

Blackstar[®]

AMPLIFICATION

CAB RIG



SIMULATOR

For

S T. J A M E S

Owner's Manual

the sound in your head

Introduction

CabRig, available on all St. James series amps, is Blackstar's next-generation DSP speaker simulator and begets a fundamental shift in the accessibility of professional recording and performing. CabRig awards budding musicians the ability to access previously unattainable technology, that has long been reserved for professional sound engineers and producers. Leading edge advancements in speaker cabinet and microphone simulation will allow any player to achieve unparalleled quality in their live sound and recorded music.

Our new advanced algorithm can simulate a speaker, cabinet and room with incredible detail and with effectively zero latency, no phase mismatch and with infinitely more flexibility than a snapshot IR. Blackstar's unrelenting devotion to innovation and evolution of design has led to ground-breaking developments in DSP engineering that bestow the ability to strip previously inextricable elements of a recording into constituent parts. As these parts are segmented, they undergo optimisation to reduce their size, without a loss of audio quality. This allows full and faultless speaker cabinet, microphone and room recreations to be loaded onto, and run directly from, the amplifier.

Blackstar's Architect software provides access and in-depth control over every aspect of CabRig, granting a vast collection of gear that, in the real world, can only be found in professional recording environments. Over 250 combinations of cabinets and microphones allow the user to inhabit the role of a sound engineer and get outstanding results every time, without any of the hassle.

With the sheer quantity of sonic options available from CabRig, it can be overwhelming. This handbook will simplify and explain the fundamentals of achieving the sound in your head using CabRig. CabRig lets you fall down the rabbit hole only as deep as you'd like to. Spend hours fine-tuning the perfect set-up or get a great tone quick using the Blackstar Presets. The choice is yours.

System Requirements

To run Architect, your computer should meet (or exceed) the following hardware requirements:

Windows requirements:

64 bit Microsoft® Windows® Operating System
Intel® Pentium® 4 2GHz or faster (or equivalent)
1GB RAM or greater
1GB free HDD space
Minimum display resolution of 1366x768
Internet connection for accessing the Online Community

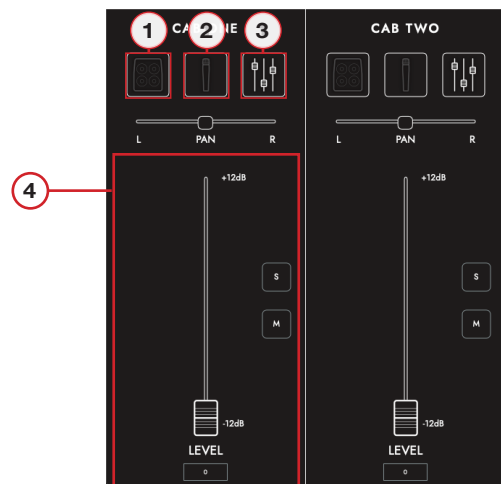
Apple® Mac requirements:

Mac OS® X 10.9 or later
1GB RAM or greater
1GB free HDD space
Minimum display resolution of 1366x768
Internet connection for accessing the Online Community
Systems that do not meet the required specification may still be capable of running Architect, but these systems will not be actively supported by Blackstar.

User Interface – CabRig Layout

To access edit CabRig settings you will need Blackstar’s Architect software. Download Architect from the Blackstar website: www.blackstaramps.com/architect. You can also download the Architect manual here: www.blackstaramps.com/wp-content/uploads/2021/06/architect-v1.0.0-handbook.pdf

Two Cab Channel Strips

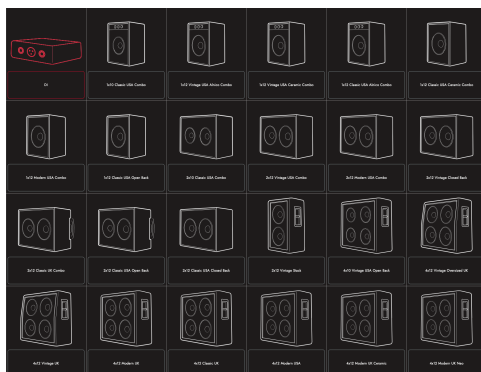


The Cab Channel strips allow you to craft and control your virtual cabinets. CabRig gives you the ability to run two separate cabinet, microphone and EQ combinations at once.

1. Cabinet Selection

Select your virtual cabinet using the Cabinet Selection panel. Choose from 23 distinct speaker cabinets or select DI (Direct Injection) for the direct power amp output.

NOTE: For use with 3rd party IR (Impulse Response) loaders, select the DI option.



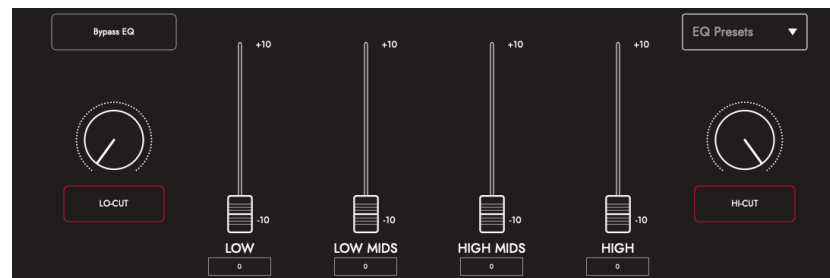
1. Microphone Selection

Mic up your virtual cabinet with a choice of 6 industry standard microphones. Toggle the axis of your microphone choice for a different tonal flavour. In general, OFF AXIS will darken your tone and shift the mid-range character.

Microphone	Character
57 - Dynamic	Bright and cutting, with controlled lows. A classic microphone choice for recording guitar cabinets. Use this microphone off-axis for a less sharp, mid-focussed tone. Typically paired with a ribbon microphone for a balanced sound.
421 - Dynamic	Aggressive and tight. Use this microphone for an upfront sound or off-axis for a more mellow sound. Pair with a thicker microphone for a full bodied tone.
67 - Condenser	Balanced with an extended top end. Off-axis this microphone gives a similar tone to a ribbon, but with a controlled low end.
414 - Condenser	Rich and bold. An extended top and bottom end make this microphone pair perfectly with mid-focussed microphones.
121 - Ribbon	Thick and warm. A great choice for a vintage sound. Pair with a brighter microphone for more cut in a mix.
160 - Ribbon	Punchy mids with smooth highs. Use this microphone for a more controlled ribbon sound. Pair with a brighter microphone for more bite.

3. EQ

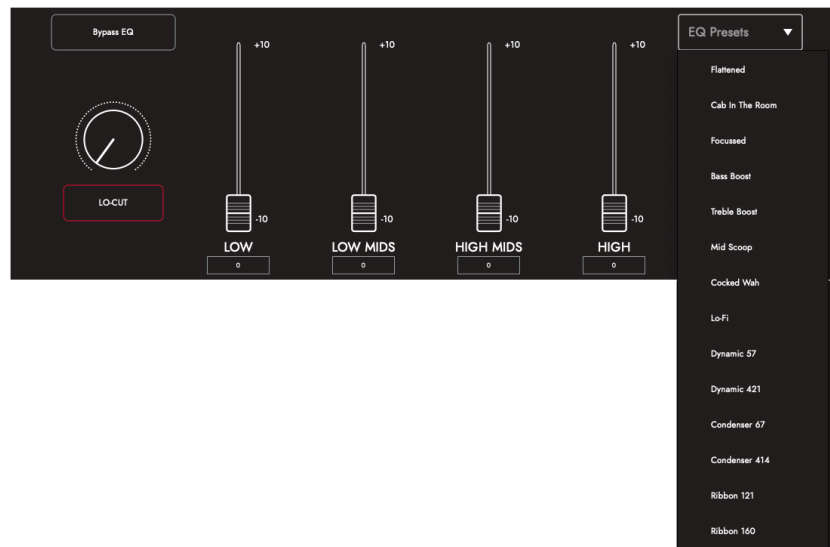
Select your virtual cabinet using the Cabinet Selection panel. Choose from 23 distinct speaker cabinets or select DI (Direct Injection) for the direct power amp output.



The channel EQs provide the ability to shape the tone of each of your cab and mic combinations individually. The EQ can be bypassed for a quick comparison.

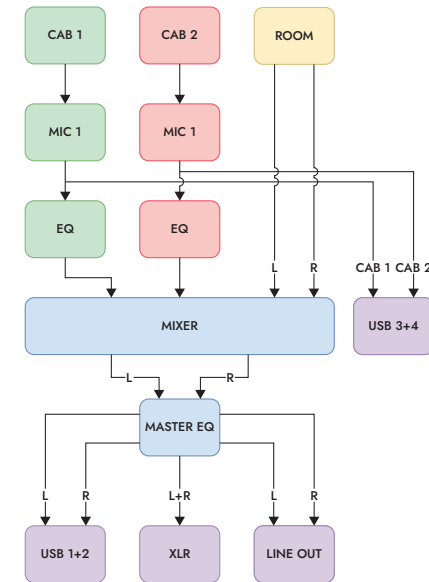
- **LOW-CUT:** Controls a 2nd order high pass filter
- **LOW:** Controls a low shelf filter at 120Hz +/- 10dB
- **LOW MIDS:** Controls a peak filter at 400Hz +/- 10dB
- **HIGH MIDS:** Controls a peak filter at 1KHz +/- 10dB
- **HIGH:** Controls a high shelf filter at 4KHz +/- 10dB
- **HI-CUT:** Controls a 2nd order low pass filter

TIP: Choose one of the EQ Presets from the drop-down box (shown below) for a good place to start. This is like having your own sound engineer, getting you to the sound you want quickly. The EQ Presets also provide a great platform for experimentation should you wish to tweak your tone further.

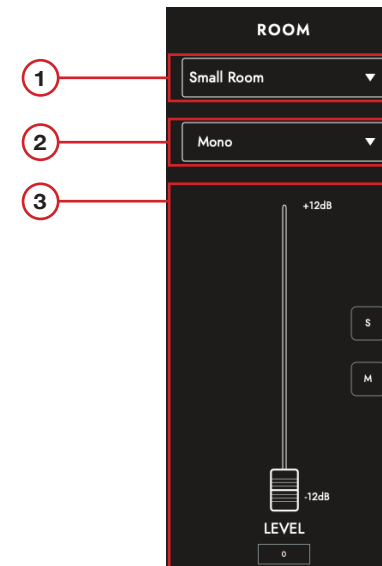


Mix Controls

Continuously pan each of your cab and mic selections individually with the PAN slider and balance the levels of your cabs using the channel faders. Use the solo button to isolate one of your cabs, or the mute button to silence it.

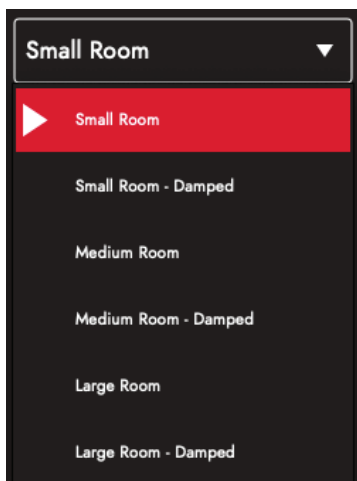


Room



1. Room Selection

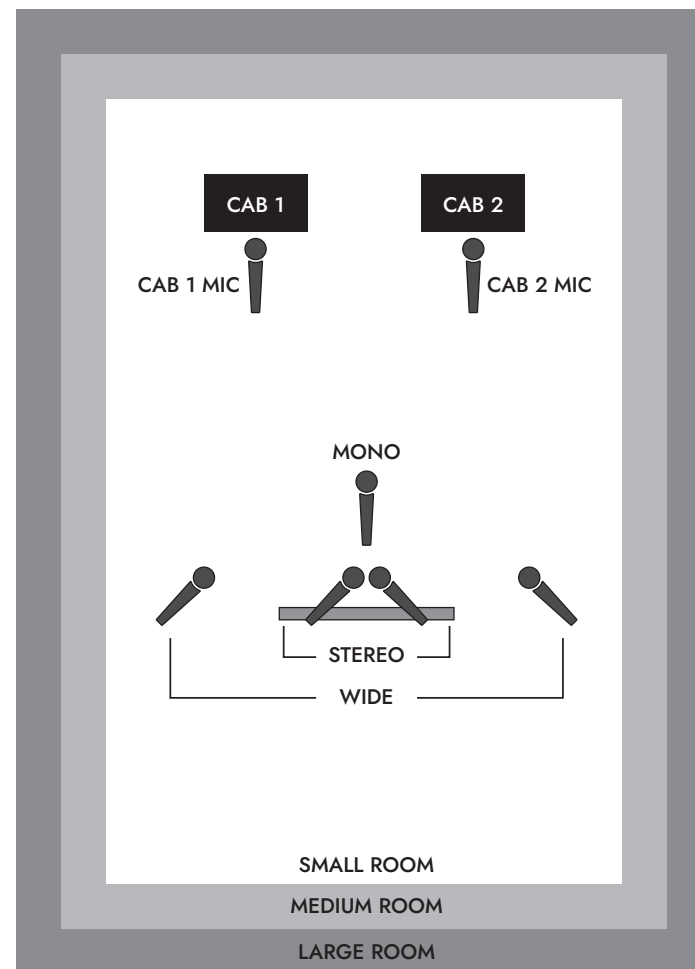
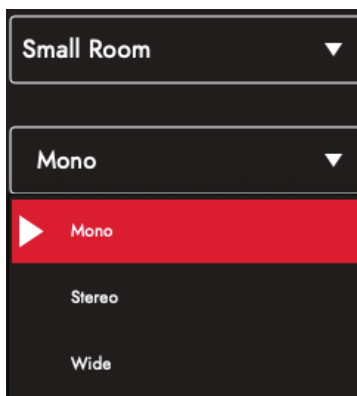
Support your cab and mic selection with room ambience. Select the type of room using the drop-down menu. Each room type has a “Damped” option; selecting this will result in a shorter and more refined sound.



2. Width Selection

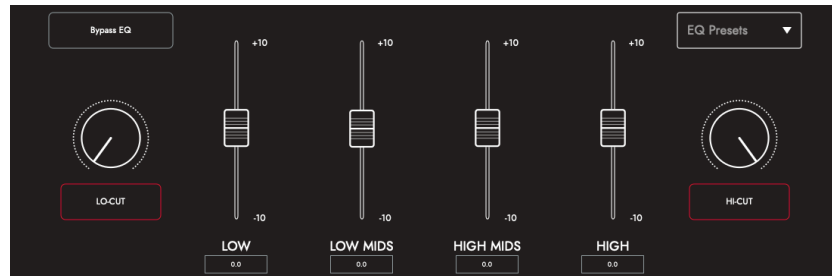
Adjust the stereo width of your room choice using this drop-down. These are emulations of three different micing techniques (shown below): mono mic, XY pair and spaced pair.

NOTE: The “Wide” setting will enhance and widen the stereo image, resulting in an expansive stereo experience.



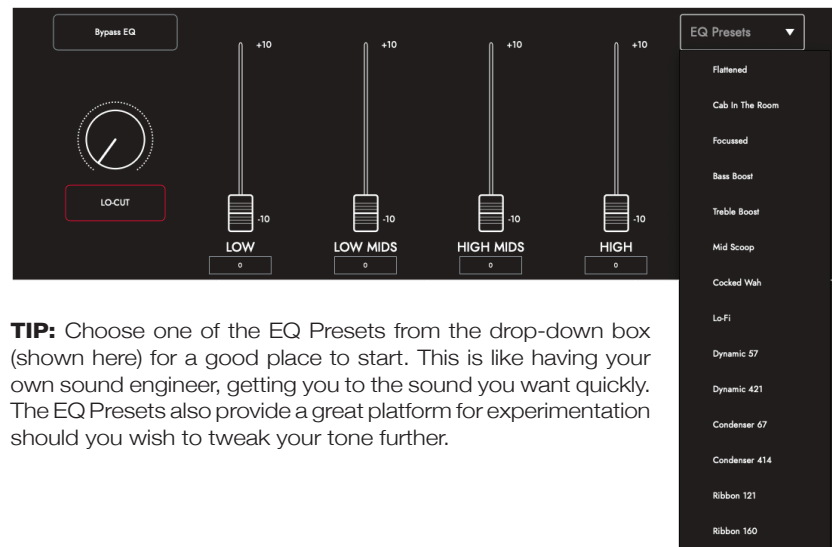
Master

1. EQ



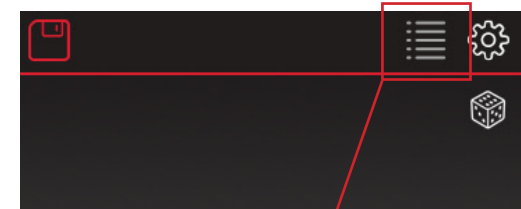
The Master EQ provide the ability to shape the overall tone of your CabRig configuration. The EQ can be bypassed for a quick comparison.

- **LOW-CUT:** Controls a 2nd order high pass filter
- **LOW:** Controls a low shelf filter at 120Hz +/- 10dB
- **LOW MIDS:** Controls a peak filter at 400Hz +/- 10dB
- **HIGH MIDS:** Controls a peak filter at 1KHz +/- 10dB
- **HIGH:** Controls a high shelf filter at 4KHz +/- 10dB
- **HI-CUT:** Controls a 2nd order low pass filter

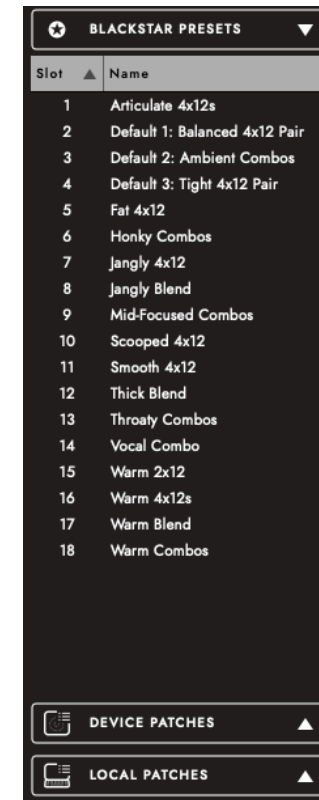


TIP: Choose one of the EQ Presets from the drop-down box (shown here) for a good place to start. This is like having your own sound engineer, getting you to the sound you want quickly. The EQ Presets also provide a great platform for experimentation should you wish to tweak your tone further.

Patches and Presets



Click here to show/hide the patches library.



Device (St. James) Patches

These are the patches that are currently loaded on your amplifier, selectable via the CabRig switch. Press the save button and "Save Patch to Device" to save your current CabRig settings to one of your "Device Patches".

Blackstar Presets

The “Blackstar Presets” are a collection of patches created by the team at Blackstar. These presets come pre-installed when you install Blackstar Architect. The Blackstar Presets are a great place to start if you are new to CabRig. Find a preset that suits your tone and adjust the CabRig settings from there.

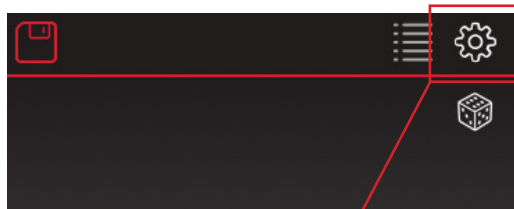
Local Patches

“Local Patches” are saved on your computer (Documents – Blackstar – Saved Patches), instead of loaded onto your amp.

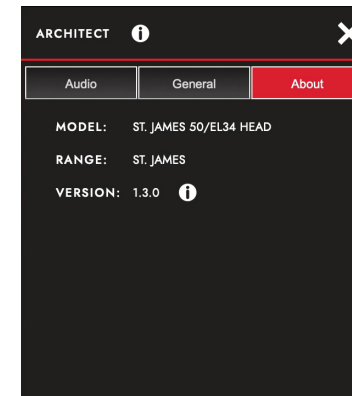
To save a local patch, click the save button and “Save Local Patch”. You can save as many “Local Patches” as you like and these can be recalled at any point by double clicking on the patch in the patches panel or right clicking on the patch and selecting “Load Patch”.

TIP: To organise your “Local Patches” in the patch panel go to “Documents – Blackstar – Saved Patches” and create your own folders. Simply drag your patches into the folders you have created and your folders will appear in the patch panel.

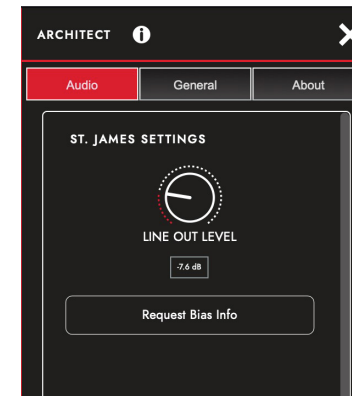
Settings Panel



Click the gear icon to open the settings panel.



Information about your amplifier MODEL, product RANGE and firmware VERSION will be displayed here.



Check the bias of your amplifier by clicking “Request Bias Info”. Follow the instructions on screen to properly check the bias of your amplifier.

If your amplifier does not appear to be biased correctly, please visit the Blackstar support page on our website: www.blackstaramps.com/support/

WARNING: Do not attempt to adjust the bias of your amplifier yourself. There are no user serviceable parts in this amplifier. Refer all servicing to qualified service personnel.

Audio Outputs/Rear Panel

CabRig SPEAKER SIMULATED OUTPUT - MONO BALANCED XLR D.I. OUTPUT socket

This output is for using an industry standard 3 pin XLR cable for connection to a recording device, stage box or mixing desk. This provides a low noise, low impedance, quality connection for recording or live use.

The signal will be the actual speaker output signal (including power valves and output transformer), that has then been passed through the CabRig technology, to apply the authentic feel and response of a 'mic'd up guitar speaker cabinet in a room'. The actual sound is dependent on the CabRig switch setting and the more in-depth settings within the CabRig software.

NOTE: The XLR output is a summed mono mix of the main stereo CabRig output. CabRig is derived from post-power amp and so the Master control will affect the signal level sent from this output.

STEREO JACK LINE OUT /PHONES socket

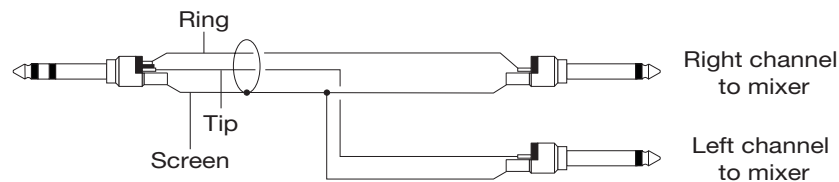
This ¼" TRS jack socket provides a stereo connection to connect to a recording device or mixing desk. Always use a good quality TRS (stereo) type lead or TRS to 2 x TS (mono) (see diagram below).

It can also connect to headphones therefore allowing silent practice with the STBY switch set to '0'.

Again, the signal will be derived from the actual speaker output via the CabRig technology, providing a high quality authentic 'mic'd cab' response. The actual sound is dependent on the CabRig switch setting and the more in-depth settings within the CabRig software app.

NOTE: This output is the full stereo CabRig mix. CabRig is derived from post-power amp and so the Master control will affect the signal level sent from this output.

When using headphones, please take into consideration that loud sounds over extended periods can result in hearing damage, both short term, long term and permanent. We spend a long time making our amps sound good, so we'd prefer that you have a long life of good hearing to be able to enjoy them.



USB AUDIO Socket

This B-type USB socket is for the connection to a computer via a suitable lead (not supplied).

This is for USB digital audio output and for connecting to the CabRig software. Again, the signal for the digital audio will be derived from the actual speaker output via the CabRig technology; providing a high-quality authentic mic'd cab response. The actual sound is dependent on the CabRig switch setting and the more in depth settings within the CabRig software.

For USB audio, standard audio drivers are used to connect the amplifier to a PC, Mac or other applicable recording device. No specific drivers are required. For a guide on low latency USB recording visit: www.blackstaramps.com/usbrecording

The audio output via USB from your amplifier directly to your computer is carried across four independent, simultaneous channels:

Channel 1: Stereo emulated, left channel – The fully processed guitar sound, with CabRig speaker cabinet emulation. Contains the left channel of the main CabRig output.

Channel 2: Stereo emulated, right channel - The fully processed guitar sound, with CabRig speaker cabinet emulation. Contains the right channel of the main CabRig output.

Channel 3: This channel contains the raw cab and mic selection of CAB 1 without EQ, mix controls or room. The signal is taken straight from the microphone.

Channel 4: This channel contains the raw cab and mic selection of CAB 2 without EQ, mix controls or room. The signal is taken straight from the microphone.

These audio streams can be recorded simultaneously within your chosen recording software/DAW.

TIP: To record a truly Stereo-effected sound – which is faithfully recreated when playing back your recorded tracks on any stereo speakers – pan the stereo emulated left channel 100% left in the mix, and pan the right channel 100% right.

TIP: To record a DI track alongside a single Cab with a stereo room, mute the DI channel inside of CabRig. Use USB audio channels 1 and 2 for your processed cab and channel 3 or 4 for your DI signal.

NOTE: Always connect the amplifier via a main USB port; often found on the rear of the computer or side of the laptop. The amplifier will appear as an audio capture device within recording software.

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For the latest information go to: www.blackstaramps.com

Whilst the information contained herein is correct at the time of publication, due to our policy of constant improvement and development, Blackstar Amplification Ltd reserves the right to alter specifications without prior notice.