71B00  
Control 40 [Slider 0 (col 0)] >> [LCD] Fader 1 [MIDI] E00000  
Control 41 [Slider 1 (col 1)] >> [LCD] Fader 2 [MIDI] E10000  
Control 42 [Slider 2 (col 2)] >> [LCD] Fader 3 [MIDI] E20000  
Control 43 [Slider 3 (col 3)] >> [LCD] Fader 4 [MIDI] E30000  
Control 44 [Slider 4 (col 4)] >> [LCD] Fader 5 [MIDI] E40000  
Control 45 [Slider 5 (col 5)] >> [LCD] Fader 6 [MIDI] E50000  
Control 46 [Slider 6 (col 6)] >> [LCD] Fader 7 [MIDI] E60000  
Control 47 [Slider 7 (col 7)] >> [LCD] Fader 8 [MIDI] E70000  
Control 48 [Crossfader L] >> [LCD] Master fader [MIDI] E80000  
Control 49 [Crossfader R] >> [LCD] CC # 097 [MIDI] B06100  
Control 50 [Backward[Shift]] >> [LCD] CC # 098 [MIDI] B06200  
Control 51 [Forward[Shift]] >> [LCD] CC # 099 [MIDI] B06300  
Control 52 [Stop[Shift]] >> [LCD] CC # 100 [MIDI] B06400  
Control 53 [Play[Shift]] >> [LCD] CC # 101 [MIDI] B06500  
Control 54 [Rec[Shift]] >> [LCD] CC # 102 [MIDI] B06600  
Control 55 [Joystick button] >> [LCD] CC # 103 [MIDI] B06700  
Control 56 [Foot-Switch] >> [LCD] CC # 104 [MIDI] B06800  
Control 57 [Encoder button] >> [LCD] CC # 105 [MIDI] B06900  
Control 58 [Button 0] >> [LCD] Fad bnk:bnk left [MIDI] 902E00  
Control 59 [Button 1] >> [LCD] Fad bnk:bnk right [MIDI] 902F00  
Control 60 [Button 2] >> [LCD] Fad bnk:chn left [MIDI] 903000  
Control 61 [Button 3] >> [LCD] Fad bnk:chn right [MIDI] 903100

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 62 [Button 4] >> [LCD] Flip [MIDI] 903200  
Control 63 [Button 5] >> [LCD] Global view [MIDI] 903300  
Control 64 [Button 6] >> [LCD] Name / Value [MIDI] 903400  
Control 65 [Button 7] >> [LCD] Smpte / Beats [MIDI] 903500  
Control 66 [LFO] >> [LCD] CC # 114 [MIDI] B07200

\*\*\*\*\* Mackie grp 07 \*\*\*\*\*

Control 05 [Ribbon controller] >> [LCD] CC # 061 [MIDI] B03D00  
Control 06 [Joystick X] >> [LCD] CC # 062 [MIDI] B03E00  
Control 07 [Joystick Y] >> [LCD] CC # 063 [MIDI] B03F00  
Control 08 [Knob 0 (row 0 - col 0)] >> [LCD] CC#028 Channel 1 [MIDI] B01C00  
Control 09 [Knob 1 (row 0 - col 1)] >> [LCD] CC#028 Channel 2 [MIDI] B11C00  
Control 10 [Knob 2 (row 0 - col 2)] >> [LCD] CC#028 Channel 3 [MIDI] B21C00  
Control 11 [Knob 3 (row 0 - col 3)] >> [LCD] CC#028 Channel 4 [MIDI] B31C00  
Control 12 [Knob 4 (row 0 - col 4)] >> [LCD] CC#028 Channel 5 [MIDI] B41C00  
Control 13 [Knob 5 (row 0 - col 5)] >> [LCD] CC#028 Channel 6 [MIDI] B51C00  
Control 14 [Knob 6 (row 0 - col 6)] >> [LCD] CC#028 Channel 7 [MIDI] B61C00  
Control 15 [Knob 7 (row 0 - col 7)] >> [LCD] CC#028 Channel 8 [MIDI] B71C00  
Control 16 [Knob 8 (row 1 - col 0)] >> [LCD] CC#029 Channel 1 [MIDI] B01D00  
Control 17 [Knob 9 (row 1 - col 1)] >> [LCD] CC#029 Channel 2 [MIDI] B11D00  
Control 18 [Knob 10 (row 1 - col 2)] >> [LCD] CC#029 Channel 3 [MIDI] B21D00  
Control 19 [Knob 11 (row 1 - col 3)] >> [LCD] CC#029 Channel 4 [MIDI] B31D00  
Control 20 [Knob 12 (row 1 - col 4)] >> [LCD] CC#029 Channel 5 [MIDI] B41D00  
Control 21 [Knob 13 (row 1 - col 5)] >> [LCD] CC#029 Channel 6 [MIDI] B51D00  
Control 22 [Knob 14 (row 1 - col 6)] >> [LCD] CC#029 Channel 7 [MIDI] B61D00  
Control 23 [Knob 15 (row 1 - col 7)] >> [LCD] CC#029 Channel 8 [MIDI] B71D00  
Control 24 [Knob 16 (row 2 - col 0)] >> [LCD] CC#030 Channel 1 [MIDI] B01E00  
Control 25 [Knob 17 (row 2 - col 1)] >> [LCD] CC#030 Channel 2 [MIDI] B11E00  
Control 26 [Knob 18 (row 2 - col 2)] >> [LCD] CC#030 Channel 3 [MIDI] B21E00  
Control 27 [Knob 19 (row 2 - col 3)] >> [LCD] CC#030 Channel 4 [MIDI] B31E00  
Control 28 [Knob 20 (row 2 - col 4)] >> [LCD] CC#030 Channel 5 [MIDI] B41E00  
Control 29 [Knob 21 (row 2 - col 5)] >> [LCD] CC#030 Channel 6 [MIDI] B51E00  
Control 30 [Knob 22 (row 2 - col 6)] >> [LCD] CC#030 Channel 7 [MIDI] B61E00  
Control 31 [Knob 23 (row 2 - col 7)] >> [LCD] CC#030 Channel 8 [MIDI] B71E00  
Control 32 [Knob 24 (row 3 - col 0)] >> [LCD] CC#031 Channel 1 [MIDI] B01F00



## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 33 [Knob 25 (row 3 - col 1)] >> [LCD] CC#031 Channel 2 [MIDI] B11F00  
Control 34 [Knob 26 (row 3 - col 2)] >> [LCD] CC#031 Channel 3 [MIDI] B21F00  
Control 35 [Knob 27 (row 3 - col 3)] >> [LCD] CC#031 Channel 4 [MIDI] B31F00  
Control 36 [Knob 28 (row 3 - col 4)] >> [LCD] CC#031 Channel 5 [MIDI] B41F00  
Control 37 [Knob 29 (row 3 - col 5)] >> [LCD] CC#031 Channel 6 [MIDI] B51F00  
Control 38 [Knob 30 (row 3 - col 6)] >> [LCD] CC#031 Channel 7 [MIDI] B61F00  
Control 39 [Knob 31 (row 3 - col 7)] >> [LCD] CC#031 Channel 8 [MIDI] B71F00  
Control 40 [Slider 0 (col 0)] >> [LCD] Fader 1 [MIDI] E00000  
Control 41 [Slider 1 (col 1)] >> [LCD] Fader 2 [MIDI] E10000  
Control 42 [Slider 2 (col 2)] >> [LCD] Fader 3 [MIDI] E20000  
Control 43 [Slider 3 (col 3)] >> [LCD] Fader 4 [MIDI] E30000  
Control 44 [Slider 4 (col 4)] >> [LCD] Fader 5 [MIDI] E40000  
Control 45 [Slider 5 (col 5)] >> [LCD] Fader 6 [MIDI] E50000  
Control 46 [Slider 6 (col 6)] >> [LCD] Fader 7 [MIDI] E60000  
Control 47 [Slider 7 (col 7)] >> [LCD] Fader 8 [MIDI] E70000  
Control 48 [Crossfader L] >> [LCD] Master fader [MIDI] E80000  
Control 49 [Crossfader R] >> [LCD] [MIDI] B06900  
Control 50 [Backward[Shift]] >> [LCD] CC # 106 [MIDI] B06A00  
Control 51 [Forward[Shift]] >> [LCD] CC # 107 [MIDI] B06B00  
Control 52 [Stop[Shift]] >> [LCD] CC # 108 [MIDI] B06C00  
Control 53 [Play[Shift]] >> [LCD] CC # 109 [MIDI] B06D00  
Control 54 [Rec[Shift]] >> [LCD] CC # 110 [MIDI] B06E00  
Control 55 [Joystick button] >> [LCD] CC # 111 [MIDI] B06F00  
Control 56 [Foot-Switch] >> [LCD] CC # 112 [MIDI] B07000  
Control 57 [Encoder button] >> [LCD] CC # 113 [MIDI] B07100  
Control 58 [Button 0] >> [LCD] Function key F1 [MIDI] 903600  
Control 59 [Button 1] >> [LCD] Function key F2 [MIDI] 903700  
Control 60 [Button 2] >> [LCD] Function key F3 [MIDI] 903800  
Control 61 [Button 3] >> [LCD] Function key F4 [MIDI] 903900  
Control 62 [Button 4] >> [LCD] Function key F5 [MIDI] 903A00  
Control 63 [Button 5] >> [LCD] Function key F6 [MIDI] 903B00  
Control 64 [Button 6] >> [LCD] Function key F7 [MIDI] 903C00  
Control 65 [Button 7] >> [LCD] Function key F8 [MIDI] 903D00  
Control 66 [LFO] >> [LCD] CC # 122 [MIDI] B07A00

\*\*\*\*\* Mackie grp 08 \*\*\*\*\*

Control 05 [Ribbon controller] >> [LCD] CC # 069 [MIDI] B04500  
Control 06 [Joystick X] >> [LCD] CC # 070 [MIDI] B04600  
Control 07 [Joystick Y] >> [LCD] CC # 071 [MIDI] B04700  
Control 08 [Knob 0 (row 0 - col 0)] >> [LCD] CC#032 Channel 1 [MIDI] B02000  
Control 09 [Knob 1 (row 0 - col 1)] >> [LCD] CC#032 Channel 2 [MIDI] B12000  
Control 10 [Knob 2 (row 0 - col 2)] >> [LCD] CC#032 Channel 3 [MIDI] B22000  
Control 11 [Knob 3 (row 0 - col 3)] >> [LCD] CC#032 Channel 4 [MIDI] B32000  
Control 12 [Knob 4 (row 0 - col 4)] >> [LCD] CC#032 Channel 5 [MIDI] B42000  
Control 13 [Knob 5 (row 0 - col 5)] >> [LCD] CC#032 Channel 6 [MIDI] B52000  
Control 14 [Knob 6 (row 0 - col 6)] >> [LCD] CC#032 Channel 7 [MIDI] B62000  
Control 15 [Knob 7 (row 0 - col 7)] >> [LCD] CC#032 Channel 8 [MIDI] B72000  
Control 16 [Knob 8 (row 1 - col 0)] >> [LCD] CC#033 Channel 1 [MIDI] B02100  
Control 17 [Knob 9 (row 1 - col 1)] >> [LCD] CC#033 Channel 2 [MIDI] B12100  
Control 18 [Knob 10 (row 1 - col 2)] >> [LCD] CC#033 Channel 3 [MIDI] B22100  
Control 19 [Knob 11 (row 1 - col 3)] >> [LCD] CC#033 Channel 4 [MIDI] B32100  
Control 20 [Knob 12 (row 1 - col 4)] >> [LCD] CC#033 Channel 5 [MIDI] B42100  
Control 21 [Knob 13 (row 1 - col 5)] >> [LCD] CC#033 Channel 6 [MIDI] B52100  
Control 22 [Knob 14 (row 1 - col 6)] >> [LCD] CC#033 Channel 7 [MIDI] B62100  
Control 23 [Knob 15 (row 1 - col 7)] >> [LCD] CC#033 Channel 8 [MIDI] B72100  
Control 24 [Knob 16 (row 2 - col 0)] >> [LCD] CC#034 Channel 1 [MIDI] B02200  
Control 25 [Knob 17 (row 2 - col 1)] >> [LCD] CC#034 Channel 2 [MIDI] B12200  
Control 26 [Knob 18 (row 2 - col 2)] >> [LCD] CC#034 Channel 3 [MIDI] B22200  
Control 27 [Knob 19 (row 2 - col 3)] >> [LCD] CC#034 Channel 4 [MIDI] B32200  
Control 28 [Knob 20 (row 2 - col 4)] >> [LCD] CC#034 Channel 5 [MIDI] B42200  
Control 29 [Knob 21 (row 2 - col 5)] >> [LCD] CC#034 Channel 6 [MIDI] B52200  
Control 30 [Knob 22 (row 2 - col 6)] >> [LCD] CC#034 Channel 7 [MIDI] B62200  
Control 31 [Knob 23 (row 2 - col 7)] >> [LCD] CC#034 Channel 8 [MIDI] B72200  
Control 32 [Knob 24 (row 3 - col 0)] >> [LCD] CC#035 Channel 1 [MIDI] B02300  
Control 33 [Knob 25 (row 3 - col 1)] >> [LCD] CC#035 Channel 2 [MIDI] B12300  
Control 34 [Knob 26 (row 3 - col 2)] >> [LCD] CC#035 Channel 3 [MIDI] B22300  
Control 35 [Knob 27 (row 3 - col 3)] >> [LCD] CC#035 Channel 4 [MIDI] B32300  
Control 36 [Knob 28 (row 3 - col 4)] >> [LCD] CC#035 Channel 5 [MIDI] B42300  
Control 37 [Knob 29 (row 3 - col 5)] >> [LCD] CC#035 Channel 6 [MIDI] B52300  
Control 38 [Knob 30 (row 3 - col 6)] >> [LCD] CC#035 Channel 7 [MIDI] B62300  
Control 39 [Knob 31 (row 3 - col 7)] >> [LCD] CC#035 Channel 8 [MIDI] B72300

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 40 [Slider 0 (col 0)] >> [LCD] Fader 1 [MIDI] E00000  
Control 41 [Slider 1 (col 1)] >> [LCD] Fader 2 [MIDI] E10000  
Control 42 [Slider 2 (col 2)] >> [LCD] Fader 3 [MIDI] E20000  
Control 43 [Slider 3 (col 3)] >> [LCD] Fader 4 [MIDI] E30000  
Control 44 [Slider 4 (col 4)] >> [LCD] Fader 5 [MIDI] E40000  
Control 45 [Slider 5 (col 5)] >> [LCD] Fader 6 [MIDI] E50000  
Control 46 [Slider 6 (col 6)] >> [LCD] Fader 7 [MIDI] E60000  
Control 47 [Slider 7 (col 7)] >> [LCD] Fader 8 [MIDI] E70000  
Control 48 [Crossfader L] >> [LCD] Master fader [MIDI] E80000  
Control 49 [Crossfader R] >> [LCD] CC # 113 [MIDI] B07100  
Control 50 [Backward[Shift]] >> [LCD] CC # 114 [MIDI] B07200  
Control 51 [Forward[Shift]] >> [LCD] CC # 115 [MIDI] B07300  
Control 52 [Stop[Shift]] >> [LCD] CC # 116 [MIDI] B07400  
Control 53 [Play[Shift]] >> [LCD] CC # 117 [MIDI] B07500  
Control 54 [Rec[Shift]] >> [LCD] CC # 118 [MIDI] B07600  
Control 55 [Joystick button] >> [LCD] CC # 119 [MIDI] B07700  
Control 56 [Foot-Switch] >> [LCD] CC # 120 [MIDI] B07800  
Control 57 [Encoder button] >> [LCD] CC # 121 [MIDI] B07900  
Control 58 [Button 0] >> [LCD] CC # 122 [MIDI] B07A00  
Control 59 [Button 1] >> [LCD] CC # 123 [MIDI] B07B00  
Control 60 [Button 2] >> [LCD] CC # 124 [MIDI] B07C00  
Control 61 [Button 3] >> [LCD] CC # 125 [MIDI] B07D00  
Control 62 [Button 4] >> [LCD] CC # 126 [MIDI] B07E00  
Control 63 [Button 5] >> [LCD] CC # 127 [MIDI] B07F00  
Control 64 [Button 6] >> [LCD] CC # 000 [MIDI] B00000  
Control 65 [Button 7] >> [LCD] CC # 001 [MIDI] B00100  
Control 66 [LFO] >> [LCD] CC # 002 [MIDI] B00200

\*\*\*\*\* Mackie grp 09 \*\*\*\*\*

Control 05 [Ribbon controller] >> [LCD] CC # 077 [MIDI] B04D00  
Control 06 [Joystick X] >> [LCD] CC # 078 [MIDI] B04E00  
Control 07 [Joystick Y] >> [LCD] CC # 079 [MIDI] B04F00  
Control 08 [Knob 0 (row 0 - col 0)] >> [LCD] CC#036 Channel 1 [MIDI] B02400  
Control 09 [Knob 1 (row 0 - col 1)] >> [LCD] CC#036 Channel 2 [MIDI] B12400  
Control 10 [Knob 2 (row 0 - col 2)] >> [LCD] CC#036 Channel 3 [MIDI] B22400

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 11 [Knob 3 (row 0 - col 3)] >> [LCD] CC#036 Channel 4 [MIDI] B32400  
Control 12 [Knob 4 (row 0 - col 4)] >> [LCD] CC#036 Channel 5 [MIDI] B42400  
Control 13 [Knob 5 (row 0 - col 5)] >> [LCD] CC#036 Channel 6 [MIDI] B52400  
Control 14 [Knob 6 (row 0 - col 6)] >> [LCD] CC#036 Channel 7 [MIDI] B62400  
Control 15 [Knob 7 (row 0 - col 7)] >> [LCD] CC#036 Channel 8 [MIDI] B72400  
Control 16 [Knob 8 (row 1 - col 0)] >> [LCD] CC#037 Channel 1 [MIDI] B02500  
Control 17 [Knob 9 (row 1 - col 1)] >> [LCD] CC#037 Channel 2 [MIDI] B12500  
Control 18 [Knob 10 (row 1 - col 2)] >> [LCD] CC#037 Channel 3 [MIDI] B22500  
Control 19 [Knob 11 (row 1 - col 3)] >> [LCD] CC#037 Channel 4 [MIDI] B32500  
Control 20 [Knob 12 (row 1 - col 4)] >> [LCD] CC#037 Channel 5 [MIDI] B42500  
Control 21 [Knob 13 (row 1 - col 5)] >> [LCD] CC#037 Channel 6 [MIDI] B52500  
Control 22 [Knob 14 (row 1 - col 6)] >> [LCD] CC#037 Channel 7 [MIDI] B62500  
Control 23 [Knob 15 (row 1 - col 7)] >> [LCD] CC#037 Channel 8 [MIDI] B72500  
Control 24 [Knob 16 (row 2 - col 0)] >> [LCD] CC#038 Channel 1 [MIDI] B02600  
Control 25 [Knob 17 (row 2 - col 1)] >> [LCD] CC#038 Channel 2 [MIDI] B12600  
Control 26 [Knob 18 (row 2 - col 2)] >> [LCD] CC#038 Channel 3 [MIDI] B22600  
Control 27 [Knob 19 (row 2 - col 3)] >> [LCD] CC#038 Channel 4 [MIDI] B32600  
Control 28 [Knob 20 (row 2 - col 4)] >> [LCD] CC#038 Channel 5 [MIDI] B42600  
Control 29 [Knob 21 (row 2 - col 5)] >> [LCD] CC#038 Channel 6 [MIDI] B52600  
Control 30 [Knob 22 (row 2 - col 6)] >> [LCD] CC#038 Channel 7 [MIDI] B62600  
Control 31 [Knob 23 (row 2 - col 7)] >> [LCD] CC#038 Channel 8 [MIDI] B72600  
Control 32 [Knob 24 (row 3 - col 0)] >> [LCD] CC#039 Channel 1 [MIDI] B02700  
Control 33 [Knob 25 (row 3 - col 1)] >> [LCD] CC#039 Channel 2 [MIDI] B12700  
Control 34 [Knob 26 (row 3 - col 2)] >> [LCD] CC#039 Channel 3 [MIDI] B22700  
Control 35 [Knob 27 (row 3 - col 3)] >> [LCD] CC#039 Channel 4 [MIDI] B32700  
Control 36 [Knob 28 (row 3 - col 4)] >> [LCD] CC#039 Channel 5 [MIDI] B42700  
Control 37 [Knob 29 (row 3 - col 5)] >> [LCD] CC#039 Channel 6 [MIDI] B52700  
Control 38 [Knob 30 (row 3 - col 6)] >> [LCD] CC#039 Channel 7 [MIDI] B62700  
Control 39 [Knob 31 (row 3 - col 7)] >> [LCD] CC#039 Channel 8 [MIDI] B72700  
Control 40 [Slider 0 (col 0)] >> [LCD] Fader 1 [MIDI] E00000  
Control 41 [Slider 1 (col 1)] >> [LCD] Fader 2 [MIDI] E10000  
Control 42 [Slider 2 (col 2)] >> [LCD] Fader 3 [MIDI] E20000  
Control 43 [Slider 3 (col 3)] >> [LCD] Fader 4 [MIDI] E30000  
Control 44 [Slider 4 (col 4)] >> [LCD] Fader 5 [MIDI] E40000  
Control 45 [Slider 5 (col 5)] >> [LCD] Fader 6 [MIDI] E50000  
Control 46 [Slider 6 (col 6)] >> [LCD] Fader 7 [MIDI] E60000

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 47 [Slider 7 (col 7)] >> [LCD] Fader 8 [MIDI] E70000  
Control 48 [Crossfader L] >> [LCD] Master fader [MIDI] E80000  
Control 49 [Crossfader R] >> [LCD] CC # 121 [MIDI] B07900  
Control 50 [Backward[Shift]] >> [LCD] CC # 122 [MIDI] B07A00  
Control 51 [Forward[Shift]] >> [LCD] CC # 123 [MIDI] B07B00  
Control 52 [Stop[Shift]] >> [LCD] CC # 124 [MIDI] B07C00  
Control 53 [Play[Shift]] >> [LCD] CC # 125 [MIDI] B07D00  
Control 54 [Rec[Shift]] >> [LCD] CC # 126 [MIDI] B07E00  
Control 55 [Joystick button] >> [LCD] CC # 127 [MIDI] B07F00  
Control 56 [Foot-Switch] >> [LCD] CC # 000 [MIDI] B00000  
Control 57 [Encoder button] >> [LCD] CC # 001 [MIDI] B00100  
Control 58 [Button 0] >> [LCD] CC # 002 [MIDI] B00200  
Control 59 [Button 1] >> [LCD] CC # 003 [MIDI] B00300  
Control 60 [Button 2] >> [LCD] CC # 004 [MIDI] B00400  
Control 61 [Button 3] >> [LCD] CC # 005 [MIDI] B00500  
Control 62 [Button 4] >> [LCD] CC # 006 [MIDI] B00600  
Control 63 [Button 5] >> [LCD] CC # 007 [MIDI] B00700  
Control 64 [Button 6] >> [LCD] CC # 008 [MIDI] B00800  
Control 65 [Button 7] >> [LCD] CC # 009 [MIDI] B00900  
Control 66 [LFO] >> [LCD] CC # 010 [MIDI] B00A00

\*\*\*\*\* Mackie grp 10 \*\*\*\*\*

Control 05 [Ribbon controller] >> [LCD] CC # 085 [MIDI] B05500  
Control 06 [Joystick X] >> [LCD] CC # 086 [MIDI] B05600  
Control 07 [Joystick Y] >> [LCD] CC # 087 [MIDI] B05700  
Control 08 [Knob 0 (row 0 - col 0)] >> [LCD] CC#040 Channel 1 [MIDI] B02800  
Control 09 [Knob 1 (row 0 - col 1)] >> [LCD] CC#040 Channel 2 [MIDI] B12800  
Control 10 [Knob 2 (row 0 - col 2)] >> [LCD] CC#040 Channel 3 [MIDI] B22800  
Control 11 [Knob 3 (row 0 - col 3)] >> [LCD] CC#040 Channel 4 [MIDI] B32800  
Control 12 [Knob 4 (row 0 - col 4)] >> [LCD] CC#040 Channel 5 [MIDI] B42800  
Control 13 [Knob 5 (row 0 - col 5)] >> [LCD] CC#040 Channel 6 [MIDI] B52800  
Control 14 [Knob 6 (row 0 - col 6)] >> [LCD] CC#040 Channel 7 [MIDI] B62800  
Control 15 [Knob 7 (row 0 - col 7)] >> [LCD] CC#040 Channel 8 [MIDI] B72800  
Control 16 [Knob 8 (row 1 - col 0)] >> [LCD] CC#041 Channel 1 [MIDI] B02900  
Control 17 [Knob 9 (row 1 - col 1)] >> [LCD] CC#041 Channel 2 [MIDI] B12900

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 18 [Knob 10 (row 1 - col 2)] >> [LCD] CC#041 Channel 3 [MIDI] B22900  
Control 19 [Knob 11 (row 1 - col 3)] >> [LCD] CC#041 Channel 4 [MIDI] B32900  
Control 20 [Knob 12 (row 1 - col 4)] >> [LCD] CC#041 Channel 5 [MIDI] B42900  
Control 21 [Knob 13 (row 1 - col 5)] >> [LCD] CC#041 Channel 6 [MIDI] B52900  
Control 22 [Knob 14 (row 1 - col 6)] >> [LCD] CC#041 Channel 7 [MIDI] B62900  
Control 23 [Knob 15 (row 1 - col 7)] >> [LCD] CC#041 Channel 8 [MIDI] B72900  
Control 24 [Knob 16 (row 2 - col 0)] >> [LCD] CC#042 Channel 1 [MIDI] B02A00  
Control 25 [Knob 17 (row 2 - col 1)] >> [LCD] CC#042 Channel 2 [MIDI] B12A00  
Control 26 [Knob 18 (row 2 - col 2)] >> [LCD] CC#042 Channel 3 [MIDI] B22A00  
Control 27 [Knob 19 (row 2 - col 3)] >> [LCD] CC#042 Channel 4 [MIDI] B32A00  
Control 28 [Knob 20 (row 2 - col 4)] >> [LCD] CC#042 Channel 5 [MIDI] B42A00  
Control 29 [Knob 21 (row 2 - col 5)] >> [LCD] CC#042 Channel 6 [MIDI] B52A00  
Control 30 [Knob 22 (row 2 - col 6)] >> [LCD] CC#042 Channel 7 [MIDI] B62A00  
Control 31 [Knob 23 (row 2 - col 7)] >> [LCD] CC#042 Channel 8 [MIDI] B72A00  
Control 32 [Knob 24 (row 3 - col 0)] >> [LCD] CC#043 Channel 1 [MIDI] B02B00  
Control 33 [Knob 25 (row 3 - col 1)] >> [LCD] CC#043 Channel 2 [MIDI] B12B00  
Control 34 [Knob 26 (row 3 - col 2)] >> [LCD] CC#043 Channel 3 [MIDI] B22B00  
Control 35 [Knob 27 (row 3 - col 3)] >> [LCD] CC#043 Channel 4 [MIDI] B32B00  
Control 36 [Knob 28 (row 3 - col 4)] >> [LCD] CC#043 Channel 5 [MIDI] B42B00  
Control 37 [Knob 29 (row 3 - col 5)] >> [LCD] CC#043 Channel 6 [MIDI] B52B00  
Control 38 [Knob 30 (row 3 - col 6)] >> [LCD] CC#043 Channel 7 [MIDI] B62B00  
Control 39 [Knob 31 (row 3 - col 7)] >> [LCD] CC#043 Channel 8 [MIDI] B72B00  
Control 40 [Slider 0 (col 0)] >> [LCD] Fader 1 [MIDI] E00000  
Control 41 [Slider 1 (col 1)] >> [LCD] Fader 2 [MIDI] E10000  
Control 42 [Slider 2 (col 2)] >> [LCD] Fader 3 [MIDI] E20000  
Control 43 [Slider 3 (col 3)] >> [LCD] Fader 4 [MIDI] E30000  
Control 44 [Slider 4 (col 4)] >> [LCD] Fader 5 [MIDI] E40000  
Control 45 [Slider 5 (col 5)] >> [LCD] Fader 6 [MIDI] E50000  
Control 46 [Slider 6 (col 6)] >> [LCD] Fader 7 [MIDI] E60000  
Control 47 [Slider 7 (col 7)] >> [LCD] Fader 8 [MIDI] E70000  
Control 48 [Crossfader L] >> [LCD] Master fader [MIDI] E80000  
Control 49 [Crossfader R] >> [LCD] CC # 001 [MIDI] B00100  
Control 50 [Backward[Shift]] >> [LCD] CC # 002 [MIDI] B00200  
Control 51 [Forward[Shift]] >> [LCD] CC # 003 [MIDI] B00300  
Control 52 [Stop[Shift]] >> [LCD] CC # 004 [MIDI] B00400  
Control 53 [Play[Shift]] >> [LCD] CC # 005 [MIDI] B00500



## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 54 [Rec[Shift]] >> [LCD] CC # 006 [MIDI] B00600  
Control 55 [Joystick button] >> [LCD] CC # 007 [MIDI] B00700  
Control 56 [Foot-Switch] >> [LCD] CC # 008 [MIDI] B00800  
Control 57 [Encoder button] >> [LCD] CC # 009 [MIDI] B00900  
Control 58 [Button 0] >> [LCD] CC # 010 [MIDI] B00A00  
Control 59 [Button 1] >> [LCD] CC # 011 [MIDI] B00B00  
Control 60 [Button 2] >> [LCD] CC # 012 [MIDI] B00C00  
Control 61 [Button 3] >> [LCD] CC # 013 [MIDI] B00D00  
Control 62 [Button 4] >> [LCD] CC # 014 [MIDI] B00E00  
Control 63 [Button 5] >> [LCD] CC # 015 [MIDI] B00F00  
Control 64 [Button 6] >> [LCD] CC # 016 [MIDI] B01000  
Control 65 [Button 7] >> [LCD] CC # 017 [MIDI] B01100  
Control 66 [LFO] >> [LCD] CC # 018 [MIDI] B01200

\*\*\*\*\* Mackie grp 11 \*\*\*\*\*

Control 05 [Ribbon controller] >> [LCD] CC # 093 [MIDI] B05D00  
Control 06 [Joystick X] >> [LCD] CC # 094 [MIDI] B05E00  
Control 07 [Joystick Y] >> [LCD] CC # 095 [MIDI] B05F00  
Control 08 [Knob 0 (row 0 - col 0)] >> [LCD] CC#044 Channel 1 [MIDI] B02C00  
Control 09 [Knob 1 (row 0 - col 1)] >> [LCD] CC#044 Channel 2 [MIDI] B12C00  
Control 10 [Knob 2 (row 0 - col 2)] >> [LCD] CC#044 Channel 3 [MIDI] B22C00  
Control 11 [Knob 3 (row 0 - col 3)] >> [LCD] CC#044 Channel 4 [MIDI] B32C00  
Control 12 [Knob 4 (row 0 - col 4)] >> [LCD] CC#044 Channel 5 [MIDI] B42C00  
Control 13 [Knob 5 (row 0 - col 5)] >> [LCD] CC#044 Channel 6 [MIDI] B52C00  
Control 14 [Knob 6 (row 0 - col 6)] >> [LCD] CC#044 Channel 7 [MIDI] B62C00  
Control 15 [Knob 7 (row 0 - col 7)] >> [LCD] CC#044 Channel 8 [MIDI] B72C00  
Control 16 [Knob 8 (row 1 - col 0)] >> [LCD] CC#045 Channel 1 [MIDI] B02D00  
Control 17 [Knob 9 (row 1 - col 1)] >> [LCD] CC#045 Channel 2 [MIDI] B12D00  
Control 18 [Knob 10 (row 1 - col 2)] >> [LCD] CC#045 Channel 3 [MIDI] B22D00  
Control 19 [Knob 11 (row 1 - col 3)] >> [LCD] CC#045 Channel 4 [MIDI] B32D00  
Control 20 [Knob 12 (row 1 - col 4)] >> [LCD] CC#045 Channel 5 [MIDI] B42D00  
Control 21 [Knob 13 (row 1 - col 5)] >> [LCD] CC#045 Channel 6 [MIDI] B52D00  
Control 22 [Knob 14 (row 1 - col 6)] >> [LCD] CC#045 Channel 7 [MIDI] B62D00  
Control 23 [Knob 15 (row 1 - col 7)] >> [LCD] CC#045 Channel 8 [MIDI] B72D00  
Control 24 [Knob 16 (row 2 - col 0)] >> [LCD] CC#046 Channel 1 [MIDI] B02E00

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 25 [Knob 17 (row 2 - col 1)] >> [LCD] CC#046 Channel 2 [MIDI] B12E00  
Control 26 [Knob 18 (row 2 - col 2)] >> [LCD] CC#046 Channel 3 [MIDI] B22E00  
Control 27 [Knob 19 (row 2 - col 3)] >> [LCD] CC#046 Channel 4 [MIDI] B32E00  
Control 28 [Knob 20 (row 2 - col 4)] >> [LCD] CC#046 Channel 5 [MIDI] B42E00  
Control 29 [Knob 21 (row 2 - col 5)] >> [LCD] CC#046 Channel 6 [MIDI] B52E00  
Control 30 [Knob 22 (row 2 - col 6)] >> [LCD] CC#046 Channel 7 [MIDI] B62E00  
Control 31 [Knob 23 (row 2 - col 7)] >> [LCD] CC#046 Channel 8 [MIDI] B72E00  
Control 32 [Knob 24 (row 3 - col 0)] >> [LCD] CC#047 Channel 1 [MIDI] B02F00  
Control 33 [Knob 25 (row 3 - col 1)] >> [LCD] CC#047 Channel 2 [MIDI] B12F00  
Control 34 [Knob 26 (row 3 - col 2)] >> [LCD] CC#047 Channel 3 [MIDI] B22F00  
Control 35 [Knob 27 (row 3 - col 3)] >> [LCD] CC#047 Channel 4 [MIDI] B32F00  
Control 36 [Knob 28 (row 3 - col 4)] >> [LCD] CC#047 Channel 5 [MIDI] B42F00  
Control 37 [Knob 29 (row 3 - col 5)] >> [LCD] CC#047 Channel 6 [MIDI] B52F00  
Control 38 [Knob 30 (row 3 - col 6)] >> [LCD] CC#047 Channel 7 [MIDI] B62F00  
Control 39 [Knob 31 (row 3 - col 7)] >> [LCD] CC#047 Channel 8 [MIDI] B72F00  
Control 40 [Slider 0 (col 0)] >> [LCD] Fader 1 [MIDI] E00000  
Control 41 [Slider 1 (col 1)] >> [LCD] Fader 2 [MIDI] E10000  
Control 42 [Slider 2 (col 2)] >> [LCD] Fader 3 [MIDI] E20000  
Control 43 [Slider 3 (col 3)] >> [LCD] Fader 4 [MIDI] E30000  
Control 44 [Slider 4 (col 4)] >> [LCD] Fader 5 [MIDI] E40000  
Control 45 [Slider 5 (col 5)] >> [LCD] Fader 6 [MIDI] E50000  
Control 46 [Slider 6 (col 6)] >> [LCD] Fader 7 [MIDI] E60000  
Control 47 [Slider 7 (col 7)] >> [LCD] Fader 8 [MIDI] E70000  
Control 48 [Crossfader L] >> [LCD] Master fader [MIDI] E80000  
Control 49 [Crossfader R] >> [LCD] CC # 009 [MIDI] B00900  
Control 50 [Backward[Shift]] >> [LCD] CC # 010 [MIDI] B00A00  
Control 51 [Forward[Shift]] >> [LCD] CC # 011 [MIDI] B00B00  
Control 52 [Stop[Shift]] >> [LCD] CC # 012 [MIDI] B00C00  
Control 53 [Play[Shift]] >> [LCD] CC # 013 [MIDI] B00D00  
Control 54 [Rec[Shift]] >> [LCD] CC # 014 [MIDI] B00E00  
Control 55 [Joystick button] >> [LCD] CC # 015 [MIDI] B00F00  
Control 56 [Foot-Switch] >> [LCD] CC # 016 [MIDI] B01000  
Control 57 [Encoder button] >> [LCD] CC # 017 [MIDI] B01100  
Control 58 [Button 0] >> [LCD] CC # 018 [MIDI] B01200  
Control 59 [Button 1] >> [LCD] CC # 019 [MIDI] B01300  
Control 60 [Button 2] >> [LCD] CC # 020 [MIDI] B01400



## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 61 [Button 3] >> [LCD] CC # 021 [MIDI] B01500  
Control 62 [Button 4] >> [LCD] CC # 022 [MIDI] B01600  
Control 63 [Button 5] >> [LCD] CC # 023 [MIDI] B01700  
Control 64 [Button 6] >> [LCD] CC # 024 [MIDI] B01800  
Control 65 [Button 7] >> [LCD] CC # 025 [MIDI] B01900  
Control 66 [LFO] >> [LCD] CC # 026 [MIDI] B01A00

\*\*\*\*\* Mackie grp 12 \*\*\*\*\*

Control 05 [Ribbon controller] >> [LCD] CC # 101 [MIDI] B06500  
Control 06 [Joystick X] >> [LCD] CC # 102 [MIDI] B06600  
Control 07 [Joystick Y] >> [LCD] CC # 103 [MIDI] B06700  
Control 08 [Knob 0 (row 0 - col 0)] >> [LCD] CC#048 Channel 1 [MIDI] B03000  
Control 09 [Knob 1 (row 0 - col 1)] >> [LCD] CC#048 Channel 2 [MIDI] B13000  
Control 10 [Knob 2 (row 0 - col 2)] >> [LCD] CC#048 Channel 3 [MIDI] B23000  
Control 11 [Knob 3 (row 0 - col 3)] >> [LCD] CC#048 Channel 4 [MIDI] B33000  
Control 12 [Knob 4 (row 0 - col 4)] >> [LCD] CC#048 Channel 5 [MIDI] B43000  
Control 13 [Knob 5 (row 0 - col 5)] >> [LCD] CC#048 Channel 6 [MIDI] B53000  
Control 14 [Knob 6 (row 0 - col 6)] >> [LCD] CC#048 Channel 7 [MIDI] B63000  
Control 15 [Knob 7 (row 0 - col 7)] >> [LCD] CC#048 Channel 8 [MIDI] B73000  
Control 16 [Knob 8 (row 1 - col 0)] >> [LCD] CC#049 Channel 1 [MIDI] B03100  
Control 17 [Knob 9 (row 1 - col 1)] >> [LCD] CC#049 Channel 2 [MIDI] B13100  
Control 18 [Knob 10 (row 1 - col 2)] >> [LCD] CC#049 Channel 3 [MIDI] B23100  
Control 19 [Knob 11 (row 1 - col 3)] >> [LCD] CC#049 Channel 4 [MIDI] B33100  
Control 20 [Knob 12 (row 1 - col 4)] >> [LCD] CC#049 Channel 5 [MIDI] B43100  
Control 21 [Knob 13 (row 1 - col 5)] >> [LCD] CC#049 Channel 6 [MIDI] B53100  
Control 22 [Knob 14 (row 1 - col 6)] >> [LCD] CC#049 Channel 7 [MIDI] B63100  
Control 23 [Knob 15 (row 1 - col 7)] >> [LCD] CC#049 Channel 8 [MIDI] B73100  
Control 24 [Knob 16 (row 2 - col 0)] >> [LCD] CC#050 Channel 1 [MIDI] B03200  
Control 25 [Knob 17 (row 2 - col 1)] >> [LCD] CC#050 Channel 2 [MIDI] B13200  
Control 26 [Knob 18 (row 2 - col 2)] >> [LCD] CC#050 Channel 3 [MIDI] B23200  
Control 27 [Knob 19 (row 2 - col 3)] >> [LCD] CC#050 Channel 4 [MIDI] B33200  
Control 28 [Knob 20 (row 2 - col 4)] >> [LCD] CC#050 Channel 5 [MIDI] B43200  
Control 29 [Knob 21 (row 2 - col 5)] >> [LCD] CC#050 Channel 6 [MIDI] B53200  
Control 30 [Knob 22 (row 2 - col 6)] >> [LCD] CC#050 Channel 7 [MIDI] B63200  
Control 31 [Knob 23 (row 2 - col 7)] >> [LCD] CC#050 Channel 8 [MIDI] B73200

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 32 [Knob 24 (row 3 - col 0)] >> [LCD] CC#051 Channel 1 [MIDI] B03300  
Control 33 [Knob 25 (row 3 - col 1)] >> [LCD] CC#051 Channel 2 [MIDI] B13300  
Control 34 [Knob 26 (row 3 - col 2)] >> [LCD] CC#051 Channel 3 [MIDI] B23300  
Control 35 [Knob 27 (row 3 - col 3)] >> [LCD] CC#051 Channel 4 [MIDI] B33300  
Control 36 [Knob 28 (row 3 - col 4)] >> [LCD] CC#051 Channel 5 [MIDI] B43300  
Control 37 [Knob 29 (row 3 - col 5)] >> [LCD] CC#051 Channel 6 [MIDI] B53300  
Control 38 [Knob 30 (row 3 - col 6)] >> [LCD] CC#051 Channel 7 [MIDI] B63300  
Control 39 [Knob 31 (row 3 - col 7)] >> [LCD] CC#051 Channel 8 [MIDI] B73300  
Control 40 [Slider 0 (col 0)] >> [LCD] Fader 1 [MIDI] E00000  
Control 41 [Slider 1 (col 1)] >> [LCD] Fader 2 [MIDI] E10000  
Control 42 [Slider 2 (col 2)] >> [LCD] Fader 3 [MIDI] E20000  
Control 43 [Slider 3 (col 3)] >> [LCD] Fader 4 [MIDI] E30000  
Control 44 [Slider 4 (col 4)] >> [LCD] Fader 5 [MIDI] E40000  
Control 45 [Slider 5 (col 5)] >> [LCD] Fader 6 [MIDI] E50000  
Control 46 [Slider 6 (col 6)] >> [LCD] Fader 7 [MIDI] E60000  
Control 47 [Slider 7 (col 7)] >> [LCD] Fader 8 [MIDI] E70000  
Control 48 [Crossfader L] >> [LCD] Master fader [MIDI] E80000  
Control 49 [Crossfader R] >> [LCD] CC # 017 [MIDI] B01100  
Control 50 [Backward[Shift]] >> [LCD] CC # 018 [MIDI] B01200  
Control 51 [Forward[Shift]] >> [LCD] CC # 019 [MIDI] B01300  
Control 52 [Stop[Shift]] >> [LCD] CC # 020 [MIDI] B01400  
Control 53 [Play[Shift]] >> [LCD] CC # 021 [MIDI] B01500  
Control 54 [Rec[Shift]] >> [LCD] CC # 022 [MIDI] B01600  
Control 55 [Joystick button] >> [LCD] CC # 023 [MIDI] B01700  
Control 56 [Foot-Switch] >> [LCD] CC # 024 [MIDI] B01800  
Control 57 [Encoder button] >> [LCD] CC # 025 [MIDI] B01900  
Control 58 [Button 0] >> [LCD] CC # 026 [MIDI] B01A00  
Control 59 [Button 1] >> [LCD] CC # 027 [MIDI] B01B00  
Control 60 [Button 2] >> [LCD] CC # 028 [MIDI] B01C00  
Control 61 [Button 3] >> [LCD] CC # 029 [MIDI] B01D00  
Control 62 [Button 4] >> [LCD] CC # 030 [MIDI] B01E00  
Control 63 [Button 5] >> [LCD] CC # 031 [MIDI] B01F00  
Control 64 [Button 6] >> [LCD] CC # 032 [MIDI] B02000  
Control 65 [Button 7] >> [LCD] CC # 033 [MIDI] B02100  
Control 66 [LFO] >> [LCD] CC # 034 [MIDI] B02200

## AN003 : Bitstream 3X – Mackie/Logic control emulation

\*\*\*\*\* Mackie grp 13 \*\*\*\*\*

Control 05 [Ribbon controller] >> [LCD] CC # 109 [MIDI] B06D00  
Control 06 [Joystick X] >> [LCD] CC # 110 [MIDI] B06E00  
Control 07 [Joystick Y] >> [LCD] CC # 111 [MIDI] B06F00  
Control 08 [Knob 0 (row 0 - col 0)] >> [LCD] CC#052 Channel 1 [MIDI] B03400  
Control 09 [Knob 1 (row 0 - col 1)] >> [LCD] CC#052 Channel 2 [MIDI] B13400  
Control 10 [Knob 2 (row 0 - col 2)] >> [LCD] CC#052 Channel 3 [MIDI] B23400  
Control 11 [Knob 3 (row 0 - col 3)] >> [LCD] CC#052 Channel 4 [MIDI] B33400  
Control 12 [Knob 4 (row 0 - col 4)] >> [LCD] CC#052 Channel 5 [MIDI] B43400  
Control 13 [Knob 5 (row 0 - col 5)] >> [LCD] CC#052 Channel 6 [MIDI] B53400  
Control 14 [Knob 6 (row 0 - col 6)] >> [LCD] CC#052 Channel 7 [MIDI] B63400  
Control 15 [Knob 7 (row 0 - col 7)] >> [LCD] CC#052 Channel 8 [MIDI] B73400  
Control 16 [Knob 8 (row 1 - col 0)] >> [LCD] CC#053 Channel 1 [MIDI] B03500  
Control 17 [Knob 9 (row 1 - col 1)] >> [LCD] CC#053 Channel 2 [MIDI] B13500  
Control 18 [Knob 10 (row 1 - col 2)] >> [LCD] CC#053 Channel 3 [MIDI] B23500  
Control 19 [Knob 11 (row 1 - col 3)] >> [LCD] CC#053 Channel 4 [MIDI] B33500  
Control 20 [Knob 12 (row 1 - col 4)] >> [LCD] CC#053 Channel 5 [MIDI] B43500  
Control 21 [Knob 13 (row 1 - col 5)] >> [LCD] CC#053 Channel 6 [MIDI] B53500  
Control 22 [Knob 14 (row 1 - col 6)] >> [LCD] CC#053 Channel 7 [MIDI] B63500  
Control 23 [Knob 15 (row 1 - col 7)] >> [LCD] CC#053 Channel 8 [MIDI] B73500  
Control 24 [Knob 16 (row 2 - col 0)] >> [LCD] CC#054 Channel 1 [MIDI] B03600  
Control 25 [Knob 17 (row 2 - col 1)] >> [LCD] CC#054 Channel 2 [MIDI] B13600  
Control 26 [Knob 18 (row 2 - col 2)] >> [LCD] CC#054 Channel 3 [MIDI] B23600  
Control 27 [Knob 19 (row 2 - col 3)] >> [LCD] CC#054 Channel 4 [MIDI] B33600  
Control 28 [Knob 20 (row 2 - col 4)] >> [LCD] CC#054 Channel 5 [MIDI] B43600  
Control 29 [Knob 21 (row 2 - col 5)] >> [LCD] CC#054 Channel 6 [MIDI] B53600  
Control 30 [Knob 22 (row 2 - col 6)] >> [LCD] CC#054 Channel 7 [MIDI] B63600  
Control 31 [Knob 23 (row 2 - col 7)] >> [LCD] CC#054 Channel 8 [MIDI] B73600  
Control 32 [Knob 24 (row 3 - col 0)] >> [LCD] CC#055 Channel 1 [MIDI] B03700  
Control 33 [Knob 25 (row 3 - col 1)] >> [LCD] CC#055 Channel 2 [MIDI] B13700  
Control 34 [Knob 26 (row 3 - col 2)] >> [LCD] CC#055 Channel 3 [MIDI] B23700  
Control 35 [Knob 27 (row 3 - col 3)] >> [LCD] CC#055 Channel 4 [MIDI] B33700  
Control 36 [Knob 28 (row 3 - col 4)] >> [LCD] CC#055 Channel 5 [MIDI] B43700  
Control 37 [Knob 29 (row 3 - col 5)] >> [LCD] CC#055 Channel 6 [MIDI] B53700  
Control 38 [Knob 30 (row 3 - col 6)] >> [LCD] CC#055 Channel 7 [MIDI] B63700

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 39 [Knob 31 (row 3 - col 7)] >> [LCD] CC#055 Channel 8 [MIDI] B73700  
Control 40 [Slider 0 (col 0)] >> [LCD] Fader 1 [MIDI] E00000  
Control 41 [Slider 1 (col 1)] >> [LCD] Fader 2 [MIDI] E10000  
Control 42 [Slider 2 (col 2)] >> [LCD] Fader 3 [MIDI] E20000  
Control 43 [Slider 3 (col 3)] >> [LCD] Fader 4 [MIDI] E30000  
Control 44 [Slider 4 (col 4)] >> [LCD] Fader 5 [MIDI] E40000  
Control 45 [Slider 5 (col 5)] >> [LCD] Fader 6 [MIDI] E50000  
Control 46 [Slider 6 (col 6)] >> [LCD] Fader 7 [MIDI] E60000  
Control 47 [Slider 7 (col 7)] >> [LCD] Fader 8 [MIDI] E70000  
Control 48 [Crossfader L] >> [LCD] Master fader [MIDI] E80000  
Control 49 [Crossfader R] >> [LCD] CC # 025 [MIDI] B01900  
Control 50 [Backward[Shift]] >> [LCD] CC # 026 [MIDI] B01A00  
Control 51 [Forward[Shift]] >> [LCD] CC # 027 [MIDI] B01B00  
Control 52 [Stop[Shift]] >> [LCD] CC # 028 [MIDI] B01C00  
Control 53 [Play[Shift]] >> [LCD] CC # 029 [MIDI] B01D00  
Control 54 [Rec[Shift]] >> [LCD] CC # 030 [MIDI] B01E00  
Control 55 [Joystick button] >> [LCD] CC # 031 [MIDI] B01F00  
Control 56 [Foot-Switch] >> [LCD] CC # 032 [MIDI] B02000  
Control 57 [Encoder button] >> [LCD] CC # 033 [MIDI] B02100  
Control 58 [Button 0] >> [LCD] CC # 034 [MIDI] B02200  
Control 59 [Button 1] >> [LCD] CC # 035 [MIDI] B02300  
Control 60 [Button 2] >> [LCD] CC # 036 [MIDI] B02400  
Control 61 [Button 3] >> [LCD] CC # 037 [MIDI] B02500  
Control 62 [Button 4] >> [LCD] CC # 038 [MIDI] B02600  
Control 63 [Button 5] >> [LCD] CC # 039 [MIDI] B02700  
Control 64 [Button 6] >> [LCD] CC # 040 [MIDI] B02800  
Control 65 [Button 7] >> [LCD] CC # 041 [MIDI] B02900  
Control 66 [LFO] >> [LCD] CC # 042 [MIDI] B02A00

\*\*\*\*\* Mackie grp 14 \*\*\*\*\*

Control 05 [Ribbon controller] >> [LCD] CC # 117 [MIDI] B07500  
Control 06 [Joystick X] >> [LCD] CC # 118 [MIDI] B07600  
Control 07 [Joystick Y] >> [LCD] CC # 119 [MIDI] B07700  
Control 08 [Knob 0 (row 0 - col 0)] >> [LCD] CC#056 Channel 1 [MIDI] B03800  
Control 09 [Knob 1 (row 0 - col 1)] >> [LCD] CC#056 Channel 2 [MIDI] B13800

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 10 [Knob 2 (row 0 - col 2)] >> [LCD] CC#056 Channel 3 [MIDI] B23800  
Control 11 [Knob 3 (row 0 - col 3)] >> [LCD] CC#056 Channel 4 [MIDI] B33800  
Control 12 [Knob 4 (row 0 - col 4)] >> [LCD] CC#056 Channel 5 [MIDI] B43800  
Control 13 [Knob 5 (row 0 - col 5)] >> [LCD] CC#056 Channel 6 [MIDI] B53800  
Control 14 [Knob 6 (row 0 - col 6)] >> [LCD] CC#056 Channel 7 [MIDI] B63800  
Control 15 [Knob 7 (row 0 - col 7)] >> [LCD] CC#056 Channel 8 [MIDI] B73800  
Control 16 [Knob 8 (row 1 - col 0)] >> [LCD] CC#057 Channel 1 [MIDI] B03900  
Control 17 [Knob 9 (row 1 - col 1)] >> [LCD] CC#057 Channel 2 [MIDI] B13900  
Control 18 [Knob 10 (row 1 - col 2)] >> [LCD] CC#057 Channel 3 [MIDI] B23900  
Control 19 [Knob 11 (row 1 - col 3)] >> [LCD] CC#057 Channel 4 [MIDI] B33900  
Control 20 [Knob 12 (row 1 - col 4)] >> [LCD] CC#057 Channel 5 [MIDI] B43900  
Control 21 [Knob 13 (row 1 - col 5)] >> [LCD] CC#057 Channel 6 [MIDI] B53900  
Control 22 [Knob 14 (row 1 - col 6)] >> [LCD] CC#057 Channel 7 [MIDI] B63900  
Control 23 [Knob 15 (row 1 - col 7)] >> [LCD] CC#057 Channel 8 [MIDI] B73900  
Control 24 [Knob 16 (row 2 - col 0)] >> [LCD] CC#058 Channel 1 [MIDI] B03A00  
Control 25 [Knob 17 (row 2 - col 1)] >> [LCD] CC#058 Channel 2 [MIDI] B13A00  
Control 26 [Knob 18 (row 2 - col 2)] >> [LCD] CC#058 Channel 3 [MIDI] B23A00  
Control 27 [Knob 19 (row 2 - col 3)] >> [LCD] CC#058 Channel 4 [MIDI] B33A00  
Control 28 [Knob 20 (row 2 - col 4)] >> [LCD] CC#058 Channel 5 [MIDI] B43A00  
Control 29 [Knob 21 (row 2 - col 5)] >> [LCD] CC#058 Channel 6 [MIDI] B53A00  
Control 30 [Knob 22 (row 2 - col 6)] >> [LCD] CC#058 Channel 7 [MIDI] B63A00  
Control 31 [Knob 23 (row 2 - col 7)] >> [LCD] CC#058 Channel 8 [MIDI] B73A00  
Control 32 [Knob 24 (row 3 - col 0)] >> [LCD] CC#059 Channel 1 [MIDI] B03B00  
Control 33 [Knob 25 (row 3 - col 1)] >> [LCD] CC#059 Channel 2 [MIDI] B13B00  
Control 34 [Knob 26 (row 3 - col 2)] >> [LCD] CC#059 Channel 3 [MIDI] B23B00  
Control 35 [Knob 27 (row 3 - col 3)] >> [LCD] CC#059 Channel 4 [MIDI] B33B00  
Control 36 [Knob 28 (row 3 - col 4)] >> [LCD] CC#059 Channel 5 [MIDI] B43B00  
Control 37 [Knob 29 (row 3 - col 5)] >> [LCD] CC#059 Channel 6 [MIDI] B53B00  
Control 38 [Knob 30 (row 3 - col 6)] >> [LCD] CC#059 Channel 7 [MIDI] B63B00  
Control 39 [Knob 31 (row 3 - col 7)] >> [LCD] CC#059 Channel 8 [MIDI] B73B00  
Control 40 [Slider 0 (col 0)] >> [LCD] Fader 1 [MIDI] E00000  
Control 41 [Slider 1 (col 1)] >> [LCD] Fader 2 [MIDI] E10000  
Control 42 [Slider 2 (col 2)] >> [LCD] Fader 3 [MIDI] E20000  
Control 43 [Slider 3 (col 3)] >> [LCD] Fader 4 [MIDI] E30000  
Control 44 [Slider 4 (col 4)] >> [LCD] Fader 5 [MIDI] E40000  
Control 45 [Slider 5 (col 5)] >> [LCD] Fader 6 [MIDI] E50000

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 46 [Slider 6 (col 6)] >> [LCD] Fader 7 [MIDI] E60000  
Control 47 [Slider 7 (col 7)] >> [LCD] Fader 8 [MIDI] E70000  
Control 48 [Crossfader L] >> [LCD] Master fader [MIDI] E80000  
Control 49 [Crossfader R] >> [LCD] CC # 033 [MIDI] B02100  
Control 50 [Backward[Shift]] >> [LCD] CC # 034 [MIDI] B02200  
Control 51 [Forward[Shift]] >> [LCD] CC # 035 [MIDI] B02300  
Control 52 [Stop[Shift]] >> [LCD] CC # 036 [MIDI] B02400  
Control 53 [Play[Shift]] >> [LCD] CC # 037 [MIDI] B02500  
Control 54 [Rec[Shift]] >> [LCD] CC # 038 [MIDI] B02600  
Control 55 [Joystick button] >> [LCD] CC # 039 [MIDI] B02700  
Control 56 [Foot-Switch] >> [LCD] CC # 040 [MIDI] B02800  
Control 57 [Encoder button] >> [LCD] CC # 041 [MIDI] B02900  
Control 58 [Button 0] >> [LCD] CC # 042 [MIDI] B02A00  
Control 59 [Button 1] >> [LCD] CC # 043 [MIDI] B02B00  
Control 60 [Button 2] >> [LCD] CC # 044 [MIDI] B02C00  
Control 61 [Button 3] >> [LCD] CC # 045 [MIDI] B02D00  
Control 62 [Button 4] >> [LCD] CC # 046 [MIDI] B02E00  
Control 63 [Button 5] >> [LCD] CC # 047 [MIDI] B02F00  
Control 64 [Button 6] >> [LCD] CC # 048 [MIDI] B03000  
Control 65 [Button 7] >> [LCD] CC # 049 [MIDI] B03100  
Control 66 [LFO] >> [LCD] CC # 050 [MIDI] B03200

\*\*\*\*\* Mackie grp 15 \*\*\*\*\*

Control 05 [Ribbon controller] >> [LCD] CC # 125 [MIDI] B07D00  
Control 06 [Joystick X] >> [LCD] CC # 126 [MIDI] B07E00  
Control 07 [Joystick Y] >> [LCD] CC # 127 [MIDI] B07F00  
Control 08 [Knob 0 (row 0 - col 0)] >> [LCD] CC#060 Channel 1 [MIDI] B03C00  
Control 09 [Knob 1 (row 0 - col 1)] >> [LCD] CC#060 Channel 2 [MIDI] B13C00  
Control 10 [Knob 2 (row 0 - col 2)] >> [LCD] CC#060 Channel 3 [MIDI] B23C00  
Control 11 [Knob 3 (row 0 - col 3)] >> [LCD] CC#060 Channel 4 [MIDI] B33C00  
Control 12 [Knob 4 (row 0 - col 4)] >> [LCD] CC#060 Channel 5 [MIDI] B43C00  
Control 13 [Knob 5 (row 0 - col 5)] >> [LCD] CC#060 Channel 6 [MIDI] B53C00  
Control 14 [Knob 6 (row 0 - col 6)] >> [LCD] CC#060 Channel 7 [MIDI] B63C00  
Control 15 [Knob 7 (row 0 - col 7)] >> [LCD] CC#060 Channel 8 [MIDI] B73C00  
Control 16 [Knob 8 (row 1 - col 0)] >> [LCD] CC#061 Channel 1 [MIDI] B03D00



## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 17 [Knob 9 (row 1 - col 1)] >> [LCD] CC#061 Channel 2 [MIDI] B13D00  
Control 18 [Knob 10 (row 1 - col 2)] >> [LCD] CC#061 Channel 3 [MIDI] B23D00  
Control 19 [Knob 11 (row 1 - col 3)] >> [LCD] CC#061 Channel 4 [MIDI] B33D00  
Control 20 [Knob 12 (row 1 - col 4)] >> [LCD] CC#061 Channel 5 [MIDI] B43D00  
Control 21 [Knob 13 (row 1 - col 5)] >> [LCD] CC#061 Channel 6 [MIDI] B53D00  
Control 22 [Knob 14 (row 1 - col 6)] >> [LCD] CC#061 Channel 7 [MIDI] B63D00  
Control 23 [Knob 15 (row 1 - col 7)] >> [LCD] CC#061 Channel 8 [MIDI] B73D00  
Control 24 [Knob 16 (row 2 - col 0)] >> [LCD] CC#062 Channel 1 [MIDI] B03E00  
Control 25 [Knob 17 (row 2 - col 1)] >> [LCD] CC#062 Channel 2 [MIDI] B13E00  
Control 26 [Knob 18 (row 2 - col 2)] >> [LCD] CC#062 Channel 3 [MIDI] B23E00  
Control 27 [Knob 19 (row 2 - col 3)] >> [LCD] CC#062 Channel 4 [MIDI] B33E00  
Control 28 [Knob 20 (row 2 - col 4)] >> [LCD] CC#062 Channel 5 [MIDI] B43E00  
Control 29 [Knob 21 (row 2 - col 5)] >> [LCD] CC#062 Channel 6 [MIDI] B53E00  
Control 30 [Knob 22 (row 2 - col 6)] >> [LCD] CC#062 Channel 7 [MIDI] B63E00  
Control 31 [Knob 23 (row 2 - col 7)] >> [LCD] CC#062 Channel 8 [MIDI] B73E00  
Control 32 [Knob 24 (row 3 - col 0)] >> [LCD] CC#063 Channel 1 [MIDI] B03F00  
Control 33 [Knob 25 (row 3 - col 1)] >> [LCD] CC#063 Channel 2 [MIDI] B13F00  
Control 34 [Knob 26 (row 3 - col 2)] >> [LCD] CC#063 Channel 3 [MIDI] B23F00  
Control 35 [Knob 27 (row 3 - col 3)] >> [LCD] CC#063 Channel 4 [MIDI] B33F00  
Control 36 [Knob 28 (row 3 - col 4)] >> [LCD] CC#063 Channel 5 [MIDI] B43F00  
Control 37 [Knob 29 (row 3 - col 5)] >> [LCD] CC#063 Channel 6 [MIDI] B53F00  
Control 38 [Knob 30 (row 3 - col 6)] >> [LCD] CC#063 Channel 7 [MIDI] B63F00  
Control 39 [Knob 31 (row 3 - col 7)] >> [LCD] CC#063 Channel 8 [MIDI] B73F00  
Control 40 [Slider 0 (col 0)] >> [LCD] Fader 1 [MIDI] E00000  
Control 41 [Slider 1 (col 1)] >> [LCD] Fader 2 [MIDI] E10000  
Control 42 [Slider 2 (col 2)] >> [LCD] Fader 3 [MIDI] E20000  
Control 43 [Slider 3 (col 3)] >> [LCD] Fader 4 [MIDI] E30000  
Control 44 [Slider 4 (col 4)] >> [LCD] Fader 5 [MIDI] E40000  
Control 45 [Slider 5 (col 5)] >> [LCD] Fader 6 [MIDI] E50000  
Control 46 [Slider 6 (col 6)] >> [LCD] Fader 7 [MIDI] E60000  
Control 47 [Slider 7 (col 7)] >> [LCD] Fader 8 [MIDI] E70000  
Control 48 [Crossfader L] >> [LCD] Master fader [MIDI] E80000  
Control 49 [Crossfader R] >> [LCD] CC # 041 [MIDI] B02900  
Control 50 [Backward[Shift]] >> [LCD] CC # 042 [MIDI] B02A00  
Control 51 [Forward[Shift]] >> [LCD] CC # 043 [MIDI] B02B00  
Control 52 [Stop[Shift]] >> [LCD] CC # 044 [MIDI] B02C00

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 53 [Play[Shift]] >> [LCD] CC # 045 [MIDI] B02D00  
Control 54 [Rec[Shift]] >> [LCD] CC # 046 [MIDI] B02E00  
Control 55 [Joystick button] >> [LCD] CC # 047 [MIDI] B02F00  
Control 56 [Foot-Switch] >> [LCD] CC # 048 [MIDI] B03000  
Control 57 [Encoder button] >> [LCD] CC # 049 [MIDI] B03100  
Control 58 [Button 0] >> [LCD] CC # 050 [MIDI] B03200  
Control 59 [Button 1] >> [LCD] CC # 051 [MIDI] B03300  
Control 60 [Button 2] >> [LCD] CC # 052 [MIDI] B03400  
Control 61 [Button 3] >> [LCD] CC # 053 [MIDI] B03500  
Control 62 [Button 4] >> [LCD] CC # 054 [MIDI] B03600  
Control 63 [Button 5] >> [LCD] CC # 055 [MIDI] B03700  
Control 64 [Button 6] >> [LCD] CC # 056 [MIDI] B03800  
Control 65 [Button 7] >> [LCD] CC # 057 [MIDI] B03900  
Control 66 [LFO] >> [LCD] CC # 058 [MIDI] B03A00

\*\*\*\*\* Mackie grp 16 \*\*\*\*\*

Control 05 [Ribbon controller] >> [LCD] CC # 005 [MIDI] B00500  
Control 06 [Joystick X] >> [LCD] CC # 006 [MIDI] B00600  
Control 07 [Joystick Y] >> [LCD] CC # 007 [MIDI] B00700  
Control 08 [Knob 0 (row 0 - col 0)] >> [LCD] CC#064 Channel 1 [MIDI] B04000  
Control 09 [Knob 1 (row 0 - col 1)] >> [LCD] CC#064 Channel 2 [MIDI] B14000  
Control 10 [Knob 2 (row 0 - col 2)] >> [LCD] CC#064 Channel 3 [MIDI] B24000  
Control 11 [Knob 3 (row 0 - col 3)] >> [LCD] CC#064 Channel 4 [MIDI] B34000  
Control 12 [Knob 4 (row 0 - col 4)] >> [LCD] CC#064 Channel 5 [MIDI] B44000  
Control 13 [Knob 5 (row 0 - col 5)] >> [LCD] CC#064 Channel 6 [MIDI] B54000  
Control 14 [Knob 6 (row 0 - col 6)] >> [LCD] CC#064 Channel 7 [MIDI] B64000  
Control 15 [Knob 7 (row 0 - col 7)] >> [LCD] CC#064 Channel 8 [MIDI] B74000  
Control 16 [Knob 8 (row 1 - col 0)] >> [LCD] CC#065 Channel 1 [MIDI] B04100  
Control 17 [Knob 9 (row 1 - col 1)] >> [LCD] CC#065 Channel 2 [MIDI] B14100  
Control 18 [Knob 10 (row 1 - col 2)] >> [LCD] CC#065 Channel 3 [MIDI] B24100  
Control 19 [Knob 11 (row 1 - col 3)] >> [LCD] CC#065 Channel 4 [MIDI] B34100  
Control 20 [Knob 12 (row 1 - col 4)] >> [LCD] CC#065 Channel 5 [MIDI] B44100  
Control 21 [Knob 13 (row 1 - col 5)] >> [LCD] CC#065 Channel 6 [MIDI] B54100  
Control 22 [Knob 14 (row 1 - col 6)] >> [LCD] CC#065 Channel 7 [MIDI] B64100  
Control 23 [Knob 15 (row 1 - col 7)] >> [LCD] CC#065 Channel 8 [MIDI] B74100



## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 24 [Knob 16 (row 2 - col 0)] >> [LCD] CC#066 Channel 1 [MIDI] B04200  
Control 25 [Knob 17 (row 2 - col 1)] >> [LCD] CC#066 Channel 2 [MIDI] B14200  
Control 26 [Knob 18 (row 2 - col 2)] >> [LCD] CC#066 Channel 3 [MIDI] B24200  
Control 27 [Knob 19 (row 2 - col 3)] >> [LCD] CC#066 Channel 4 [MIDI] B34200  
Control 28 [Knob 20 (row 2 - col 4)] >> [LCD] CC#066 Channel 5 [MIDI] B44200  
Control 29 [Knob 21 (row 2 - col 5)] >> [LCD] CC#066 Channel 6 [MIDI] B54200  
Control 30 [Knob 22 (row 2 - col 6)] >> [LCD] CC#066 Channel 7 [MIDI] B64200  
Control 31 [Knob 23 (row 2 - col 7)] >> [LCD] CC#066 Channel 8 [MIDI] B74200  
Control 32 [Knob 24 (row 3 - col 0)] >> [LCD] CC#067 Channel 1 [MIDI] B04300  
Control 33 [Knob 25 (row 3 - col 1)] >> [LCD] CC#067 Channel 2 [MIDI] B14300  
Control 34 [Knob 26 (row 3 - col 2)] >> [LCD] CC#067 Channel 3 [MIDI] B24300  
Control 35 [Knob 27 (row 3 - col 3)] >> [LCD] CC#067 Channel 4 [MIDI] B34300  
Control 36 [Knob 28 (row 3 - col 4)] >> [LCD] CC#067 Channel 5 [MIDI] B44300  
Control 37 [Knob 29 (row 3 - col 5)] >> [LCD] CC#067 Channel 6 [MIDI] B54300  
Control 38 [Knob 30 (row 3 - col 6)] >> [LCD] CC#067 Channel 7 [MIDI] B64300  
Control 39 [Knob 31 (row 3 - col 7)] >> [LCD] CC#067 Channel 8 [MIDI] B74300  
Control 40 [Slider 0 (col 0)] >> [LCD] Fader 1 [MIDI] E00000  
Control 41 [Slider 1 (col 1)] >> [LCD] Fader 2 [MIDI] E10000  
Control 42 [Slider 2 (col 2)] >> [LCD] Fader 3 [MIDI] E20000  
Control 43 [Slider 3 (col 3)] >> [LCD] Fader 4 [MIDI] E30000  
Control 44 [Slider 4 (col 4)] >> [LCD] Fader 5 [MIDI] E40000  
Control 45 [Slider 5 (col 5)] >> [LCD] Fader 6 [MIDI] E50000  
Control 46 [Slider 6 (col 6)] >> [LCD] Fader 7 [MIDI] E60000  
Control 47 [Slider 7 (col 7)] >> [LCD] Fader 8 [MIDI] E70000  
Control 48 [Crossfader L] >> [LCD] Master fader [MIDI] E80000  
Control 49 [Crossfader R] >> [LCD] CC # 049 [MIDI] B03100  
Control 50 [Backward[Shift]] >> [LCD] CC # 050 [MIDI] B03200  
Control 51 [Forward[Shift]] >> [LCD] CC # 051 [MIDI] B03300  
Control 52 [Stop[Shift]] >> [LCD] CC # 052 [MIDI] B03400  
Control 53 [Play[Shift]] >> [LCD] CC # 053 [MIDI] B03500  
Control 54 [Rec[Shift]] >> [LCD] CC # 054 [MIDI] B03600  
Control 55 [Joystick button] >> [LCD] CC # 055 [MIDI] B03700  
Control 56 [Foot-Switch] >> [LCD] CC # 056 [MIDI] B03800  
Control 57 [Encoder button] >> [LCD] CC # 057 [MIDI] B03900  
Control 58 [Button 0] >> [LCD] CC # 058 [MIDI] B03A00  
Control 59 [Button 1] >> [LCD] CC # 059 [MIDI] B03B00

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 60 [Button 2] >> [LCD] CC # 060 [MIDI] B03C00  
Control 61 [Button 3] >> [LCD] CC # 061 [MIDI] B03D00  
Control 62 [Button 4] >> [LCD] CC # 062 [MIDI] B03E00  
Control 63 [Button 5] >> [LCD] CC # 063 [MIDI] B03F00  
Control 64 [Button 6] >> [LCD] CC # 064 [MIDI] B04000  
Control 65 [Button 7] >> [LCD] CC # 065 [MIDI] B04100  
Control 66 [LFO] >> [LCD] CC # 066 [MIDI] B04200

\*\*\*\*\* Mackie grp 17 \*\*\*\*\*

Control 05 [Ribbon controller] >> [LCD] CC # 013 [MIDI] B00D00  
Control 06 [Joystick X] >> [LCD] CC # 014 [MIDI] B00E00  
Control 07 [Joystick Y] >> [LCD] CC # 015 [MIDI] B00F00  
Control 08 [Knob 0 (row 0 - col 0)] >> [LCD] CC#068 Channel 1 [MIDI] B04400  
Control 09 [Knob 1 (row 0 - col 1)] >> [LCD] CC#068 Channel 2 [MIDI] B14400  
Control 10 [Knob 2 (row 0 - col 2)] >> [LCD] CC#068 Channel 3 [MIDI] B24400  
Control 11 [Knob 3 (row 0 - col 3)] >> [LCD] CC#068 Channel 4 [MIDI] B34400  
Control 12 [Knob 4 (row 0 - col 4)] >> [LCD] CC#068 Channel 5 [MIDI] B44400  
Control 13 [Knob 5 (row 0 - col 5)] >> [LCD] CC#068 Channel 6 [MIDI] B54400  
Control 14 [Knob 6 (row 0 - col 6)] >> [LCD] CC#068 Channel 7 [MIDI] B64400  
Control 15 [Knob 7 (row 0 - col 7)] >> [LCD] CC#068 Channel 8 [MIDI] B74400  
Control 16 [Knob 8 (row 1 - col 0)] >> [LCD] CC#069 Channel 1 [MIDI] B04500  
Control 17 [Knob 9 (row 1 - col 1)] >> [LCD] CC#069 Channel 2 [MIDI] B14500  
Control 18 [Knob 10 (row 1 - col 2)] >> [LCD] CC#069 Channel 3 [MIDI] B24500  
Control 19 [Knob 11 (row 1 - col 3)] >> [LCD] CC#069 Channel 4 [MIDI] B34500  
Control 20 [Knob 12 (row 1 - col 4)] >> [LCD] CC#069 Channel 5 [MIDI] B44500  
Control 21 [Knob 13 (row 1 - col 5)] >> [LCD] CC#069 Channel 6 [MIDI] B54500  
Control 22 [Knob 14 (row 1 - col 6)] >> [LCD] CC#069 Channel 7 [MIDI] B64500  
Control 23 [Knob 15 (row 1 - col 7)] >> [LCD] CC#069 Channel 8 [MIDI] B74500  
Control 24 [Knob 16 (row 2 - col 0)] >> [LCD] CC#070 Channel 1 [MIDI] B04600  
Control 25 [Knob 17 (row 2 - col 1)] >> [LCD] CC#070 Channel 2 [MIDI] B14600  
Control 26 [Knob 18 (row 2 - col 2)] >> [LCD] CC#070 Channel 3 [MIDI] B24600  
Control 27 [Knob 19 (row 2 - col 3)] >> [LCD] CC#070 Channel 4 [MIDI] B34600  
Control 28 [Knob 20 (row 2 - col 4)] >> [LCD] CC#070 Channel 5 [MIDI] B44600  
Control 29 [Knob 21 (row 2 - col 5)] >> [LCD] CC#070 Channel 6 [MIDI] B54600  
Control 30 [Knob 22 (row 2 - col 6)] >> [LCD] CC#070 Channel 7 [MIDI] B64600

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 31 [Knob 23 (row 2 - col 7)] >> [LCD] CC#070 Channel 8 [MIDI] B74600  
Control 32 [Knob 24 (row 3 - col 0)] >> [LCD] CC#071 Channel 1 [MIDI] B04700  
Control 33 [Knob 25 (row 3 - col 1)] >> [LCD] CC#071 Channel 2 [MIDI] B14700  
Control 34 [Knob 26 (row 3 - col 2)] >> [LCD] CC#071 Channel 3 [MIDI] B24700  
Control 35 [Knob 27 (row 3 - col 3)] >> [LCD] CC#071 Channel 4 [MIDI] B34700  
Control 36 [Knob 28 (row 3 - col 4)] >> [LCD] CC#071 Channel 5 [MIDI] B44700  
Control 37 [Knob 29 (row 3 - col 5)] >> [LCD] CC#071 Channel 6 [MIDI] B54700  
Control 38 [Knob 30 (row 3 - col 6)] >> [LCD] CC#071 Channel 7 [MIDI] B64700  
Control 39 [Knob 31 (row 3 - col 7)] >> [LCD] CC#071 Channel 8 [MIDI] B74700  
Control 40 [Slider 0 (col 0)] >> [LCD] Fader 1 [MIDI] E00000  
Control 41 [Slider 1 (col 1)] >> [LCD] Fader 2 [MIDI] E10000  
Control 42 [Slider 2 (col 2)] >> [LCD] Fader 3 [MIDI] E20000  
Control 43 [Slider 3 (col 3)] >> [LCD] Fader 4 [MIDI] E30000  
Control 44 [Slider 4 (col 4)] >> [LCD] Fader 5 [MIDI] E40000  
Control 45 [Slider 5 (col 5)] >> [LCD] Fader 6 [MIDI] E50000  
Control 46 [Slider 6 (col 6)] >> [LCD] Fader 7 [MIDI] E60000  
Control 47 [Slider 7 (col 7)] >> [LCD] Fader 8 [MIDI] E70000  
Control 48 [Crossfader L] >> [LCD] Master fader [MIDI] E80000  
Control 49 [Crossfader R] >> [LCD] CC # 057 [MIDI] B03900  
Control 50 [Backward[Shift]] >> [LCD] CC # 058 [MIDI] B03A00  
Control 51 [Forward[Shift]] >> [LCD] CC # 059 [MIDI] B03B00  
Control 52 [Stop[Shift]] >> [LCD] CC # 060 [MIDI] B03C00  
Control 53 [Play[Shift]] >> [LCD] CC # 061 [MIDI] B03D00  
Control 54 [Rec[Shift]] >> [LCD] CC # 062 [MIDI] B03E00  
Control 55 [Joystick button] >> [LCD] CC # 063 [MIDI] B03F00  
Control 56 [Foot-Switch] >> [LCD] CC # 064 [MIDI] B04000  
Control 57 [Encoder button] >> [LCD] CC # 065 [MIDI] B04100  
Control 58 [Button 0] >> [LCD] CC # 066 [MIDI] B04200  
Control 59 [Button 1] >> [LCD] CC # 067 [MIDI] B04300  
Control 60 [Button 2] >> [LCD] CC # 068 [MIDI] B04400  
Control 61 [Button 3] >> [LCD] CC # 069 [MIDI] B04500  
Control 62 [Button 4] >> [LCD] CC # 070 [MIDI] B04600  
Control 63 [Button 5] >> [LCD] CC # 071 [MIDI] B04700  
Control 64 [Button 6] >> [LCD] CC # 072 [MIDI] B04800  
Control 65 [Button 7] >> [LCD] CC # 073 [MIDI] B04900  
Control 66 [LFO] >> [LCD] CC # 074 [MIDI] B04A00

\*\*\*\*\* Mackie grp 18 \*\*\*\*\*

Control 05 [Ribbon controller] >> [LCD] CC # 021 [MIDI] B01500  
Control 06 [Joystick X] >> [LCD] CC # 022 [MIDI] B01600  
Control 07 [Joystick Y] >> [LCD] CC # 023 [MIDI] B01700  
Control 08 [Knob 0 (row 0 - col 0)] >> [LCD] CC#072 Channel 1 [MIDI] B04800  
Control 09 [Knob 1 (row 0 - col 1)] >> [LCD] CC#072 Channel 2 [MIDI] B14800  
Control 10 [Knob 2 (row 0 - col 2)] >> [LCD] CC#072 Channel 3 [MIDI] B24800  
Control 11 [Knob 3 (row 0 - col 3)] >> [LCD] CC#072 Channel 4 [MIDI] B34800  
Control 12 [Knob 4 (row 0 - col 4)] >> [LCD] CC#072 Channel 5 [MIDI] B44800  
Control 13 [Knob 5 (row 0 - col 5)] >> [LCD] CC#072 Channel 6 [MIDI] B54800  
Control 14 [Knob 6 (row 0 - col 6)] >> [LCD] CC#072 Channel 7 [MIDI] B64800  
Control 15 [Knob 7 (row 0 - col 7)] >> [LCD] CC#072 Channel 8 [MIDI] B74800  
Control 16 [Knob 8 (row 1 - col 0)] >> [LCD] CC#073 Channel 1 [MIDI] B04900  
Control 17 [Knob 9 (row 1 - col 1)] >> [LCD] CC#073 Channel 2 [MIDI] B14900  
Control 18 [Knob 10 (row 1 - col 2)] >> [LCD] CC#073 Channel 3 [MIDI] B24900  
Control 19 [Knob 11 (row 1 - col 3)] >> [LCD] CC#073 Channel 4 [MIDI] B34900  
Control 20 [Knob 12 (row 1 - col 4)] >> [LCD] CC#073 Channel 5 [MIDI] B44900  
Control 21 [Knob 13 (row 1 - col 5)] >> [LCD] CC#073 Channel 6 [MIDI] B54900  
Control 22 [Knob 14 (row 1 - col 6)] >> [LCD] CC#073 Channel 7 [MIDI] B64900  
Control 23 [Knob 15 (row 1 - col 7)] >> [LCD] CC#073 Channel 8 [MIDI] B74900  
Control 24 [Knob 16 (row 2 - col 0)] >> [LCD] CC#074 Channel 1 [MIDI] B04A00  
Control 25 [Knob 17 (row 2 - col 1)] >> [LCD] CC#074 Channel 2 [MIDI] B14A00  
Control 26 [Knob 18 (row 2 - col 2)] >> [LCD] CC#074 Channel 3 [MIDI] B24A00  
Control 27 [Knob 19 (row 2 - col 3)] >> [LCD] CC#074 Channel 4 [MIDI] B34A00  
Control 28 [Knob 20 (row 2 - col 4)] >> [LCD] CC#074 Channel 5 [MIDI] B44A00  
Control 29 [Knob 21 (row 2 - col 5)] >> [LCD] CC#074 Channel 6 [MIDI] B54A00  
Control 30 [Knob 22 (row 2 - col 6)] >> [LCD] CC#074 Channel 7 [MIDI] B64A00  
Control 31 [Knob 23 (row 2 - col 7)] >> [LCD] CC#074 Channel 8 [MIDI] B74A00  
Control 32 [Knob 24 (row 3 - col 0)] >> [LCD] CC#075 Channel 1 [MIDI] B04B00  
Control 33 [Knob 25 (row 3 - col 1)] >> [LCD] CC#075 Channel 2 [MIDI] B14B00  
Control 34 [Knob 26 (row 3 - col 2)] >> [LCD] CC#075 Channel 3 [MIDI] B24B00  
Control 35 [Knob 27 (row 3 - col 3)] >> [LCD] CC#075 Channel 4 [MIDI] B34B00  
Control 36 [Knob 28 (row 3 - col 4)] >> [LCD] CC#075 Channel 5 [MIDI] B44B00  
Control 37 [Knob 29 (row 3 - col 5)] >> [LCD] CC#075 Channel 6 [MIDI] B54B00

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 38 [Knob 30 (row 3 - col 6)] >> [LCD] CC#075 Channel 7 [MIDI] B64B00  
Control 39 [Knob 31 (row 3 - col 7)] >> [LCD] CC#075 Channel 8 [MIDI] B74B00  
Control 40 [Slider 0 (col 0)] >> [LCD] Fader 1 [MIDI] E00000  
Control 41 [Slider 1 (col 1)] >> [LCD] Fader 2 [MIDI] E10000  
Control 42 [Slider 2 (col 2)] >> [LCD] Fader 3 [MIDI] E20000  
Control 43 [Slider 3 (col 3)] >> [LCD] Fader 4 [MIDI] E30000  
Control 44 [Slider 4 (col 4)] >> [LCD] Fader 5 [MIDI] E40000  
Control 45 [Slider 5 (col 5)] >> [LCD] Fader 6 [MIDI] E50000  
Control 46 [Slider 6 (col 6)] >> [LCD] Fader 7 [MIDI] E60000  
Control 47 [Slider 7 (col 7)] >> [LCD] Fader 8 [MIDI] E70000  
Control 48 [Crossfader L] >> [LCD] Master fader [MIDI] E80000  
Control 49 [Crossfader R] >> [LCD] CC # 065 [MIDI] B04100  
Control 50 [Backward[Shift]] >> [LCD] CC # 066 [MIDI] B04200  
Control 51 [Forward[Shift]] >> [LCD] CC # 067 [MIDI] B04300  
Control 52 [Stop[Shift]] >> [LCD] CC # 068 [MIDI] B04400  
Control 53 [Play[Shift]] >> [LCD] CC # 069 [MIDI] B04500  
Control 54 [Rec[Shift]] >> [LCD] CC # 070 [MIDI] B04600  
Control 55 [Joystick button] >> [LCD] CC # 071 [MIDI] B04700  
Control 56 [Foot-Switch] >> [LCD] CC # 072 [MIDI] B04800  
Control 57 [Encoder button] >> [LCD] CC # 073 [MIDI] B04900  
Control 58 [Button 0] >> [LCD] CC # 074 [MIDI] B04A00  
Control 59 [Button 1] >> [LCD] CC # 075 [MIDI] B04B00  
Control 60 [Button 2] >> [LCD] CC # 076 [MIDI] B04C00  
Control 61 [Button 3] >> [LCD] CC # 077 [MIDI] B04D00  
Control 62 [Button 4] >> [LCD] CC # 078 [MIDI] B04E00  
Control 63 [Button 5] >> [LCD] CC # 079 [MIDI] B04F00  
Control 64 [Button 6] >> [LCD] CC # 080 [MIDI] B05000  
Control 65 [Button 7] >> [LCD] CC # 081 [MIDI] B05100  
Control 66 [LFO] >> [LCD] CC # 082 [MIDI] B05200

\*\*\*\*\* Mackie grp 19 \*\*\*\*\*

Control 05 [Ribbon controller] >> [LCD] CC # 029 [MIDI] B01D00  
Control 06 [Joystick X] >> [LCD] CC # 030 [MIDI] B01E00  
Control 07 [Joystick Y] >> [LCD] CC # 031 [MIDI] B01F00  
Control 08 [Knob 0 (row 0 - col 0)] >> [LCD] CC#076 Channel 1 [MIDI] B04C00

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 09 [Knob 1 (row 0 - col 1)] >> [LCD] CC#076 Channel 2 [MIDI] B14C00  
Control 10 [Knob 2 (row 0 - col 2)] >> [LCD] CC#076 Channel 3 [MIDI] B24C00  
Control 11 [Knob 3 (row 0 - col 3)] >> [LCD] CC#076 Channel 4 [MIDI] B34C00  
Control 12 [Knob 4 (row 0 - col 4)] >> [LCD] CC#076 Channel 5 [MIDI] B44C00  
Control 13 [Knob 5 (row 0 - col 5)] >> [LCD] CC#076 Channel 6 [MIDI] B54C00  
Control 14 [Knob 6 (row 0 - col 6)] >> [LCD] CC#076 Channel 7 [MIDI] B64C00  
Control 15 [Knob 7 (row 0 - col 7)] >> [LCD] CC#076 Channel 8 [MIDI] B74C00  
Control 16 [Knob 8 (row 1 - col 0)] >> [LCD] CC#077 Channel 1 [MIDI] B04D00  
Control 17 [Knob 9 (row 1 - col 1)] >> [LCD] CC#077 Channel 2 [MIDI] B14D00  
Control 18 [Knob 10 (row 1 - col 2)] >> [LCD] CC#077 Channel 3 [MIDI] B24D00  
Control 19 [Knob 11 (row 1 - col 3)] >> [LCD] CC#077 Channel 4 [MIDI] B34D00  
Control 20 [Knob 12 (row 1 - col 4)] >> [LCD] CC#077 Channel 5 [MIDI] B44D00  
Control 21 [Knob 13 (row 1 - col 5)] >> [LCD] CC#077 Channel 6 [MIDI] B54D00  
Control 22 [Knob 14 (row 1 - col 6)] >> [LCD] CC#077 Channel 7 [MIDI] B64D00  
Control 23 [Knob 15 (row 1 - col 7)] >> [LCD] CC#077 Channel 8 [MIDI] B74D00  
Control 24 [Knob 16 (row 2 - col 0)] >> [LCD] CC#078 Channel 1 [MIDI] B04E00  
Control 25 [Knob 17 (row 2 - col 1)] >> [LCD] CC#078 Channel 2 [MIDI] B14E00  
Control 26 [Knob 18 (row 2 - col 2)] >> [LCD] CC#078 Channel 3 [MIDI] B24E00  
Control 27 [Knob 19 (row 2 - col 3)] >> [LCD] CC#078 Channel 4 [MIDI] B34E00  
Control 28 [Knob 20 (row 2 - col 4)] >> [LCD] CC#078 Channel 5 [MIDI] B44E00  
Control 29 [Knob 21 (row 2 - col 5)] >> [LCD] CC#078 Channel 6 [MIDI] B54E00  
Control 30 [Knob 22 (row 2 - col 6)] >> [LCD] CC#078 Channel 7 [MIDI] B64E00  
Control 31 [Knob 23 (row 2 - col 7)] >> [LCD] CC#078 Channel 8 [MIDI] B74E00  
Control 32 [Knob 24 (row 3 - col 0)] >> [LCD] CC#079 Channel 1 [MIDI] B04F00  
Control 33 [Knob 25 (row 3 - col 1)] >> [LCD] CC#079 Channel 2 [MIDI] B14F00  
Control 34 [Knob 26 (row 3 - col 2)] >> [LCD] CC#079 Channel 3 [MIDI] B24F00  
Control 35 [Knob 27 (row 3 - col 3)] >> [LCD] CC#079 Channel 4 [MIDI] B34F00  
Control 36 [Knob 28 (row 3 - col 4)] >> [LCD] CC#079 Channel 5 [MIDI] B44F00  
Control 37 [Knob 29 (row 3 - col 5)] >> [LCD] CC#079 Channel 6 [MIDI] B54F00  
Control 38 [Knob 30 (row 3 - col 6)] >> [LCD] CC#079 Channel 7 [MIDI] B64F00  
Control 39 [Knob 31 (row 3 - col 7)] >> [LCD] CC#079 Channel 8 [MIDI] B74F00  
Control 40 [Slider 0 (col 0)] >> [LCD] Fader 1 [MIDI] E00000  
Control 41 [Slider 1 (col 1)] >> [LCD] Fader 2 [MIDI] E10000  
Control 42 [Slider 2 (col 2)] >> [LCD] Fader 3 [MIDI] E20000  
Control 43 [Slider 3 (col 3)] >> [LCD] Fader 4 [MIDI] E30000  
Control 44 [Slider 4 (col 4)] >> [LCD] Fader 5 [MIDI] E40000



## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 45 [Slider 5 (col 5)] >> [LCD] Fader 6 [MIDI] E50000  
Control 46 [Slider 6 (col 6)] >> [LCD] Fader 7 [MIDI] E60000  
Control 47 [Slider 7 (col 7)] >> [LCD] Fader 8 [MIDI] E70000  
Control 48 [Crossfader L] >> [LCD] Master fader [MIDI] E80000  
Control 49 [Crossfader R] >> [LCD] CC # 073 [MIDI] B04900  
Control 50 [Backward[Shift]] >> [LCD] CC # 074 [MIDI] B04A00  
Control 51 [Forward[Shift]] >> [LCD] CC # 075 [MIDI] B04B00  
Control 52 [Stop[Shift]] >> [LCD] CC # 076 [MIDI] B04C00  
Control 53 [Play[Shift]] >> [LCD] CC # 077 [MIDI] B04D00  
Control 54 [Rec[Shift]] >> [LCD] CC # 078 [MIDI] B04E00  
Control 55 [Joystick button] >> [LCD] CC # 079 [MIDI] B04F00  
Control 56 [Foot-Switch] >> [LCD] CC # 080 [MIDI] B05000  
Control 57 [Encoder button] >> [LCD] CC # 081 [MIDI] B05100  
Control 58 [Button 0] >> [LCD] CC # 082 [MIDI] B05200  
Control 59 [Button 1] >> [LCD] CC # 083 [MIDI] B05300  
Control 60 [Button 2] >> [LCD] CC # 084 [MIDI] B05400  
Control 61 [Button 3] >> [LCD] CC # 085 [MIDI] B05500  
Control 62 [Button 4] >> [LCD] CC # 086 [MIDI] B05600  
Control 63 [Button 5] >> [LCD] CC # 087 [MIDI] B05700  
Control 64 [Button 6] >> [LCD] CC # 088 [MIDI] B05800  
Control 65 [Button 7] >> [LCD] CC # 089 [MIDI] B05900  
Control 66 [LFO] >> [LCD] CC # 090 [MIDI] B05A00

\*\*\*\*\* Mackie grp 20 \*\*\*\*\*

Control 05 [Ribbon controller] >> [LCD] CC # 037 [MIDI] B02500  
Control 06 [Joystick X] >> [LCD] CC # 038 [MIDI] B02600  
Control 07 [Joystick Y] >> [LCD] CC # 039 [MIDI] B02700  
Control 08 [Knob 0 (row 0 - col 0)] >> [LCD] CC#080 Channel 1 [MIDI] B05000  
Control 09 [Knob 1 (row 0 - col 1)] >> [LCD] CC#080 Channel 2 [MIDI] B15000  
Control 10 [Knob 2 (row 0 - col 2)] >> [LCD] CC#080 Channel 3 [MIDI] B25000  
Control 11 [Knob 3 (row 0 - col 3)] >> [LCD] CC#080 Channel 4 [MIDI] B35000  
Control 12 [Knob 4 (row 0 - col 4)] >> [LCD] CC#080 Channel 5 [MIDI] B45000  
Control 13 [Knob 5 (row 0 - col 5)] >> [LCD] CC#080 Channel 6 [MIDI] B55000  
Control 14 [Knob 6 (row 0 - col 6)] >> [LCD] CC#080 Channel 7 [MIDI] B65000  
Control 15 [Knob 7 (row 0 - col 7)] >> [LCD] CC#080 Channel 8 [MIDI] B75000

## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 16 [Knob 8 (row 1 - col 0)] >> [LCD] CC#081 Channel 1 [MIDI] B05100  
Control 17 [Knob 9 (row 1 - col 1)] >> [LCD] CC#081 Channel 2 [MIDI] B15100  
Control 18 [Knob 10 (row 1 - col 2)] >> [LCD] CC#081 Channel 3 [MIDI] B25100  
Control 19 [Knob 11 (row 1 - col 3)] >> [LCD] CC#081 Channel 4 [MIDI] B35100  
Control 20 [Knob 12 (row 1 - col 4)] >> [LCD] CC#081 Channel 5 [MIDI] B45100  
Control 21 [Knob 13 (row 1 - col 5)] >> [LCD] CC#081 Channel 6 [MIDI] B55100  
Control 22 [Knob 14 (row 1 - col 6)] >> [LCD] CC#081 Channel 7 [MIDI] B65100  
Control 23 [Knob 15 (row 1 - col 7)] >> [LCD] CC#081 Channel 8 [MIDI] B75100  
Control 24 [Knob 16 (row 2 - col 0)] >> [LCD] CC#082 Channel 1 [MIDI] B05200  
Control 25 [Knob 17 (row 2 - col 1)] >> [LCD] CC#082 Channel 2 [MIDI] B15200  
Control 26 [Knob 18 (row 2 - col 2)] >> [LCD] CC#082 Channel 3 [MIDI] B25200  
Control 27 [Knob 19 (row 2 - col 3)] >> [LCD] CC#082 Channel 4 [MIDI] B35200  
Control 28 [Knob 20 (row 2 - col 4)] >> [LCD] CC#082 Channel 5 [MIDI] B45200  
Control 29 [Knob 21 (row 2 - col 5)] >> [LCD] CC#082 Channel 6 [MIDI] B55200  
Control 30 [Knob 22 (row 2 - col 6)] >> [LCD] CC#082 Channel 7 [MIDI] B65200  
Control 31 [Knob 23 (row 2 - col 7)] >> [LCD] CC#082 Channel 8 [MIDI] B75200  
Control 32 [Knob 24 (row 3 - col 0)] >> [LCD] CC#083 Channel 1 [MIDI] B05300  
Control 33 [Knob 25 (row 3 - col 1)] >> [LCD] CC#083 Channel 2 [MIDI] B15300  
Control 34 [Knob 26 (row 3 - col 2)] >> [LCD] CC#083 Channel 3 [MIDI] B25300  
Control 35 [Knob 27 (row 3 - col 3)] >> [LCD] CC#083 Channel 4 [MIDI] B35300  
Control 36 [Knob 28 (row 3 - col 4)] >> [LCD] CC#083 Channel 5 [MIDI] B45300  
Control 37 [Knob 29 (row 3 - col 5)] >> [LCD] CC#083 Channel 6 [MIDI] B55300  
Control 38 [Knob 30 (row 3 - col 6)] >> [LCD] CC#083 Channel 7 [MIDI] B65300  
Control 39 [Knob 31 (row 3 - col 7)] >> [LCD] CC#083 Channel 8 [MIDI] B75300  
Control 40 [Slider 0 (col 0)] >> [LCD] Fader 1 [MIDI] E00000  
Control 41 [Slider 1 (col 1)] >> [LCD] Fader 2 [MIDI] E10000  
Control 42 [Slider 2 (col 2)] >> [LCD] Fader 3 [MIDI] E20000  
Control 43 [Slider 3 (col 3)] >> [LCD] Fader 4 [MIDI] E30000  
Control 44 [Slider 4 (col 4)] >> [LCD] Fader 5 [MIDI] E40000  
Control 45 [Slider 5 (col 5)] >> [LCD] Fader 6 [MIDI] E50000  
Control 46 [Slider 6 (col 6)] >> [LCD] Fader 7 [MIDI] E60000  
Control 47 [Slider 7 (col 7)] >> [LCD] Fader 8 [MIDI] E70000  
Control 48 [Crossfader L] >> [LCD] Master fader [MIDI] E80000  
Control 49 [Crossfader R] >> [LCD] CC # 081 [MIDI] B05100  
Control 50 [Backward[Shift]] >> [LCD] CC # 082 [MIDI] B05200  
Control 51 [Forward[Shift]] >> [LCD] CC # 083 [MIDI] B05300



## AN003 : Bitstream 3X – Mackie/Logic control emulation

Control 52 [Stop[Shift]] >> [LCD] CC # 084 [MIDI] B05400  
Control 53 [Play[Shift]] >> [LCD] CC # 085 [MIDI] B05500  
Control 54 [Rec[Shift]] >> [LCD] CC # 086 [MIDI] B05600  
Control 55 [Joystick button] >> [LCD] CC # 087 [MIDI] B05700  
Control 56 [Foot-Switch] >> [LCD] CC # 088 [MIDI] B05800  
Control 57 [Encoder button] >> [LCD] CC # 089 [MIDI] B05900  
Control 58 [Button 0] >> [LCD] CC # 090 [MIDI] B05A00  
Control 59 [Button 1] >> [LCD] CC # 091 [MIDI] B05B00  
Control 60 [Button 2] >> [LCD] CC # 092 [MIDI] B05C00  
Control 61 [Button 3] >> [LCD] CC # 093 [MIDI] B05D00  
Control 62 [Button 4] >> [LCD] CC # 094 [MIDI] B05E00  
Control 63 [Button 5] >> [LCD] CC # 095 [MIDI] B05F00  
Control 64 [Button 6] >> [LCD] CC # 096 [MIDI] B06000  
Control 65 [Button 7] >> [LCD] CC # 097 [MIDI] B06100  
Control 66 [LFO] >> [LCD] CC # 098 [MIDI] B06200