ASP8024

HERITAGE EDITION

Manual

AUDIENT

Welcome to your new Audient ASP8024-HE

Contents

* DAW specific manuals available online.

Introduction

With the ASP8024 in production for nearly 20 years, and thousands of consoles in use around the world based upon David Dearden's legendary circuit blocks, we've returned to his roots to release the definitive version of the ASP8024 - the Heritage Edition.

Nineteen years ago David set out to design an analogue recording console not knowing it was destined to become a modern classic. To commemorate Audient and David's phenomenal achievement we have re-imagined his timeless design with new enhancements, features and tonal options based on his early years as a studio technician in the renowned Advision Studios, London UK.

We have taken a great deal of pride and care in the design and manufacture of your ASP8024-HE console with the aim of providing you with consistent and reliable performance for many years to come.

How to use this manual

This manual has been divided into sections for your convenience.

The first section introduces ASP8024-HE and provides an overview of the control surface and where to find things. The following sections provide detailed information regarding each function, operation of controls and how they relate to each other. Along the way a number of handy tips and suggestions will offer up possible uses and applications for the console during creative use.

Unpacking

Your Audient ASP8024-HE console has been carefully and meticulously tested and inspected before dispatch. Please check for any signs of transit damage. If any signs of mishandling are found please notify the carrier and inform your dealer immediately. The packaging should include the console, an IEC power cord and this manual.

Important Safety Instructions

Please read all of these instructions and save them for later reference before connecting ASP8024-HE to the mains and powering up the console. To prevent electrical shock and fire hazard follow all warnings and instructions marked on the ASP8024-HE. This unit is connected via its IEC power cord to the mains safety earth.

NEVER OPERATE THIS CONSOLE WITH THIS EARTH CONNECTION REMOVED.

Please read all of these instructions and save them for later reference before attempting to connect the ASP8120 Ultra PSU to the Mains AC power source. To prevent electrical shock and fire hazard, follow all the warnings and instructions marked on the rear of the ASP8120 Ultra PSU.

- This unit is connected via its power cord to the mains safety earth.
- NEVER OPERATE THE UNIT WITH THIS EARTH CONNECTION REMOVED .
- Check that the correct operating voltage has been set for your AC mains supply (115V for USA / Japan or 230V for EU / UK etc.)
- Check that the fuse fitted is the correct type for the selected mains voltage.
- Always replace fuse with the correct type - 115V = T16A, 230V = T8A SLOW BLOW (time delay) types.
- Ensure that the ASP8120 Ultra is firmly connected to the console multi-pin HIROSE connector before powering on for the first time.

Do NOT attempt to tamper with the power supply or mains voltages - HAZARDOUS TO HEALTH.

Always replace the mains fuse with the correct value - T2A slow blow.

!WARNING!

TO REDUCE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

PLEASE REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Service and Repair

The console uses a complex internal pcb sandwich arrangement making field service only possible by a qualified technician. If any technical issues do arise with your console, please contact your dealer as soon as possible to arrange for technical support. Do not attempt to fix the console unless qualified to do so. See the warranty section provided at the end of this manual for details of your cover.

Overview

The ASP8024 Heritage Edition is a semi-modular, inline console, built to order and lovingly constructed in our Hampshire factory by a skilled team who've hand-assembled these consoles for nearly 20 years.

The ASP8024 Heritage Edition largely features the same smooth, clean sound as the original Audient console design with its 24 Buses, 12 Auxes and 2 Cue Sends. However, we have made several key enhancements including John HardyTM 990C summing amplifiers, as well as the RETRO IRON Output Card, offering tonal options on your Mix Output.

The ASP8024-HE is a fully inline console allowing you to start building your mixes as you're tracking. By utilising the Long and Short Faders simultaneously you can create separate record and monitor balances on the same channel strip, all while being able access the consoles split-able EQ and Aux Sends.

Heritage Edition's inline architecture reduces the consoles footprint while still providing incredible audio performance, complete flexibility, intuitive workflow options, as well as being a visually stunning centrepiece for your studio.

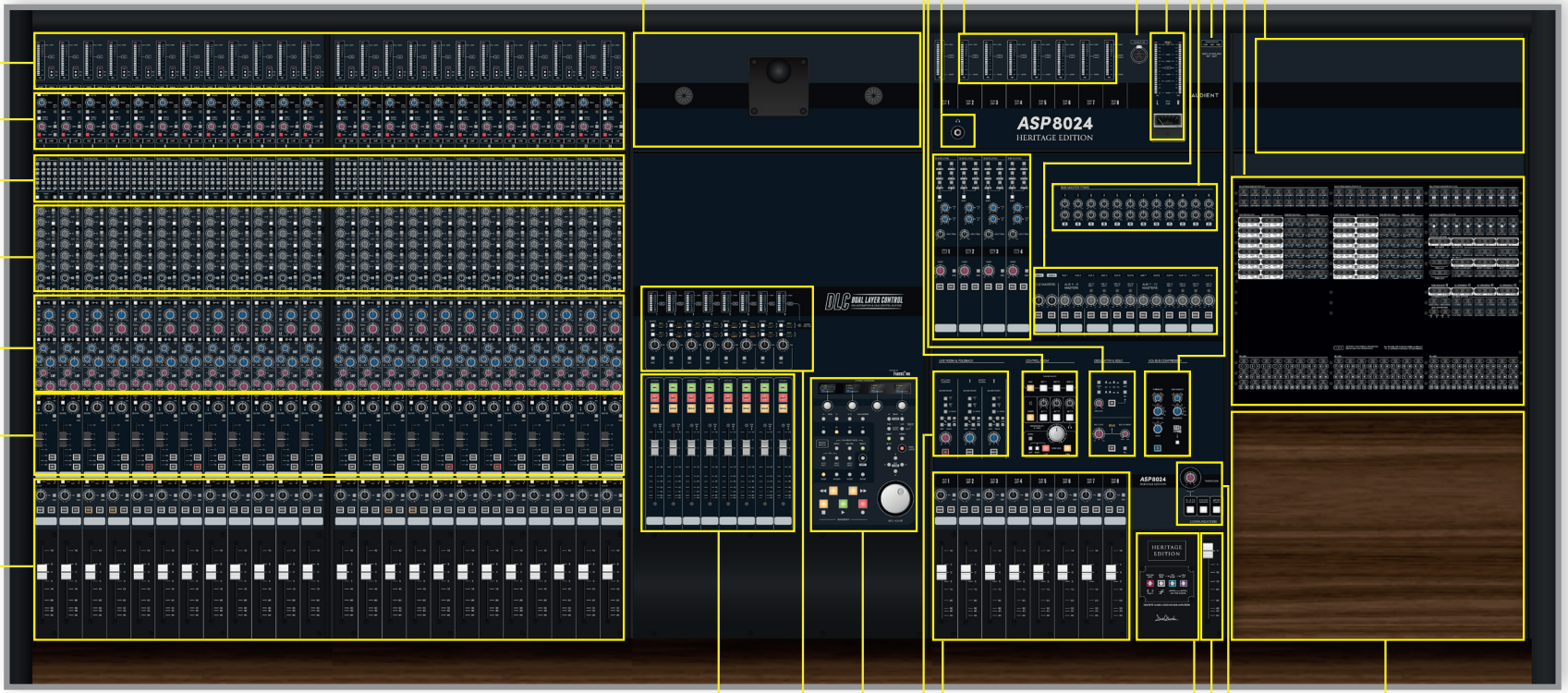
Modular design

As the ASP8024-HE is a semi modular console, there are various optional modules and extras available. These are specified when ordering: Dual Layer Control, Patchbay, Producers Desk, VESA Screen Mount, 48 Bus Mod and Cable Entry Pod.

This part of the manual will take you through the functionality of each section and individual controls on the console. We recommend referencing the following pages when you are unsure on how to use a feature or parameter, or would simply like to further understand specific controls found on the console.

Console Functions
Part 1

Console Layout



Input Meters

Channel Inputs

BUS Routing Matrix

AUX & CUE Sends

Channel EQ

Short Fader

Long Fader

VESA POD

Sub-Group/Line I/P

BUS Trims

Oscillator

Monitoring

BUS Trims

Aux Master

Master Meters

T/B Mic XLR

PSU Status

Compressor

On-Board Patchbay

Blank POD

DLC VCA & HUI™

DLC Module HUITM Control & VCA Automation

DLC DAW Transport

Sub-Group Faders

Foldback & Comms

Talkback

Mix Fader

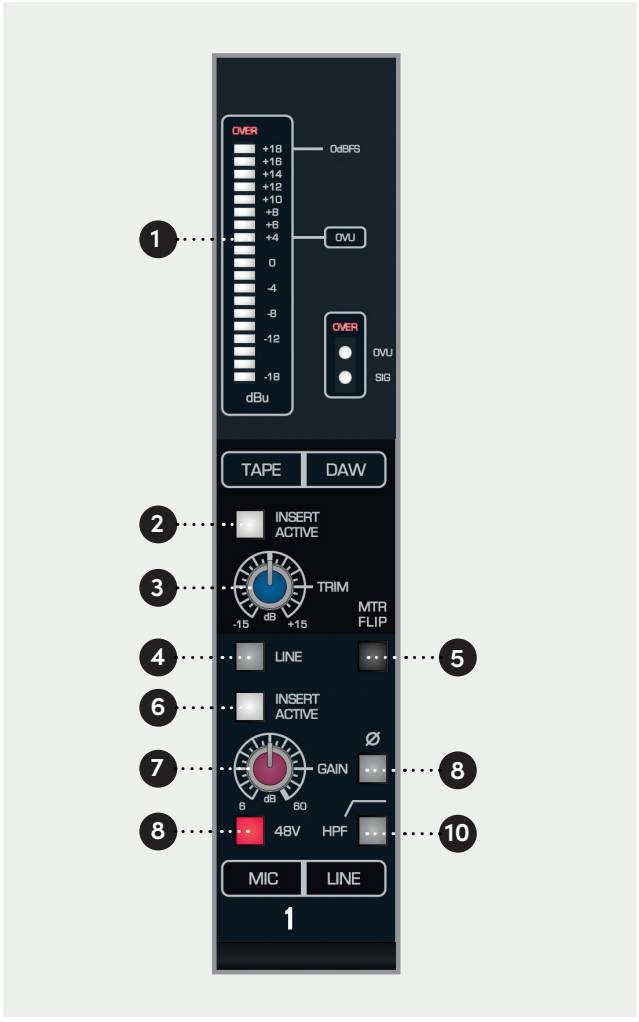
Mix Processing

Script Tray

Input Module

Mic & Line Inputs

The preamps of the ASP8024-HE use a transformerless, eight transistor design to provide a fast, clean sound with a little bit of colour when pushed. An insert on both the mic and tape inputs allows you to insert outboard gear into the recording path or the playback / mix path.



1 METERS. The Meters show the level coming into both the Mic/Line Input and the DAW/Tape Returns enabling you to set a healthy signal level. They are scaled in dBu.

2 INSERT ACTIVE. Activates the Insert for DAW/Tape Returns, allowing you to add outboard gear into your mixing path

3 Tape/Daw Trim. The Trim boosts or cuts the overall level of the DAW/Tape Returns by ±15dB. Use to gain stage input signals.

4 LINE. The Line Button swaps between the Mic and Line Inputs.

5 MTR FLIP. Flips the source of the meters. By default the large meter shows the DAW/Tape return and the small meter shows the Mic/Line input.

6 INSERT ACTIVE. Activates the insert for the Mic/Line Input.

7 GAIN. Applies gain to the Mic/Line Input to amplify the signal. 6 to 60dB on Mic and -14 to 40dB on Line.

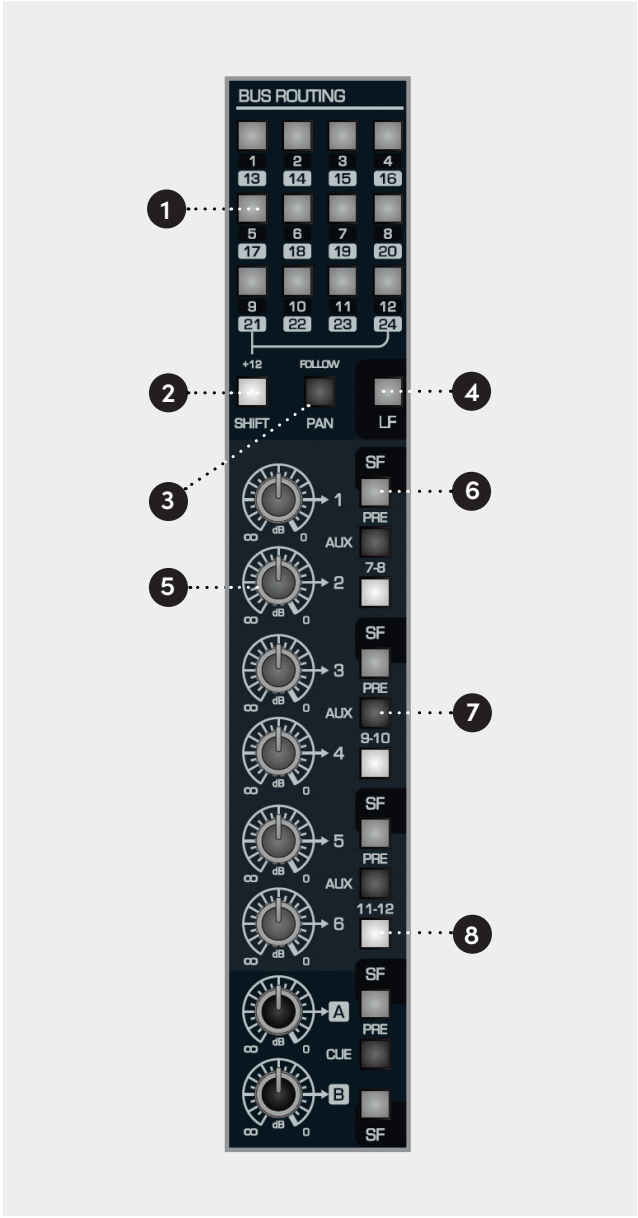
8 Ø POLARITY REVERSE. Inverts the signal in the Mic/Line Input. Useful if you are recording with multiple microphones which may be out of phase with each other.

9 48V. Turns on +48V Phantom Power locally for each channel to power your microphones when needed.

10 HPF. Turns on the High Pass Filter to remove frequencies below 75Hz in the Mic/Line signal.

Routing and Auxiliaries

The routing of the ASP8024-HE allows you to send the signal of any given channel to any of the 24 Multi-track Buses, giving you a huge amount of flexibility at both the tracking and mixing stage. Up to 12 Auxes and 2 Cue Sends allow you to easily utilise outboard effects and control over artist foldback.



1 BUS ROUTING SWITCHES. Assign channel signal to any of the 24 Multi-track Buses (or 48 Buses if the 48 Channel Bus Mod is installed)

2 SHIFT. Offset the value of each routing switch by 12 so that signals can access Multi-track buses 13-24.

3 FOLLOW PAN. Use to create a stereo bus. Bus routing will follow the channel pan position, with odd buses providing the left channel, and even buses providing the right.

4 LF. Allows you to route audio from the Long Fader path of the channel to the multi-track buses. By default SF (Short Fader) signals feeds the routing matrix.

5 SEND LEVEL (dB). Controls the amount of signal being sent to the corresponding Aux/Cue Bus. This can be anywhere from -inf to 0dB. Use these to build FX sends to reverbs etc.

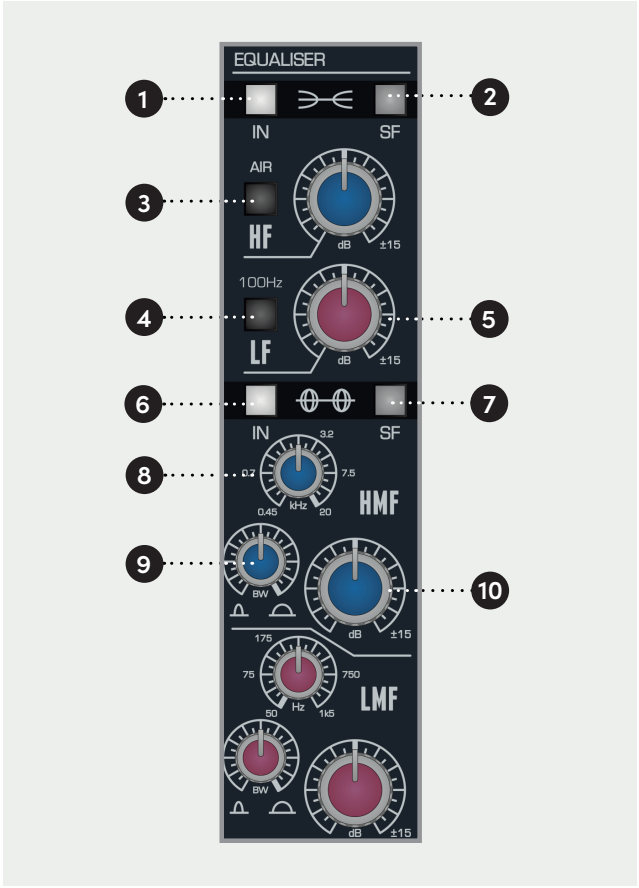
6 SF. By default the sends are taken from the LF (Long Fader). SF allows you to send audio from the short fader path to the Aux Buses. This can be pre or post.

7 PRE. Takes the signal from before the fader (SF or LF) rather than after, to ensure that the fader position doesn't affect the aux send level. Great for headphone mixes.

8 7-8, 9-10, 11-12. Use these buttons to shift the send destinations to Auxes 7-12.

Equaliser

ASP8024-HE features the classic David Dearden 4-Band console Equaliser on every channel. Offering two dual-band equalisers that can be split individually to the Short (SF) or Long (LF) Fader paths.



Shelves

1 IN switches the Shelf EQ into the signal path.

2 SF switches the Shelf EQ to the short fader path (independent of Parametric EQ).

3 AIR allows the frequency of the HF equaliser to be selected.

4 100Hz allows the frequency of the LF equaliser to be selected.

5 dB Knobs allow you to boost or cut each frquency.

Parametrics

6 IN switches the Parametric EQ into the signal path.

7 SF switches the Parametric EQ to the short fader path (independent of Shelf EQ).

8 kHz/Hz controls the centre frquency of the EQ Band.

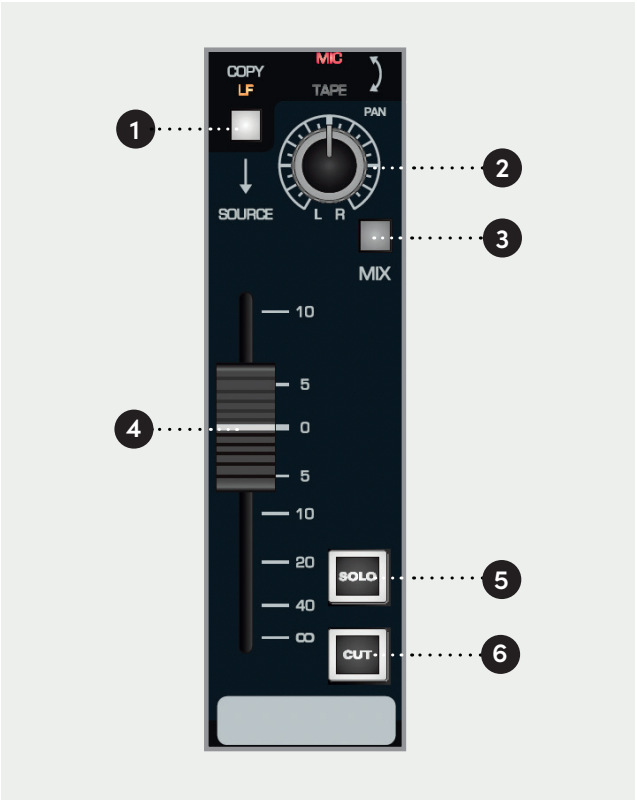
9 BW (bandwidth) Stands for bandwidth and controls the how wide the frequencies around the centre frequency. Choose a narrow BW for surgical cuts or a wide one for more musical boosts and cuts.

10 dB Knobs allow you to boost or cut each frquency.

Short Fader (SF)

ASP8024-HE is an inline console. This means that there are both input and monitoring signal paths on the same channel. By default, the Short Fader contains the input signal, however you can use the channel flip switch to switch to the tape signal.

Don't forget that you can assign the Aux/Cue Sends and EQ to the Short Faders by pressing the SF buttons.



1 Copy LF selects the post fader LF signal as the input to the Short Fader path, overriding the Mic or Tape selection from the Flip Switch. This can be used to ride the level of the Aux Sends on the Short Fader (great for delay and reverb throws).

2 PAN places the signal in the stereo field by balancing the signal between the left and right channels.

3 MIX routes the SF signal to the stereo mix bus. It is good practice to unroute any channels which are not needed. This will reduce mix amp noise.

4 This is the SHORT FADER which controls the level of the SF signal.

5 SOLO Mutes every channel except channels that are soloed.

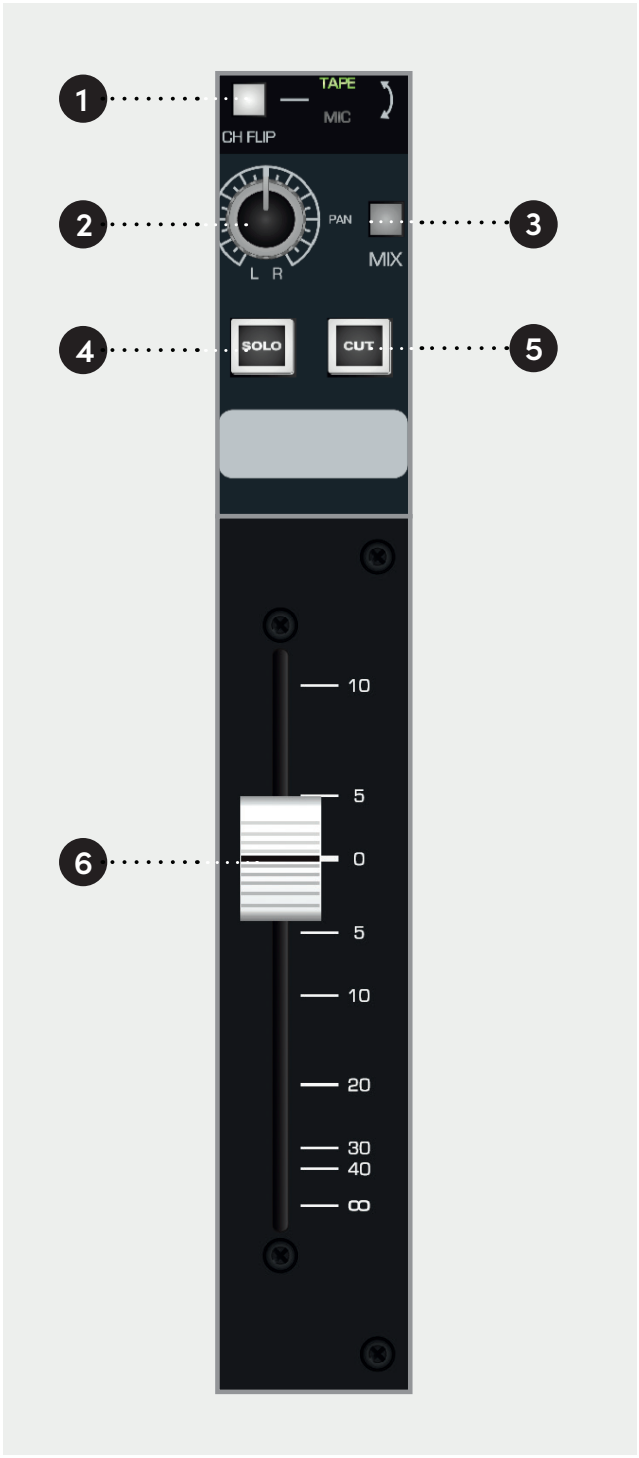
6 CUT will cut the Short Fader output of that particular channel.

Long Fader (LF)

The Long Fader operates on the LF signal path and is mainly used for creating the monitor mix and the final stereo mix.

The fader is expected to operate around the 0dB mark with 10dB of gain in hand, allowing the signal to be increased or decreased in level.

When setting levels, start with the fader at the 0dB position, then adjust the input sensitivity control to the correct level.



1 CH Flip will flip the channel path onto the Long Fader and the playback path onto the Short Fader.

2 PAN places the signal in the stereo field by balancing the signal between the left and right channels.

3 MIX. Pressing this button sends this channel to the mix bus. To minimise the noise floor of the console, this should be disengaged if the channel is not in use.

4 SOLO Mutes every channel except channels that are soloed.

5 CUT will cut the Short Fader output of that particular channel.

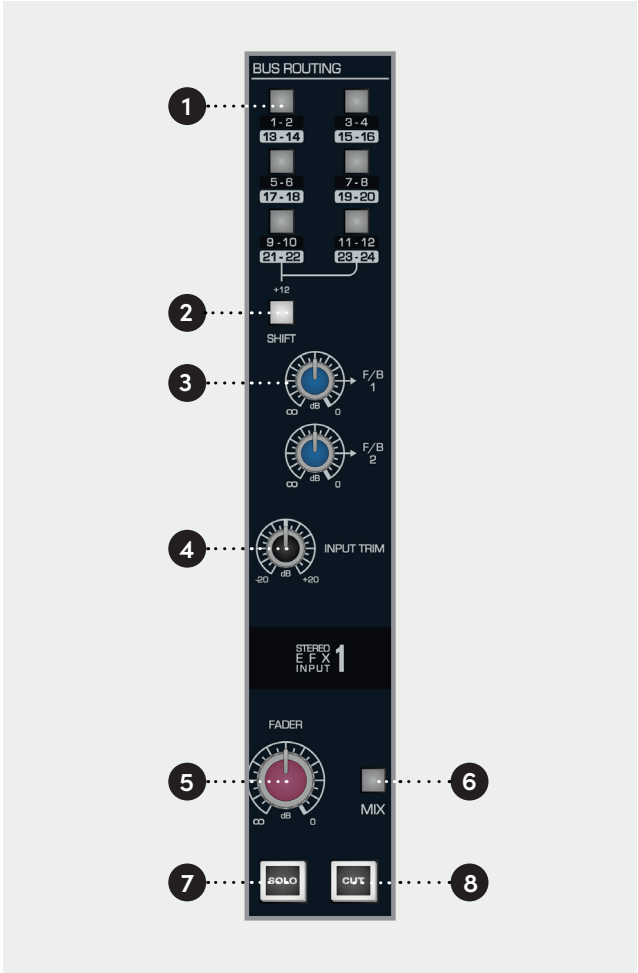
6 FADER controls the amount of signal being sent out of the Long Fader path.

Master Module

Stereo EFX Inputs

The Stereo EFX Inputs allow stereo signals to be brought back into the console from an effect unit without using up a complete channel strip.

Often stereo signals can only be routed to the stereo mix, however, the ASP8024-HE stereo inputs allow routing back to the Multi-track in addition to the mix.



1 BUS ROUTING allows you to send the stereo inputs to any of the Multi-track Buses. This is done in pairs as the stereo signal takes up 2 buses.

2 SHIFT switches the functions of the routing switches from the first 12 Multi-track Buses to the second 12 Multi- track Buses.

3 F/B 1 & 2 controls the signal sends to Foldback Output 1 and Foldback Output 2.

4 INPUT TRIM reduces or increases the signal level of the stereo EFX Input from -20dB to +20dB.

5 FADER a fader in disguise as a knob, which controls the level being sent to the Mix Bus if the Mix Button is engaged.

6 MIX sends the channel to the Mix Bus. To minimise the noise floor of the console, this should be disengaged if the channel is not in use.

7 SOLO mutes every channel except channels that are soloed.

8 CUT is used to mute the sound output of that particular Stereo EFX Input.

Bus Master Trim

The Bus Master Trims are the final stage of level control over the signals routed to the Multi-track Bus outputs. Each Bus has a Level Trim although for the purposes of this manual only a few are shown in the accompanying diagram.

1 dB KNOB allows you to adjust the overall level of a particular Multi-track Bus from -10dB to +10dB.

Cue & Aux Masters

The auxiliary masters control the overall level of the auxiliary outputs. A balance or mix can thus be created by using the controls on the channel strips and the overall level adjusted by using the auxiliary master control. The auxiliary outputs can be solo'd so that a balance can be created by listening to the output.

A typical mixing situation may require that the LF and SF paths feed the same effect device.

Although an auxiliary send can be assigned to either of the two paths they naturally cannot access both paths at the same time. By linking auxiliaries this problem is overcome and if the auxiliary 3 signals need to be combined with those on Auxiliary 1 this can be achieved by simply using the link facility.

2 dB KNOB
Allows you to adjust the overall level of a Cue or Aux from -inf to 0dB.

3 0dB MARK
When engaged, all other channels and Auxes are muted unless they also have their Solo Button engaged. This can be useful to preview artist mixes, or check that the correct material is being sent to a piece of outboard gear.

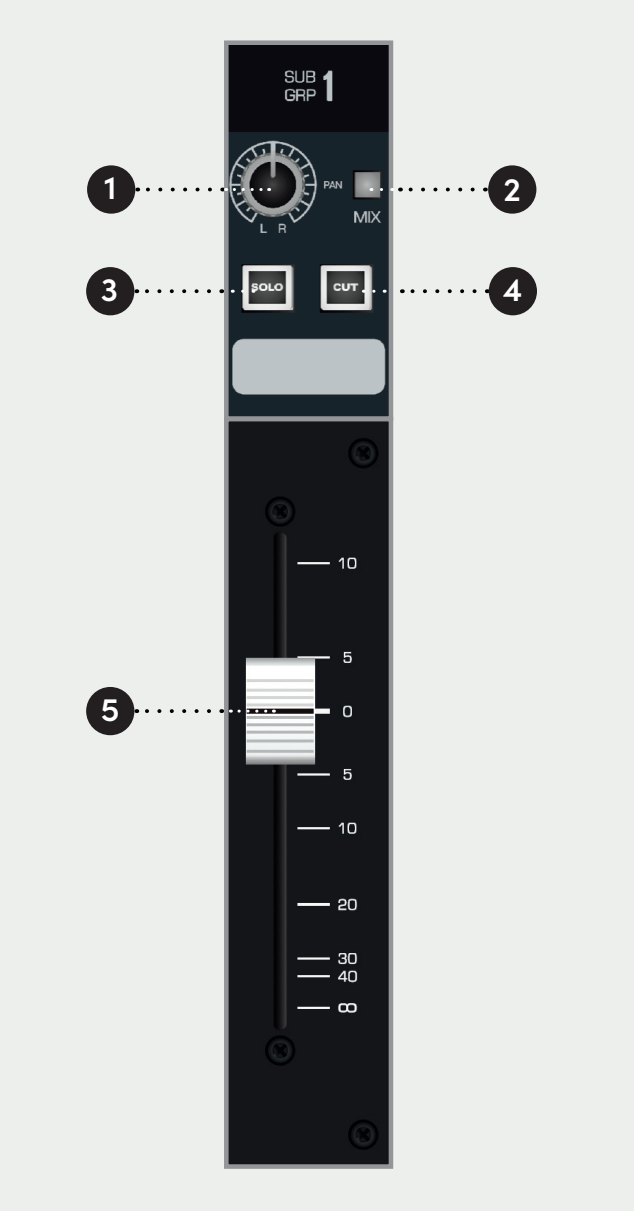
4 -INF
Links an Aux back to either Aux 1 or 2, useful for when you want to access the same reverb unit from both the LF and SF paths on the same channel.

Subgroups

In addition to routing signal to the Multi-track, the first eight buses are also sent to the 8 Sub Groups. Each sub group has a Pan control, Solo and Cut switches with a fader controlling the group output level.

The Sub Groups have insert points located on the rear panel of the console allowing external processing to be patched in.

The Mix switch assigns the Sub Group to the stereo Mix Bus and allows the Sub Group to be used in mix down. The Sub Group Insert Returns can be used as extra inputs to the mix



1 PAN places the signal in the stereo field by balancing the signal between the left and right channels.

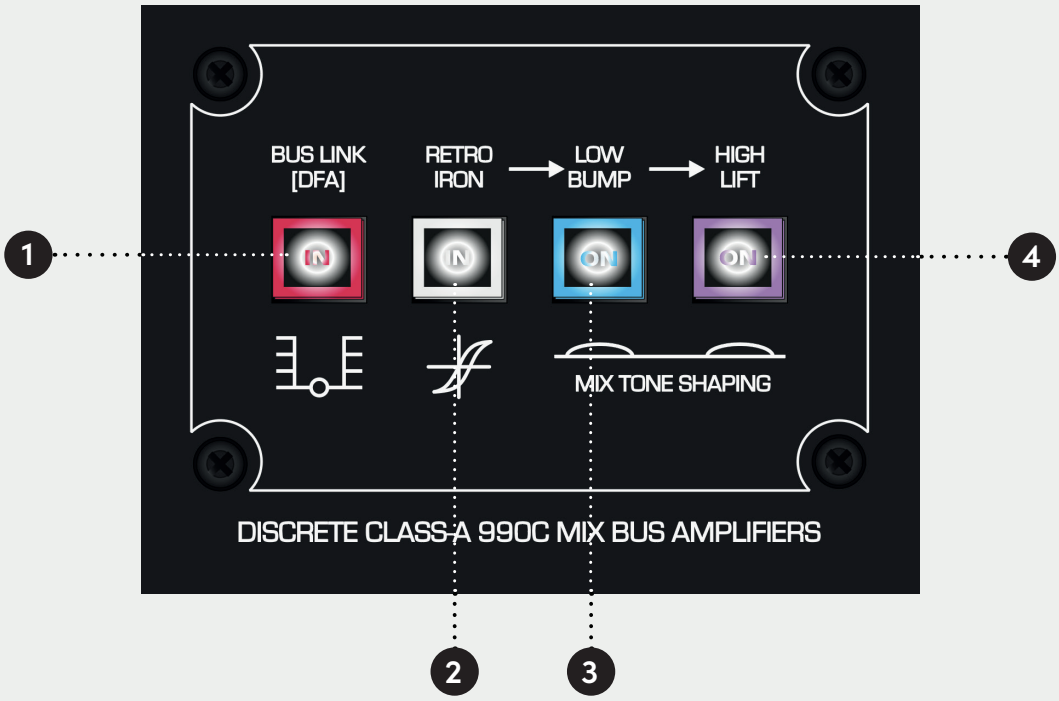
2 MIX sends the Sub Group signal to the Mix Bus. To minimise the noise floor of the console, this should be disengaged if the Sub Group is not in use.

3 SOLO mutes every channel except ones that are also soloed.

4 CUT, cuts the signal for the specific Sub Group.

5 FADER controls the amount of signal being sent to the main Mix Bus, variable from -inf to +10dB.

Heritage Output Card



Inspired by the consoles David Dearden worked on and built throughout his career, the Heritage Output Card provides tonal shaping options on your Mix Bus Output.

1 BUS LINK (DFA) When the optional 48 Channel Bus Mod is fitted to the console, pressing the Bus Link button links the two 24ch buses together allowing you to use the desk as a standard 24 bus console with flexible routing. Otherwise channels 25+ only have access to Multi-tracks 25-48.

2 RETRO IRON introduces two Carnhill Output transformers to the console, giving you the fat punchy sound transformers are known for. The two transformers are driven by a circuit inspired by David's time at Advision Studios.

When engaging the RETRO IRON stage, listen for extra punch, especially in the low end. You should find that reverbs and room mics open up and the sound stage will get wider and more pronounced.

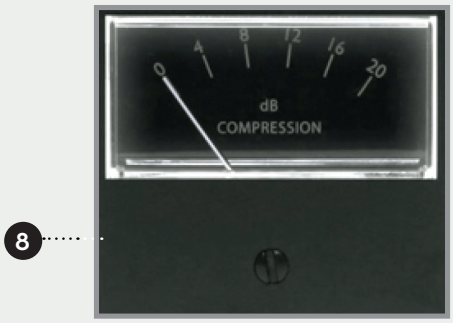
3 LOW BUMP adds a slight boost to the low-end, around 60Hz, which helps push the kick and bass through the mix and keep the track glued together.

4 HIGH LIFT. Like the Low Bump, High Lift adds a slight boost, this time to frequencies around 20kHz. This adds a little bit of 'Air' to the mix which makes cymbals sparkle, and adds clarity to vocals.

Please note that Low Bump and High Lift are part of the RETRO IRON circuit and will only affect the mix when RETRO IRON is engaged.

We would recommend adding the Retro output halfway through a mix and then mixing into it, adding the Low Bump and High Lift as needed to add a little sweetness to the mix.

BUS Compressor



A compressor can be switched into the main stereo signal path when required. Note that it is located after the mix insert point but before the main fader.

The compressor characteristics are optimised for use in mix processing while many of the parameters remain under the control of the engineer.

Threshold, Gain Make Up, Attack, Release and Ratio are all adjustable while the entire processor can be switched out of circuit when not required.

A bar-graph meter indicates the amount of compression applied to the signal. When compression is taking place this should show some very healthy activity. Please do not try to over compress the mix output as the results will sound terrible. Sometimes only a small amount of movement on the meter is required to 'glue' a mix together.

A good use of the compressor may be to limit peak signals by setting a highish threshold with a high ratio. Thus when the threshold is reached the signal is barely allowed to increase beyond it.

1 THRESHOLD Sets the minimum amplitude needed for the Compressor circuit to kick in.

2 GAIN MAKE-UP Adds gain to the output of the Compressor to compensate for the level lost from the dynamic range reduction.

3 ATTACK Sets how long the Compressor takes to react once a signal passes the threshold level. Faster attacks pick up transients but become more noticeable. Slower attacks will miss sudden transients but give a more subtle compression.

4 RELEASE Sets how long it takes the Compressor to switch off once the signal drops below the threshold level. Again a faster release is more noticeable and a slower release is more subtle.

5 RATIO Sets the amount of level reduction once the amplitude passes the threshold level. 2:1 decreases it by a factor of 2 where as 10:1 decreases it by a factor of 10.

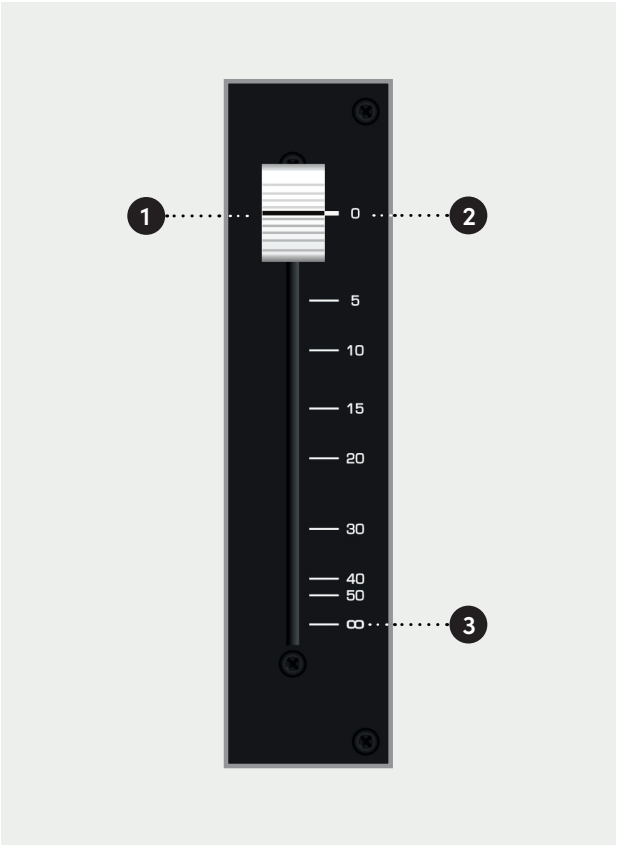
6 BASS EXPAND; adds a 350Hz high pass filter to the sidechain meaning low frequencies don't cause the Compressor to activate. This stops bass frequencies from 'pumping' and gives a more full, consistent low-end.

7 IN Adds the Compressor to the Mix Bus when engaged.

8 GAIN REDUCTION METER ; The Gain Reduction Meter displays the amount of gain that is being reduced when the Compressor is active.

Just getting the needle to bounce slightly is a great trick for 'sticking' the mix together.

Master Fader



1 MASTER FADER. The Master Fadar is used to control the stereo output of the console.

2 0dB MARK. Unlike the Long Faders, it is calibrated with the 0dB mark at the main purpose of this fadar is to create a fade at the end of a track.

Under normal operating conditions, the fader should always be set at maximum.

3 -INF. With the fader here, the signal path is closed and no signal will pass.

The master fader is used to control the stereo output of the console. Unlike the channel faders it is calibrated with the 0dB mark at the top as the main purpose of this fader is to create a fade out at the end of a title.

The master fader is used to control the stereo output of the console. Unlike the channel faders it is calibrated with the 0dB mark at the top as the main purpose of this fader is to create a fade out at the end of a title.

Under normal operating conditions the fader should always be set at maximum. If it has to be pulled back a significant distance it indicates that the levels to the mix bus are too high and should be reduced.

Control Room Monitoring

The Control Room Monitoring system is one of the most used systems in a studio. Typically there are several sets of loudspeakers with a main pair and one or more alternate pairs. These are sometimes referred to as Near, Far and Mid field monitors depending on their proximity to the listening position.

1 SOURCE SELECT BUTTONS. Allows you to select which source you would like to monitor in the control room. Mix takes audio from the Mix Bus and Ext 1-3 takes audio from the three external inputs found in the Master Section rear connector panel.

2 MAIN. Sends your selected source to the device connected to the Main Output of the ASP8024-HE, normally the main monitors.

3 ALT 1-3. Sends your selected source to one of the Alt Monitor Outputs, often used for smaller monitors or 'grotboxes'. Switching to Alt 3 will send the output to the built in headphone output found in the Master Meter section.

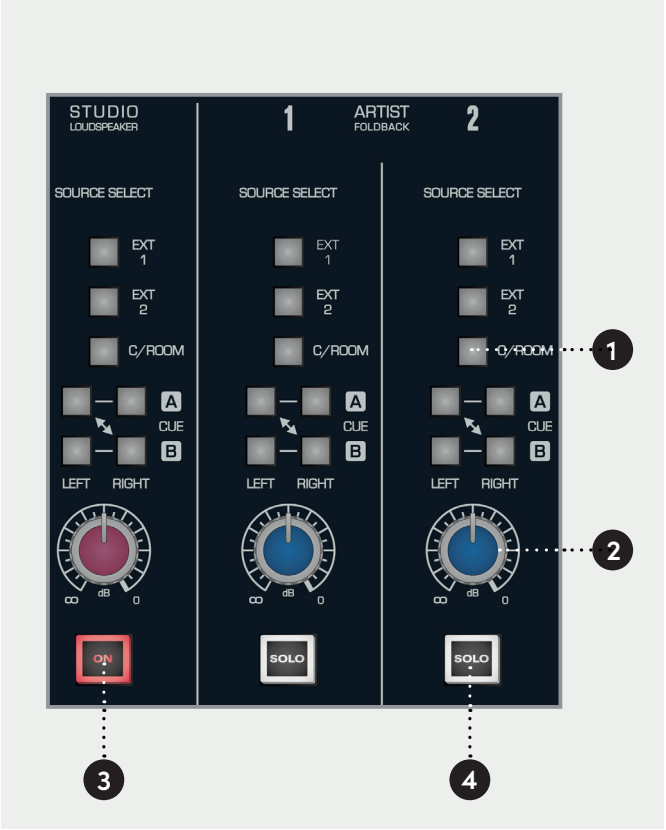
4 MONO. Sums the left and right channels of the monitor output to mono in order to check the mono compatibility of a mix.

5 LEFT, RIGHT, CUT. Allows you to cut either the left, right or both monitors.

6 DIM. Reduces the level of the main output by a set amount. Dim will be switched in automatically when talkback is used to reduce the possibility of feedback.

Live Room & Foldback

The Studio Loudspeaker and Artist Foldback section allow you to route signal to performers from various sources on the console. In all cases, the same sources are available.



1 SOURCE SELECT

- EXT 1

Takes signal from External Input 1.

- EXT 2

Takes signal from External Input 2.

- C/ROOM

Takes signal from the Control Room Outputs so your artist hears what you are hearing.

- CUE A

Takes signal from the Cue A bus. This can either be sent to the left or right channel so you can setup stereo or mono foldback.

- CUE B

Takes signal from the Cue B bus. This can either be sent to the left or right channel so you can setup stereo or mono foldback.

2 dB KNOB. This allows you to control the overall volume of the foldback on the particular foldback channel. Levels can be adjusted from -inf to 0dB.

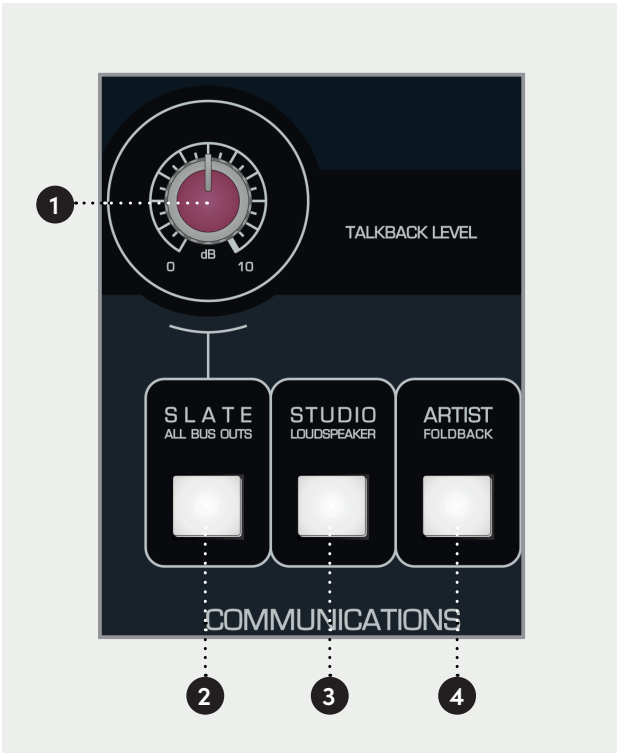
3 STUDIO LOUDSPEAKER ON. Turns the studio loudspeaker in the live room on and off.

4 ARTIST FOLDBACK SOLO. Cuts all other sources apart from those that are also soloed.

Communications

Talkback is used to communicate with the studio, the foldback system, or the group outputs of the console. Note that the talkback to the foldback and studio loudspeaker systems will work even when their respective volume controls are turned down.

In all cases, pressing a talkback button will cause the control room monitors to dim. This helps prevent feedback, makes the talkback more intelligible and does not affect the console outputs.



1 TALKBACK LEVEL sets the level of talkback being sent.

2 SLATE BUS OUTPUTS sends the talkback to both the artist and all the Bus Outputs. This means the talkback is recorded onto the track. Great for leaving session notes and take numbers at the start of a track.

3 STUDIO LOUDSPEAKERS (SLS) sends the talkback to a set of loudspeakers in the live room.

4 ARTIST FOLDBACK Sends the talkback to the Artist Foldback Mix.

Remote Talkback

ASP8024-HE has the option to control the Artist Foldback and Studio Loudspeaker talkback via latching foot switches (not provided). This lets you talk to artists and continue using the console without having to reach for the talkback controls.

To make use of this, you need to purchase a latching foot switch (such as the Radial Tonebone BigShot SW2TM remote foot switch).

Using a jack cable, plug the foot switch into the Remote Talkback Connectors on the rear of the console, to the right of the Multi-track Outputs.

The Master Meters

1 SUB GROUP METERS. The Sub Group Meters show you the post fader signal level of the Sub Groups including an OVER indicator to alert you should you reach the headroom limit of the Sub Groups.

2 TALKBACK MIC CONNECTOR. Use this to connect any standard microphone for talkback use. The connector has +48V Phantom Power for use with condenser mics. Phantom Power can be switched off by removing the jumper at LK1 on the Master Meter circuit board.

3 MAIN METERS. show you the level of the mix outputs after the Master Fader. This includes an OVER indicator to alert you if you reach the headroom limit of the Mix Outputs.

4 POWER RAIL INDICATORS Show the current status of the power rails of the console. If they are all lit up then all is well. If any of the power rail lights aren't on but the PSU is, then it indicates that there is an issue and we would recommend contacting us at: support@audient.com

5 HEADPHONE OUTPUT. The ASP8024-HE includes a reference grade Headphone Amplifier which is accessed by routing the audio to the ALT 3 outputs in the Monitor Control Section of the console. The headphone jack is a standard 6.35mm TRS jack.

6 GAIN REDUCTION METER. The Gain Reduction Meter shows you the amount of compression that is being applied.

Oscillator & Solo

The 4-Frequency Oscillator can be assigned either to the Multi-Track or the Stereo Mix Bus.

The level is adjustable and when not in use, the Oscillator should be completely turned off.

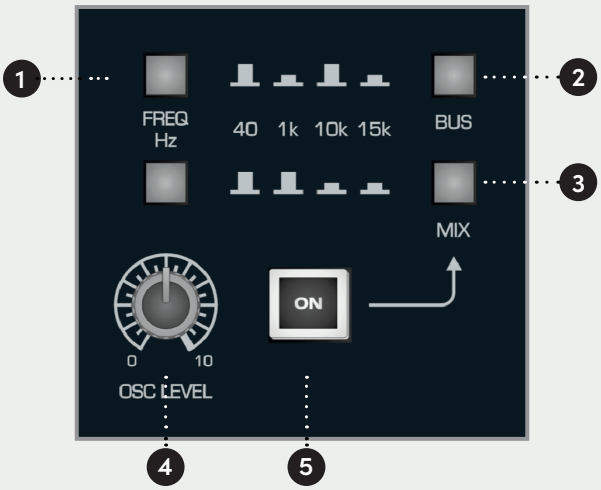
1 FREQ HZ. Using the two buttons, you can select from 40Hz, 1kHz, 10kHz or 15kHz for the Oscillator frequency using the combinations shown on the console.

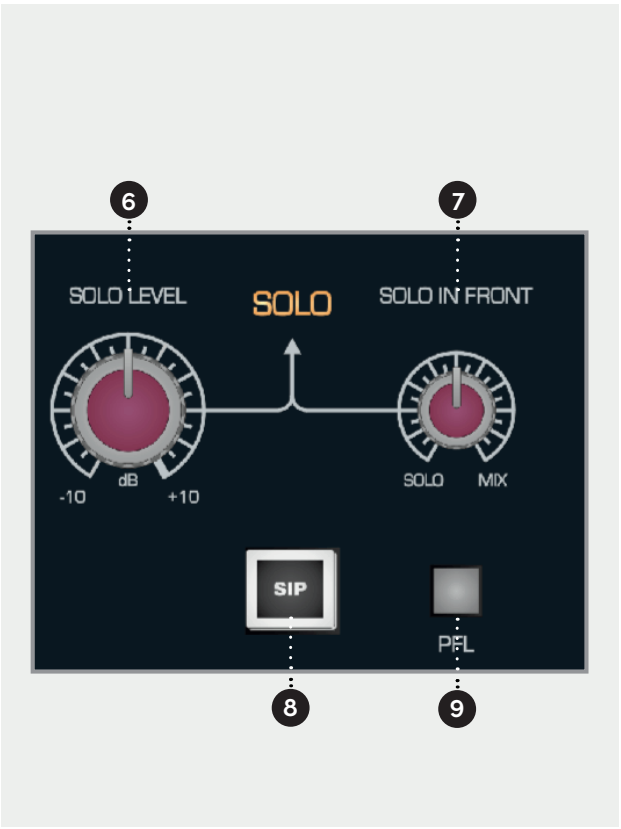
2 BUS. Sends the Oscillator signal to every Multi-track Bus Output.

3 MIX. Sends the Oscillator signal to the Mix Bus.

4 LEVEL. Sets the overall level of the Oscillator.

5 ON. Turns the Oscillator on and off.





This is the master control area for the AFL/PFL and Solo In Place system. If SIP is not illuminated then the console will either be in AFL or PFL mode depending on the AFL/PFL switch.

6 SOLO LEVEL Sets the overall level of the soloed channels. The level can be adjusted from -10dB to +10dB.

7 SOLO IN FRONT. Allows you to blend between the solo bus and the Mix Bus when in AFL or PFL modes. This means you can hear the mix behind the soloed channels to get an idea of how they will fit into the mix.

8 SIP (SOLO IN PLACE). When engaged, SIP will cut all channels to the Mix Bus other than the soloed channels. This will be recorded so should be used with caution but can be a great way to cut all other tracks during a solo section.

9 PFL. Stands for "Pre Fade Listen" and takes the soloed signal before the fader so that the position of the fader doesn't affect the level of the soloed channel.

Connector Panels

Connector Panels

The Connector Panels are the points at which the ASP8024-HE connects to the rest of the Studio.

The inputs and outputs use advanced, electronically balanced or ground sensing topologies and are fitted with extensive RFI rejection networks.

All signal interfaces are also fully protected against accidental misuse, e.g. by the connection of phantom powered cables.

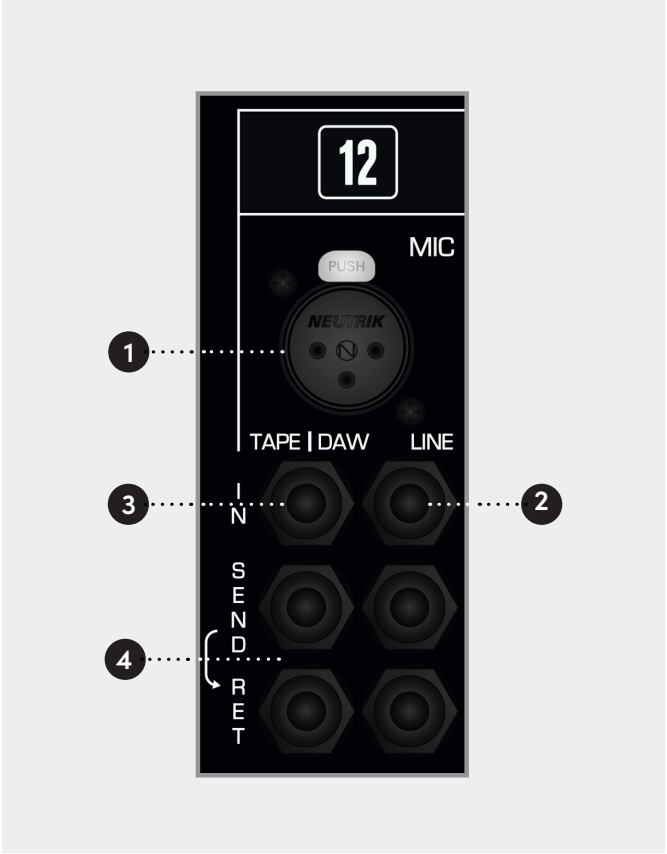
We use high quality Neutrik™ XLR connectors and Cliff™ TRS Jacks for all the connections to ensue that your signal quality is never compromised.

The rear mounted Connector Panel is where the input, output and insert point connectors are located.

The Microphone Input uses an XLR Connector, while the Line Input, Tape Input and the Insert Sends and Returns use Tip, Ring and Sleeve jacks.

NOTICE

Please note that if you have the Patchbay module fitted, the rear Connector Panel will only have the Mic and Line Inputs; the inserts and Tape/Daw Returns can be accessed via the patchbay module. For more information, please see the Patchbay Section of this manual.



1 MIC Microphones or other low level equipment can be connected to this input.

2 LINE The Line Input can be selected in place of the Microphone Input. This input is designed for higher, line level signals.

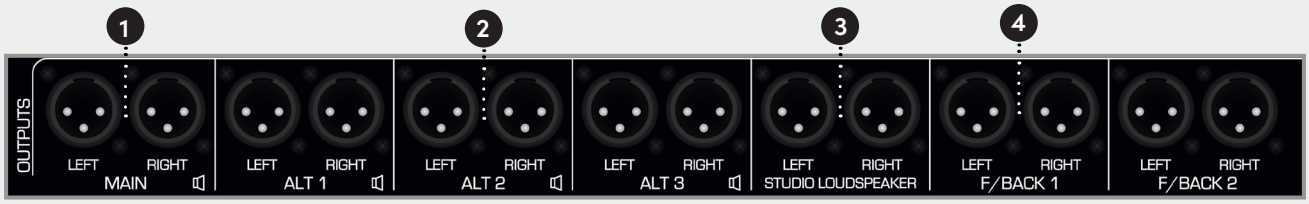
3 TAPE/DAW INPUTS The output of your converters/ tape machine should be connected here. This input is designed for line level signals.

4 SEND / RET There are two insert points per channel, with the Tape/DAW Insert on the left and the Mic/Line Insert on the right.

The Insert Points are half-normalled so the sends can be used as extra outputs without breaking the signal path. Plugging a jack into the return breaks the signal path so be careful not to plug a jack in without a piece of gear attached.

Please note that the insert points aren't affected by the Flip Switch.

Connector Panels

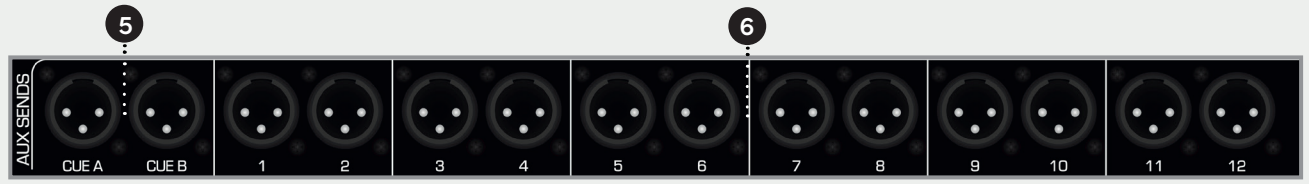


1 MAIN. Connect your main monitors here. This output is at line level so you will need an amplifier for passive monitors.

2 ALT 1,2,3. Allows you to connect up to three alternate pairs of monitors. These can be accessed through the ALT 1, ALT 2 or ALT 3 button in the control room section of the Master Section.

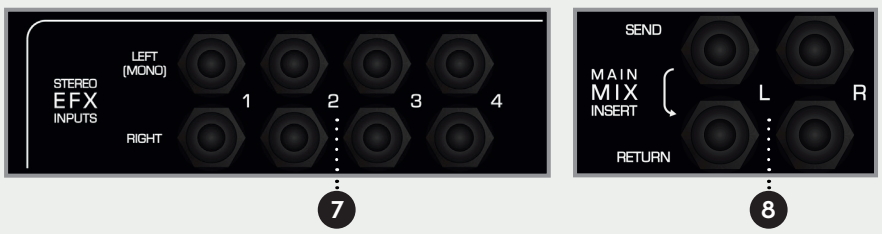
3 STUDIO LOUDSPEAKERS. Here you can connect a pair of loudspeakers which can be used to address artists in the live room. Again this is line level and an amplifier will be needed for passive loudspeakers.

4 FOLDBACK 1,2. These two stereo sends that are used for artist foldback. They can be connected to a headphone amplifier with multiple outputs if more than two artists require foldback.



5 CUE A,B. Sends the Cue Mix to outboard gear, usually the Cue Mixes are used for foldback but can be used for processing if required.

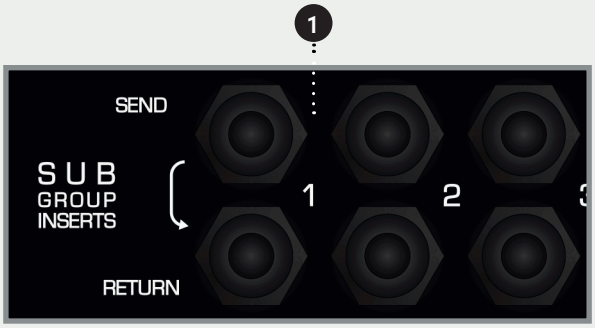
6 AUX SEND 1-12. Sends the signal from the 12 Aux Mixes to either outboard, foldback or whatever else you would like the Aux Sends to go to.



7 STEREO EFX INPUTS 1-4. Gives you four stereo inputs for the returns from stereo outboard equipment such as reverbs, compressors or delays.

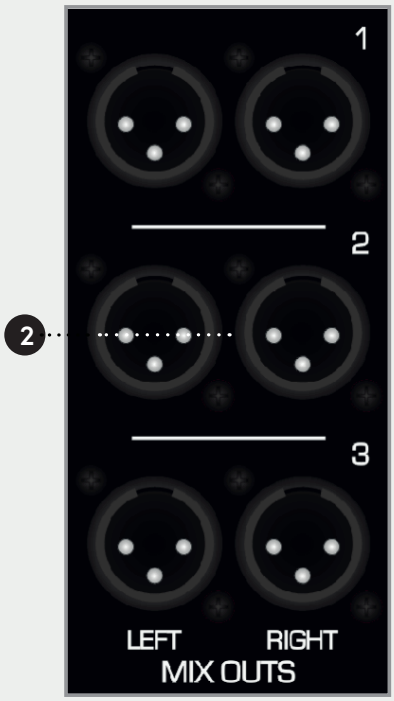
8 MAIN MIX INSERT. The Main Mix Insert allows you to insert outboard gear into the Main Mix between the Heritage Card and the VCA Bus Compressor.

Connector Panels



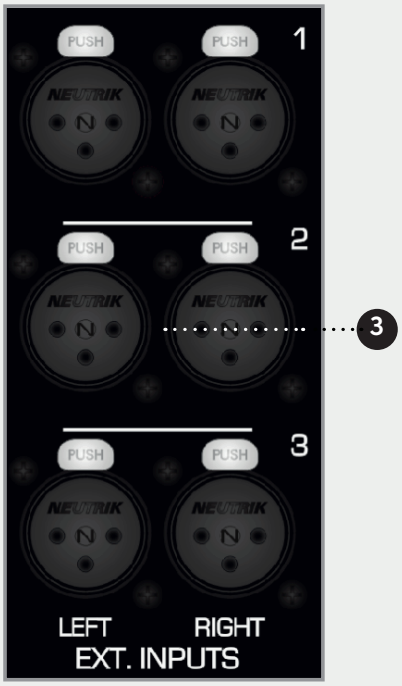
1 SUB GROUP INSERTS 1-8. This panel carries the connectors for the Sub Group Insert Points. There are 8 Sub Groups and each has a Send Output and a Return Input.

Signal is always present on the Send Output. If required, the Insert Returns could be used as very basic inputs to the stereo mix bus during mixdown, from a submixer or sampler for example.



2 MIX OUTS 1,2,3. After the Master Fader, the stereo Mix Bus is sent to three Mix Outputs. These can be sent to anything that is capable of capturing a stereo signal.

Having three separate Mix Outputs means you can capture up to three copies of the mix at the same time.

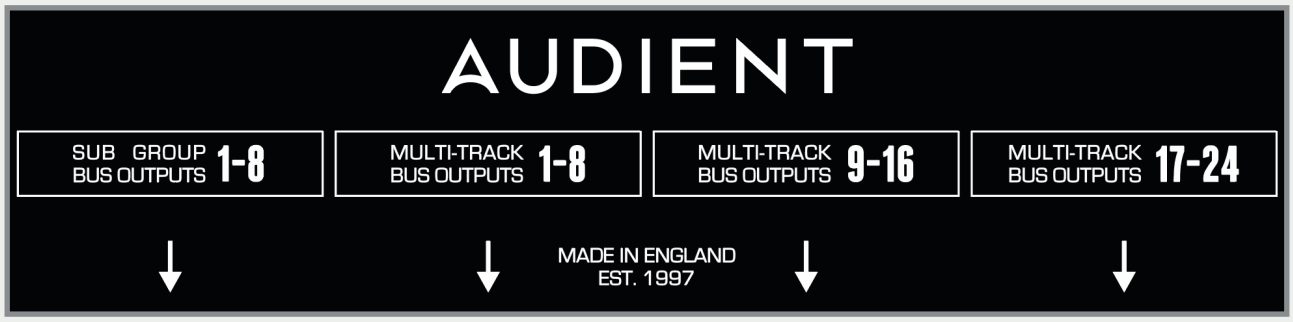


3 EXTERNAL INPUTS 1,2,3. The three External Inputs allow you to monitor up to three additional inputs as well as the stereo Mix Bus. This could be anything from a CD player, a MP3 player or even a sidecar console.

Connector Panels

This panel contains the connectors for the Multi-track Bus Outputs. Rather than having individual connectors for each output, multi-pole connectors are used for fast and easy installation.

The Multi-track Bus Outputs are split across 3 connectors, each carrying the outputs for 8 tracks. The Sub Group Outputs are on a fourth connector. All of the connectors follow the Tascam DB25 wiring standard.



MULTI-PIN CONNECTIONS			
SIGNAL NUMBER	+VE SIGNAL	-VE SIGNAL	SCREEN
1 / 9 / 17	24	12	25
2 /10 /18	10	23	11
3 / 11 / 19	21	9	22
4 / 12 / 20	7	20	8
5 / 13 / 21	18	6	19
6 / 14 / 22	4	17	5
7 / 15 / 23	15	3	16
8 / 16 / 24	1	14	2

NOTE: All undesignated pins are unconnected. All screen connections are joined inside the console and connected to metalwork earth.

PATCHBAYS: Tie lines connections 25-32 etc follow the same wiring convention shown above.

Power Supply

The console is powered by the ASP8120 Ultra, rack-mounted power supply. On the front you will find the power switch for the entire console, three LED indicators and the +48V fuse.

The power supply uses extremely low noise fans and transformers, meaning that the PSU can be placed in the same room as the console without producing distracting noises. The LED indicators show the current status of the +18V, -18V and +48V Power rails, if the LEDs are lit then it means that the rails are working as they should. Similar power rail indicators can be found in the master meter section of the console.

Should you need to replace the fuse on the front panel of the PSU, be sure to use a 500mA Slow Blow type fuse.

On the rear of the power supply you will find a IEC socket, a mains voltage selector, a mains fuse and the connector for the console power cable. Before powering on the power supply, make sure that the voltage selector switch is set to the position that reflects your country's mains voltage.

To connect the console's power cable, simply push the connector into the socket and then pull the two retaining arms over the connector until you feel a small click.

Ensure that the two cooling fans aren't restricted in any way, otherwise it could cause the power supply to overheat. The unit doesn't require any space above or below it when racked up and can be placed directly on the floor. The console is supplied with 4 meter, shielded power cable.

Using ASP4816-HE
Part 2

Introduction

Recording is generally a three stage process made up of the tracking stage, the editing stage and then the mixing stage. The tracking stage consists of capturing the audio onto a storage medium. Traditionally audio was captured onto multi-track tape, however now the majority of people will use a Digital Audio Workstation (DAW) such as Logic or Pro Tools.

The editing stage involves preparing audio for mixing, this usually involves everything from trimming, editing and fading audio, to tuning parts and more. This is where the monitoring section of the console really comes into its own, allowing you to quickly solo and cut channels out of your monitoring mix.

The third stage of the process involves returning the recorded tracks from your DAW/ tape machine back into the console. Using the faders and EQs, you can mix the audio until the individual tracks come together as a collective whole. Once you are happy with your mix, you can combine it into a stereo mix using the analogue mix bus processing of the ASP8024- HE.

Summing can also be done in your DAW but you may find that summing through the console adds a little more colour and punch to the overall mix, especially when fed through the discrete 990 op-amps and Heritage Card tonal options.

In-line Architecture

The ASP8024-HE uses an inline architecture, which means the Mic/Line Inputs and the DAW/Tape Returns are both situated on the same channel strip; these two paths are known as the Short Fader (SF) and the Long Fader (LF) paths. Inline architecture allows you to split the various sections of the channel strip between the two signal paths.

For example, you could use the Shelf EQs to add a high frequency boost to a vocal during tracking and then use the Cue sends to send the same Mic/Line signal to a fold-back mix. At the same time you could be using the Parametric EQs to cut out a room noise on the DAW/Tape Return path and using one of the Auxiliaries to send the DAW/ Tape return signal to a reverb unit.

To split the channel strip, each section has a button which allows you to place it on either the LF path or the SF path. The bus routing switches by default are on the SF path, while the Auxiliaries, Cues and EQs default to the LF path. Furthermore, it is possible to flip the two signal paths so that Mic/Line signal is sent to the LF path and the Daw/Tape Returns are sent to the SF path.

Tracking

A new project usually starts off with a blank session in your DAW or with a blank roll of tape. The first step is to get a signal into the console from the microphone or instrument. To do this, connect the microphone or instrument to the Mic/Line Inputs of your console. If you are using the TRS Line Input, press down the Line button on the channel you are using. If you are using a microphone that requires +48V Phantom Power then make sure that the red '+48V' button is engaged. You should always mute that channel, and your Speaker and Headphone Outputs before engaging Phantom Power as there can be a loud popping noise.

By default, the large Channel Meters show the level of the LF path, pressing the MTR button will flip this to allow you to accurately see the level of the inputs. To set the level, turn the Gain Knob, making sure to avoid overloading the channel (indicated with the OVER light above the meter).

The Multi-Track Buses

For simple sessions, it is typical to route the SF channel path to its corresponding Multi-track Output using the Bus Routing Matrix. This sends the signal to your recording device.

To control the amount of level being sent to the output simply bring up the Short Fader to a point where you get a healthy signal into your recording device. Setting the fader at 0dB means that the signal isn't boosted or attenuated when it is sent to the Multi-track Outputs, which is ideal for most situations. However, you can also use the Short Fader in a more creative manner:
If you are using multi-track tape machine instead of a DAW, slightly increasing the level of your Multi-track Outputs via the Short Fader can give you pleasing magnetic saturation. This isn't applicable to all recording scenarios, but when used well, can give you a warm, punchy sound that is great on drums and guitars.

In a similar vein, you can use the Short Fader to reduce the output, allowing you to increase the gain of the preamp. Although the Audient preamp design is relatively clean, it does start to tighten up and get slightly 'warmer' as you start to push it harder. Again, while this isn't suitable for all situations, it can be a great way of adding additional richness or body to a recording.

Monitoring Recorded Tracks

To monitor your recorded tracks from your recording device (DAW/Tape machine) bring up the Long Faders and press the Long Fader Mix button. This sends the audio to the Mix Bus which is then sent to the monitors. This enables you to monitor what is happening in your DAW on the Long Faders and lets you start building a mix as you're tracking, all without making changes to your input signals.

Foldback

You can use ASP8024-HE's two Cue Mixes, to allow musicians to hear the live input and click/guide tracks from your session. To bring a click/guide track onto the console, it needs to be sent to the DAW/Tape Returns on a channel (or multiple channels). This brings the signal onto the LF path of that channel. To help keep your session easy to navigate, it is recommended that you keep the guide tracks separate from the recording channels (e.g. bring them in on the last channels on the console).

To send the click/guide track, turn up the Cue Mix knobs on the channels you want to send. The Cue Mix knobs default to the LF path, so to send the live input to the artist, make sure the SF button is engaged next to the Cue mix knobs. Use the Cue Mix Solo button found on the Master Section to monitor what will be sent to the artist, and then ensure the Cue Mix Master is turned up.

The Cue Mix can be routed to the Foldback Output using the "Live Room and Foldback Section" of the Master Section. Press the Cue buttons under Foldback 1 to assign the Cue Mix to the Foldback Output. It is possible to create a stereo foldback signal using the two cue mixes, using Cue A as the left channel, and Cue B as the right channel.

Tracking with Effects

When tracking, it is possible to make use of the console EQ as well as using Channel Inserts, allowing you to commit effects as you record. To insert a piece of equipment, press the Insert Active button in the Mic/Line section of the channel strip.

For EQ, ensure that the SF and IN buttons are engaged on the EQ band that you want to use. It is possible to split the Shelf and Parametric EQs between the Long and Short Faders by sending only one to the SF path.

Mixing

Getting Audio From DAW to Console

Recorded tracks should be brought back onto the console using the DAW/Tape Returns, which come in on the Long Faders by default. Ensuring that the MTR flip buttons are disengaged, signal should appear on the long meters for each active channel strip.

Engage the Mix buttons for the Long Faders and bring up the faders to 0dB for channels that are in use. Signal should now appear on the main meters in the master section, and you should be able to hear the recorded tracks.

Subgroups

ASP8024-HE has eight subgroups, which allows you to group certain tracks together and give you control over their overall level (drums channels for example). Sub Groups can be set by using the first eight buttons of the Bus Routing Matrix at the top of the channels, ensuring that the Bus Routing is flipped to the LF path by pressing the LF button next to the switch matrix.

To create a stereo sub-mix, press the Follow Pan button. This causes the odd Multi-track Buses to take signal from the left side and the even numbers from the right. For example, on each channel, you would press down a pair of Multi- track buttons such as 1 and 2. Any channel that is panned fully left will appear on Sub Group 1, and any channel panned fully right appears on Sub Group 2, with channels panned in between being split between Sub Groups.

Adding EQ to Tracks

EQ can be added to channels to allow them to sit better together, or just for creative purposes. To do this, press the IN button on the band of EQ you want to add to the channel.

For more broad equalisation, the Shelving EQs are best and allow you to add additional low end or high frequencies to that track. The Parametric EQs allow you to sweep frequencies and adjust the bandwidth of the EQ. This gives you more control over what is being cut or boosted and is great for surgical cuts of problem frequencies.

Inserts & Auxiliaries (Using Outboard Equipment)

There are a few different ways to connect outboard equipment to the desk, depending on how you want the outboard to affect your audio. The first way is to add the outboard gear in the channel insert point. This means the outboard can only affect the channel it is placed on. Connect your outboard gear between the insert send and return, then press the 'Insert In' on the DAW/ TAPE inputs to send the signal through the gear. The Sub Groups can also have gear inserted in the same way, useful when wanting to process a group of channels as a whole.

Another way of using outboard effects is to use the auxiliaries. This allows you to send multiple channels of audio to the same piece of outboard gear, while not affecting the original audio. The Aux Send level knobs allow you to alter the amount of signal being sent to the auxiliary from each channel. The output of the outboard can be fed back into the console either through an unused input channel, or one of the Stereo EFX Inputs.

When using an Auxiliary, ensure that the corresponding Aux Master is turned up in the Master Section of the console. The Aux Master Solo buttons can be used to monitor what is being sent to the outboard gear.

The Mix Bus

The Mix Bus is the two channel bus that your mix is summed into. On the ASP8024-HE, the summing bus is active and uses a pair of JensonTM 990C+, fully Discrete Op-Amps. This offers a fast punchy sound, minimal crosstalk and an extremely low noise floor. This then runs into the Heritage output card, which gives additional tone shaping options.

The first option is RETRO IRON, which runs the signal through a vintage style amplification stage followed by a pair of Carnhill Transformers - adding extra weight and warmth to the output. The transformers also add body and punch to the low end and a little bit of top end sparkle.
With the RETRO IRON Card switched in, you can also switch in two Baxandall EQ stages:
Low Bump adds a 2dB boost at 60Hz, this helps push kick drums and bass forward in the mix and tightens the low end. High Lift adds a 2dB boost at 20kHz which will make cymbals sparkle and make vocals more present.

The Mix Bus Insert is located after the Heritage Output Card and allows you to apply outboard effects to the entire mix. Plug your outboard gear into the two mix inserts, one for the left channel, and one for the right. We recommend using stereo or stereo linked units, or two identical units with switched controls. Two units with continuous controls can be used, however care must be taken to match the units to prevent imbalance across the stereo field.

Adding Mix Bus Compression

After the insert is the Mix Bus Compressor, a Soft Knee VCA compressor, optimised for Mix Bus use. To insert the compressor into the Mix bus simply press the IN button. The Threshold controls at which amplitude the Compressor begins to compress the signal. As it is reduced, more of the signal will be compressed. The Ratio controls by how much the signal above the threshold is reduced. A ratio of 2:1 reduces the level by a factor of two, a ratio of 4:1 reduces the level by a factor of 4 etc.

The Attack and Release controls can be used to further affect the way the mix is compressed. The attack controls how quickly the Compressor reacts when the signal amplitude moves above the threshold. A slow setting will result in fast transient signals being compressed less, and a faster setting means transients will be compressed with the rest of the signal. The release controls how quickly the Compressor stops affecting the signal once it falls below the threshold level.

The Mix Bus Compressor features a further feature, labeled Bass Expand. This adds a 350Hz high-pass filter to the sidechain, which means low frequencies won't cause the Compressor to activate. This can help to give a more full, consistent low-end.

As the signal is compressed, the overall level will be reduced, especially when compressing harshly. To bring the signal back up to its original level, use the Make-up Gain Knob. Switching the Compressor in and out and listening for a volume difference or using the Master Meters allows you to quickly set you make up gain.

Capturing Your Final Mix

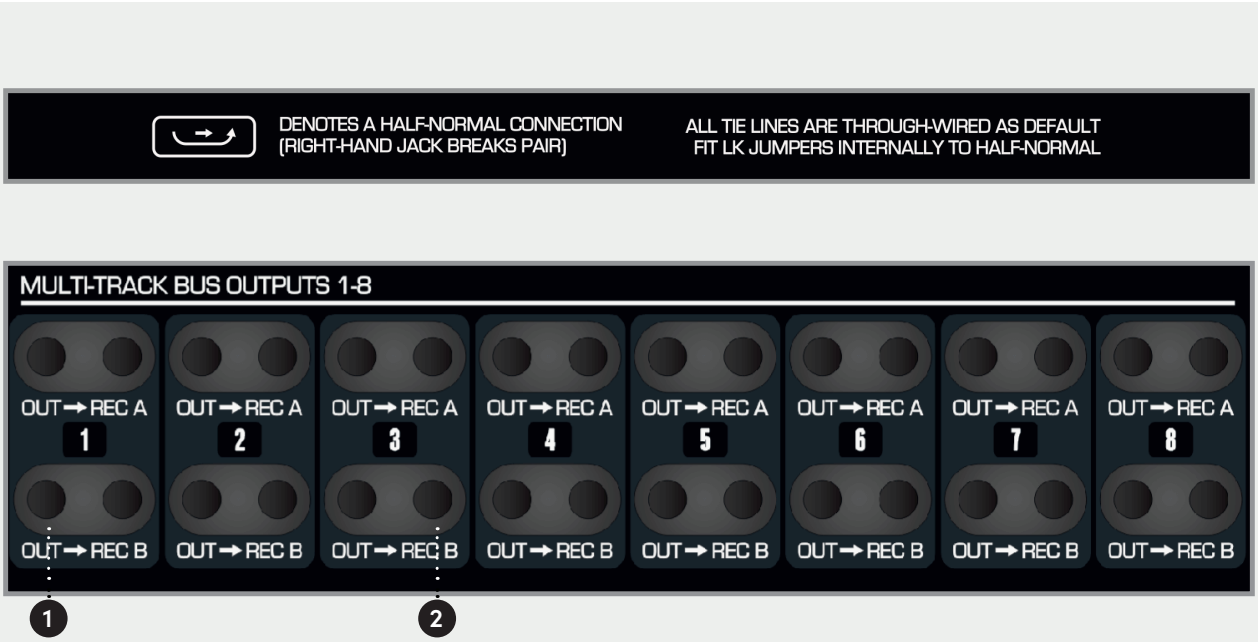
Once you are happy with the mix, it can be captured by connecting one of the Mix Outputs to your DAW or another recording medium, and recording the track in its entirety through the desk. Riding faders, or altering settings during mixdown provides the analogue equivalent of DAW automation, while giving a human element to a mix.and one for the right.

We recommend using stereo or stereo linked units, or two identical units with switched controls. Two units with continuous controls can be used, however care must be taken to match the units to prevent imbalance across the stereo field.

Optional Extras & Modules

Part 3

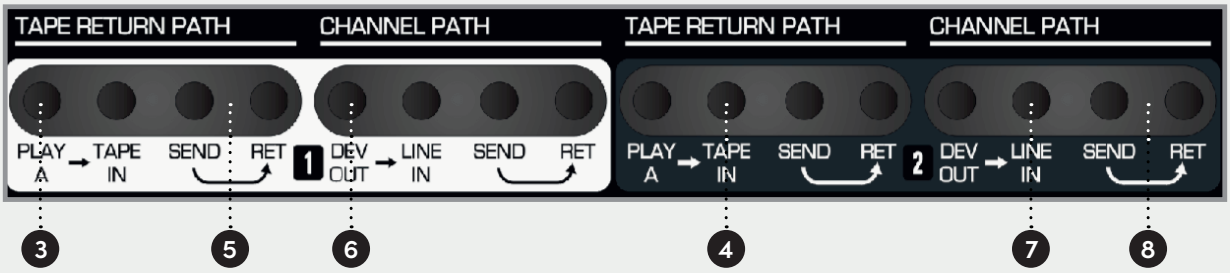
Patchbay



This section of the manual explains the functionality of the optional Patchbay Module and how it relates to the features explained previously in the manual.

1 OUT. This is the signal from the Multi-track Bus Outputs. This is available for each Multi-track Bus from 1 to 24.

2 REC A, B. These are the outputs to the 24 track recording medium, be that a DAW or a tape machine. Each Multi-track Bus has a separate A and B output, which allows you to simultaneously track to two separate recording mediums.



Tape Return

The Tape Return path is the signal coming back from either your DAW or tape machine.

3 PLAY A is the signal coming directly from the playback device.

4 TAPE IN Where the signal enters the desk ready to be mixed to the stereo bus.

5 SEND/RETURN The sends and returns allow you to insert outboard gear into the Tape Return path.

Channel Path

The Channel Path, is the signal coming from the microphones and instruments into the desk.

6 DEV OUT Stands for device out and allows you to route the signal directly from the Line Input.

7 LINE IN Where the signal enters the desk to the Line Inputs for either tracking or mixing.

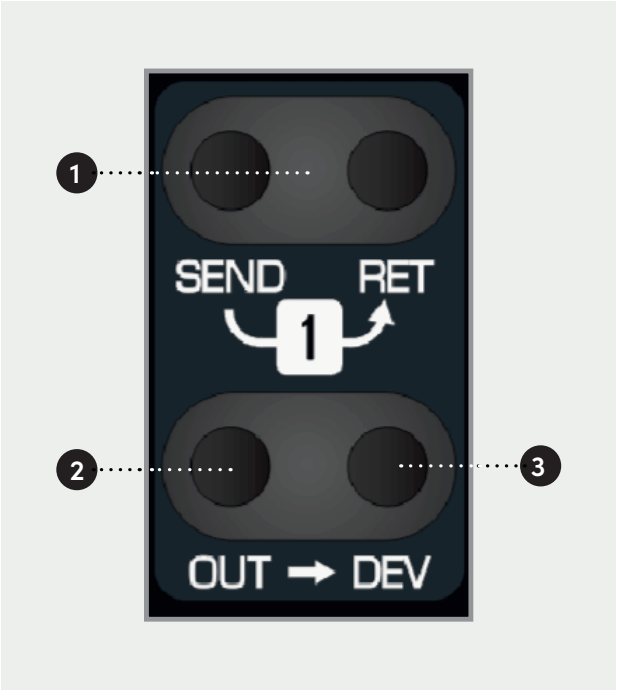
8 SEND/RETURN The Sends and returns allow you to insert outboard gear into the Mic/Line Input.

Sub Group Inserts and Outputs

1 SEND/RET. Each Sub Group has its own insert point allowing you to send the Sub Group signal to outboard gear.

2 OUT. The output of the Sub Group can be found here, allowing you to send the Sub Group signal anywhere on the Patchbay.

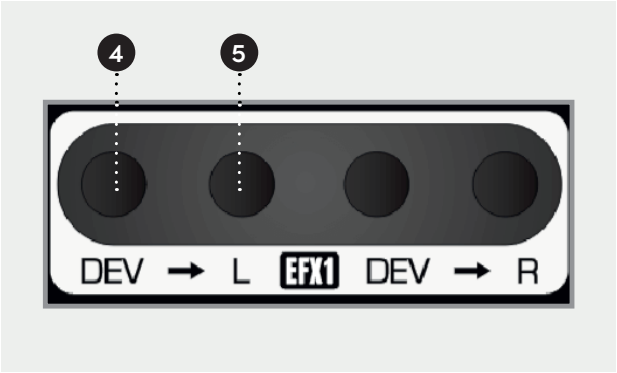
3 DEV. This output sends signal to whatever device is connected to the Sub Group outputs. If nothing is plugged into the 'OUT' jack, this is where the Sub Group is sent to.



Stereo Effects Inputs

4 DEV. This is the signal directly from the device plugged into the Stereo Effects jack on the rear of the console.

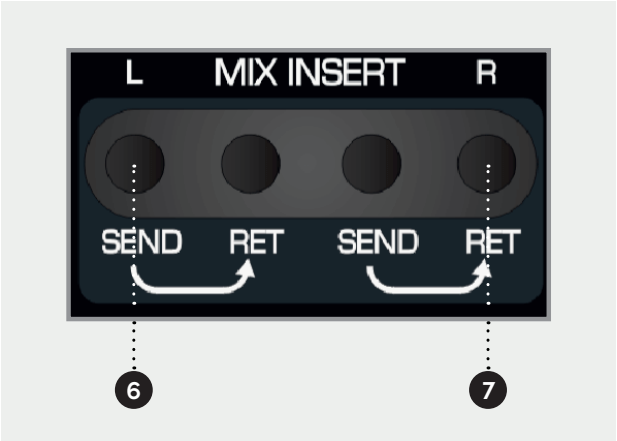
5 L, R. Left and right inputs for the Stereo Effects Input.



Main Mix Inserts

6 SEND The sends are found after the Heritage Card in the signal chain, so if RETRO IRON is engaged, it will be present on the sent signal.

7 RET The return comes before the Bus Compressor, so any signal coming into the return will be compressed if the Compressor is switched in.

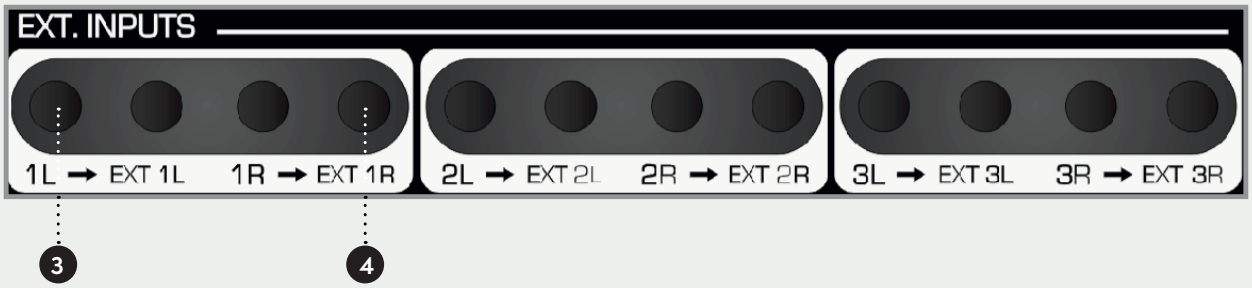


Mix Outputs

1 MIX L, MIX R. The sends for the left and right sides of the stereo Mix Bus. This comes after the Master Fader.

2 1L, 1R, 2L, 2R, 3L, 3R. The left and right outputs of each Mix Output, labelled accordingly (1L = Mix Output 1, Left Channel).

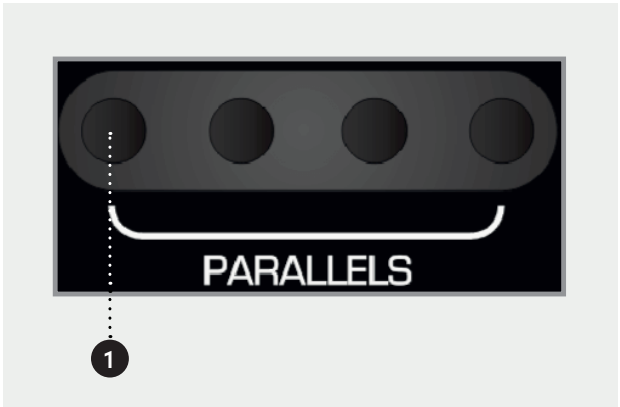
External Inputs



3 1L, 1R, 2L, 2R, 3L, 3R. The left and right inputs of each External Input, labelled accordingly (1L = External Input 1, Left Channel). This comes directly from the device plugged into the External Input connectors on the rear of the console.

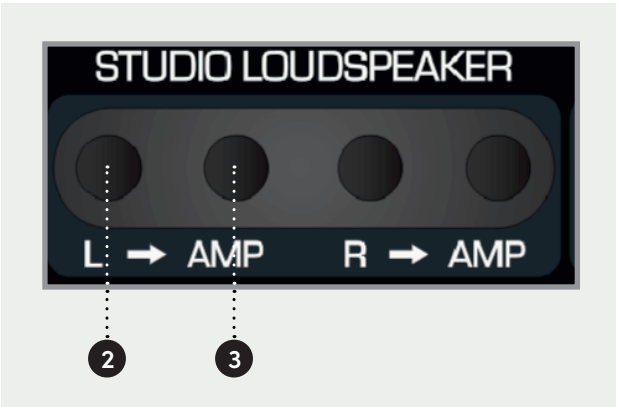
4 EXT 1L, 1R, 2L, 2R, 3L, 3R. The sends to the Monitor Control Section of the console. Anything patched in here can be heard in the Monitor and Foldback Sections of the console by pressing either EXT 1, 2 or 3.

Parallels



1 Any signal patched into one of the Parallel Jacks will be sent out of the other three jacks allowing signals to be duplicated. Do not plug in more than one signal send at the same time as this will short the outputs together!

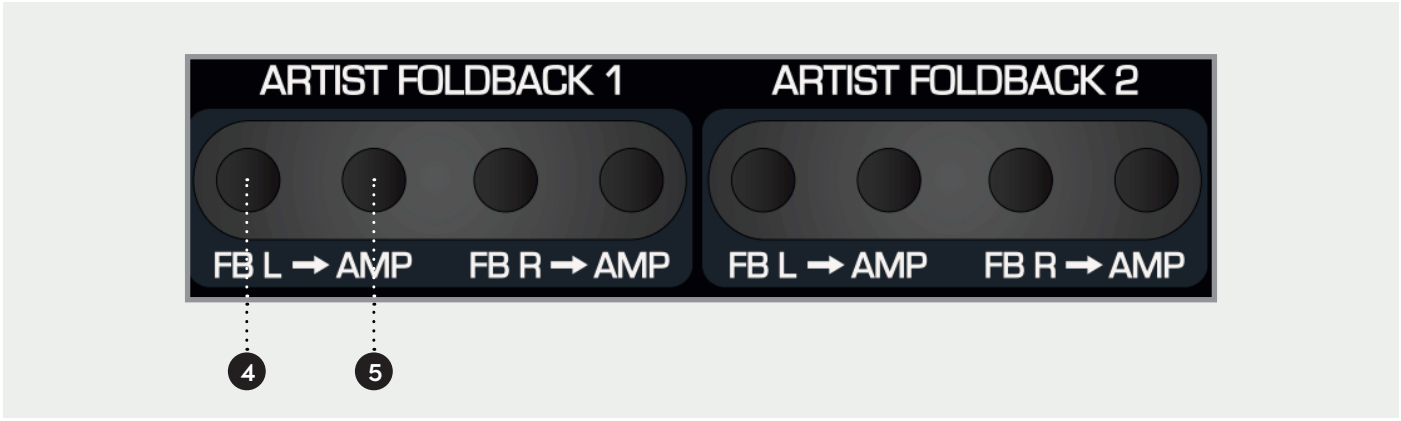
Studio Loudspeaker



2 L, R. The left and right channels of the Studio Loudspeaker send.

3 AMP. A direct output to any equipment connected to the Studio Loudspeaker connector on the rear of the console. In most cases this will be an amplifier for the speaker itself.

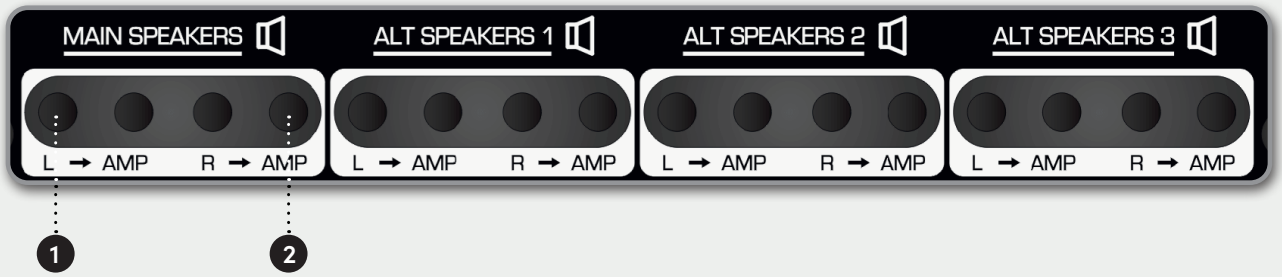
Artist Foldback 1,2



4 FB L, FB R. The left and right channels of each Foldback Send.

5 AMP. A direct output to the device connected to the Foldback connectors on the rear of the console. In most cases this will be a line level headphone amplifier.

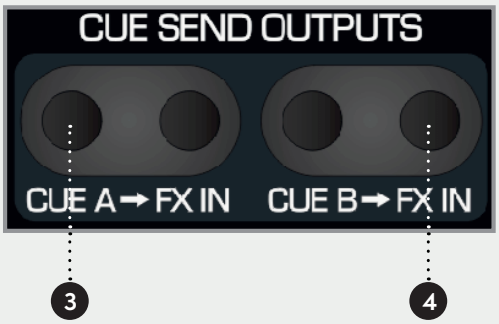
Speaker Outputs



1 L, R. Contains the signal for the left and right channels of the Speaker Outputs.

2 AMP. A direct output to any equipment connected to the Speaker Connectors on the rear of the console. In most cases this will be an amplifier, either a stand alone unit or built into a pair of active monitors.

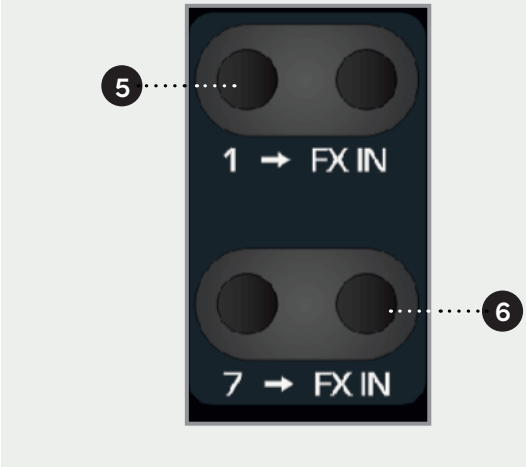
Cue Send Outputs



3 Cue A, B. The signals from the two Cue Mixes. The send output is after the Cue Master Trim.

4 FX IN. Patches directly to the device plugged into the Cue Outputs on the rear of the console.

AUX Send Outputs



5 1, 2, 3, 4..... ETC. The outputs from the 12 Aux Sends found on each channel of the desk.

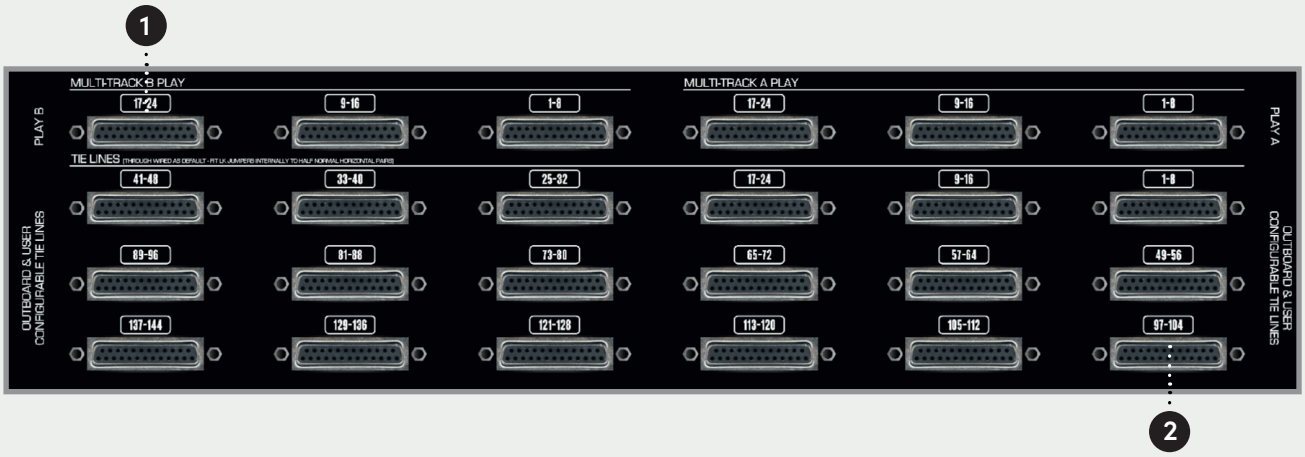
6 FX IN. Patches directly to the device plugged into the Aux Outputs on the rear of the console.

Level Converters

The level converters take a professional +4dB signal and passively convert it to -10dB for patching in consumer level devices. Please note that the conversion can only bring the signal level down and can't be used in reverse.

Tie Lines

There are 144 Tie Lines giving plenty of space to add outboard gear. All Tie Lines are through wired but can be half normalled in pairs by fitting internal link jumpers.



Rear Connector Panel

1 MULTI-TRACK PLAY A, B The Multi-track Outputs on a Patchbay console are found here. The 24 channels are carried on 3 DB25 cables, each carrying 8 channels using the Tascam standard wiring. There are outputs for both Multi-track A and B.

2 TIE LINES The Tie Lines are accessed through the 18 DB25 connectors on the Patchbay connector panel. Each Tie Line can act as either an input or an output depending on how you have them configured.

DLC Module

For those who have the Dual Layer Control Module, there is a separate manual section which can be found at the end of this manual.

Producer's Desk

The Producer's Desk provides extra real estate on your console, letting you place a keyboard, mouse or even a control surface at the centre of your console or off to one side for an assistant.

Traditionally the producer would sit at the PD to take session notes or annotate music scores alongside the engineer. There are many ways to utilise the PD option, make it work for you and take advantage of the beautifully included walnut script tray.

If you have two PD modules side-by-side (what we call a Double PD) it allows you to cater for larger control surfaces such as the Slate Raven or Avid S3 controller.

48 BUS Mod & DFA

Studio Speakers and Foldback

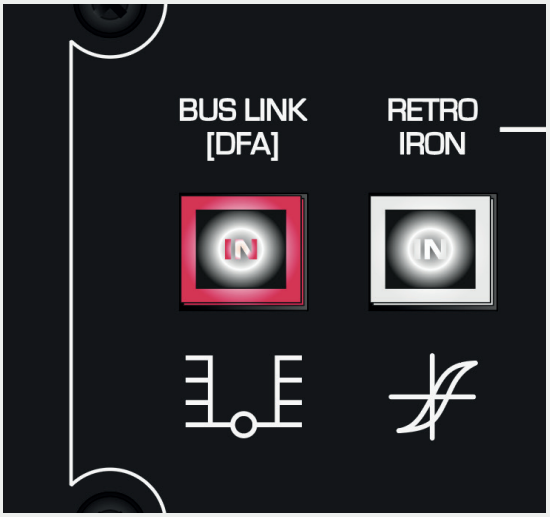
The 48-Bus Mod provides an extra set of Multi-track Bus Outputs, forming Multi-track Buses 25-48.

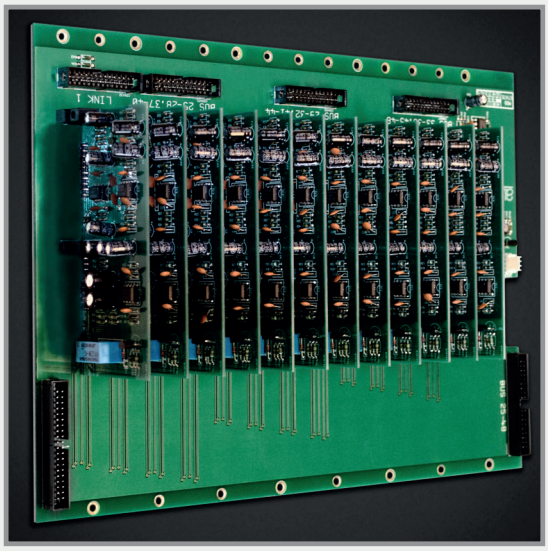
Where the first 24 channels of the console have access to buses 1-24, and subsequent channels have access to 25-48. Buses 25-48 do not have access to bus master trims and so exit the console at unity gain. It is also worth noting that the Stereo EFX Inputs are only routable to buses 1-24.

With the Bus Mod installed, the console can be operated in two modes, Bus Split and Bus Link:
In Bus Split mode, channels 1-24 can access Multi-track buses 1-24, whilst channels 25+ can access 25-48, providing up to 48 discrete outputs from the console.

In Bus Link mode, the 25-48 combiners are summed into the original 1-24 Multi-track buses to provide standard 24-bus operation across the entire console.

When no Bus Mod option is installed, the Bus Link switch becomes a handy DFA button for those all important production decisions...





VESA Screen Mount

The VESA screen mount provides both 75 and 100mm mounting options for TFT screens up to 19".

Simply screw the VESA mount onto the back of the screen using the four screws provided, then re-attach the system to the ball joint on the console, making sure it is tightly fixed.

To adjust, slightly loosen the clamp and set the ideal position before tightening it again.

Cable Entry Meter Pod

The Cable Entry Meter Pod allows you to feed cables through the console offering a much neater console surface.

To wire cables through the console:

1 Unscrew a rectangular blanking panel found underneath the console.

2 Carefully unscrew and lower the rear connector panel, making sure to remove the cable hooks as well.

3 Remove the screws underneath the top wooden trim, accessed from within the rear of the console.

4 Remove both the horizontal and vertical metal trims on the console bucket containing the Cable Entry Meter Pod.

5 Tilt the Meter Pod forward and feed the cable towards the empty blanking panel.

Further Information

Warranty

Warranty Statement

Your ASP8024-HE comes with a manufacturer's warranty for three years from the date of despatch to the end user.

The warranty covers faults due to defective materials used in manufacture and faulty workmanship only.

During this warranty period Audient will repair or at its discretion replace the faulty unit provided it is returned carriage paid to an authorised Audient service centre. We will not provide warranty repair if in our opinion the fault has resulted from unauthorised modification, misuse, negligence, act of God or accident.

We accept a liability to repair or replace your ASP8024-HE as described above. We do not accept any additional liability. This warranty does not affect any legal rights you may have against the person who supplied this product – it is additional to those rights.

Warranty Limitations

This warranty does not cover damage resulting from accident or misuse. The warranty is void unless repairs are carried out by an authorised service centre. The warranty is void if the unit has been modified other than at the manufacturer's instruction. The warranty does not cover components which have a limited life, and which are expected to be periodically replaced for optimal performance. We do not warrant that the unit shall operate in any other way than as described in this manual.

Audient Ltd
Aspect House
Herriard
Hampshire
RG25 2PN
United Kingdom

Tel: +44 (0) 1256 381944
audient.com

Registration

ARC

Please register your console on our website to receive useful information about ASP8024 Heritage Edition including educational resources, usage tips and more.

Registration is also useful for us to be able to identify your product, and increase the speed at which we are able to provide technical support.

Console Specifications

Frequency Response

MIC INPUT TO MIX OUTPUT	±0.3dB (20Hz to 20kHz with 6 to 40dB gain).
LINE INPUT TO MIX OUTPUT	±0.3dB (20Hz to 20kHz with 0dB gain)

Noise

MIC EIN (20-20KHZ, 150R SOURCE)	< -127.5dBu
BUS NOISE (NO INPUTS ROUTED)	< -93dBu
BUS NOISE (36 INPUTS ROUTED)	< -81dBu (990C Mix Amps)

Crosstalk and Mute Attenuation at 1kHz

SHORT FADER MUTE	>90dB @ 1kHz
LONG FADER MUTE	>90dB @ 1kHz
MIX ASSIGN	>90dB @ 1kHz
BUS ASSIGN	>90dB @ 1kHz

THD and Noise at +22dB Output

MIC XLR INPUT TO ANY OUTPUT	< 0.005% at 1kHz, 22dBu Output
LINE INPUT TO ANY OUTPUT	< 0.005% at 1kHz, 22dBu Output
TAPE INPUT TO ANY OUTPUT	< 0.003% at 1kHz, 22dBu Output

Maximum Output into 2kΩ

MIX OUTPUT	> +26dBu
BUS OUTPUT	> +26dBu
AUX OUTPUT	> +26dBu
INSERT SEND	> +20dBu
MONITOR, STUDIO, F/B OUTPUTS	> +20dBu

MIC CMRR

70dB (Min Gain)
75dB (Max Gain)

Maximum Input

MIC	>+21dBu (Min Gain)
LINE	>+30dBu (Min Gain)
INSERT RETURN	>+21dBu

Retro Iron Heritage

The Heritage Card was designed and built with world class LM4562 operational amplifiers (EQ stages) and a discrete Class-AB RETRO IRON output stage based upon the best US & UK designs from the early 1970's.

Taking influence from two consoles that David Dearden modified and serviced at Advision Studios in London during his arrival as in-house technician, these consoles became part of the sound of recording for clients such as David Bowie, Emerson Lake & Palmer, Shirley Bassey, Fleetwood Mac and many others. The H.E Card offers glue, 3-dimensional detail enhancement and lower midrange growl - designed by Tom Waterman and fine tuned by ear to reflect these classic tones.

THD and Noise at +22dB Output

0dBu into 600Ω	< 0.016% @ 1kHz (2nd & 3rd)
+24dBu into 600Ω	< 0.003% at 1kHz

Noise

RETRO IRON On, EQ Off	< -92dBu (20Hz to 20kHz unweighted)

Tone Shaping EQ

LOW BUMP	+2dB wide bell @ 60Hz, Baxandall Type
HIGH LIFT	+2dB wide bell @ 20kHz, Baxandall Type
GAIN ADJUST JUMPER POSITIONS	+0.5, +1, +2 (defau lt) or +3dB Options

Maximum Output Level

CARNHILL LINE DRIVER	+28dBu into 600Ω
INSERTION LOSS	1dB into 600Ω (Transformer Loading)
OUTPUT GAIN	±0.5dB Load Dependant
OUTPUT IMPEDANCE	600Ω

Dynamic Range

120dB

Crosstalk

< -82dB 10Hz to 10kHz, typ. -88dB @ 1kHz

Frequency Response

RETRO IRON Engaged on Main Mix	±0.1dB (10Hz to 80kHz)
HARD-WIRE BYPASS	Relay Switched - No Loading Effects

Headphone Amplifier

ASP8024 Heritage Edition comes with a high-current reference headphone amplifier provided as the ALT3 monitor output destination. The new design features a 250mA high current output stage based upon class leading Burr-BrownTM and LM4562 high-speed amplifiers. The output is entirely D.C coupled with very low output impedance for all types of headphones and there is only one main capacitor in the signal path for very low distortion and sonic performance!

Frequency Response

MIC INPUT TO MIX OUTPUT LOAD INDEPENDENT	±0.1dB (20Hz to 20kHz)

Noise

REFERENCE HEADPHONE STAGE	< -104dBu (20Hz to 20kHz unweighted)

Maximum Output Level

LOAD DEPENDENT	+22dBu, typically +18dBu into all phones

Maximum Output Power

POWER INTO 600Ω	+22dBu @ 0.0010% THD = 317mW>
POWER INTO 150Ω	+21dBu @ 0.0012% THD = 1W
POWER INTO 60Ω	+20dBu @ 0.0080% THD = 2W!
POWER INTO 32Ω	+17dBu @ 0.0080% THD = 2W!

Dynamic Range

>122dB

Crosstalk

< -80dB 10Hz to 10kHz, typ. -82dB @ 1kHz

Output Impedence

< 10Ω DC Coupled

THD and Noise at +22dB Output

THD into 600Ω	@ 1kHz	0.0013% (0dBu), 0.0009% (+18dBu)
THD into 150Ω	@ 1kHz	0.0010% (0dBu), 0.0012% (+18dBu)
THD into 60Ω	@ 1kHz	0.0024% (0dBu), 0.0016% (+18dBu)
THD into 32Ω	@ 1kHz	0.0040% (0dBu), 0.0077% (+17dBu)

Glossary

AFL

This allows after fade (post fade) signals to be heard on the monitors and viewed on the main stereo meters.

Auxiliaries

Sometimes known as auxiliary sends these are used as secondary mix buses. The mixes created on these buses are then used to feed effect units or are fed back to the performers as a foldback feed. Every channel has access to the auxiliary mixes and the contribution of any channel can be varied by using the appropriate auxiliary level control. Auxiliaries can be switched pre or post fader and be allocated to either the SF or LF signal paths.

Auxiliary Master

Associated with every auxiliary there is an auxiliary master control to give overall level control rather than having to adjust the contribution from every channel.

Bus Master

Inputs are assigned to bus outputs through a routing matrix, enabling one or many inputs to be assigned to the same bus. The bus outputs usually correspond to inputs on the DAW or other recording device. Each bus then has a mixing amplifier whose gain can be controlled by the Bus Master Trim. This allows the level to a multi-track input to be raised or lowered without having to adjust the individual level of each channel routed to that track. The faders can still be used to adjust the relative levels of channels.

Cut

The cut or mute control is used to silence (mute) a signal path when it is not in use. This removes the noise contribution from that source leading to a quieter mix. There are cut switches in both the SF and LF signal paths.

Dim

This allows the control room loudspeaker levels to be reduced by a pre-set amount. Dim will be brought into action automatically when talkback is used preventing howl round.

Equaliser

Equalisers are what would be referred to as tone controls on consumer equipment. Equalisers are divided into a number of bands - 4 in this case. There is scope to adjust high and low frequencies and two bands of middle (mid) frequencies. The high and low frequency sections are shelving and the turnover frequency is switchable. The middle frequency sections are peaking and the frequency of the peak (or dip) is adjustable. It is also possible to alter the Q of the mid sections with a pot, making the Q continuously variable between two values. In-line consoles often have the facility for the equaliser to be split such that it can be used partly in the channel path and partly in the monitor path. The SF switches on ASP4816-HE equalisers allow the HF/LF and MID equalisers to be independently switched into the SF signal path.

Flip

Flip allows the inputs to the signal paths to be swapped. Normally the LF path will carry the DAW input, however, with FLIP pressed it will carry the MIC/LINE input while the DAW input will travel through the SF path.

Foldback

Foldback is a mix that is returned to the performers in the studio in order that they can play in time with what is already recorded. It could simply be the console stereo output although more usually it is taken from a pair of auxiliary buses allowing a different mix to be created. Talkback may also be included on the foldback outputs enabling communication with the artists.

In-line

This refers to a type of console which contains two signal paths within a channel strip. The channel signal path is used to feed a DAW or other recording device while the monitor path is used to carry the output of the DAW (or other recording device) through to the stereo mix bus. In-line consoles can be more compact than split consoles or can carry more channels for a given size. The possibility of switching signals between the two paths and of sharing facilities between the paths makes the in-line concept a very attractive one.

Insert points

Insert points allow the signal path to be broken allowing the insertion of some signal processing device. The device inserted is then in series with the signal path. When not required the device can either be switched out using the INSERT switch or unplugged from the console.

LF

The Long fader is normally used to feed the mix. The lighter areas of the channel strips are areas used for the LF signal path. There may be a dark switch labelled SF allowing that facility to be switched into the SF or short fader path.

Line

The line input is a high level, high input impedance input intended for high level sources such as the outputs of a DAW or other recording device, sampler etc.

Mic

The microphone input is a low level, low impedance input intended for use by low output devices such as microphones. This contrasts with the line input which is intended for use by equipment with high output levels, such as a DAW line output for example.

Mix

This allows signal to be routed to the stereo mix bus which is the main output of the console. This routing can be applied to both the SF and LF signal paths and is particularly useful during mix down when as many inputs as possible are often required.

Pan

Short for panoramic potentiometer this control places a mono source signal onto the stereo bus. The proportion of signal fed to the left and right buses is variable (using the pan control) and alters the spatial position of an instrument within the mix. Thus a number of channels can all be panned to different spatial positions. Generally low frequency instruments such as kick drums are panned centrally as they are omnidirectional and for a given SPL the speakers are being driven at a lower level leading to less distortion. Signals can also be panned across odd and even bus outputs allowing them to recorded in stereo.

Q

Q is an indication of the frequency range or bandwidth over which a peaking equaliser will be effective. Low Qs affect a wide range of frequencies while high Qs affect a much narrower range of frequencies. It thus allows an equalisation adjustment to be targeted to maximise the effect where required while at the same time minimising changes where they are not wanted. Generally high Qs sound less pleasant than low Qs.

Routing

This is the process of selecting to which bus output of the console the signal should be routed. Routing can be to multiple tracks and if an odd/even combination is selected then panning can be used to record a stereo signal.

SF

The Short fader is normally used to feed the inputs to a DAW or other recording device. It therefore controls the recorded level of the signal. When SF appears by a control or group of controls it means that these functions can be switched into the short fader (or channel fader) path.

Shift

This allows the number of routing switches to be reduced by doubling the function of each switch. With Shift unpressed routing is possible to tracks 1 through 8. With Shift pressed routing to tracks 9 through 16 is possible.

Solo in place

This is a method of previewing the signal in a channel and works by cutting all the signals feeding the stereo bus other than the one(s) being solo'd. This is a destructive process and does affect the stereo or mix output of the console.

Stereo Bus

This is usually the main bus in the console and provides the output to whatever stereo recording device is in use. The stereo output is also used as the main monitor source allowing the output of the multi-track to be heard and the balance of the individual tracks in the mix to be adjusted.

ASP8024

HERITAGE EDITION

Dual Layer Control (DLC)
Manual V1.0

AUDIENT

Contents

DLC Summary

The Dual Layer Control Module gives you control over analogue and digital worlds from the heart of the console. In the analogue layer, it provides intuitive analogue automation as well as an extra set of line inputs and outputs. In the DAW layer, it provides a powerful array of DAW control features, right at your fingertips. These include eight bankable faders, transport control, track record enable, pan control, aux sends, and plug-in manipulation.

The eight channels of analogue VCA automation, let you add movement and finesse to your console mix balances. The VCAs can be individually routed to subgroups 1-8 or independent line inputs and outputs, that can be patched to any insert point on the console for ultimate flexibility.

VCA automation is controlled via our proprietary Faderlink plugin (64- Bit AAX, VST & Audio Unit, supported by all popular DAWs), allowing you to record, edit and recall eight channels of VCA automation directly from your DAW session, providing visual representation of volume and mute alterations.

The DLC has the ability to jump between the analogue and DAW layers at any time without altering your levels, letting you quickly adjust settings without interrupting your workflow. The DAW layer is connected via the HUITM protocol and supports: Cubase, Nuendo, Logic Pro X and Pro Tools.

Mac Installation

This section goes through the installation process for the DLC module on your computer, allowing you to make use of the Analogue Automation and Control Surface functionality.

Physical Connection

To physically connect DLC to your computer, plug a standard CAT5 Ethernet cable into the port located above the DLC Network sticker on the rear of the console, and the other end into your computer (or router/switch).

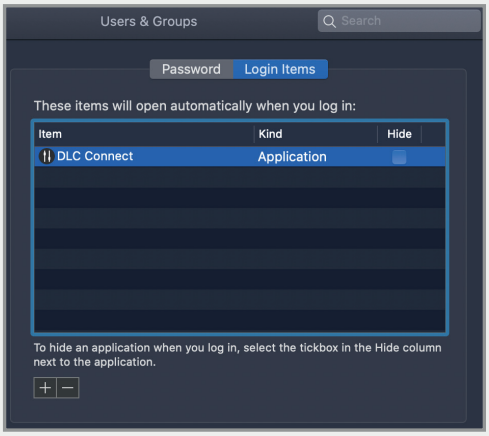
DLC Connect App

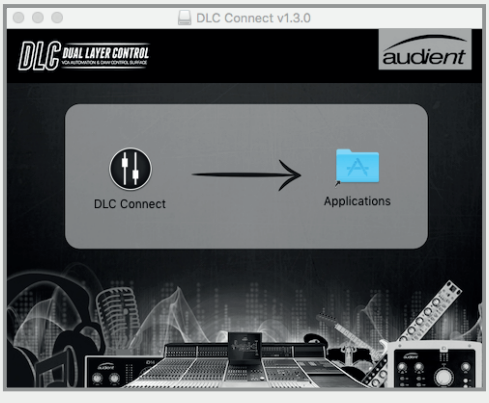
To achieve communication between DLC and the Mac, the DLC Connect app is needed. This creates the necessary MIDI ports for your DAW to connect to DLC. This app can be downloaded from our website here.

Once downloaded, drag the DLC Connect icon into the Application folder: Macintosh HD > Applications

It is possible to open the application automatically on login, making it quicker to get set up each time the computer is booted up. Open the app, then right click on the app icon in the dock, navigate to options, then select Open at Login.

Alternatively go to: System Preferences > Accounts > [Account Name] > Login Items Tab > Add New Applications (+ Button) > Browse and select DLC connect.





Networking Theory

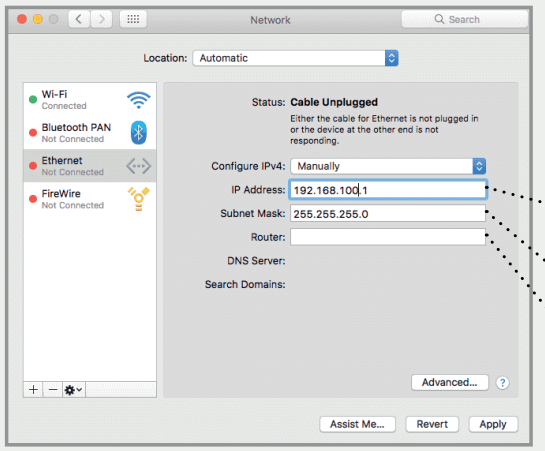
On a network, devices must have a unique "address" to ensure they can communicate, this is known as an IP address. You will need to decide whether your network will automatically assign IP addresses to connected devices, or if you will manually assign them yourself.

If connecting DLC to your computer directly, you will most likely want to set the IP addresses manually, however if connecting DLC to a larger network, typically the IP address will be automatically assigned using "DHCP" (you will commonly have used this when connecting to things like WiFi networks).

Setting Manual IP Addresses

If you aren't using DHCP to automatically set IP addresses, you must set them manually on the DLC and Mac to ensure the two devices are communicating correctly.

System Preferences > Network > Ethernet Tab > Configure IPv4 Manually



Example:

Choose a unique IP address by changing 'X' to a number between 1-254, the number must be different on the DLC module and the computer:

192 . 168 . 100 . X

Set the Subnet Mask to:
255 . 255 . 255 . 0

We recommend leaving the Router settings blank.

On the DLC Module, press the Setup Button. The OLED displays will show the first page of the console setup. Using the Page Keys underneath the first encoder, page to the right and ensure that Use DHCP is set to 'NO' in the next menu.

Page right again to reach the IP address screen and use the encoders to set the IP address to:

192 . 168 . 100 . X
(ensuring that 'X' is different to that of the computer).

On the following pages, set the Subnet Mask to:
255 . 255 . 255 . 0

Set the Port to: 1212

Press the Setup Button again to exit setup and save these settings.

Setting Automatic IP Address (using DHCP)

If you have connected DLC to a network using DHCP to automatically assign IP addresses, then you will need to set DLC to use DHCP.

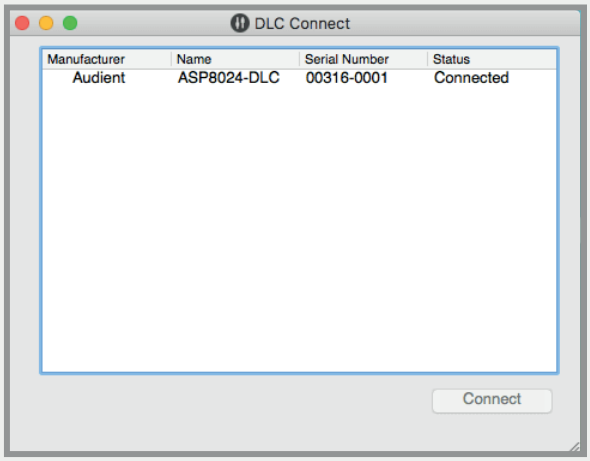
On the second page of the Setup Menu, ensure that the Use DHCP option is set to YES, then press the Setup Button again to exit setup and save these settings. Make sure your Mac is configured to use DHCP in the Network System Preferences (by default your Mac should be set to use DHCP).

DLC Connect

Once network settings have been finalised, reboot the console and the computer. On rebooting, DLC Connect should open and the console should be listed. Highlight the console within the app, and click the connect button.

Your DLC module should now be connected to your Mac and ready for configuration as a HUI control surface and analogue automation platform.

The DLC connect app icon in the menu bar will display the connectivity status, with a black icon indicating DLC is connected, and a greyed out icon indicating DLC is disconnected.



Connected

Disconnected

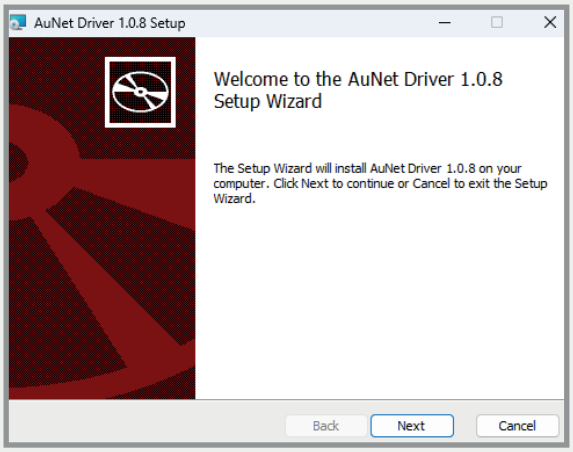
Windows Installation

Physical Connection

To physically connect DLC to your computer, plug a standard CAT5 Ethernet cable into the port located above the DLC Network sticker on the rear of the console, and the other end into your computer (or router/switch).

AuNet App

To achieve communication between DLC and the PC, the AuNet app is needed. This creates the necessary MIDI ports for your DAW to connect to DLC. This can be downloaded from our website here.



Once downloaded, double click on the file to begin the installation process.

To enable the application to boot upon user login:
Find the AuNet app in the Start Menu, right click on it and create a shortcut.

Right click on the shortcut and copy it.

Press Windows Key + R, and type “shell:common startup”, this will open a folder containing the startup apps for all users of the computer.

Right click inside the window and paste the AuNet app shortcut. AuNet app will now open upon user login.

Networking Theory

On a network, devices must have a unique "address" to ensure they can communicate, this is known as an IP address. You will need to decide whether your network will automatically assign IP addresses to connected devices, or if you will manually assign them yourself.

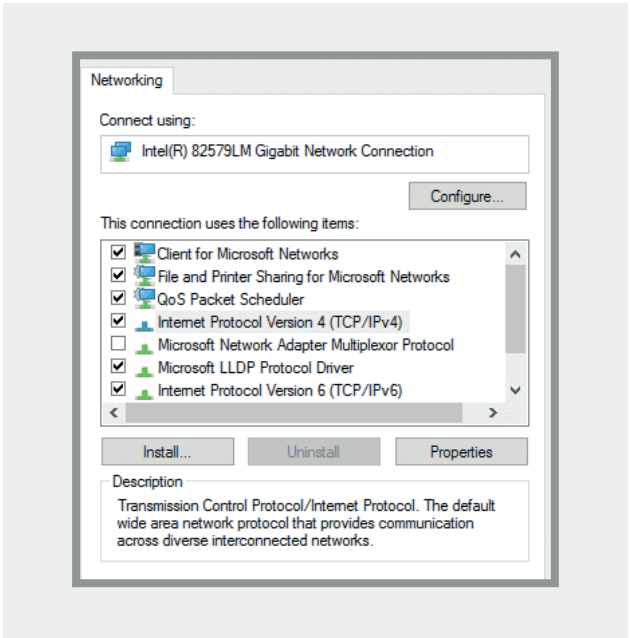
If connecting DLC to your computer directly, you will most likely want to set the IP addresses manually, however if connecting DLC to a larger network, typically the IP address will be automatically assigned using "DHCP" (you will commonly have used this when connecting to things like WiFi networks).

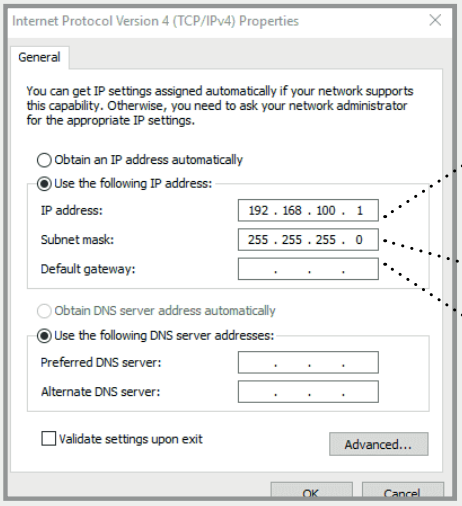
Setting Manual IP Addresses

If you aren't using DHCP to automatically assign IP addresses, you must manually set them to ensure the two devices are networked correctly.

Control Panel > Network and Internet > Network and Sharing Centre > Change Adapter Settings

In this window, right click on Ethernet and select Properties. From the list of connections, find IPv4 and click properties. Here you can change the IP address.





Example:

Choose a unique IP address by changing 'X' to a number between 1-254, the number must be different on the DLC module and the computer:

192 . 168 . 100 . X

Set the Subnet Mask to: 255 . 255 . 255 . 0

We recommend leaving the Default Gateway settings blank.

On the DLC Module, press the Setup Button. The OLED displays will show the first page of the console setup. Using the Page Keys underneath the first encoder, page to the right and ensure that Use DHCP is set to NO.

Page right again to reach the IP address screen and use the encoders to set the IP address to:

192 . 168 . 100 . X
(ensuring that 'X' is different to that of the computer).

On the following pages, set the Subnet Mask to:
255 . 255 . 255 . 0

Set the Port to: 1212

Press the Setup Button again to exit setup and save these settings.

Setting Automatic IP Address (using DHCP)

If you have connected DLC to a network using DHCP to automatically assign IP addresses, then you will need to set DLC to use DHCP.

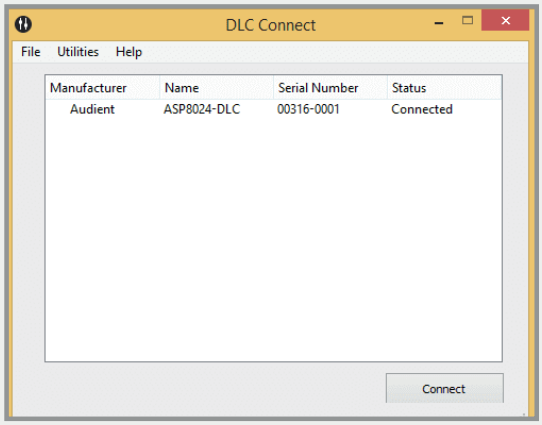
On the second page of the Setup Menu, ensure that the Use DHCP option is set to YES, then press the Setup Button again to exit setup and save these settings. Make sure your PC is configured to use DHCP in the PC Network settings (by default your PC should be set to use DHCP).

DLC Connect

Once network settings have been finalised, reboot the console and the computer. On rebooting, DLC Connect should open and the console should be listed. Highlight the console within the app, and click the connect button.

Your DLC module should now be connected to your PC and ready for configuration as a HUI control surface and analogue automation platform.

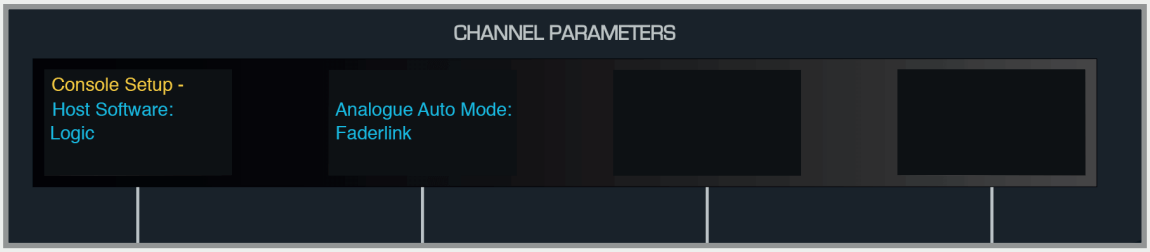
The DLC connect app icon in the System Tray will display the connectivity status, with a black icon indicating DLC is connected, and a greyed out icon indicating DLC is disconnected.



Connected

Disconnected

Faderlink Installation



Faderlink is a simple and elegant solution to the problem of integrating analogue automation within Digital Audio Workstation projects, without the need for a dedicated console computer. Faderlink presents you with a Fader and Cut switch which can be automated in the same way as any other plugin parameter in your workstation.

1 Download the Faderlink plugin installer from our website: audient.com/products/consoles/ASP8024-HE/downloads

2 Close your Digital Audio Workstation applications.

3 Double click on the downloaded file to open the installer, then follow the instructions.

4 Once installed, relaunch your DAW and Faderlink should appear in the list of plugins.

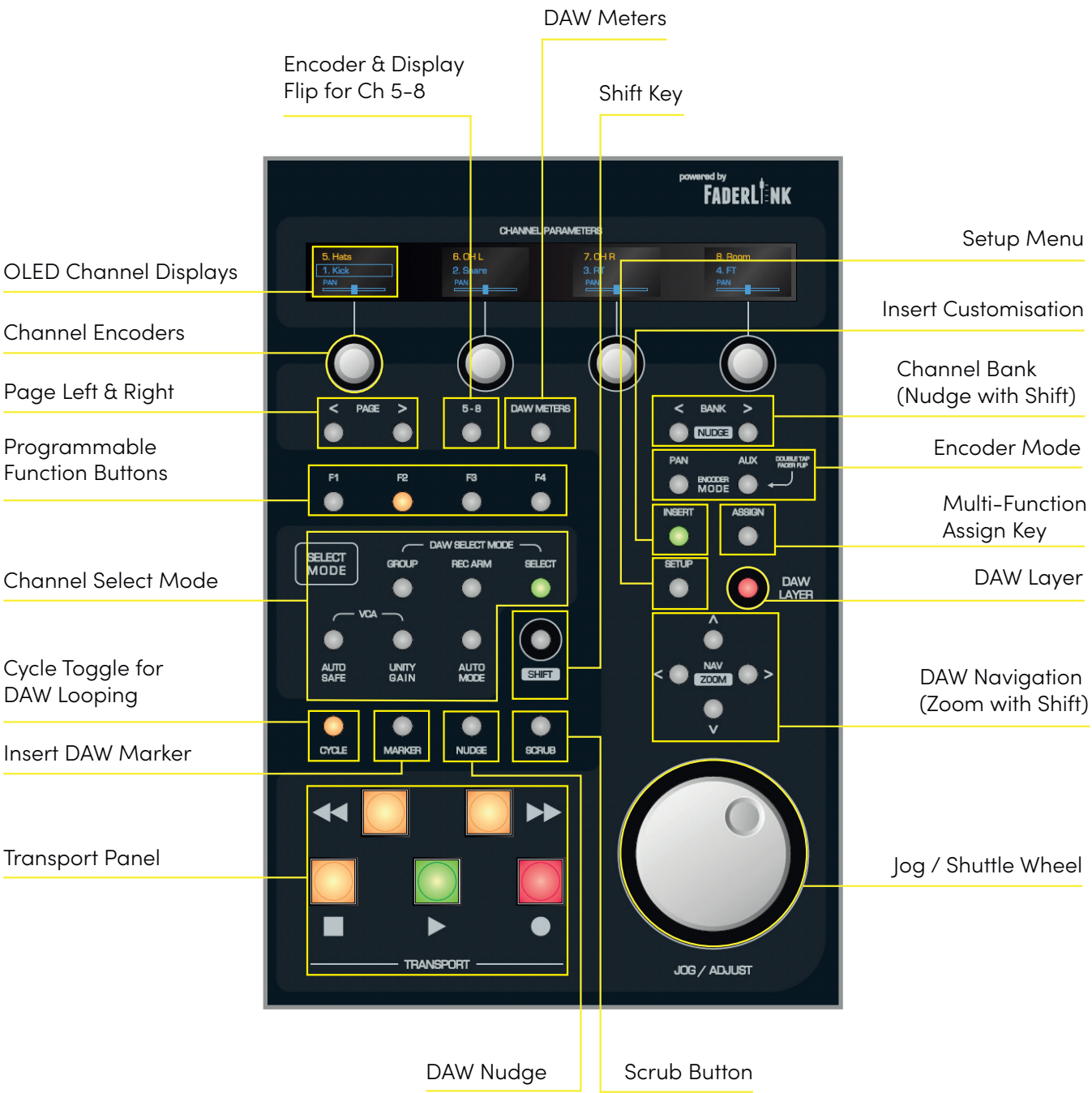
On the Console

The DLC module must have it's Analogue Automation Mode set to Faderlink. Press the Setup Button, then use the second encoder to select Faderlink as the Analogue Automation Mode. Press the Setup Button again to save the settings.

DLC Operation

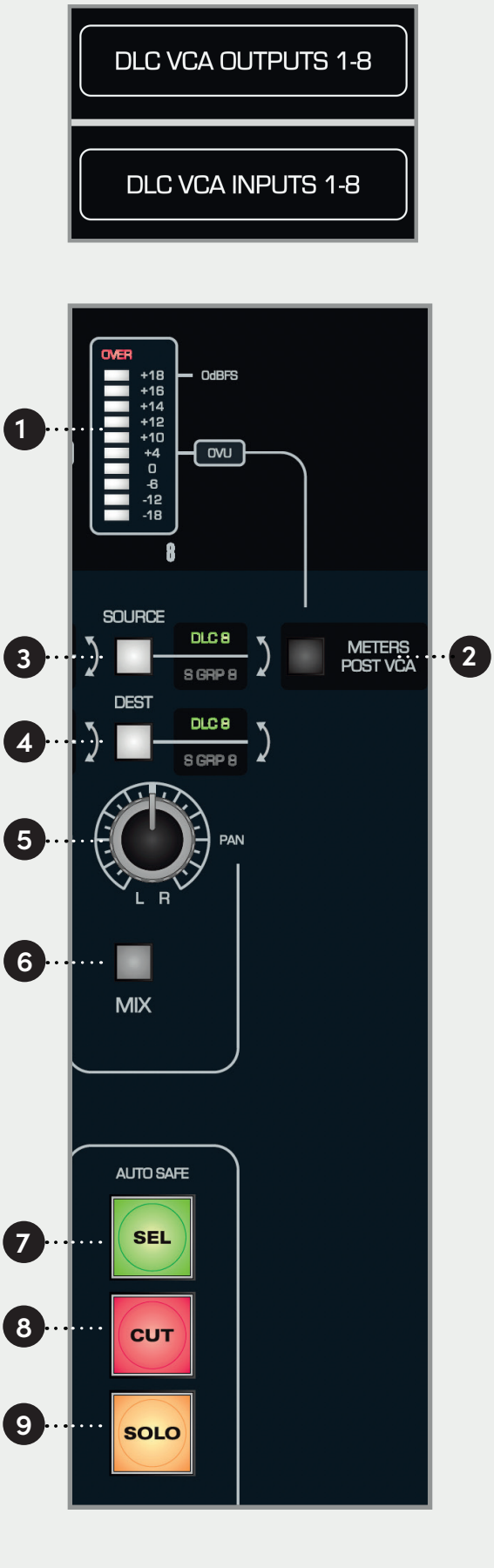
Control Surface Interface

The control surface functions operate differently depending on your choice of DAW. For instructions on how to use the control features within your workstation, please refer to the DAW specific control surface manuals found online at: audient.com/products/consoles/ASP8024-HE/downloads



Audio Routing

DLC has eight line inputs and outputs, labelled the DLC VCA Inputs/Outputs. These are accessible on the rear of the console on DB25 connectors (location depends on console configuration).



1 METER. Displays the level of the signal coming from the source, unless the DAW Meters switch on the control surface is engaged.

2 METERS POST VCA. Switches the meters between Pre and Post fader.

3 SOURCE. The audio can be sourced from the DLC VCA Inputs or the eight Sub Groups on the console. If S GRP is selected, it breaks the signal to that Sub Group, unless it is also selected as the destination on that channel.

4 DEST. The eight DLC channels can be assigned to the DLC VCA Outputs or the Sub Groups. If S GRP is engaged, it will replace all other channels routed to the Sub Group, unless the Source button is also set to S GRP.

5 PAN. Pans the audio in the mix.

6 MIX. Assign the output of the DLC channel to the Mix Bus. You can therefore route the line level sources directly to mix, effectively adding a further eight channels to the console.

7 SELECT. Selects the channel, for use with Unity and Auto Safe Mode, as well as in the DAW Layer.

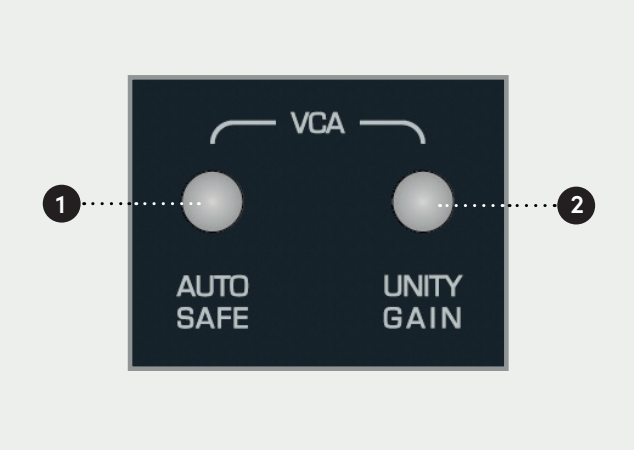
8 CUT. Cuts the channel, can be automated in the Analogue Layer, and used in the DAW Layer.

9 SOLO. Solos the channel in Analogue and DAW Layers. This cannot be automated.

To insert the DLC channel into a Sub Group and automate it's volume, ensure that both the Source and Destination buttons are switched to S GRP.

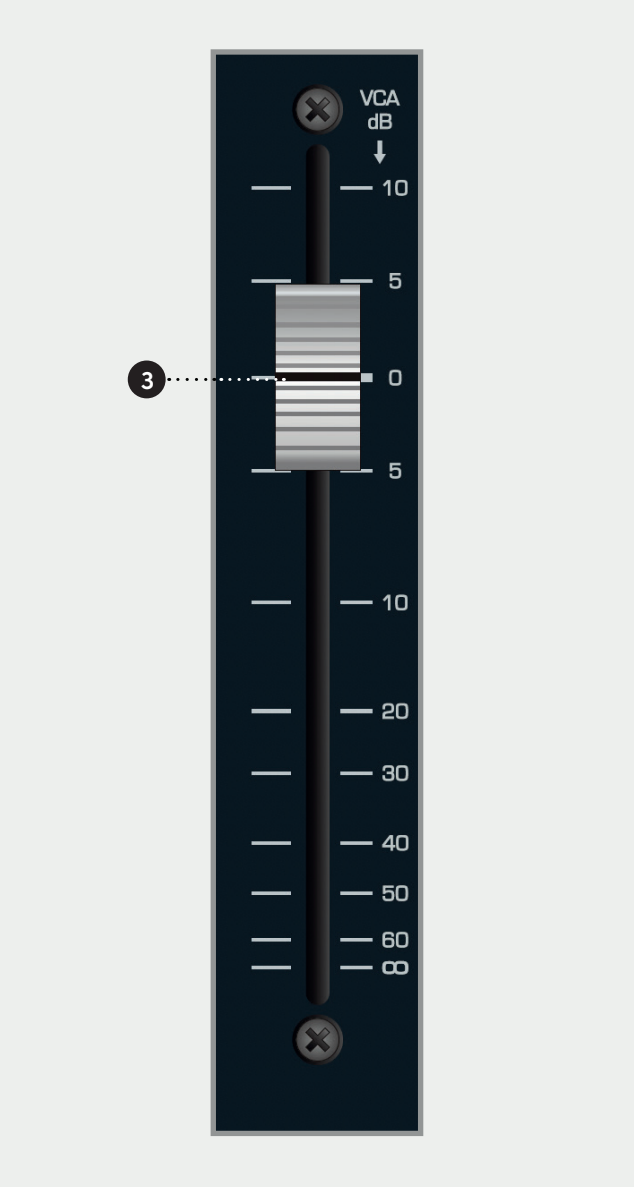
VCA Functionality

There are two buttons on the right section of DLC that are applicable in the Analogue Layer when using analogue automation.



1 AUTO SAFE Press Auto Safe then engage the Select button on any channel that you want to completely isolate from automation control. Ideal for trying out a new ride before recording a pass of automation.

2 UNITY Press Unity then engage the select button on any channel that you want to fix at unity gain (0dB).



3 VCA FADER This fader is not directly in the audio path of the channel, but rather acts as a control fader, sending D.C. control voltage changes to the VCAs, which provides attenuation, mute and +10 dB of gain "in-hand" above unity for the analogue audio path.

The VCA analogue automation functionality is particularly useful for automating the volume of a signal post analogue dynamics processing.

Faderlink Interface

1 CHANNEL CUT BUTTON. Cuts the audio for this channel. This mimics the Cut Button on the selected channel on the DLC module.

2 CHANNEL FADER. Controls the volume of the VCA fader, operating between -inf and +10dB. This fader mimics the VCA fader on the selected channel on the DLC module.

3 CHANNEL SELECTION MENU. Select the DLC channel that you want to save the channel automation for. this will appear on the corresponding channel on the DLC OLED displays.

4 DEVICE MENU. Select the appropriate device from the menu.

5 MIDI IN MENU*. Select the MIDI Input for Automation.

6 MIDI OUT MENU*. Select the MIDI Output for Automation.

7 SCRIBBLE STRIP Allows you to name the channel, this will appear on the corresponding channel on the DLC OLED displays.

*Set these to ASP8024-DLC Automation.

Analogue Automation

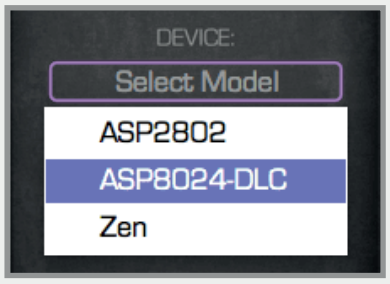
For analogue automation functionality, first ensure the DLC has the Analogue Automation Mode set to Faderlink in the first page of the Setup Menu, then follow these instructions for each DLC channel you want to automate:

1 Set the desired audio routing using the Source and Dest buttons.

2 In your DAW, add a Faderlink Plugin instance to any track. This can be a track with or without regions present. If automating a group from your DAW or an individual track, it would make sense to put the Faderlink plugin on those tracks to keep things organised. Alternatively a single track could be created with eight instances of Faderlink, so that all automation data is contained on the same track.

3 Set the Device to ASP8024-DLC and ensure that the MIDI In and Out have automatically set to ASP8024-DLC Automation.

4 Set the channel number to the VCA fader you want to control on the DLC module, and name the channel by double clicking on the Scribble Strip and typing the name.



4 Set the channel number to the VCA fader you want to control on the DLC module, and name the channel by double clicking on the Scribble Strip and typing the name.

5 Ensure that Auto Safe and Unity are disengaged on the channel.

6 For the DAW track that contains the Faderlink plugin(s), set the automation mode appropriately (e.g. Touch, Latch or Write).

7 Begin playback and ride the fader (and cut) to write the automation.

Firmware & Support

When updates are released for your console to improve control surface workflow, bug fixes and add new features, you may need to update the console firmware. Firmware files are packaged as part of the DLC Connect App download, so download the latest version from our website and follow the simple instructions provided.

By registering your console, you can be notified via email when new updates are made available. Please visit the Registration Section of the main ASP8024-HE manual for more information.
If you are experiencing any issues, please contact our support team via email at:

support@audient.com

Audient Ltd
Aspect House
Herriard
Hampshire
RG25 2PN
United Kingdom

Tel: +44 (0) 1256 381944
audient.com

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