Solid State Logic

SOUND | | VISION



Sigma

Remote-Controlled Analogue Mix Engine

User Guide

Sigma. This is SSL.

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1. Introduction

ABOUT THIS USER GUIDE

Congratulations on purchasing your Solid State Logic Sigma. This User Guide will help you to configure Sigma for your studio. We've included a range of setup examples, so connecting and configuring Sigma to suit your workflow couldn't be easier.

This User Guide is arranged into the following sections:

Introduction	An overview of Sigma's features.
Hardware Installation	This section provides information on Sigma's physical connections and how to connect them to your existing studio equipment.
Software Installation	This section lists all of the required software needed in order to make Sigma work with your DAW.
Network Setup	This section guides you through configuring Sigma to work on your computer network and tablet/smartphone.
Connecting to and Using Sigma	This section details how to operate Sigma and discusses control from the web browser.
Example Setups	This section provides some "real world" examples of how to configure Sigma in various setups. This includes how to arrange your DAW session to work with Sigma.
Appendices	Contains additional documentation for reference.

SIGMA OVERVIEW

What is Sigma and what was the idea behind it?

Sigma is a 2U, remote-controllable analogue mix engine. Sigma has 16 stereo/mono inputs and outputs, 2 mix buses (A and B), mix bus insert points, comprehensive monitoring, a talkback input and customisable user buttons. The idea of Sigma was to bring the sound of an SSL console together with all the workflow advantages of mixing in a DAW. Sigma is built upon the same Superanalogue technology as our Duality and AWS consoles. Superanalogue circuit design gives you an extended frequency response, precise stereo imaging, clarity and depth. Sigma is designed for the professional looking to add that extra 10% to their sound, that even the best plug-in emulation cannot achieve.

Sigma features LED metering on all 16 channel strips and an additional high resolution stereo master meter. The blue rotary encoder is switchable (via a push function) between controlling the following levels: control room monitor level, headphones, Mix Bus A and Mix Bus B master "fader" gains.

Many features on Sigma can be controlled using a MIDI learn. This means that you can use a generic MIDI controller to do a number of things from controlling the monitor level, to switching Mix Insert points in/out.

How do I operate Sigma?

All of Sigma's controls can be accessed through the web browser interface. The **CHANNELS** page is used to configure each of Sigma's 16 channels, whilst the **MASTER** page is used to configure the monitoring section and other features including User buttons and MIDI Learn functionality. The **SETTINGS** page provides additional configuration options. The web browser interface means you can also control Sigma from a tablet or smartphone.

How does Sigma work?

Sigma works by using faders in your DAW as analogue gain controls. Sigma communicates with your DAW in the same way a control surface does, but instead uses the DAW's fader positions to control the gain of 16 analogue "faders". The automation in your DAW session can be used to "ride" the levels of an analogue mix, bringing together the efficiency of a DAW automation system with the sound of your favourite analogue outboard equipment.



2. Hardware Installation

INSTALLATION OVERVIEW

The diagram below gives you an idea of how Sigma connects to your other studio gear.



FRONT PANEL

Sigma provides you with 16 stereo line inputs and 16 stereo line outputs on Tascam standard (AES59) 25-pin D-sub connectors. Using the web browser interface, the left input of each stereo channel can be selected as a mono source. When an input is set to mono, the channel number on the front panel will glow green.





CHIP (CHANNEL INPUTS) AND CHOP (CHANNEL DIRECT OUTPUTS)

All inputs and outputs for Sigma are on AES 59 'Tascam' standard D-Sub connectors. Each D-Sub carries up to four stereo signals. The inputs and outputs are all operating at line-level. The direct channel outputs are sourced *post-fader*.

Typically, you would connect the outputs from your D/A converter into the CHIPs.

The CHOPs would be connected to your A/D to record back into the DAW.

A creative use for Sigma could be using it to automate an analogue desk. This could be achieved by connecting the insert sends from the console into Sigma's CHIPs and then connecting Sigma's CHOPs into the insert returns of the console.

MISCELLANEOUS CONNECTIONS

EXT, RTNS, TB - AES 59 'Tascam' standard connections:

- **EXT** Provides a line-level stereo input available from an external source such as a professional CD player.
- **RTNS** (**A** + **B**)- Provides connections for the stereo insert return signals of both Mix Bus A and Mix Bus B.
- **TB** Provides a line-level input from which you can connect the output from a talkback microphone preamplifier.

MIX B, SENDS, H/P - AES 59 'Tascam' standard connections.

- MIX B Stereo Mix Bus B outputs
- **SENDS** Provides connections for the stereo insert send signals of both Mix Bus A and MIx Bus B.
- H/P Provides a line-level stereo headphone output suitable for running a headphone feed into a cue mixer.

EXT	, RT	NS, T/B†	D-sub to	
Cor	nnect	tor Type: 25-way D-type Female	XLR-F	
Pin		Description	Loom	
		n/c		
	14	n/c	XLR-8	
2		OV		
	15	Talkback Mic Input (+ve)		
3		XLR-7		
	16	OV		
4		Mix B Insert Return Right (+ve)		
	17	Mix B Insert Return Right (–ve)	XLR-6	
5		OV		
	18	Mix B Insert Return Left (+ve)		
6		Mix B Insert Return Left (–ve)	XLR-5	
	19	OV		
7		Mix A Insert Return Right (+ve)		
	20 Mix A Insert Return Right (–ve) XLR-4			
8		OV		
	21	Mix A Insert Return Left (+ve)		
9		Mix A Insert Return Left (–ve)	XLR-3	
	22	OV		
10		External Input Right (+ve)		
	23	External Input Right (–ve)	XLR-2	
		OV		
	24	External Input Left (+ve)		
12		External Input Left (–ve)	XLR-1	
	25	0V		
13		n/c		

MD	(B, 9	SENDS, H/P†	D-sub to		
Cor	nnect	tor Type: 25-way D-type Female	XLR-M		
Pin		Description	Loom		
1		Headphone Right (+ve, line level)			
	14	Headphone Right (–ve, line level)	XLR-8		
2		OV			
	15	Headphone Left (+ve, line level)			
3		XLR-7			
	16	OV			
4		Mix B Insert Send Right (+ve)			
	17 Mix B Insert Send Right (–ve) XLR-6				
5		OV			
	18	Mix B Insert Send Left (+ve)			
6		Mix B Insert Send Left (–ve)	XLR-5		
	19	OV			
7		Mix A Insert Send Right (+ve)			
	20	Mix A Insert Send Right (–ve)	XLR-4		
8		OV			
	21	Mix A Insert Send Left (+ve)			
9		Mix A Insert Send Left (–ve)	XLR-3		
	22	OV			
10		Mix B Output Right (+ve)			
	23	Mix B Output Right (–ve)	XLR-2		
		OV			
	24	Mix B Output Left (+ve)			
12		Mix B Output Left (–ve)	XLR-1		
	25	OV			
13		n/c			

3. Software Installation and Configuration

Sigma requires the following software to be installed on your computer:

- ipMIDI software To carry the automation data from your DAW to Sigma's channels.
- A web browser (Chrome/Firefox/Safari/Internet Explorer) To configure your Sigma.
- Flash The 'Save' and 'Load' buttons in the web browser require Flash.

1) IPMIDI SOFTWARE

There is no disk included with Sigma. In order to install the ipMIDI software, you need to go to the SSL website, navigate to the Sigma product page (within 'Music' products) and click on the 'Downloads' tab. Follow the onscreen instructions to download your Sigma Support File, containing all necessary software.

During the registration process you will be prompted for your Sigma serial number, which you will find on the white label on the rear of your Sigma unit.

ipMIDI Installation - Macintosh

After downloading the Sigma Mac Support File from the Downloads section, install the ipMIDI.dmg file. Note that you will be asked to logout and in again once you have completed the installation. Once you have logged back in open **Audio MIDI Setup** (in the **Utilities** folder on your Mac) and double click on the ipMIDI icon (in MIDI Window view). Set the number of ports to 20 in the resulting pop-up.



There are two version of ipMIDI for Mac; V1.5 is suitable for OS X 10.5 whilst V1.6 runs on OS X 10.6 upwards. Please choose the correct version for your Mac.

Note that if you are upgrading an older copy of ipMIDI you must uninstall it before running the installer. To uninstall ipMIDI simple delete: '/Library/Audio/MIDI Drivers/ipMIDIDriver.plugin'. You should empty the Trash after deleting the '.plugin' file before running the installer.

ipMIDI Installation - Windows

After downloading the Sigma Windows Support File from the downloads page, install the ipMIDI.exe. Note that you will have to restart the computer at the end of the setup process. Once the computer has restarted, double-click on the ipMIDI icon in the bottom-right taskbar of Windows and set the number of MIDI ports to 20 in the resulting pop-up.

ipMIDI - Ethern	et MIDI	Ports	
Mute Ports			
1 2	3	4	5
6 7	8	9	10
Mute All		Mute	None
11 12	13	14	15
16 17	18	19	20
Coop back			
Ports after	Reboot	: 20	×
🕞 Change			ОК
_	_	_	

Note that if you are upgrading an older copy of ipMIDI you must uninstall (using **Add/Remove programs**) it before running the installer.

2) INSTALL WEB BROWSER

Sigma is configured through your web browser. Please ensure you have one of the following installed on your computer:

- Google Chrome
- Firefox
- Safari
- Internet Explorer

Important: Please check the SSL website for tested web browser versions and compatability.

Out of the box, Sigma comes preconfigured with a fixed IP address. This can be changed to DHCP in the settings if required. Therefore, the first time you connect to Sigma should be through a direct ethernet connection between Sigma and your computer (see Network setup information for more information).

3) INSTALL FLASH

The **SAVE** and **LOAD** buttons in the web browser require Flash to be installed. Please go to the Adobe Flash website to make sure you have the latest version of Flash installed:

http://get.adobe.com/flashplayer

SIGMA'S INTERNAL SOFTWARE

Sigma has internal software that comes pre-installed from the factory. There may be infrequent updates for this software. Please refer to *Chapter 5* 'Software Update & Reboot Button' for more information on how to check your Sigma software version and updating the software.

4. Network Setup

GENERAL

Sigma communicates with your DAW over a standard Ethernet cable using the ipMIDI software driver to emulate a multiport MIDI interface. To ensure minimum latency ipMIDI uses multicast UDP rather than TCP/IP.

Routers that support high data transfer rates should be used. Some domestic routers have experienced problems, so please check your router specification if problems occur.

Notes for Network Technicians:

Because ipMIDI uses multicast UDP packets, messages between one computer and Sigma will be received by all other computers on the network potentially causing problems with other ipMIDI devices on your network. The UDP packets can be blocked by using a firewall router and connecting the main network by the WAN connector. The firewall can then be configured to allow all traffic apart from UDP ports 21928 through 21947 which are used by ipMIDI. Note that it may be necessary to use a separate Ethernet switch in place of an integrated firewall router switch, as some of these can not support the ihg data transfer rate required. The NetGear GS108 (an eight port switch) has been used successfully at SSL Begbroke.

You can purchase a pre-configured LAN Integration Network Switch from the SSL web store. See setup example 3 for more details.

Sigma's IP Address

By default, Sigma uses a fixed IP address of 192.168.1.201/sigmaweb. Alternatively, Sigma can be set to use a dynamically assigned (DHCP) address if your installation precludes a simple direct connection. Switching between the two options is done in Sigma's **SETTINGS** page in your web browser. See *'Connecting to and Using Sigma'* chapter for more information.

Useful Built-In Features

Reverting from DHCP to Fixed IP

If a situation arises where Sigma is set to DHCP but you are unable to connect via a DHCP, take the following steps:

- 1) Power Sigma off
- 2) Set your computer network settings to be a fixed IP address
- 3) Power Sigma on

This will force Sigma into reverting to its fixed IP address.

How to check the current IP address of Sigma

Once connected to Sigma, it is possible to change the fixed IP address as desired. In a situation where you forget what the fixed IP address is set to, press and hold the first **USER** button on the front panel and whilst keeping this held down, press the second **USER** button. Sigma will use the front panel LEDs to readout the IP address it is set to.



NETWORK CONNECTION EXAMPLES

1. Fixed IP – Direct Connection

This is the simplest way to setup Sigma with your computer. Sigma comes configured to use a fixed IP on first startup.



Please note that Macintosh computers with multiple Ethernet ports can only use one of those ports at any one time!

If you are using a Macintosh computer, you should ensure that Airport is switched off. We strongly recommend this as Airport is known to cause conflicts with ipMIDI data and may stop Sigma from working. If you wish to use the internet, we suggest you configure Sigma with a Router/Switch (see example 2).

Network Connection Configuration - Macintosh

- On your computer go to System Preferences and click on the Network icon.
- Set **Configure IPv4 to Manually** then fill in the **IP Address** and **Subnet Mask** boxes with the numbers shown below. The IP address should be in the 192.168.1.X range with a Subnet of 255.255.255.0.

'X' should be a number between 3 and 254. Make sure that the 'X' number is not the same as Sigma's address and/or any other device on the network.

	Locatio	n: Automatic	A V
O Ethernet Connected	~~~>	Status:	Connected
FireWire Not Connected	*		address 192.168.1.3.
● Wi-Fi Off		Configure IPv4:	Manually +
		IP Address:	192.168.1.3
		Subnet Mask:	255.255.255.0
		Router:	
		DNS Server:	
		Search Domains:	ssl.local
			Advanced ?

Network Connection Configuration - Windows

- Go to Network and go into Local Area Connection Properties.
- Open up the option Internet Protocol Version 4 (TCP/IPv4).
- Select Use the following IP address and then fill in the IP Address and Subnet mask boxes as shown below.

You can get IP settings assign this capability. Otherwise, you for the appropriate IP settings	ed automatically if your network supports u need to ask your network administrator s.
Obtain an IP address aut	tomatically
• Use the following IP addr	ress:
IP address:	192.168.1.3
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	
 Use the following DNS se Preferred DNS server: Alternate DNS server: 	rver addresses:
Validate settings upon e	xit Advanced
	OK Cancel

2. Router (and Switch) Connection using DHCP - Allows Access to Internet

This connection method allows you to connect multiple devices to your network and access the internet at the same time.

The premise behind this method is that your Internet router acts as a DHCP server, dynamically assigning IP addresses to all the devices on your network. The simplest configuration would be as follows:



Network Connection Configuration - Macintosh

- On the Mac, go to **System Preferences** and click on the **Network** icon.
- Set Configure IPv4 to Using DHCP.

	Locatio	n: Automatic	÷
 Ethernet Connected FireWire Not Connected Wi-Fi Off 		Status: Connecte Ethernet is a address 10. Configure IPv4 ✓ Using DH USing DH Using Bo Subnet Mask Router DNS Server Search Domains: ssl.local	d currently active and has the IP 1.4.179. ICP ICP with manual address otP PPOE Service
+ - * •			Advanced

Network Connection Configuration - Windows

- Go to Network and go into Local Area Connection Properties.
- Open up the option Internet Protocol Version 4 (TCP/IPv4).
- Choose the option **Obtain an IP address automatically**.

is capability. Otherwise, you need or the appropriate IP settings.	to ask your network administrator
Obtain an IP address automatic	ally
O Use the following IP address: —	
IP address:	
Subnet mask:	
Default gateway:	
Use the following DNS server ad Preferred DNS server:	ddresses:
Preferred DNS server: Alternate DNS server:	· · ·
Validate settings upon exit	Advanced
	OK Cance

3. Connection in a facility that has multiple SSL Consoles/Multiple ipMIDI devices

If you are in a studio that has multiple SSL consoles/ipMIDI devices, we recommend that you purchase one of our 'LAN integration network switches' from the SSL web store. Due to the nature of UDP, if you have two SSL consoles/ipMIDI devices on the same network with a normal router/switch setup, then you may find that an ipMIDI device in one room will start affecting another ipMIDI devices in another room. Our managed switch blocks UDP data on two of the ports, solving the problem and allowing uplinking in a multi-room facility. Please visit the following link for more details and a picture example:

store.solidstatelogic.com/catalog/36.

CONTROLLING SIGMA WITH A TABLET / SMARTPHONE

You can use a tablet/smartphone device to control Sigma by using it to access the web browser. Before attempting to connect your tablet to Sigma, please ensure that you have established Sigma on your local area network, using one of the three methods detailed above.

In order for your tablet/smartphone to communicate with Sigma, **you will need a Wireless Router**. The Wireless Router will act as a bridge, connecting your tablet to Sigma.

Connecting to Sigma using an iPad via a Wireless Router

Fixed IP

1. Connect your iPad to your wireless router signal in (Settings > WI-FI)

iPad	14:13	* 38% ND
Settings	Wi-Fi	
Airplane Mode OFF		
🛜 WI-FI Wireless Router	Wi-Fi	ON O
Bluetooth On	Choose a Network	
Do Not Disturb	Solid State Logic	
	Solid State Logic Public	≙ 🗢 🧿
Notifications	✓ Wireless Router	÷ 0
General	Other	>
🚳 Sounds		
🛃 Brightness & Wallpaper	Ask to Join Networks	OFF
Picture Frame	Known networks will be joined automatically. If no know will have to manually select a n	wn networks are available, you iotwork.
Privacy		
iCloud		
🔄 Mail, Contacts, Calendars		
T Notes		
Reminders		
💟 Messages		
-		



DHCP Network

1. Connect your iPad to your wireless router in (Settings > WI-FI).



2. Download an app that allows you to see devices on your network. "My Devices" by Zoftware Design®, Inc is free to download. Please be aware that "My Devices" is an iPhone app that also works on iPad. **So in the iPad app store, make sure your search is set to iPhone Apps, not iPad apps.**



3. Go to Settings > MyDevices on your iPad. Ensure that all 'Device Filters' are OFF. Turn 'Use Safari' ON in 'Web View'.

iPad 🗇	14:30	* 3ND
Settings	MyDevices	
Sar-Code	Device Filters	
BBC iPlayer	Hide Basic	OFF
BBC News	Hide Unknown	() OFF
👹 Fing	Hide Non-Web	() OFF
🚰 GarageBand	Hide Bonjour	OFF
M Gmail	Search Time (Seconds)	
Cood Food		
😸 iMovie	Authentication	
🛞 iTranslate	Username admin	
ITV Player	Password	
🤯 MyDevices		
OOReader	Web View	
Rightmove	Debugger	
🧱 Rubik's Cube	Use Satari	
Skype		
with the stuff state of the sta		

4. Launch app and and select your SSL Sigma device on the network.

My Devices	
🧠 Jamess-iPad	>
Iinksys Wireless Broadband Router	۲
🤝 SSL Sigma	۲
🖒 🚫 Searching for Devices	0

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Instead of using an app to access your Sigma device, you can type in Sigma's DHCP name address directly into the browser's address bar. As you can see from the above screenshot, in Safari, the address is made up of your Sigma's name followed by .local/sigmaweb. Spaces should be filled with an '_'.

Alternatively, you can type the actual IP address that Sigma is currently assigned to into your browser's address bar. Press and hold the first User button on the front panel and whilst keeping this held down, press the second User button. Sigma will use the front panel LEDs to readout the IP address it is set to.

It is recommended **not** to mix browsers between devices - e.g. running Safari on the iPad and Chrome on your main computer.



CONNECTING USING DHCP

In the **SETTINGS** page you can set Sigma to work by DHCP. After setting Sigma to DHCP and restarting the unit, use the following steps to connect to Sigma:

Macintosh Users (must use Safari)

- 1. Launch Safari
- 2. In Safari, go to Preferences > Bookmarks and click 'Include Bonjour' in the Bookmarks Bar.

00	Bookmarks
General Bookmarks Tabs AutoFill Passwords Se	ecurity Privacy Notifications Extensions Advanced
Bookmarks ba	r: 🗹 Include Reading List
	✓ Include Top Sites
	Include Contacts
	🗹 Include Bonjour
Bookmarks menu	u: 🗹 Include bookmarks bar
	Include Contacts
	🗹 Include Bonjour
6 H	
Collections	s: Include Contacts
	✓ Include Bonjour

- 3. Bonjour should now appear in your bookmarks bar in Safari.
- 4. Select your SSL Sigma from the list and Safari will navigate to the Sigma pages.

00	SSL Sigma Web Interface
🔹 🕨 🙆 🖻 🙆 sigma_010.local./SigmaWeb/	default.htm
승 🌐 🏢 Bonjour Y Cherwell Scctive Camps Book Your S	nTech.co.uk HM RevenuePAYE Tools MDAC Summ
S About Bonjour	L Sigma Web Interface
CodeMeter WebAdmin (Richard-Morans-in myrouter RE1000 SSL Sigma Sigma_010	xiord • England SI
Connected To: status	
м	ASTER CHANNELS SETTING
METER	

Windows Users

1. Go to your PC's Network settings

	A di sudadana dariba	
Organize Network and Sharing Center Add a primter Favorites Desktop Source State Recent Places Ubranes Ubranes Descumate Music Printees Videos	Add a wreles device Network Infrastructure (1) Linky: Wirdes: Broadband Roster WRT54GR Other Devices (1) SSL Syme	55 · 🖬
P∰ Computer ∰ Lecal Disk (C.) ∰ Selid State Legic (J.) ∰ JamesP (\sshuses/Staff) (L) ∰ Eproms (\\ROADRJINKER) (R)		
🧤 Network		

2. Sigma will be listed under "Other Devices". Double-click on the icon and it will load your web browser to the Sigma pages.

THE WEB BROWSER INTERFACE

Once connected, you have access to all of Sigma's functions using the web browser, which is arranged as follows:



MASTER

Upon connecting to Sigma, you will be looking at the **MASTER** page within the web browser. The state of most functions set within the browser, such as monitoring source or insert points in/out, are reflected on the physical Sigma front panel.

Master Meter

To the right of the 16 channel meters is the Master Meter. 'o' at the top indicates odBFS (+24dBu). This can be re-scaled globally with the 16 Channel meters in the **SETTINGS** page.

The web browser allows you to switch the master meter between the following:

- **MON** Master Meter follows the current monitoring source(s).
- **MIX A** Lock the Master Meter to follow the postfader level of Mix Bus A
- **MIX B** Locks the Master Meter to follow the postfader level of Mix Bus B

Mix Bus Inserts

The Mix A and Mix B insert points are enabled through the browser by clicking on the **MIX A** and **MIX B** buttons inside the **INSERT** box. Inserts have a ' Σ ' function which sums the insert return with the original main stereo mix bus signal. This may be useful for a several reasons: it will allow you to link the mix busses of two Sigmas together by connecting the mix bus output from the second Sigma into the insert return of the first Sigma; or you could use this function with one Sigma to create a parallel compression effect, using the compressed signal present.

Level Control

The front panel of Sigma has a blue rotary encoder, surrounded by an LED ring. Pushing the encoder in will cycle through the options **MON**, **H/P**, **MIX A** and **MIX B**, enabling independent level control of each one.

- MON Main/Alternate monitor level
- **H/P** Headphones output level
- MIX A Mix Bus A level
- MIX B Mix Bus B level

When setting the level of Mix A or Mix B, the dot that breaks up the LED ring will light red to indicate odB.

Push and hold the rotary encoder for two seconds, then release. The dimly lit LED ring now indicates that you are in **Fine** adjustment mode

Coarse: level steps in 0.5 dB Fine: level steps in 0.1dB

Pushing and holding the rotary encoder again will return it to **Coarse** operation.

Note: The rotary encoder is speed-sensitive. Slower turns will allow you to change gains more accurately.

Web Brows	er			
Meter	Rotary Indicator	Rotary Assignment	Mon	Headphone (H/P) Box
Jodree		7 (SSIgnificine	DOX	
PUSH MONO E HELD MONO E			MDI	
Insert Selection	User Buttons	MIDI Learn	DIM Box	Footswitch (F/S) Box
Unit Front Pa	anel			
Master	Rotary	Level	Mon	Headphone
I*leter	KNOD	Box	BOX	(H/P) BOX
0 0 0 2 2 0 4 4 0 6 0 12 0 18 0 18 0 24 0 40 0 L R		LEVEL MON H/P (MIX A (MIX B BTO A (MIX B (MIX A (MIX B	MON MIXA MIXB EXT ALTLIS MONO	
	/	/ Incort	Power	ilack
	Buttons	Box	Button	Input
release. The d	limly lit LED	SOURCE	RANGE	
2		MON	0 to 12	
		H/P	0 to 12	
it to Coarse o	operation.	MIX A	-∞ to +10c (red dot ind	1B icates OdB)
r turns will a	llow you to	MIX B	$-\infty$ to +10c (red dot ind	1B icates OdB)

B TO A Function

The output of Mix Bus B can be injected into Mix A by engaging the **B TO A** button in the web browser. This would be useful for applying parallel compression to drums on Mix B (using the Mix B insert point) before blending the compressed drums into Mix A (containing the uncompressed instruments).

Mix B is injected post the Mix A insert point but pre Mix A level control. If you wish to inject the output of Mix B pre Mix A insert point, we suggest you take one of these two alternative approaches:

1. Take the Mix B output and connect it back into a stereo input of Sigma, being sure only to route it to Mix A to avoid an unwanted feedback loop.

${\tt E.g.:}$ MIX B OUTPUT > SIGMA STEREO CHANNEL > ROUTE TO MIX A > ENGAGE INSERT

HINT: By bringing the output of Mix B into a channel input of Sigma, you are able to automate it like any other channel.

or:

2. Instead of using Mix A's insert point to connect your analogue processing equipment, simply connect the output of Mix A directly into any outboard equipment and take the output of this into your DAW to print back the mix. As a final step you can send the output of this stem out of your DAW into the EXT input of Sigma, to monitor your printed mix post D/A conversion.

ENGAGE B TO A FUNCTION > MIX A OUTPUT > ANALOGUE PROCESSING > DAW INPUT. (Final Step) DAW OUTPUT > EXT INPUT OF SIGMA > MONITOR EXT INPUT.

USER Buttons

Two User buttons on the front panel allow you to assign up to four functions. Each button has a **Push** and a **Push & Hold** operation.

By default the User buttons are set as follows:

Left User Button

Push:Toggles Alternate loudspeaker selection on/offPush & Hold:Toggles Mono check on/off



Push:Mutes loudspeaker outputsPush & Hold:Dims loudspeaker outputs

The drop-down boxes in the web browser allow you to change these assignments.

MON Box

The **MON** box on the front panel indicates the control room monitor source(s) currently selected. This could be any combination of **MIX A**, **MIX B** or **EXT** (front panel iJack input and line-level connection on rear panel D-Sub).

ALT L/S indicates if you have selected the alternate speaker set and **MONO** shows if you are listening to a mono foldown of the stereo mix.

All of these selections can be engaged/disengaged through the web browser.

HINT: The **MON** LED on the front panel lights amber to indicate a monitor dim and lights red to indicate a monitor cut.





The H/P box on the front panel indicates which sources are feeding the headphones on both the front panel 1/4" jack output and the line-level output on the rear panel D-Sub connection. This may be any combination of MIX A, MIX B or EXT.

Sigma's talkback input can be switched on/off with the **T/B** button in the web browser. The talkback input is routed to both the front panel 1/4" headphone output and the rear panel line-level feed. Talkback is injected **post the H/P level control**, so you will need to use the output level of your talkback mic's preamp to control the overall talkback level.

Sigma does not include an internal talkback preamp. The T/B input is line-level input from which you should connect the output of the external preamp you are using with your talkback microphone.

The line-level headphones feed provided on the rear D-Sub provides a useful method of running the headphones feed into a separate live room/vocal booth. Typically, you would connect this into a cue mixer system, which the artist would plug their headphones into. The level of the headphone signal is controlled by selecting H/P in the Level Box and using the rotary encoder to adjust accordingly.

MIDI LEARN

Clicking the LEARN button beneath the MIDI icon activates Sigma's MIDI Learn mode. LEARN allows you to use CC messages (generated by a CC MIDI control surface) to control various functions on the **MASTER** page. This is useful if Sigma is installed into a remote rack outside your immediate reach.

Use the SETTINGS of the web browser to select an ipMIDI port for Sigma to receive MIDI CC messages through.

Follow the onscreen instructions to learn/un-learn functions.

Assignable MIDI Learn functions include:

- ROTARY LEVEL ENCODER
- LEVEL SOURCE CYCLE
- DIM MONITORS

• CUT MONITORS

- MONITOR SOURCE CYCLE
- INSERT A
- INSERT B SUM
- MIX B TO MIX A
- METER SOURCE CYCLE

• MONO

- T/B
- INSERT B

- ALT L/S

- INSERT A SUM

• H/P SOURCE CYCLE

FOOTSWITCH

On the rear panel of Sigma you will find a footswitch input, suitable for a 1/4" on/off (latching or non-latching) footswitch. SSL tested with a Digitech FS300 (non-latching) and a standard Marshall guitar footswitch (latching). By default, the footswitch is assigned to turn the talkback talkback input on/off although this can be changed to any of the options available in the drop-down box.

DIM SETTINGS

T/B DIM (for Headphones) - When talkback is engaged, the T/B DIM level sets the amount of attenuation applied to the currently selected **MONITOR** source(s) in the headphones. A setting of odB will apply no attenuation and therefore simply sum the talkback input with the monitor sources. A setting of $-\infty$ will apply maximum attenuation, completely muting the monitor source, leaving only the talkback input.

MON DIM (for control room) - Sets the level of DIM for the control room monitors, when the DIM button is engaged.

ilack Input

The bottom-right of Sigma's front panel provides a 1/8" stereo jack input for connecting consumer products such as iPods. This input can be sent to the control room monitors or headphones by selecting **EXT** (External Input).

If you wish to connect the output of a professional line-level source such as a CD player, there is a stereo external input available on the rear panel D-Sub connector. This will be summed with the front panel iJack input. See Appendix A for connection/pinout details.



F/S

CHANNELS



The **CHANNELS** page controls functions such as mix bus routing or mono/stereo selection for each channel. As with the **MASTER** page, many of these functions are reflected on the Sigma front panel.

Each channel on the Sigma front panel displays the input signal level (pre-fader) with a six segment LED display.

Sigma has 16 input channels that are individually switchable via the **MONO** button in the web browser. When operating in mono, a pan control will appear.

12 24 30 40 A B Sigma Front Panel

Channel

6

Just above the mix bus buttons, you'll see a value in dBs for each channel. This is the analogue "fader" gain readout for each channel and is useful for checking that the DAW's faders are controlling the analogue gains of Sigma.

Sigma has 2 mix busses: **A** and **B**. Each channel can be routed to either or both busses using the **MIX A** and **MIX B** buttons.

Each channel can be renamed simply by clicking in and typing in the relevant box.

The **SOLO** button performs a solo-in-place, cutting all other channels. **CUT** mutes the channel's output.

The SOLO function can be changed from solo-in-place to an AFL style solo, using Mix Bus B as an AFL bus. Please see the **SETTINGS** section for more information.

GLOBAL SETUP

The **GLOBAL SETUP** section at the bottom of the **CHANNELS** tab provides a number of useful quick functions.

	GLOBAL SETUP	
NAMES - DAW CLEAR	ALL - MONO STEREO MIX A MIX B	SOLO — SAFE CLEAR

NAMES

- **DAW** This button will automatically rename the channels of Sigma to be the same as the first 16 names in your DAW session. This function will only work when using HUI/MCU (not MIDI).
- **CLEAR** Clears all track names.

ALL

- **MONO** Sets all channels of Sigma to mono.
- **STEREO** Sets all channels of Sigma to stereo.
- **MIX A** Assigns/de-assigns all channels to Mix Bus A.
- **MIX B** Assigns/de-assigns all channels to Mix Bus B.

SOLO

- SAFE This button enables you to protect channels in Sigma from cutting when a solo is made. For instance, you may not want your vocal reverb on channel 16 to be cut when soloing the dry vocal on channel 15. To configure a channel as 'solo safed' simply enable the SAFE button and then click (or touch if using a tablet) on a channel's SOLO button. This will show you a strikethrough line on the SOLO text to indicate it has been 'solo safed'. Clicking on the SOLO button a second time will disable it from being 'solo safed'. Exit this mode by clicking on the SAFE button once more.
- **CLEAR** Clears any active solos on Sigma's channels.

SETTINGS

Solid State Log	gic • Oxford	• England	2 4 6 12 8 SIGM 30	A GTOA	
igma Name [Sigma_010], Software version	: 1.0.0.19 MASTER	CHANNELS	SETTINGS	LOAD	SAVE
DAW / PROTOCOL	CHANNELS 1-8	MIDI L	EARN 10 •	MIS METER SCALE	C +24 +22
MIDI ABSOLUTE	CHANNELS 9-16	NA Sigma_010	ME	SOLO MODE	+18 SIP AFL
	NETWORK			SOLO TYPE	ALT
IP AD	DRESS 192 8 168	8 1 8 (201 3	SOLO BOOST	•
GA	UBNET 255 8 255 TEWAY 192 8 168	8 255 8 (8 1 8 (0 8	SOFTWARE	JPDATE
				VERSION: 1.0.0.19	

Unlike the **MASTER** and **CHANNELS** pages of Sigma, the **SETTINGS** page does not mirror any section of the front panel. This page contains many important setup aspects of Sigma.

SETUP Box

NAME

This box allows you to name your Sigma unit. This will be useful when using more than one Sigma.

DAW/PROTOCOL SELECTION

This must be set in order to allow Sigma to correctly translate automation data from the DAW. There are five options:

- Pro Tools (HUI)
- Logic (MCU)
- Cubase/Nuendo (MCU)
- Ableton (MCU)
- MIDI

See Chapter 6 '*Example Setups*' for more information on which one to choose for your setup.

ipMIDI Ports

CHANNELS 1-8	Select the ipMIDI Port number to match your first HUI/MCU unit in your DAW.
CHANNELS 9-16	Select the ipMIDI Port number to match your second HUI/MCU unit in your DAW.

MIDI ABSOLUTE

The **MIDI ABSOLUTE** box will become available if **MIDI** is selected in the **DAW/PROTOCOL** drop-down list. **MIDI ABSOLUTE** offers an alternative way of controlling Sigma's analogue gains directly from the DAW. Instead of sending volume messages over the HUI/MCU protocol, **MIDI ABSOLUTE** works by sending MIDI volume messages directly from the outputs of MIDI tracks within the DAW. Set the MIDI Absolute ipMIDI port to be the same as the ipMIDI port that your 16 MIDI Track outputs are set to in the DAW.

See Chapter 6 'Example Setups' for more information.

Note the CHANNELS 1-8 and CHANNELS 9-16 drop-down boxes have no effect when MIDI is being used.

DAW HANDSHAKE

Some DAWs perform 'handshaking' with HUI/MCU devices. Pro Tools sends out frequent handshake messages, whereas Logic only performs a handshake upon first connection or changing sessions. The **EXAMPLE SETUPS** section offers advice on when to have **DAW HANDSHAKE** enabled and when to have it disabled.

If you have two HUI devices (such as a Nucleus and Sigma) connected on your network, then only one of them needs to perform the 'handshaking'. If both are 'handshaking' this may cause problems.

In general:

Leave HANDSHAKE enabled (button lights green), if there are no other HUI devices on your network apart from Sigma.

DISABLE HANDSHAKE Leave HANDSHAKE enabled (button lights green), if there are no other HUI devices on your network apart from Sigma.

MIDI LEARN

Many functions on the **MASTER** page of Sigma can be enabled/disabled from an external MIDI controller sending CC messages (e.g. the CC layer available on an SSL Nucleus). You should set this drop-down to match the ipMIDI port number from which the MIDI CC messages are being sent on. For instance, if Nucleus' CC layer is setup on DAW Layer 3, this drop-down should be set to **ipMIDI Port 5**.

The **MIDI LEARN** drop down box only allows access to ipMIDI ports. If you wish to use a MIDI device/interface that does not use ipMIDI, you can download a free program called 'MIDI Patchbay' to route the output of your chosen MIDI device into an ipMIDI port.

00	Untitled
Generic MIDI Device ali channels; all notes	ipMIDI Port 5 MIDI Input: Generic MIDI Device + Channels Notes Other Other Allow all notes Block all notes Only allow notes in the range: C-1 + Coll + <p< td=""></p<>
Add Patch	MIDI Output: ipMIDI Port 5 \$
	Page 32

NETWORK Box

You are able to choose between a **FIXED IP** address or **DHCP** configuration. The static IP address of Sigma defaults to 192.168.1.201. Please see **NETWORK SETUP** section for more information.

MISC Box

This section contains a number of miscellaneous settings.

METER SCALE

Meter scaling is applied globally to all channel meters and the master meter. Set to match the odBFS reference of your A/D D/A converter. The three options are: +24dBu, +22dBu or + 18dBu. By default, Sigma is set to +24dBu = odBFS.

SOLO MODE

This controls how the **SOLO** function works in the **CHANNELS** page. If you are unfamiliar with different solo modes then the following explains the differences between the two:

SIP (Solo-In-Place) Soloing a channel causes all other channels to be muted.

AFL (After Fader Level) Soloing a channel moves that signal onto a separate stereo mix bus, normally known as the AFL bus.

Sigma does not have a dedicated AFL bus. However, selecting the **AFL** option in **SOLO MODE** will hijack Mix Bus B and use this as an AFL bus. Sigma will automatically switch the monitor source selection to Mix Bus B when soloing in this mode.

AFL is useful when you want to solo a channel just to check something whilst printing a mix back into the DAW. If you were to use SIP, you would disrupt the printing process as soloing in this mode mutes all other channels.

Please note that if you are operating Sigma in AFL Solo Mode, you will be unable to route channels to Mix Bus B in the web browser. Also, upon changing to AFL Solo Mode, any channels currently routed to Mix Bus B will be unrouted.

By default, Sigma is set to **SIP (Solo-In-Place)**.

SOLO TYPE

- **LATCH** When one channel is in solo, pressing a second **SOLO** button adds this channel to the first rather than cancelling the original channel.
- ALT When ALT is selected the SOLO buttons are prevented from latching, introducing inter-cancellation between SOLO buttons: pressing a second SOLO button cancels the first SOLO.

By default, Sigma is set to **LATCH**.

SOLO BOOST

SOLO BOOST automatically increases the monitor level by the set amount when a **SOLO** is activated (range o - 1odB). This is useful when mixing to help reduce the level difference apparent when changing from listening to the whole mix to just one soloed channel.

SOFTWARE UPDATE

The **SOFTWARE UPDATE** button is used to update Sigma's internal software. You must have the ethernet cable connected to perform the update. Below the button you will see the current version of Sigma software you are running. There may be infrequent updates provided for Sigma. The .bin file used to update Sigma's software will be available from the SSL website. Go to the Sigma product page and go to the **Downloads** tab to login and download.

After downloading the .bin file, Click on the **SOFTWARE UPDATE** button in the **SETTINGS** page of the web browser and locate the downloaded .bin file. Follow the onscreen instructions.

IMPORTANT - After updating your Sigma software and restarting, you will need to clear your web browser's Cache in order for all changes to take effect. You may also need to Refresh the page.

Solid State Logi	c • Oxford	• England	d SIGM		Ctrl RANALOGUE
gma Name (Sigma_010), Sonware version: 1.0	MASTER	CHANNELS	SETTINGS	LOAD	SAVE
DAW / PROTOCOL ProTools (HUI)	SETUP CHANNELS 1-8 (ipMIDI, Port 1	MIDI (ipMIDI, Por	LEARN	MISC METER SCALE	+24
MIDI ABSOLUTE	CHANNELS 9-16	N Sigma_010	AME	SOLO MODE	+ 18 SIP AFL
	NETWORK			SOLO TYPE	LATCH
IP ADDRE	ESS 192 8 168	B <u>1</u> B (B <u>255</u> B (201 6	SOLO BOOST	0 8
GATEW	ΥΑΥ <u>192</u> θ <u>168</u>	0 1 0	<u> </u>	STATUS VERSION: 1.0.0.19	
		Page 34			

REBOOT Button

When you make a change in the **SETTINGS** page that requires Sigma to be restarted in order for the change to have effect, a message will prompt you to perform a restart. The **SOFTWARE UPDATE** button will temporarily change to a **REBOOT** button. Click this to restart Sigma.

	MASTER	CHANNELS	SETTINGS		SAVE
DAW / PROTOCOL	CHANNELS 1-8	MIDI (ipMIDI, Por	LEARN	METER SCALE	+24 +22
	CHANNELS 9-16	N Sigma_010	AME	SOLO MODE	+18 SIP
l	DAW HANDSHAKE CLICK REBOOT TO ACCEPT YOUR O NETWORK	CHANGES		SOLO TYPE	LATCH
FIXED	IP ADDRESS 192 8 168	<u> </u>	201	SOLO BOOST	• • •
DHCP	SUBNET 255 8 255 GATEWAY 192 8 168	₿ <u>255</u> ₿ (<u> </u>	STATUS VERSION: 1.0.0.19	DT
E AND LOAD B AVE button will save al NELS and SETTINGS	UTTONS l of Sigma's settings acr	oss the three ma	in pages - MAIN	, LOAD	
clicking the SAVE butto	on you will be presented with a presented with the presented withet with the presented with the presented with the presented wi	with a pop-up as	king you to name	e	
- 4114 110031 4 4131111	tion on your computer/i	ICTWOIR.			

6. Example Setups

This section will provide a guide for how to configure Sigma in various setups. This section presumes you have established a network connection to Sigma and installed the ipMIDI software. Please see the relevant sections if you have not already done this.

PRO TOOLS + SIGMA (NO CONTROL SURFACE)

In this example we will configure Sigma to work with Pro Tools on ipMIDI channels 1 and 2.

Sigma Browser Settings

- 1. Go to the **SETTINGS** page in the Sigma browser.
- 2. Set DAW/PROTOCOL to PRO TOOLS (HUI) from the drop-down box.
- 3. Set CHANNELS 1-8 to ipMIDI Port 1 and set CHANNELS 9-16 to ipMIDI Port 2.
- 4. Enable the **DAW HANDSHAKE** button (lights green).

DAW/PROTOC <u>OL</u>	CHANNELS 1-8 MIDI LEAR	MISC METER SCALE +24
ProTools (HUI)	(ipMIDI, Port 1	+22
	CHANNELS 9-16 NAME	
	DAW HANDSHAKE	SOLO TYPE
	NETWORK	ALT
FIXED	IP ADDRESS 192 8 168 8 1 8 201	B SOLO BOOST OB
DHCP	SUBNET 255 8 255 8 255 8	S SOFTWARE UPDATE
	GATEWAY 192 8 168 8 1 8 1	B STATUS VERSION: 1.0.0.19
Pro Tools Settings

- 1. Open Pro Tools.
- Go to Setup > Peripherals... and then go to the MIDI Controllers tab.
- 3. Set the first row to type **HUI**, with **Receive From** and **Set To** both set to **ipMIDI Port 1**.
- 4. Set the second row to type **HUI**, with **ipMIDI Port 2**.
- 5. Click **OK** to confirm.

Pro Tools Session Setup

The final step is to create 16 new tracks which will be our dedicated fader controls for each of Sigma's analogue channels.

Synchronization Machine Control MIDI Controllers Ethernet Controllers Type Receive From Send To # Ch's #1 HUI ipMIDI,Prt1 ipMIDI,Prt1 8 #2 HUI ipMIDI,Prt2 ipMIDI,Prt2 8 #3 none none ipone * #4 none * * *			Per	ipheral	S			
Type Receive From Send To # Ch's #1 HUI ipMIDI,Prt1 ipMIDI,Prt1 8 #2 HUI ipMIDI,Prt2 ipMIDI,Prt2 8 #3 none none one 0 #4 none none 0 0	Synchr	onization	Machine Control	MIDI	Controllers	Ether	net Co	ntrollers
#1 HUI ipMIDI,Prt1 ipMIDI,Prt1 8 1 #2 HUI ipMIDI,Prt2 ipMIDI,Prt2 8 1 #3 none none none 1 1 #4 none none 1 1 1		Туре	Receive F	rom	Send To	•	# (Ch's
#2 HUI ipMIDI,Prt2 ipMIDI,Prt2 8 #3 none none none ÷ #4 none inone ÷ inone ÷	#1	HUI	ipMIDI,Prt	1 🗘	ipMIDI,Prt1	;	8	\$
#3 none i none i none i i i i i i i i i i i i i i i i i i i	#2	HUI	ipMIDI,Prt	2 🛟	ipMIDI,Prt2	;	8	\$
#4 none : none : • • •	#3	none	none	Å.	none	Å.		Å.
	#4	none	none	*	none	\$		A Ŧ

- 1. Go to Track > New...
- 2. Create 16 new blank Audio Tracks (it does not matter if they are mono or stereo).
- 3. Make sure that these 16 audio tracks are positioned as the first 16 tracks of the session.

Any volume automation data or fader movements on these 16 tracks will control the analogue signal gains of Sigma.

4. Your existing tracks with audio recorded to them should be routed out of different outputs on your audio interface, which will then feed the appropriate Sigma inputs channels (just like you would do with any normal summing unit).

		16.	tracks	positio	ned at	top of	the se	ession t	o cont	rol Sigi	ma's l	6 analo	gue ga	iins							
INSERTS & E	INSERTS A-E	INSERTS A-E	INSERTS & E	INSERTS A-E	INSERTS A-E	INSERTS A-E	INSERTS & E	INSERTS A-E	INSERTS A-E	INSERTS A-E	INSERTS A-E	INSERTS A-E	INSERTS A-E	INSERTS A-E	INSERTS A-E	INSERTS A-E	INSERTS A-E	INSERTS A-6	INSERTS A-E	INSERTS A-E	NSERTS A.E
SENDS A.E	SENDS A.E	SENDS A E	SENDS A.E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A E	SENDS A-E	SENDS A-E	SENDS A.E	SENDS A-E	SENDS A E	SENDS A-E	SENDS A-E	SENDS A.E	SENDS A.E	SENDS A E	SENDS A-E	SENDS A.E	SENDS A-E	SENDS A-E
1/0 8x1 * Out 1-2 9 AUTO auto read *	1/0 1/0 1/2 0ut12 AUTO auto mud no group	U D In 3 V Out 1.2 P AUTO mails read V reagroup V	II D In 4 Out 1-2 9 AUTO actornand Ins group	1/0 In 5 Out 1-2 AUTO auto read	1/0 In 6 Out 1-2 AUTO auto read *	I/O In 7 V Out 1-2 9 AUTO auto read V no group V	IJ 0 In 8 Out 1-2 AUTO multo read V reagroup	II O In 9 V Out 1-2 P AUTO autoread V no group V	I/O In 10 * Out 1-2 * AUTO auto read * no group *	I/O h1 * Out12 P AUTO auto read *	I/O In1 V Out12 9 AUTO autornad V no group V	U O Is 1 V Out 1-2 P AUTO suito read V no group V	IIO In1 T Out12 P AUTO suboread T	I/O In 1 V Out 1-2 P AUTO auto read V ne group V	1/0 1/1 0ut1-2 9 AUTO auto read * no group *	I/O no input * Out 1 0 AUTO auto read *	1) 0 no input * Out 2 9 AUTO suboread *	II O ns input " Out 3-4 9 AUTO autoread " at CRUNE "	I/O no input * Out 54 9 AUTO auto read * actoread *	I/O ro input * Out 7-5 AUTO auto read * a: DRUNS *	0 \1 * toqti cm 2 t nO AUTO * bear chus * 2AB al
																8	5				5 1
									AKGUAG & 2 & 4 & 4					88046 4 2 4 4 4					**************************************		
vel 0.0 \$ (an) } Audio 1	vol 0.0 Com H Audio 2	vel 0.0 ≑ dyn + Audio 3	vel c.o ¢ dyn)+r Audio 4	vet 0.0	vel c.a ≑ dan)> Audio 6	vol 4.0 dyn)+ Audio 7	vol 0.0 ≑ dyn jer Auclio 8	vət c.o dırın jət Audio 9	vet 0.0 ≑ dan)≫ Audio 10	vel 0.0 Com >> Audio 11	vol 0.0	vol 0.0 Com (re) Audio 13	vel 0.0 ⇒ dyn)+ Audio 14	vel 0.0 ≑ dan)≫ Audio 15	vel 0.3 Com H Audio 16	vel 42.3 transformed and transformed and tran	vol +3.5 \$ dyn }+ Snare 2	val 426 \$ dyn + Toms 3-4	vel 7.8 ≑ sim)> OHS 5-8	vel +2.6 (0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,	vet 463

Notes:

These 16 audio tracks must be positioned as the first 16 in the session, as the HUI/MCU protocols dictate this. Pan information is not read, you must set the pan in the **CHANNELS** page of Sigma browser.

Tip: You probably want to rename these Audio Tracks to meaningful names such as 'KICK' instead of Audio1. Once you have done this in the DAW, go to the **CHANNELS** page in the web browser and click the **DAW** > **NAMES** button in the global menu. This will copy across the names of the 16 tracks.

PRO TOOLS + SIGMA + NUCLEUS (OR ANY STANDARD HUI CONTROL SURFACE)

In this example we will configure Sigma to work together with a Nucleus. You could follow the setup procedure for Pro Tools + Sigma (no control surface) however, when using a HUI controller, banking through channels will mis-align the automation data. e.g. if you use the 'Channel Right' button a Nucleus to make the second track in the session appear on Channel 1 of Nucleus, your automation stream from the second track in your DAW will drive the first analogue channel of Sigma - not what we want!

To solve this problem, we have provided a **MIDI** automation mode, as found in our Matrix console. This mode works by using MIDI tracks in your session to control the analogue gains directly, rather than over the HUI/MCU protocols. Therefore, banking does not have any unwanted effects on the automation data.

Sigma Browser Settings

- 1. Go to the $\ensuremath{\textbf{SETTINGS}}$ page in the Sigma browser.
- 2. Set **DAW/PROTOCOL** to **MIDI** from the drop-down box.
- 3. Disable the **HANDSHAKING** button.
- 4. Go to the MIDI ABSOLUTE mode and pick an ipMIDI Port e.g. Port 9.

Note that the CHANNELS 1-8 and CHANNELS 9-16 boxes have no effect when using MIDI.

	MASTER CHANNELS SETTIN	
DAW / PROTOCOL	CHANNELS 1-8 MIDI LEARN	MISC +24 METER SCALE +24 +22
MIDI ABSOLUTE	CHANNELS 9-16 NAME	+18 SOLO MODE SIP
		SOLO TYPE
	IP ADDRESS 192 8 158 8 1 8 201 8	SOLO BOOST 0
FIXED	SUBNET 255 8 255 8 255 9 0 8	SOFTWARE UPDATE
DHCP	GATEWAY 192 8 168 8 1 8 1 8	STATUS VERSION: 1.0.0.19

Pro Tools Settings

- 1. Open Pro Tools.
- 2. Have the **Setup** > **Peripherals...** > **MIDI Controllers** configured as you would normally for your Nucleus (or HUI) controller e.g. The screenshot shows a Nucleus setup for use on DAW Layer 1. Note that with this setup, this is not how the analogue gains of Sigma are driven. That will be done over the MIDI tracks in the following steps...

Synchro	onization	Mach						
			ine Control	MIDI	Controllers	Ether	s	
	Туре		Receive Fi	rom	Send To	b	# Ch's	
#1	HUI	•	ipMIDI,Prt1	;	ipMIDI,Prt1	;	8	
#2	HUI	;	ipMIDI,Prt2	•	ipMIDI,Prt2	;	8	
#3	none	•	none	\$	none	\$	\$	
#4	none	;	none	*	none	\$	\$	
				_		<u></u>		
				C	Cancel)	ОК	

Pro Tools Session Setup

- 1. Go to **Track > New...**
- 2. Create 16 new **MIDI Tracks** (it does not matter where they are positioned in the session).
- 3. Leave the inputs to the MIDI Tracks set to ALL.
- 4. Set the output of the first MIDI track to **ipMIDI Port 9, channel-1**.
- 5. Continue setting the outputs in this way incrementally to get all 16 channels e.g. The second MIDI track is set to output on **ipMIDI Port 9, channel-2**, the third MIDI track is set to output on **ipMIDI Port 9, channel-3**, etc.

Any volume automation data or fader movements on these 16 MIDI tracks will control the analogue gains of Sigma.

6. Your existing tracks with audio recorded to them should be routed out of different outputs on your audio interface, which will then feed the appropriate Sigma inputs channels (just like you would do with any normal summing unit).



- 7. You will need to move the MIDI faders before their levels are picked up by Sigma.
- 8. We recommend you use Pro Tools' **Solo Safe** feature to Solo Safe the 16 MIDI tracks. This will ensure that when you solo one of your audio tracks in Pro Tools, the automation data will still be read.

Tip: When using **MIDI Absolute**, the volume information is being sent discreetly from the output of each MIDI track. This means that you can position these MIDI tracks anywhere in your DAW session. They do not have to be arranged as the first 16 tracks.

Notes:

Although MIDI faders have a maximum resolution 127 values, these values are scaled in such a way to provide smooth and natural volume automation in the useful range of fader travel. Pan information is not read, you must set the pan in the **CHANNELS** page of Sigma browser.

PRO TOOLS + SIGMA + AVID[®] ARTIST SERIES CONTROL SURFACE (EUCON)

In this example we will configure Sigma to work together with a Artist Series Control Surface such as the Artist Control®.

The HUI and Eucon protocols are able to work simultaneously. When using a Eucon control surface, banking is done in the Eucon domain and does not affect automation streams on Sigma.

In this example we will configure Sigma to work with Pro Tools on ipMIDI channels 1 and 2.

Sigma Browser Settings

- 1. Go to the $\ensuremath{\textbf{SETTINGS}}$ page in the Sigma browser.
- 2. Set **DAW/PROTOCOL** to **PRO TOOLS (HUI)** from the drop-down box.
- 3. Set CHANNELS 1-8 to ipMIDI Port 1 and set CHANNELS 9-16 to ipMIDI Port 2.
- 4. Enable the **HANDSHAKING** button.

Igma Name [Sigma_010]. Software version: 1.0.0.19 MASTER CHANNELS SETUP DAW / PROTOCOL (Protools (HUI) • • · · · · · · · · · · · · · · · · ·	LOAD SAVE
	VERSION: 1.0.0.19

Pro Tools Settings

- 1. Open Pro Tools.
- 2. Go to Setup > Peripherals... > MIDI Controllers.
- 3. Set the first row to type **HUI**, with **Receive From** and **Send To** both set to **ipMIDI Port 1**.
- 4. Set the second row to type **HUI**, with **ipMIDI Port 2**.
- 5. Click **OK** to confirm.

Artist Controller Settings

Leave your Eucon settings the same in the **Ethernet Controllers** tab.

		Peri	pherals			
Synchronization	Machine Control	MIDI Controllers	Ethernet Controllers	Mic Preamps	Satellites	VENUE
		Eth	ernet Port			
		Enable	÷			
	#1	none	* Name			
	#2	none	\$ Name			
	#3	none	\$ Name			
	#4	none	\$ Name			
	#5	none	Name			
	#6	none	Name			
	#7	none	\$ Name			
		Enable I	EUCON			
			L	Cancel	ОК	
_	_	_		_	_	-
		Pa	ge 42			

Pro Tools Session Setup

- 1. Go to **Track > New...**
- 2. Create 16 new blank Audio Tracks (it does not matter if they are mono or stereo)
- 3. Make sure that these 16 audio tracks are positioned as the first 16 tracks of the session

Any volume automation data or fader movements on these 16 tracks will control the analogue gain changes of Sigma.

4. Your existing tracks with audio recorded to them should be routed out of different outputs on your audio interface, which will then feed the appropriate Sigma inputs channels (just like you would do with any normal summing unit).

				Co	ontrol t	racks n	nust be	e Tracks	s I-16 i	in the s	session.	J									
INSERTS A-E	INSERTS A-E	INSERTS A-C	INSERTS A-E	INSERTS A-E	INSERTS A-E	INSERTS A-E	INSERTS A-E	PISERTS A-C	INSCRTS A-C	INSCRTS A-E	INSERTS A-E	INSERTS A-E	INSERTS A-E	INSERTS A-E	INSERTS A-E	INSCRTS A-C	INSERTS A-E	INSERTS A-C	INSERTS A-E	INSERTS A-C	INSERTS A-C
SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENCS A-E
I/O In1 V Out1-2 1 AUHO auto read V ros group V	Ir 0 In 2 Out 1-2 AUTO Autro Autro Casto read	1/0 In 3 V Out 1:2 P AUTO auto read V mo group V	I/O In 4 V Out 1-2 P AUHO auto read V	I/O In 5 ° Out 1-2 9 AUTO auto read ° no group °	I/O In 6 V Out 1-2 P AUTO auto read V no group V	1/0 In 7 V Out 1-2 P AUTO auto read V no group V	I/O In 8 V Out 1-2 9 AUTO auto read V	1/0 In 9 V Out 1-2 P AUTO asto read V no group V	I/O In 10 V Out 1-2 P AUTO auto read V no group V	I/O In 1 V Out 1-2 P AUTO Outo read V no group V	II O In 1 V Out 1-2 P AUTO outoreed V mogroup V	II 0 In 1 V Out 1-2 P AUTO outerced V mogroup V	IIO In1 V Out1-2 P AUTO ostoreed V mogroup V	IIO In1 V Out1-2 P AUTO Cultoreed V	IID In1 V Out1-2 1 AUTO Culoreed V	H O no input V Out 1 4 AUTO outo read V a: DRUNS V	U D no input V Out 2 9 AUTO oute reed V	LI D no input * Out 3-4 * AUTO oute read * a: DRUNS *	LL D no input * Out 54 * AUTO Oute read *	110 no lepat V Cur 7-3 AUTO auto read V	U O no isput V Out J AUTO sufe read V b: BASS V
																		144444 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			
vel 0.0 Com H- Audio 1	vel 0.0 Com H+ Audio 2	vel 0.0 Com H Audio 3	vel 0.0 ≎ Cyn)⊁ Audio 4	vol 0.8 Con H Audio 5	vet 0.0 \$ Com)⊁ Audio 6	vel 0.0 ≎ (on) ≯ Audio 7	vol 0.0 ≎ (dyn))≯ Audio 8	vel 0.0 ≎ 0.0m)+ Audio 9	vol 0.0 ≎ (dyn))≻ Audio 10	vel 0.0 ≎ (dyn) ≫ Audio 11	vel 0.0 ≎ (dyn) >≻ Audio 12	vel 0.0 O (dyn.) I≯ Audio 13	vel 0.0 O (dyn.) I≯ Audio 14	vol 0.0 O (dyn.) I≯ Audio 15	vel 0.0 Coys I+ Audio 16	vel +2.3 ¢ dys }+ Kick	vol •3.5 ¢ Øys }++ Snare 2	vol •2.6	vel -7.8	vol 42.6 (4)/0 (++ Rooms 7-8	vol 463 ¢ 0/n (+ Bass 9

Notes:

These 16 audio tracks must be positioned as the first 16 in the session, as the HUI/MCU protocols dictate this. Pan information is not read, you must set the pan in the **CHANNELS** page of Sigma browser.

Tip: You probably want to rename these Audio Tracks to meaningful names such as 'KICK' instead of Audio1. Once you have done this in the DAW, go to the **CHANNELS** page in the web browser and click the DAW > NAMES button in the global menu. This will copy across the names of the 16 tracks.

LOGIC + SIGMA (NO CONTROL SURFACE)

In this example we will configure Sigma to work with Logic on ipMIDI channels 1 and 2.

Sigma Browser Settings

- 1. Go to the **SETTINGS** page in the Sigma browser.
- 2. Set **DAW/PROTOCOL** to **LOGIC (MCU)** from the drop-down box.
- 3. Set CHANNELS 1-8 to ipMIDI Port 1 and set CHANNELS 9-16 to ipMIDI Port 2.
- 4. Enable the **DAW HANDSHAKE** button (lights green).

Solid State Logic • Oxford • England SIG	A Ctrl superanalogue
MASTER CHANNELS SETTINGS SETUP DAW/PROTOCOL CHANNELS 1-8 IpMIDI, Port 1 ipMIDI, Port 10 ipMIDI, Port 10	LOAD SAVE MISC METER SCALE +24 +22
MIDI ABSOLUTE (ipMIDI, Port 9 +) CHANNELS 9-16 NAME Sigma_010 DAW HANDSHAKE	+18 SOLO MODE SIP AFL SOLO TYPE LATCH
NETWORK IP ADDRESS 192 0 168 0 1 0 201 0 FIXED SUBNET 255 0 255 0 0 0 DHCP GATEWAY 192 0 168 0 1 0 1 0	ALT SOLO BOOST O D SOFTWARE UPDATE STATUS VERSION: 1.0.0.19
	VERSION: 1.0.0.19
Page 44	

Logic Settings

- 1. Open Logic.
- 2. Go to Preferences > Control Surfaces Setup...
- 3. Choose **New** and then **Install...**
- 4. Select a Mackie Designs Mackie Control and click Add.
- 5. Set the **Output Port** and **Input Port** to **Port 1**.
- 6. Now select a **Mackie Designs Mackie Control Extender** from the list and click **Add**.
- 7. Set the **Output Port** and **Input Port** to **Port 2**.

Aackie Control	
Output Port: Port 1 Input Port: Port 1 Module: Logic Contr Model: Mackie Cor Version: (unknown) Color	¢ ¢ ol
Transport Button Click: Touchless movable faders: Fader Touch Sensitivity: 3 acklight Saver Timeout (min): 15 Serial No.:	
Control Surface Group 1	
Flip Mode: Off	÷
Display Mode: Value	
Clock Display: SMPTE	
Channel Strip View Mode: Arrange	÷
Fader Bank for Tracks View: 0	
Fader Bank for All View: 0	
Channel Strip Parameter: Pan	\$
Surround Parameter: Diversity	\$
EQ Band: 1	
EQ Parameter: Frequency	\$
EQ Parameter Page: 16	
Send Slot: 4	
Send Parameter: Position	\$
Send Parameter Page: 0	
plit: no. of upper parameters: 0	
Instrument Parameter Page: 0	
Inst Param Page (Split Lower): 0	
Insert Slot: 3	
Insert Slot (Split Lower): 1	
Plug-in Parameter Page: 0	
-in Param Page (Split Lower): 0	
Channel Strip Track: 262145	
nnel Strip Track (Split Lower): 262145	
Track Lock:	
Track Name Format: Name	
Parameter Page Shift Mode: By Page	
Relative Change Mode: Coarse	÷
Mix Group: 2	

Important: Please ensure you are selecting the **Mackie Designs - Mackie Control Surface** and **NOT** the **Mackie Designs - Logic Control Surface.** The Logic Control Surface sends different messages and Sigma will not respond to these.

Logic Session Setup

The final step is to create 16 new tracks which will be our dedicated fader controls for each of Sigma's analogue channels.

- 1. Use the + button and to create 16 new Audio Tracks (it does not matter if they are mono or stereo)
- 2. Make sure that these 16 audio tracks are positioned as the first 16 tracks of the session

Any volume automation data or fader movements on these 16 tracks will control the analogue gain changes of Sigma.

3. Your existing tracks with audio recorded to them should be routed out of different outputs on your audio interface, which will then feed the appropriate Sigma inputs channels (just like you would do with any normal summing unit).



4. It is recommended to set the Logic Mixer to 'Arrange' view mode. This will ensure that the first 16 'control tracks' always correspond to Sigma's 16 analogue gains. If using Instruments tracks with Multi Outputs, also ensure that the 'Link' button is disabled, to prevent Logic automatically switching back to the 'All' view mode when you click on an instrument.

Edit - Options - View -

Single Arrange 📶 Audio Inst Aux Bus Input Output Master MIDI 🖡 🖑 🖑

Notes:

These 16 audio tracks must be positioned as the first 16 in the session, as the HUI/MCU protocols dictate this. Pan information is not read, you must set the pan in the **CHANNELS** page of Sigma browser.

Tip: You probably want to rename these Audio Tracks to meaningful names such as 'KICK' instead of Audio1. Once you have done this in the DAW, go to the **CHANNELS** page in the web browser and click the **DAW** > **NAMES** button in the global menu. This will copy across the names of the 16 tracks.

LOGIC + SIGMA + NUCLEUS (OR ANY STANDARD MCU CONTROL SURFACE)

In this example we will configure Sigma to work together with a Nucleus. Logic uses 'Control Surface Groups' so that the actions of one controller does not affect another. This is useful for us, as setting up 'Control Surface Groups' allows the banking commands of a control surface to remain separate from the automation streams controlling Sigma. Using this method, when you press **bank** on your control surface, the automation streams into Sigma do not follow the banking command.

Sigma Browser Settings

We'll set up Sigma on ipMIDI channels 1 & 2.

- 1. Go to the $\ensuremath{\textbf{SETTINGS}}$ page in the Sigma browser.
- 2. Set DAW/PROTOCOL to LOGIC (MCU) from the drop-down box.
- 3. Set CHANNELS 1-8 to ipMIDI Port 1 and set CHANNELS 9-16 to ipMIDI Port 2.
- 4. Disable **DAW HANDSHAKE** (goes grey).

	MASTER	CHANNELS	SETTINGS		SAVI
DAW / PROTOCOL	CHANNELS 1-8	MIDI (ipMIDI, Po	ILEARN rt 10	METER SCALE	+24
MIDI ABSOLUTE	CHANNELS 9-16 (ipMIDi, Port 2 + DAW HANDSHAKE	N Sigma_010		SOLO MODE	+ 18 SIP AFL
	NETWORK			SOLO TYPE	LATCH
IP AD	DRESS 192 6 168 UBNET 255 6 255	8) <u>1</u> 8) (8) <u>255</u> 8) (6	SOLO BOOST	0 8
GA	TEWAY 192 8 168	8 1 8 (<u> </u>	STATUS VERSION: 1.0.0.19	

Logic Control Surface Settings

First, we'll set up Sigma.

- 1. Open Logic.
- 2. Go Preferences > Control Surfaces Setup...
- 3. Choose New and then Install...
- 4. Select a Mackie Designs Mackie Control and click Add.
- 5. Set **Output Port** and **Input Port** to **Port 1**.
- 6. Now select a **Mackie Designs Mackie Control Extender** from the list and click **Add**.
- 7. Set **Output Port** and **Input Port** to **Port 2**.

Important: Please ensure you are selecting the **Mackie Designs - Mackie Control Surface** and **NOT** the **Mackie Designs - Logic Control Surface.** The Logic Control Surface sends different messages and Sigma will not respond to these.

Now, we'll set up Nucleus for operation on DAW Layer 2:

- 3. Choose **New** and then **Install...**
- 4. Select a Mackie Designs Mackie Control and click Add.
- 5. Set **Output Port** and **Input Port** to **Port 3**.
- 6. Select a Mackie Designs Mackie Control Extender and click Add.
- 7. Set **Output Port** and **Input Port** to **Port 4**.
- 8. This is the important part: When you have all the Mackie Controllers and Extenders in a line, highlight the last two (Mackie Control #2 and Mackie Control Extender #2) and **drag them underneath the first two controllers**. Doing this will create a different 'Control Surface Group'.

Mackie Control #2		
Output Port: Port 3		
Input Port: Port 3	÷	
Module: Logic Cont		
Model: Mackie Co	rol december of the second secon	
Version: (unknown)		
Color:		
Transport Button Click: 🗹		
Touchless movable faders:		
Fader Touch Sensitivity: 3	Mackie Control Mackie Control Extender	
Backlight Saver Timeout (min): 15		
Serial No.:		
Control Surface Group 2		
Flip Mode: Off		
Display Mode: Value		
Clock Display: Beats	00000000	
Channel Strip View Mode: Arrange		
Fader Bank for Tracks View: 0	TACTICUTY	
Fader Bank for All View: 0		
Channel Strip Parameter: Volume		
Surround Parameter: Angle	÷	
EQ Band: 1	II Mackie Control #2 Mackie Control #2	
EQ Parameter: Frequency	•	
EQ Parameter Page: 0		
Send Slot: 1		
Send Parameter: Destination	+	
Send Parameter Page: 0		
Split: no. of upper parameters: 0		
Instrument Parameter Page: 0		
Inst Param Page (Split Lower): 0		
Insert Slot: 1		
Insert Slot (Split Lower): 1		
Plug-in Parameter Page: 0		
Plug-in Param Page (Split Lower): 0		
Channel Strip Track: 262145		
Channel Strip Track (Split Lower): 262145		
Track Lock:		
Track Name Format: Name		
Parameter Page Shift Mode: By Page		
Relative Change Mode: Coarse	*	
Mix Group: 1		
Group Parameter Page: 0		-

Logic Control Surface Preferences

You now need to ensure that Logic's Control Surfaces Preferences are set correctly. Go to Preferences > Control Surfaces and set the options to match the screenshot to the right. Ensure that the option 'Control surface follows track selection' is un-ticked.

Logic Session Setup

The final step is to create 16 new tracks which will be our dedicated fader controls for each Sigma analogue channel.

- Use the + button and to create 16 new Audio Tracks (it 1. does not matter if they are mono or stereo)
- Make sure that these 16 audio tracks are positioned as 2. the first 16 tracks of the session

Any volume automation data or fader movements on these 16 tracks will control the analogue signal gains of Sigma.

3. Your existing tracks with audio recorded to them should be routed out of different outputs on your audio interface, which will then feed the appropriate Sigma inputs channels (just like you would do with any normal summing unit).

000

181

63

Resolution of Relative Controls:

iple Controls per Parameter: 2

General Help Tags

Preferences

Bypass All while in background

Touching fader selects track

Flash Mute and Solo buttons

For longer labels and value displays Only when all parameters fit on one page

Volume and other parameters

Pickup Mode

value units For: 🗹 Instrument/plug-in parameters

~~

' 0

Control surface follows track selection

Jog resolution depends on horizontal zo

· (▼ 128 ▲

Controller Assignments...) (Setup.



It is recommended to set the Logic Mixer to 'Arrange' view mode. This ensures that the first 16 'control tracks' always 4. correspond to Sigma's 16 analogue gains. If using Instrument tracks with Multi Outputs, also ensure that the 'Link' button is **disabled**, to prevent Logic automatically switching back to '**All**' view mode when you click on an instrument.

Edit - Options - View -

Single Arrange 📶 Audio Inst Aux Bus Input Output Master MIDI 📐 🖑 .

Note: These 16 audio tracks must be positioned as the first 16 in the session, as the HUI/MCU protocols dictate this. Pan information is not read, you must set the pan in the **CHANNELS** page of Sigma browser.

Tip: You probably want to rename these Audio Tracks to meaningful names such as 'KICK' instead of Audio1. Once you have done this in the DAW, go to the CHANNELS page in the web browser and click the DAW > NAMES button in the global menu. This will copy across the names of the 16 tracks.

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LOGIC + SIGMA + AVID[®] ARTIST SERIES CONTROL SURFACE (EUCON)

In this example we will configure Sigma to work together with a Artist Series Control Surface such as the Artist Control®.

The MCU and Eucon protocols are able to work simultaneously. When using a Eucon control surface, banking is done in the Eucon domain and does not affect automation streams on Sigma.

In this example we will configure Sigma to work with Logic on ipMIDI channels 1 and 2.

Sigma Browser Settings

We will set up Sigma to work on ipMIDI channels 1 & 2.

- 1. Go to the **SETTINGS** page in the Sigma browser.
- 2. Set **DAW/PROTOCOL** to **LOGIC (MCU)** from the drop-down box.
- 3. Set CHANNELS 1-8 to ipMIDI Port 1 and set CHANNELS 9-16 to ipMIDI Port 2.

Solid State Logic • Oxford • England SIG	A SUPERANALOGUE
MASTER CHANNELS SETTINGS	LOAD SAVE
DAW / PROTOCOL CHANNELS 1-8 MIDI LEARN Logic (MCU) Immility Immility Immility	MISC METER SCALE +24 +22
MIDI ABSOLUTE (ipMIDI, Port 9 + Sigma_010 DAW HANDSHAKE	+18 SOLO MODE SIP AFL
	SOLO TYPE
NETWORK IP ADDRESS 192 0 168 0 1 0 201 0 FIXED SUBNET 255 0 255 0 0 0	ALT SOLO BOOST O O
GATEWAY 192 8 168 8 1 8 1 8	STATUS VERSION: 1.0.0.19

Artist Controller Settings

You should not be required to set up any additional functionality on your Artist Controller. As you will know, Eucon does not appear in the Control Surfaces Setup of Logic, it is just part of Logic Pro 9.

Logic Control Surface Settings

First, we'll set up Sigma.

- 1. Open Logic.
- 2. Go to Preferences > Control Surfaces Setup...
- 3. Choose **New** and then **Install...**
- 4. Select a Mackie Designs Mackie Control and click Add.
- 5. Set the **Output Port** and **Input Port** to **Port 1**.
- 6. Now select a **Mackie Designs Mackie Control Extender** from the list and click **Add**.
- 7. Set the **Output Port** and **Input Port** to **Port 2**.

ckie Control		
Output Port: Input Port: Module: Model: Version: Color:	Port 1 Port 1 Logic Control Mackie Contr (unknown)	¢ ¢ ol
Transport Button Click: Touchless movable faders: Fader Touch Sensitivity: Backlight Saver Timeout (min): Serial No.:	3 15	
Control Surface Group 1		
Flip Mode:	Off	÷
Display Mode:	SMPTE	
Channel Strip View Mode	Arrange	
Fader Bank for Tracks View:	0	
Fader Bank for All View:	0	
Channel Strip Parameter:	Pan	
Surround Parameter:	Diversity	*
FO Band:	1	
FO Parameter:	Frequency	
FO Parameter Page:	16	
Send Slot:	4	
Send Parameter:	Position	
Send Parameter Page:	0	*
Solit: no. of upper parameters:	0	
Instrument Parameter Page:	0	
Inst Param Page (Solit Lower):	0	
Insert Slot:	3	
Insert Slot (Split Lower):	1	
Plug-in Parameter Page:	0	
ig-in Param Page (Solit Lower):	0	
Channel Strin Track:	262145	
annel Strip Track (Split Lower):	262145	
Track Lock:		
Track Name Format:	Name	
Parameter Page Shift Mode:	Ry Page	
Relative Change Mode:	Coarre	
Mix Croup:	2	
Mix Group.	2	

Important: Please ensure you are selecting the **Mackie Designs - Mackie Control Surface** and **NOT** the **Mackie Designs - Logic Control Surface.** The Logic Control Surface sends different messages and Sigma will not respond to these.

Logic Session Setup

The final step is to create 16 new tracks which will be our dedicated fader controls for each of Sigma's analogue channels.

- 1. Use the + button and to create 16 new Audio Tracks (it does not matter if they are mono or stereo)
- 2. Make sure that these 16 audio tracks are positioned as the first 16 tracks of the session

Any volume automation data or fader movements on these 16 tracks will control the analogue gains of Sigma.

3. Your existing tracks with audio recorded to them should be routed out of different outputs on your audio interface, which will then feed the appropriate Sigma inputs channels (just like you would do with any normal summing unit).



4. It is recommended to set the Logic Mixer to 'Arrange' view mode. This will ensure that the first 16 'control tracks' always correspond to Sigma's 16 analogue gains. If using Instruments tracks with Multi Outputs, also ensure that the 'Link' button is disabled, to prevent Logic automatically switching back to the 'All' view mode when you click on an instrument.

Single Arrange 11 Audio Inst Aux Bus Input Output Master MIDI N. O.

Notes:

These 16 audio tracks must be positioned as the first 16 in the session, as the HUI/MCU protocols dictate this. Pan information is not read, you must set the pan in the **CHANNELS** page of Sigma browser.

Tip: You probably want to rename these Audio Tracks to meaningful names such as 'KICK' instead of Audio1. Once you have done this in the DAW, go to the **CHANNELS** page in the web browser and click the **DAW** > **NAMES** button in the global menu. This will copy across the names of the 16 tracks.

Edit - Options - View -

CUBASE/NUENDO + SIGMA (NO CONTROL SURFACE)

In this example we will configure Sigma to work with Cubase/Nuendo on ipMIDI channels 1 and 2.

Sigma Browser Settings

- 1. Go to the **SETTINGS** page in the Sigma browser.
- 2. Set the **DAW/PROTOCOL** to be **CUBASE/NUENDO (MCU)** from the drop-down box
- 3. Set CHANNELS 1-8 to ipMIDI Port 1 and set CHANNELS 9-16 to ipMIDI Port 2.

Solid State Logic • Oxford • England SIG gma Name [Sigma_010], Software version: 1.0.0.19 MASTER CHANNELS SETTINGS	
DAW / PROTOCOL CHANNELS 1-8 MIDI LEARN Cubase/Nuendo (MCU + ipMIDI, Port 1 + ipMIDI, Port 10 +	MISC METER SCALE +24 +22
MIDI ABSOLUTE (pMIDI, Port 9 +) CHANNELS 9-16 NAME Sigma_010 Daw HANDSHAKE	SOLO MODE SIP
NETWORK	SOLO TYPE LATCH
IP ADDRESS 192 8 168 8 1 8 201 8 Fixed SUBNET 255 8 255 8 0 8	SOLO BOOST 0 8
GATEWAY 192 8 168 8 1 8 1 8	STATUS VERSION: 1.0.0.19

Cubase/Nuendo Settings

- 1. Open Cubase/Nuendo.
- Go to Devices > Device Setup... and then go to Remote Devices.
- Click the '+' button to add in a Mackie Control. Set the MIDI Input and MIDI Output Ports to ipMIDI Port 2. (Cubase requires the ipMIDI ports to be configured in reverse order).
- Click '+' to add in a second Mackie Control. Set the MIDI Input and MIDI Output Ports to ipMIDI Port 1.
- 5. Click **Apply** and click **OK**.

0	Device Setup		
- 14	Mackie Cont	rol	
evices	ipMIDI Port 2		 MIDI Input
MIDI MIDI Port Setup	ipMIDI Port 2		MIDI Output
Remote Devices	User Commands		Reset
Mackie Control 2	Button	Category	Command
Quick Controls	User A		
Transport	User B		
Record Time Max	F1		
Time Display	Shift+F1		
Video	F2		
Ball Video Plaver	Shift+F2		
WST Audio System	F3 Shift+E2		
Puilt_in Audio	FA		
VST System Link	Shift+F4		
VST System Link	FS		
	Shift+F5		
	F6		
	Shift+F6		
	F7		
	Shift+F7		
	Short	- Smart Swite	h Delay
	Enable Auto S	elect	
	Relay Click		
	Help		Reset Apply

Session Setup

The final step is to create 16 new tracks which will be our dedicated fader controls for each of Sigma's analogue channels.

- 1. Go to **Project** and **Add track > Audio...**
- Create 16 new blank Audio Tracks (it does not matter if they are mono or stereo).
- 3. Make sure that these 16 audio tracks are positioned as the first 16 tracks of the session.

Any volume automation data or fader movements on these 16 tracks will control the analogue gains of Sigma.

4. Your existing tracks with audio recorded to them should be routed out of different outputs on your audio interface, which will then feed the appropriate Sigma inputs channels (just like you would do with any normal summing unit).

	000			€ 0	Cubase 7 Project	- SIGMA_W	HITE_MOUR	NINC_SON_	MESSE_201	3					
	0≡ 0 = + ★	🛆 Touch 🚽	т н н «	4 I \$	• 1	> > O @	ί×φ⊡	0/40			#80	ĭ - # U	se Quantize	- Q ~	1/16
	Record Time Max 98 hou														
	No Object Selected														
	Q No Track Preset C		R IIII /	1 5	9	13	17	21	25	29 3	13	37	41 4	I 15 4	9 5/ ^E
ĺ	1 Audio 1 🔹 🖗		adio 1												
			idio 2												
			udio 4												4
Control	0.0	00 🗁 🔳 🖻 A4	adio 5												Í
tracks	no pornar	► 6 msA	udio 6												
must be	+⊕≻ 0.0		udio 7												
Tracks I-16	HE Left - Stereo In		udio 9												
in the	⇒ Sigma 1		idio 10												
cossion	Chord Track	🗊 🖂 🔳 🖬 🖻 🗛	udio 11												
Session,	Inserts -		adio 12												
	Testa Contesta Contes		udio 13												
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l	Equalizers		udio 16												
	Sends g		ск		(HON-9-140	840	(0+0							000 0-0-000	
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	(DM S									b			

Notes: These 16 audio tracks must be positioned as the first 16 in the session, as the HUI/MCU protocols dictate this. Pan information is not read, you must set the pan in the **CHANNELS** page of Sigma browser.

Tip: You probably want to rename these Audio Tracks to meaningful names such as 'KICK' instead of Audio1. Once you have done this in the DAW, go to the **CHANNELS** page in the web browser and click the **DAW** > **NAMES** button in the global menu. This will copy across the names of the 16 tracks.

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CUBASE/NUENDO + SIGMA + NUCLEUS (OR ANY STANDARD MCU CONTROL SURFACE)

In this example we will configure Sigma to work together with a Nucleus. You could follow the setup procedure for Cubase/Nuendo + Sigma (No Control Surface) however, when using a MCU controller, banking through channels will misalign the automation data. e.g. if you use the 'Channel Right' button a Nucleus to make the second track in the session appear on Channel 1 of Nucleus, your automation stream from the second track in your DAW will drive the first analogue channel of Sigma - not what we want!

To solve this problem, we have provided a **MIDI** automation mode, as found in our Matrix console. This mode works by using MIDI tracks in your session to control the analogue gains directly, rather than over the HUI/MCU protocols. Therefore, banking does not have any unwanted effects on the automation data.

Sigma Browser Settings

- 1. Go to the **SETTINGS** page in the Sigma browser.
- 2. Set **DAW/PROTOCOL** to **MIDI** from the drop-down box.
- 3. Go to the MIDI ABSOLUTE mode and pick an ipMIDI Port e.g. Port 9.

Note that the CHANNELS 1-8 and CHANNELS 9-16 boxes have no effect when using MIDI.

a Name [Sigma_010], Software versio	MASTER CHANNELS SETTIN	
DAW / PROTOCOL MIDI	CHANNELS 1-8 MIDI LEARN	METER SCALE +24
MIDI ABSOLUTE	CHANNELS 9-16 NAME	SOLO MODE
		SOLO TYPE
IP A	DDRESS 192 8 168 8 1 8 201 8	SOLO BOOST O
DHCP	SUBNET 255 0 255 0 255 0 0 0	SOFTWARE UPDATE STATUS
		VERSION: 1.0.0.19

Cubase/Nuendo Settings

- 1. Open Cubase/Nuendo.
- 2. Have the **Setup > Peripherals... > MIDI Controllers** configured as you would normally for your Nucleus (or MCU) controller e.g. The screenshot shows a Nucleus setup for use on DAW Layer 1. Note that with this setup, this is not how the analogue gains of Sigma are driven. That will be done over the MIDI tracks in the following steps...

+ - I Devices MIDI ③ MIDI Port Setup Remote Devices Mackie Control Mackie Control 2 Quick Controls Transport Record Time Max Time Display Video ¥aw Video Player ✓ VST Audio System Built-in Audio VST System Link	Mackie Con ipMIDI Port 2 ipMIDI Port 2 User Commands Button User A User A User B F1 Shift+F1 F2 Shift+F1 F3 Shift+F3 F4 Shift+F4 EF	trol Category	Command	Input Output set
Devices MIDI MIDI Port Setup Remote Devices Mackie Control Quick Control 2 Quick Controls Transport Record Time Max Time Display Video Yaav Video Player Video Player VST Audio System Built-in Audio VST System Link	ipMIDI Port 2 ipMIDI Port 2 User Commands Button User A User B F1 Shift+F1 F2 Shift+F2 F3 Shift+F3 F4 Shift+F4 EF	Category	Command	Input Output set
 MIDI MIDI Port Setup Remote Devices Mackie Control Mackie Control 2 Quick Controls Transport Record Time Max Time Display Video Video Player VST Audio System Built-in Audio VST System Link 	ipMIDI Port 2 User Commands Button User A User B F1 Shift+F1 F2 Shift+F2 F3 Shift+F3 F4 Shift+F4 F4	Category	Command	Output set
Mackie Control 2 Mackie Control 2 Quick Controls Transport Record Time Max Time Display Video Yian Video Player ✓ VST Audio System Built-in Audio VST System Link	Button User A User B F1 Shift+F1 F2 Shift+F3 F4 Shift+F4 EE	Category	Command	
Quick Controls Transport Record Time Max Time Display Video Video Player ✓ VST Audio System Built-in Audio VST System Link	Bittori User A User B F1 Shift+F1 F2 Shift+F3 F4 Shift+F4	Lategory		
	Shift+F5 F6 Shift+F6 F7 Shift+F7			
	Short Enable Auto Relay Click Help	Select	Delay eset Ap	ply

Cubase Session Setup

The final step is to create 16 new tracks which will be our dedicated fader controls for each of Sigma's analogue channels.

- 1. Go to Project and Add track > MIDI ...
- Create 16 new MIDI Tracks (it does not matter where they are positioned in the session). 2.
- Set the output of the first MIDI track to ipMIDI Port 9, channel-1. 3.
- Continue setting the outputs in this way incrementally to get all 16 channels e.g. The second MIDI track is set to output 4. on ipMIDI Port 9, channel-2, the third MIDI track is set to output on ipMIDI Port 9, channel-3, etc.

Any volume automation data or fader movements on these 16 MIDI tracks will control the analogue gains of Sigma.

5. Your existing tracks with audio recorded to them should be routed out of different outputs on your audio interface, which will then feed the appropriate Sigma inputs channels (just like you would do with any normal summing unit).



6. You will need to move the MIDI faders before their levels are picked up by Sigma.

Tip: When using MIDI Absolute, the volume information is being sent discreetly from the output of each MIDI track. This means that you can position these MIDI tracks anywhere in your DAW session. They do not have to be arranged as the first 16 tracks.

Notes:

Although MIDI faders have a maximum resolution 127 values, these values are scaled in such a way to provide smooth and natural volume automation in the useful range of fader travel.

Pan information is not read, you must set the pan in the CHANNELS page of Sigma browser.

CUBASE/NUENDO + SIGMA + AVID[®] ARTIST SERIES CONTROL SURFACE (EUCON)

In this example we will configure Sigma to work together with a Artist Series Control Surface such as the Artist Control®.

The MCU and Eucon protocols are able to work simultaneously. When using a Eucon control surface, banking is done in the Eucon domain and does not affect automation streams on Sigma.

In this example we will configure Sigma to work with Pro Tools on ipMIDI channels 1 and 2.

Sigma Browser Settings

- 1. Go to the **SETTINGS** page in the Sigma browser.
- 2. Set the DAW/PROTOCOL to be CUBASE/NUENDO (MCU) from the drop-down box
- 3. Set CHANNELS 1-8 to ipMIDI Port 1 and set CHANNELS 9-16 to ipMIDI Port 2.

Solid State Logic • Oxford • England SIG	A SUPERANALOGUE
MASTER CHANNELS SETTINGS	LOAD RAVE
DAW / PROTOCOL CHANNELS 1-8 MIDI LEARN Cubase/Nuendo (MCU +) ipMIDI, Port 1 +) ipMIDI, Port 10 +)	MISC METER SCALE +24 +22 +18
MDI ABSOLUTE (pMIDI, Port 9 + Sigma_010 Daw HANDSHAKE	SOLO MODE SIP
NETWORK	SOLO TYPE LATCH
	SOLO BOOST 0
GATEWAY 192 8 168 8 1 8 1 8	STATUS VERSION: 1.0.0.19
Page 58	

Cubase/Nuendo Settings

- 1. Open Cubase/Nuendo.
- 2. Go to **Devices** > **Device Setup...** and then go to the **Remote Devices** section.
- 3. Click the '+' button to add in a **Mackie Control**. Set the **MIDI Input** and **MIDI Output Ports** to **ipMIDI Port 2**. (*Cubase requires the ipMIDI ports to be configured in reverse order*).
- 4. Click the '+' button to add in a second Mackie Control. Set the MIDI Input and MIDI Output Ports to ipMIDI Port 1.
- 5. Click **Apply** and click **OK**.

000	Device Setup	
+ - 14	Mackie Control	
Devices	ipMIDI Port 2	 MIDI Input
MIDI ⑦ MIDI Port Setup Remote Devices EuCon	ipMIDI Port 2 User Commands	MIDI Output Reset
Mackie Control	Button Category	Command
Mackie Control 2 Quick Controls Transport Record Time Max Time Display Video Video Video Video Player ✓ VST Audio System Built-in Audio VST System Link	User A User B F1 Shift+F1 F2 Shift+F3 F4 Shift+F5 F6 Shift+F6 F7 Shift+F7	
	Short Smart Swi Enable Auto Select Relay Click Help	tch Delay Reset Apply
		Cancel

Artist Controller Settings

You should not be required to set up any additional functionality on your Artist Controller. It should be left configured as it normally is, in the Remote Devices section.

Cubase/Nuendo Session Setup

The final step is to create 16 new tracks which will be our dedicated fader controls for each of Sigma's analogue channels.

- 1. Go to Project and Add track > Audio...
- 2. Create 16 new blank **Audio Tracks** (it does not matter if they are mono or stereo).
- 3. Make sure that these 16 audio tracks are positioned as the first 16 tracks of the session.

Any volume automation data or fader movements on these 16 tracks will control the analogue gains of Sigma.



4. Your existing tracks with audio recorded to them should be routed out of different outputs on your audio interface, which will then feed the appropriate Sigma inputs channels (just like you would do with any normal summing unit).



Notes:

These 16 audio tracks must be positioned as the first 16 in the session, as the HUI/MCU protocols dictate this. Pan information is not read, you must set the pan in the **CHANNELS** page of Sigma browser.

Tip: You probably want to rename these Audio Tracks to meaningful names such as 'KICK' instead of Audio1. Once you have done this in the DAW, go to the **CHANNELS** page in the web browser and click the **DAW > NAMES** button in the global menu. This will copy across the names of the 16 tracks.

ABLETON LIVE! + SIGMA (NO CONTROL SURFACE)

In this example we will configure Sigma to work with Ableton Live! on ipMIDI channels 1 and 2.

Sigma Browser Settings

- 1. Go to the **SETTINGS** page in the Sigma browser.
- 2. Set **DAW/PROTOCOL** to **ABLETON (MCU)** from the drop-down box.
- 3. Set CHANNELS 1-8 to ipMIDI Port 1 and set CHANNELS 9-16 to ipMIDI Port 2.

Solid State Logic	• Oxford	• England	SIGP		
	MASTER	CHANNELS	SETTINGS	LOAD	SAVE
DAW/PROTOCOL Ableton	SETUP CHANNELS 1-8 ipMIDI, Port 1	MIDI (ipMIDI, Por	LEARN t 10	MIS METER SCALE	+24 +22 +18
MIDI ABSOLUTE	CHANNELS 9-16	N. Sigma_010	4ME	SOLO MODE	SIP AFL
	NETWORK			SOLO TYPE	LATCH
IP ADDRESS	5 <u>192</u> 6 <u>168</u> 7 <u>255</u> 6 <u>255</u>	₿ <u>1</u> ₿ (₿ <u>255</u> ₿ (201 8	SOLO BOOST	0 8
GĂTEWAY	7 <u>192</u> (168)	0 1 0	<u> </u>	STATUS VERSION: 1.0.0.19	

Ableton Live! Settings

- 1. Open Ableton Live!
- 2. Go to **Preferences > MIDI/SYNC** section.
- 3. Set the first **Control Surface**.
- 4. Click the '+' button to add in a second **Mackie Control**. Set the **MIDI Input** and **MIDI Output Ports** to **ipMIDI Port 1**.
- 5. Click the '+' button to add in a Mackie Control XT. Set the Input and Output Ports to ipMIDI Port 2.

Ableton Live! Session Setup

The final step is to create 16 new tracks which will be our dedicated fader controls for each of Sigma's analogue channels.

- 1. Go to Create and Insert Audio Track.
- 2. Create 16 new blank **Audio Tracks** (it does not matter if they are mono or stereo)
- 3. Make sure that these 16 audio tracks are positioned as the first 16 tracks of the session

Any volume automation data or fader movements on these 16 tracks will control the analogue gains of Sigma.

4. Your existing tracks with audio recorded to them should

el	Contr	bi Surrace	Input	Out	put	
	MackieC	ontrol 🗢	ipMIDI (Port 1)	ipMIDI (Po	rt 1)	
dio	Mackiec	ontrolX I 👳	IpMIDI (Port 2)	IpMIDI (Po	rt 2)	
1	None		None	None		
c 5	None		None 🗸	None		
	None	~	None 🗢	None		→ (Dump
der	Takeo	over Mode	Pickup 🗢			
cord rp		MIDI F	Ports	Track	Sync	Remote
nch	> Input:	(IAC Bus 1)		Off	Off	Off
	> Input:	(Generic MI	DI Device)	Off	Off	Off
	> Input:	Euphonix MI	DI (Euphonix Port 1)	Off	Off	Off
r Account	Input	Euphonix MI	DI (Euphonix Port 2)	Off	Off	
inses	Input	Euphonix MI	DI (Euphonix Port 3)	0#	0#	
	Input:	Euphonix MI	DI (Euphonix Port 4)	0#	0#	
	Input:	MackieContr	ol logut (inMIDL (Dort 1)		01	
	Input.	MackieContr	ol Tiput (ipinib) (Port 1)		01	
	input.	in MIDL (Dect	oix i input (ipiviibi (i-or		01	
	input.	IpMIDI (Port	3)	011	01	
	> Input:	IDMIDI (Port	4)	011	011	
	input:	IDMIDI (Port	5)	Off	Off	
	Input:	IpMIDI (Port	6)	Off	Off	Off
	Input:	ipMIDI (Port	7)	Off	Off	Off
	Input:	ipMIDI (Port	8)	Off	Off	Off
	A second s	ipMIDI (Port	9)	Off	Off	Off
	> Input:	· · · · · · · · · · · · · · · · · · ·				

be routed out of different outputs on your audio interface, which will then feed the appropriate Sigma inputs channels (just like you would do with any normal summing unit).



Notes:

These 16 audio tracks must be positioned as the first 16 in the session, as the HUI/MCU protocols dictate this. Pan information is not read, you must set the pan in the **CHANNELS** page of Sigma browser.

Tip: You probably want to rename these Audio Tracks to meaningful names such as 'KICK' instead of Audio1. Once you have done this in the DAW, go to the **CHANNELS** page in the web browser and click the **DAW** > **NAMES** button in the global menu. This will copy across the names of the 16 tracks.

ABLETON LIVE! + SIGMA (WITH MCU CONTROL SURFACE)

If you wish to use Ableton Live with a control surface such as Nucleus, you should configure it using the same instructions as in the previous setup example (Ableton Live! + Sigma). Be aware that Ableton does not support control surface grouping, so using banking functions on your MCU controller will mis-align the automation streams Sigma receives.

USING SIGMA WITH OTHER DAWS

This mode will work for any DAW that supports MIDI channels with faders. It works by using MIDI tracks in your session to control the analogue gains directly, rather than over the HUI/MCU protocols. This also means that if you have a control surface, banking does not have any unwanted effects on the automation data.

Sigma Browser Settings

- 1. Go to the **Settings** page in the Sigma browser.
- 2. Set DAW/PROTOCOL to MIDI from the drop-down box.
- 3. Disable the **HANDSHAKING** button.
- 4. Go to the MIDI ABSOLUTE mode and pick an ipMIDI Port e.g. Port 9.

Note that the CHANNELS 1-8 and CHANNELS 9-16 boxes have no effect when using MIDI.

Name [Sigma_010], Software versi	on: 1.0.0.19			ERANALOGUE
	SETUP	ANNELS SETTINGS		
DAW/PROTOCOL	CHANNELS 1-8	MIDI LEARN	METER SCALE	+24
MIDI ABSOLUTE	CHANNELS 9-16 (ipMIDI, Port 2 +) DAW HANDSHAKE	NAME Sigma_010	SOLO MODE	+18 SIP AFL
	NETWORK		SOLO TYPE	LATCH
IP A	DDRESS <u>192</u> () <u>168</u>	<u>1</u> 9 <u>201</u> 9	SOLO BOOST	
	SUBNET 255 8 255 8	255 B 0 B	SOFTWARE U	IPDATE
C	ATEWAY 192 9 168 9		STATUS VERSION: 1.0.0.19	

Session Setup

We have used Pro Tools as an example.

- 1. Open your DAW.
- 2. Create 16 new MIDI Tracks (it does not matter where they are positioned in the session).
- 3. Set the output of the first MIDI track to **ipMIDI Port 9, channel-1**.
- 4. Continue setting the outputs in this way incrementally to get all 16 channels e.g. The second MIDI track is set to output on **ipMIDI Port 9, channel-2**.

Any volume automation data or fader movements on these 16 MIDI tracks will control the analogue gains of Sigma.

6. Your existing tracks with audio recorded to them should be routed out of different outputs on your audio interface, which will then feed the appropriate Sigma inputs channels (just like you would do with any normal summing unit).



- 7. You will need to move the MIDI faders before their levels are picked up by Sigma.
- 8. We recommend you use Pro Tools' **Solo Safe** feature to Solo Safe the 16 MIDI tracks. This will ensure that when you solo one of your audio tracks in Pro Tools, the automation data will still be read.

Tip: When using **MIDI Absolute**, the volume information is being sent discreetly from the output of each MIDI track. This means that you can position these MIDI tracks anywhere in your DAW session. They do not have to be arranged as the first 16 tracks.

Notes:

Although MIDI faders have a maximum resolution 127 values, these values are scaled in such a way to provide smooth and natural volume automation in the useful range of fader travel. Pan information is not read, you must set the pan in the **CHANNELS** page of Sigma browser.

USING TWO SIGMAS TOGETHER

If using two Sigmas, ensure that the following has been set up:

- Each Sigma has a different fixed IP address or you are using DHCP
- If using HUI/MCU, each Sigma should be set for different ipMIDI Ports, for example:

Sigma 1 - Set to Ports 1 & 2.

Sigma 2 - Set to Ports 3 & 4.

• You will need to have four HUI/MCU Controllers setup in your DAW, outputting to each of these ports accordingly.

The first 32 tracks of your session would then control the analogue gains.

• If using MIDI Absolute, each Sigma should be set to different ipMIDI Ports, for example:

Sigma 1 - Set to Port 9. Sigma 2 - Set to Port 10.

• If using MIDI Absolute, you will need to create 32 MIDI tracks, with the first 16 channels set to Port 9 and the second 16 channels set to Port 10.

TIP: A good way of linking the audio from two Sigmas is using the **SUM** feature on the Mix Bus Insert. Connect the **MIX A** output of your second Sigma unit into the Insert Return of **Mix Bus A** on the first Sigma. Engage the sum function. This will sum Mix A from your second Sigma with Mix A from your first Sigma.

Appendices

APPENDIX A - CONNECTORS & PINOUTS

'CHIP' – Channel Input Connectors †

Con	nect	or Type: 25-way D-type Female
Pin		Description
1		Channel 4 Right (+ve)
	14	Channel 4 Right (–ve)
2		OV
	15	Channel 4 Left (+ve)
3		Channel 4 Left (–ve)
	16	OV
4		Channel 3 Right (+ve)
	17	Channel 3 Right (–ve)
5		0V
	18	Channel 3 Left (+ve)
6		Channel 3 Left (–ve)
	19	OV
7		Channel 2 Right (+ve)
	20	Channel 2 Right (–ve)
8		0V
	21	Channel 2 Left (+ve)
9		Channel 2 Left (–ve)
	22	OV
10		Channel 1 Right (+ve)
	23	Channel 1 Right (–ve)
11		0V
	24	Channel 1 Left (+ve)
12		Channel 1 Left (–ve)
	25	0V
13		n/c

EX	T, R	RTNS, T/B †	D-sub to		
Con	Connector Type: 25-way D-type Female				
Р	in	Description	Loom		
1		n/c			
	14	n/c	XLR-8		
2		OV			
	15	Talkback Mic Input (+ve)			
3		Talkback Mic Input (–ve)	XLR-7		
	16	0V			
4		Mix B Insert Return Right (+ve)			
	17	Mix B Insert Return Right (-ve)	XLR-6		
5		OV			
	18	Mix B Insert Return Left (+ve)			
6		Mix B Insert Return Left (-ve)	XLR-5		
	19	OV			
7		Mix A Insert Return Right (+ve)			
	20	Mix A Insert Return Right (-ve)	XLR-4		
8		0V			
	21	Mix A Insert Return Left (+ve)			
9		Mix A Insert Return Left (-ve)	XLR-3		
	22	OV			
10		External Input Right (+ve)			
	23	External Input Right (–ve)	XLR-2		
11		OV			
	24	External Input Left (+ve)			
12		External Input Left (–ve)	XLR-1		
	25	OV			
13		n/c			
		1			

'Cl	IOF	• – Channel Output Connectors †		
Con	Connector Type: 25-way D-type Female			
P	in	Description		
1		Channel 4 Right (+ve)		
	14	Channel 4 Right (–ve)		
2		OV		
	15	Channel 4 Left (+ve)		
3		Channel 4 Left (–ve)		
	16	OV		
4		Channel 3 Right (+ve)		
	17	Channel 3 Right (–ve)		
5		OV		
	18	Channel 3 Left (+ve)		
6		Channel 3 Left (–ve)		
	19	OV		
7		Channel 2 Right (+ve)		
	20	Channel 2 Right (–ve)		
8		OV		
	21	Channel 2 Left (+ve)		
9		Channel 2 Left (–ve)		
	22	0V		
10		Channel 1 Right (+ve)		
	23	Channel 1 Right (–ve)		
11		0V		
	24	Channel 1 Left (+ve)		
12		Channel 1 Left (–ve)		
	25	OV		
13		n/c		

Main Monitor Output

Connecto	or Type:	XLR 3-pin Male
Pin	Descriptio	n
1	0V (Chass	is)
2	Signal +ve	!
3 Signal -		2

Alternate Monitor Output

Connector Type:		XLR 3-pin Male
Pin	Description	
1	0V (Chassis)	
2	Signal +ve	
3	Signal –ve	

Mix A OutputConnector Type:XLR 3-pin MalePinDescription1OV (Chassis)2Signal +ve3Signal -ve

Con	inect	or Type: 25-way D-type Female	XLR-N
Р	in	Description	Loom
1		Headphone Right (+ve, line level)	
	14	Headphone Right (–ve, line level)	XLR-8
2		OV	
	15	Headphone Left (+ve, line level)	
3		Headphone Left (–ve, line level)	XLR-7
	16	0V	
4		Mix B Insert Send Right (+ve)	
	17	Mix B Insert Send Right (-ve)	XLR-6
5		OV	
	18	Mix B Insert Send Left (+ve)	
6		Mix B Insert Send Left (-ve)	XLR-5
	19	OV	
7		Mix A Insert Send Right (+ve)	
	20	Mix A Insert Send Right (-ve)	XLR-4
8		OV	
	21	Mix A Insert Send Left (+ve)	
9		Mix A Insert Send Left (-ve)	XLR-3
	22	OV	
10		Mix B Output Right (+ve)	
	23	Mix B Output Right (-ve)	XLR-2
11		OV	
	24	Mix B Output Left (+ve)	
12		Mix B Output Left (-ve)	XLR-1
	25	OV	-

∩ Headphones

Connect	or Type:	0.25"	Stereo Jack
	Descripti	on	
Tip	Signal Le	ft	
Ring	Signal Ri	ght	
Sleeve	0V (Chas	sis)	

🛛 🖬 iJack Input

Connector Type:		3.5mm Stereo Jack
Descript		ion
Tip	Signal Left	
Ring	Signal R	ight
Sleeve	0V (Chas	ssis)

Foot Switch Input

Connect	or Type:	0.25"	Stereo Jack
Descript		on	
Tip	Signal		
Ring	0V (Chass	sis)	
Sleeve	0V (Chass	sis)	
	Connecto Tip Ring Sleeve	Connect-Type:DescriptionTipSignalRingOV (ChassSleeveOV (Chass	Connect 0.25" Description 7 Tip Signal Ring 0V (Chassis) Sleeve 0V (Chassis)

†: D-type connector wiring follows AES59 ('Tascam') standard and binding posts are 4-40 UNC thread.

13

n/c



APPENDIX C - SUPPORT

FAQs

Support information for the entire SSL WPP range is always available through our online support site:

www.solidstatelogic.com/support

If you can't find the answer or solution for your particular issue, questions and queries can be submitted to our support staff.



Required Software

In order for Sigma to integrate with your DAW, ipMIDI software must be installed on your computer. In addition, configuration of Sigma will require the use of a web browser (Chrome, Firefox, Safari, Internet Explorer).

Important: Please check the SSL website for tested web browser versions and compatibility.

Please navigate to the Sigma page on the Solid State Logic website and click the Downloads tab. From here you will be prompted to register.



Once registered, you will be able to sign-in and download the ipMIDI software which allows Sigma to work with your DAW.

Sigma's Internal Software

The **SOFTWARE UPDATE** button (found in the **SETTINGS** page of the web browser) is used to update Sigma's internal software. You must have the ethernet cable connected to perform the update. Below the button you will see the current version of Sigma software you are running. There may be infrequent updates provided for Sigma. The **.bin** file used to update Sigma's software will be available from the SSL website. Go to the Sigma product page and go to the **Downloads** tab to login and download.

After downloading the .bin file, click on the **SOFTWARE UPDATE** button and locate the downloaded .bin file. Follow the onscreen instructions.



IMPORTANT - After updating your Sigma software and restarting, you will need to clear your web browser's Cache in order for all changes to take effect. You may also need to Refresh the page.

Hardware

The diagram below can be used in conjunction with our troubleshooting support videos for replacing Sigma's hardware.



APPENDIX D

Specifications - Technical & Environmental

Physical *

-			
Depth	320mm / 12.75"	casing only	
Height	89mm / 3.5" (2 RU)		
Width	435mm / 17" 482mm / 19"	casing only inc' rack ears	
Weight	5kg / 11 pounds		
Power	< 60 Watts		
Boxed size	510mm x 570mm x 280mm 20" x 22.5" x 11"		
Boxed weight	10kg / 22 pounds		
* All values are approximate			

Environmental

Temperature	Operating: Non-operating: Max. gradient:	+5 to 30 deg. C –20 to 50 deg. C 15 deg. C/hour
Relative Humidity	Operating: Non-operating: Max. wet bulb: (non-condensing)	20 to 80% 5 to 90% 29 deg. C
Vibration	Operating: Non-operating:	< 0.2 G (3 – 100Hz) < 0.4 G (3 – 100Hz)
Shock	Operating: Non-operating:	< 2 G (10ms max.) < 10 G (10ms max.)
Altitude (above sea level)	Operating: Non-operating:	0 to 3000m 0 to 12000m

Connections

Power Supply	IEC320 3-pin connector, 100 – 240 Vac, 50 – 60 Hz
DC Power	2mm DC power jack, +12V, < 3A
Analogue I/O	25-pin D-type socket, balanced, Zin > 10kΩ, Zo ≈ 100Ω 3-pin XLR-M, balanced, Zo ≈ 100Ω
Headphones	Stereo 1/4" jack socket, Zo \approx 75 Ω
Footswitch	Stereo 1/4" jack socket (1 circuit)
iJack	Stereo 3.5mm jack socket, Zi ≈ 10k
Network	8P8c modular connector; 'RJ-45' type (100bT, Cat5)
USB	1 x type-B chassis socket (SSL diagnostic use only)

Performance

Maximum I/O Level
Frequency Response
THD + N
Noise
CHIP to CHOP
CHIP to MIX A

+18dBu, +22dBu or 24dBu 20Hz - 40kHz ±0.3dB < 0.025% (20Hz - 20kHz)

< -83dBu @ +24dBu (20Hz - 20kHz) < -75dBu @ +24dBu (20Hz - 20kHz) (stereo, all channels routed)

Electro Magnetic Compatibility

EN55103-1:2009, EN55103-2:2009 Environment E4 Initial in-rush current 10A 5 sec in-rush current 10A Braid-screened cables should be used where applicable Star Quad cables should be used where applicable

EMC Performance Criteria

Line level inputs and outputs Measure at mid-gain, noise <-56dBu

APPENDIX E

Limited Warranty

Warranty claims will only be accepted if the purchased product has been used for its intended purpose. Any purchased product used for an unintended purpose will not be eligible for warranty protection. For all warranty inquiries or claims please address your claim to the dealer that you purchased the product from - or to Solid State Logic if the purchase was directly from Solid State Logic – within a period of two months from the date on which you detected its lack of conformity with the terms of the warranty. Please include your original proof of purchase when initiating the claim.

- Within the EU: Pursuant to the Solid State Logic Terms and Conditions under European consumer law the purchaser has full statutory warranty rights for two years from the date of delivery of the product. The warranty is valid only in those Member States of the European Union (EU) who have adopted the applicable EU law into their national legislation. The applicable national legislation governing the sale of consumer goods is not affected by this warranty.
- Outside of the EU: Outside of the European Union a 12 month warranty from date of purchase is applicable.

Out of Warranty Repairs

In the event of a fault arising after the warranty period has expired the unit should be returned to Solid State Logic either directly or via your local dealer. You will be charged for the time spent on the repair (at Solid State Logic's current repair rate) plus the cost of parts and shipping. Note that no units can be accepted for repair without prior arrangement (see below).

All Returns

- No unit will be accepted for repair by Solid State Logic unless accompanied by a valid RMA (Return Material Authorisation) number, obtainable from Solid State Logic prior to shipping.
- All units should be shipped to Solid State Logic in suitable rigid packaging Solid State Logic cannot be held responsible for any damage caused by shipping units in other packaging. In such cases Solid State Logic will return the unit in a suitable box, which you will be charged for.
- Do not include the power cable, manual or any other items Solid State Logic can not guarantee to return them to you.



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As research and development is a continual process, Solid State Logic reserves the right to change the features and specifications described herein without notice or obligation.

Solid State Logic cannot be held responsible for any loss or damage arising directly or indirectly from any error or omission in this manual.

E&OE

