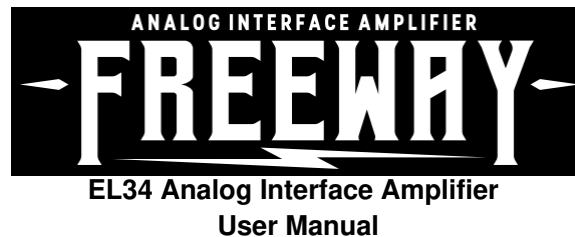




FREEWAY EL34 Analog Interface Amplifier User Manual

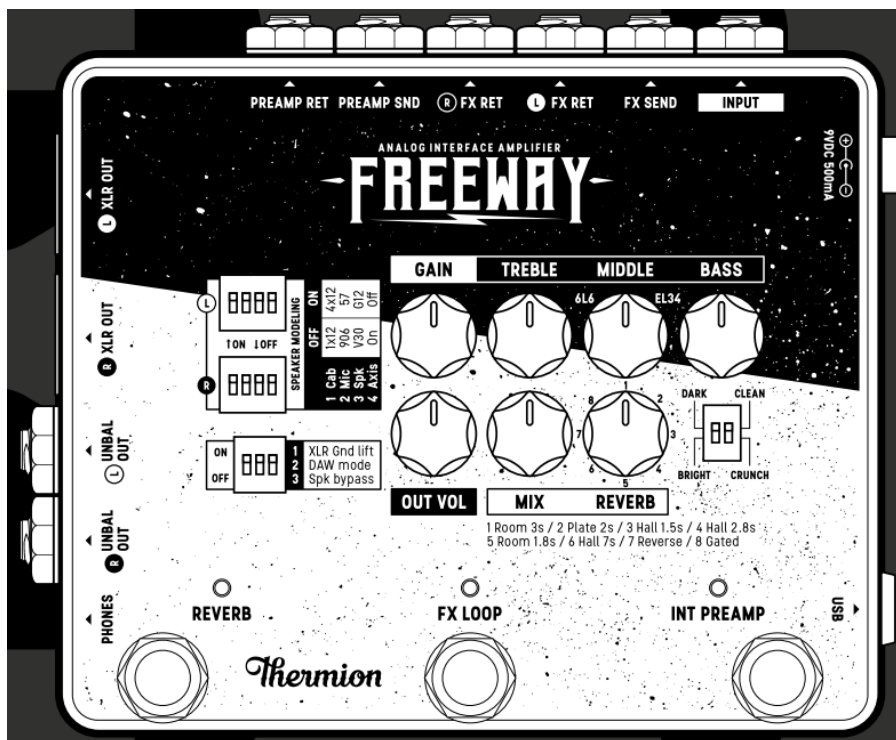
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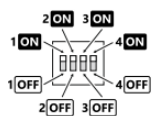
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FREEWAY EL34 Analog Interface Amplifier

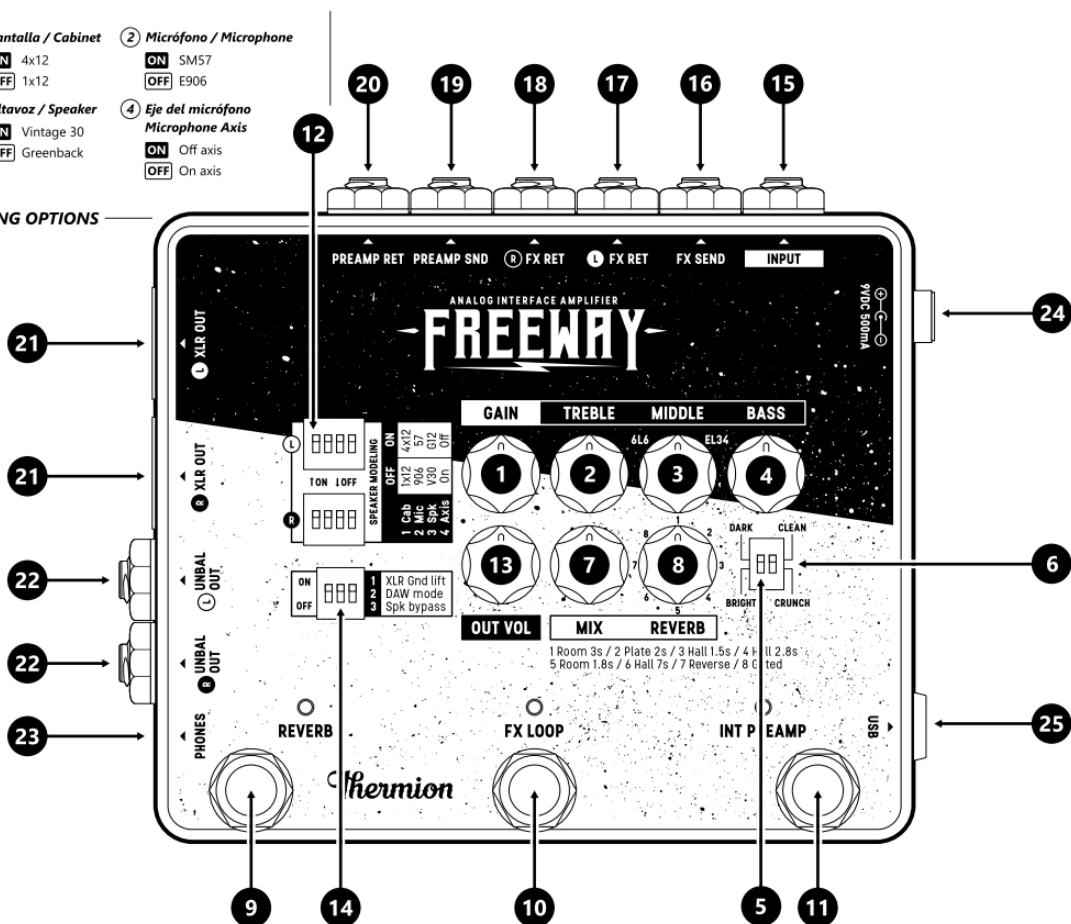


CONTROLES



- 1 Pantalla / Cabinet
 - ON 4x12
 - OFF 1x12
- 2 Micrófono / Microphone
 - ON SM57
 - OFF E906
- 3 Altavoz / Speaker
 - ON Vintage 30
 - OFF Greenback
- 4 Eje del micrófono / Microphone Axis
 - ON Off axis
 - OFF On axis

ANALOG SPEAKER MODELING OPTIONS



Warning

- Read carefully this manual before use and keep these instructions. Heed all warnings.
- Donotusethis apparatus near water.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

- Clean only with dry cloth.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the device.
- Unplug this apparatus during lightning storms or when unused for long periods off time.
- No user serviceable parts inside. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate nor molly, or has been dropped.
- WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
- This product is classified as Waste Electrical and Electronic Equipment (WEEE) in the European Union and must not be discarded with household waste.
- Refer to labels on the unit, including bottom cover, or other markings and pertinent information.

Warranty

Triode Electronic Engineering S.L. warrants this product to be free from defects in materials and workmanship under normal use and service.

Thermion liability under this warranty is limited to repairing or replacing defective materials that show evidence of defect, provided the product is returned to Thermion with return authorization, where all parts and labor will be covered up to a period of two years. The company shall not be liable for any consequential damage as a result of the product's use in any circuit or assembly.

Proof-of-purchase is considered to be the burden of the consumer.

Thermion reserves the right to make changes in design, or make additions to, or improvements upon this product without incurring any obligation to install the same on products previously manufactured.

The consumer forfeits the benefits of this warranty if the product's main assembly is opened and tampered with by anyone other than a certified Term ion technician or, if the product is used with voltages outside of the range suggested by the manufacturer.

INTRODUCTION

Thermion Freeway is a complete analog preamplifier, emulation system and USB interface with wide routing possibilities. It combines an analog preamp, analog speaker modeling engine, digital stereo reverb with analog mixing and filtering, stereo effects loop and full stereo USB inputs and outputs. We have taken the best of each state-of-the- art technology to offer the best of analog tones along with the greatest portability.

USER TIPS

- Play anywhere only with your pedal board going direct to a mixer, FRFR monitors or PA system sending your signal through the XLR outputs.
- Convert your pedal board into a fully capable guitar studio with many tonal possibilities using record mode, just using a USB C cable and your studio monitors or a pair of head phones.
- Play over backing tracks from your computer using a USB cable and live mode.
- Use headphones to rehearse at home silently with your pedal board.
- Get the most dynamic and realistic speaker emulation with our 'Analog Speaker Modeling' system. Use the 8 DIP switches and sweep the mids to your sweet spot. Adapt the emulation of each channel to your taste.
- Use Freeway as a preamp, going into a guitar power amp and speaker cab or the return jack of a combo amplifier using the emulation bypass.
- Combine Freeway with other speaker emulation devices or programs using the emulation bypass.
- Take advantage of the stereo amplitude of your effects thanks to the effects loop and reverb of Freeway.

- The 'Preamp Loop' allows you to use an external preamp as a second channel. Connect the 'Preamp Send' and 'Preamp Return' jacks to your favorite preamp. When you deactivate the internal preamp, it will be replaced by the one you connect to the Preamp Loop.

CONTROLS

Preamp

1. Gain: Controls the level and saturation of the internal preamp.
2. Treble: Treble frequencies level of the preamp.
3. Middle: frequencies level of the preamp. Up to the midpoint of the control, you'll have the sound of 6L6 tubes in the power amp. From the middle point, you will have the sound of EL34 tubes.
4. Bass: Bass frequencies level of the preamp.
5. Bright/Dark: Controls the higher frequencies of the preamp of Freeway. We recommend adjusting this brightness control according to the pedals that you connect to the input of Freeway.
 - Dark: Low brightness level.
 - Bright: High brightness level.
6. Clean/Crunch: Controls the maximum gain of the preamp of Freeway.
 - Clean: The preamp does not saturate, creating clean or just slightly break up tones.
 - Crunch: The preamp saturates from slightly break up tones to mid-gain tones.

Stereo Reverb

7. Reverb Mix: Amount of reverb that is added to the signal. Reverb is added after the effects loop.
8. Stereo reverb type: Choose between eight types of reverb.
 - Chapel reverb (3 sec.)
 - Plate reverb (2 sec.)
 - Small hall reverb (1.5 sec.)
 - Big hall reverb (2.8 sec.)
 - Room reverb (1.8 sec.)
 - Church reverb (7 sec.)
 - Reverse reverb (1.2 sec.)
 - Gated reverb (0.8 sec.)

Footswitches

9. Reverb: Turn internal Stereo reverb on or off.
10. FX Loop: Turn the Stereo effects loop on or off.
11. Preamp: Turn the Freeway preamp on or off. When the Freeway preamp is disconnected, the preamp loop is activated. Thus, it is possible to switch between the internal Freeway preamp and another external preamp.

Analog Speaker Modeling

Recreates the dynamic and tonal behavior of a real microphoned amplifier cabinet using fully analog circuitry.

12. L/R Analog speaker Modeling:
 - CAB: Models a 1×12 cabinet or a 4×12 cabinet.
 - MIC: Models a SM57 or e906 microphone.
 - SPK: Models a Celestino Greenback or Celestino V30 Speaker.
 - AXIS: Models a microphone placed 'on edge' or 'off edge' towards the speaker.

Out Controls

13. Output volume: Volume of XLR, headphone and jack outputs.

14. output controls

- Emulation Bypass: Bypasses the Analog Speaker Modelling, so you can use an external emulation system or connect into a power amp and speaker or the return jack of an amplifier.
- XLR GND Lift: Eliminates the ground connection through the XLR outputs, in order to avoid ground loops while connecting Freeway into a mixer or interface.
- Modo DAW: DAW mode eliminates the guitar signal from the XLR, jack and headphone outs while keeping it to the USB outs. This way you can use Freeway as a recording interface, processing the guitar signal inside a DAW track, and then route it through headphones or monitors connected to the XLR outs of Freeway.

Upper Connectors

15. Input: Amplifier input. Connect your guitar here or the effects you want to be in front of it, like overdrives, fuzz pedals or wah-wahs .

FXLOOP

16. FX Send: Effects loop signal send.

17. FX Return L: Left return of the effects loop. Use it with mono effects or the left signal of a stereo effect.

18. FX Return R: Return of the right signal of a stereo effect.

PREAMP LOOP

Connect a preamp here to use it as a second Freeway channel. When the internal preamp is disconnected, the preamp you connect here will replace the Freeway internal preamp.

19. Preamp Send/Thru: Connect the input of an external preamp here. You can also use this output as a 'signal Thru', to take the signal of your guitar and the pedals placed in front of Freeway to another amp or device.

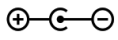
20. Preamp Return: Connect the output of an external preamp here.

Side Connectors

21. XLR L/R outs: XLR balanced signals outputs for the left and right channels. Recommended to go into a mixer, FRFR monitor or recording interface.

22. Jack L/R outs: Jack unbalanced signal outputs for the left and right channels. Recommended to go into a guitar amplifier, guitar power amp or return jack of a guitar amplifier.

23. Headphone out: TRS headphone output for both left and right channels. We recommend using at least 32 ohms headphones for better performance and full dynamics.

24. 9vDc connect here a 9vDC regulated pedal power supply with  polarity and at least 500mA of current capability. Do not exceed 10V voltage input or connect AC power supplies, or Freeway may be damaged. We recommend using a separate power supply for Freeway, different from the one powering the rest of the pedals used in the effects chain.

25. USB: Connect here a USB C cable with data carrying capabilities in order to connect Freeway to your computer and then into your DAW.

USB CONNECTION AND DRIVERS

Freeway is a 'Plug and Play' device. The Freeway USB driver is universal and will be instantly recognized on most Windows, Android or iOS devices. <https://www.ti.com/lit/pdf/slau238>

Windows

Integration: Freeway is supported by Windows 7, 8 and 10 and in all cases the drivers are integrated into the operating system.

Latency:

In the case that you experience latency when integrating Freeway into your DAW, we recommend installing ASIO4ALL Universal Audio Driver and adjusting the audio buffer size until you get good results.

<https://asio4all.org/about/download-asio4all>
<https://asio4all.org/asio-buffer-size>

ios

Integration: Freeway integration from iOS 10 and later is out of the box.

Latency: We have not experienced latency on iOS devices.

Android

Integration: The correct integration of Freeway in Android devices depends on the device, manufacturer and specific version of the operating system, as well as the cable used. Although correct integration is possible on most Android devices, as it is an operating system modified by each manufacturer, we cannot guarantee that Freeway will work correctly on all Android devices and versions. Generally speaking, we have been able to successfully integrate Freeway in all versions starting by Android 10.

If the Android device you want to connect Freeway to has a Micro USB or USBC input, we recommend connecting Freeway using the USB cable provided by the manufacturer of the Android device, together with a USBC to USB female adapter with data transmission capability.

Latency: Generally, it is not possible to compensate latency for recording with DAW mode on Android operating systems. We recommend recording on Android without using DAW mode or only playing backing tracks via Freeway on Android devices.

TROUBLESHOOT GUIDE

I am experiencing latency on PC

See 'USB Connection and Drivers' section. You will need to install the Asio4All program and adjust the buffer size until the latency is minimal. If your PC does not have enough processing power, you may not be able to achieve minimum latency.

I am experiencing latency on Android

See the 'USB Connection and Drivers' section. If your Android phone does not have enough processing power, you may not be able to minimize latency. In that case we recommend not using DAW mode, avoiding routing Freeway's sound from the USB input to the XLR outputs, and listening to the direct guitar signal coming from Freeway.

I get no sound from the reverb or its sound is not correct

Make sure your power supply is specific for guitar pedals, 9V with polarity O, stabilized and with a current capacity of at least 500mA. If you are already using a suitable power adapter, unplug Freeway's power connector, leave it off for 10 seconds and plug it back in.

I have clipping at the input of my DAW using an external preamp or with the Freeway preamp on bypass

Freeway automatically adjusts the USB gain so you have maximum dynamic range with its internal preamp. If you use an external preamp, you must adjust the output volume of said external preamp, decreasing it until the gain is below -0.3dB in the strongest notes. If you are recording directly with a guitar with active or high-output pickups, it is also possible that there is saturation on the USB input. In that case, lower the guitar volume until, during the loudest notes, the input volume remains below -0.3dB. You will not have any loss of tone on your guitar, since Freeway has an input buffer designed so that you can lower the volume of the guitar without losing sound quality.

I can't connect Freeway to my phone

Make sure you are using the USB C to USB adapter supplied with Freeway and the USB cable provided by the phone's manufacturer. The Freeway USB C adapter must be connected to the mobile phone and the cable supplied by the manufacturer to Freeway. If your phone does not have a USB C connector, you will need to purchase a specific adapter for your mobile phone.

I have a 'hum' noise when connecting Freeway to various equipment (e.g. amplifier and mixing console)

You must activate the Freeway 'GND lift'. You may also need to use a separate power supply for Freeway, different to the one powering the rest of your pedals.

I hear interference or 'ground noise' when not in contact with the strings of my guitar

This situation can occur in electrically noisy environments or using certain power supplies. You can try another power supply or connect one of the Freeway outputs to an amplifier or mixer that is connected to its respective power supply and ground, to minimize ground noise.

I hear Freeway's signal in duplicate, on top of the signal processed by my DAW

You must activate DAW mode to eliminate the 'dry' Freeway sound from the XLR, Jack and headphone outputs. This way you can process the sound in your DAW and later input it back into Freeway's outputs. Freeway does not power correctly or the sound is very weak Make sure your power supply is specific for guitar pedals, 9V with polarity @ O, stabilized and with a current capacity of at least 500mA.

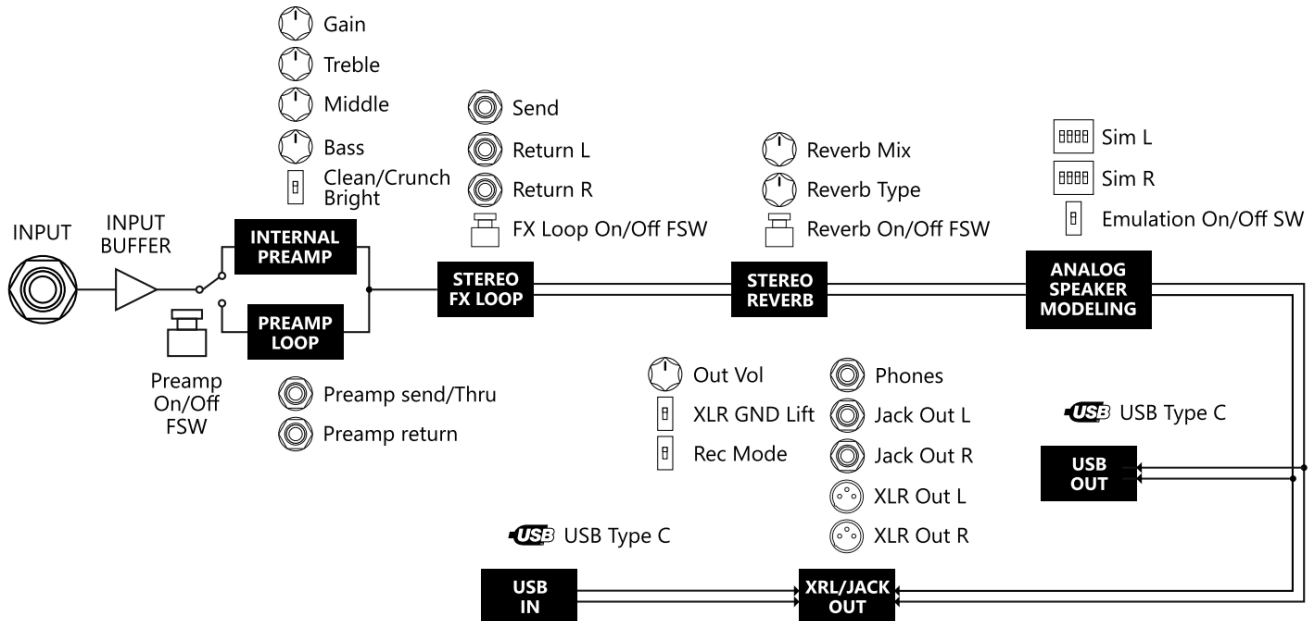
I don't have enough gain in clean mode with my guitar

With guitar pickups with low output signal, you may have to use the crunch mode of Freeway's preamp to get normal signal levels. Switch to crunch mode, adjust the gain towards the lowest part of the gain range and you will have enough sound and volume without saturation.

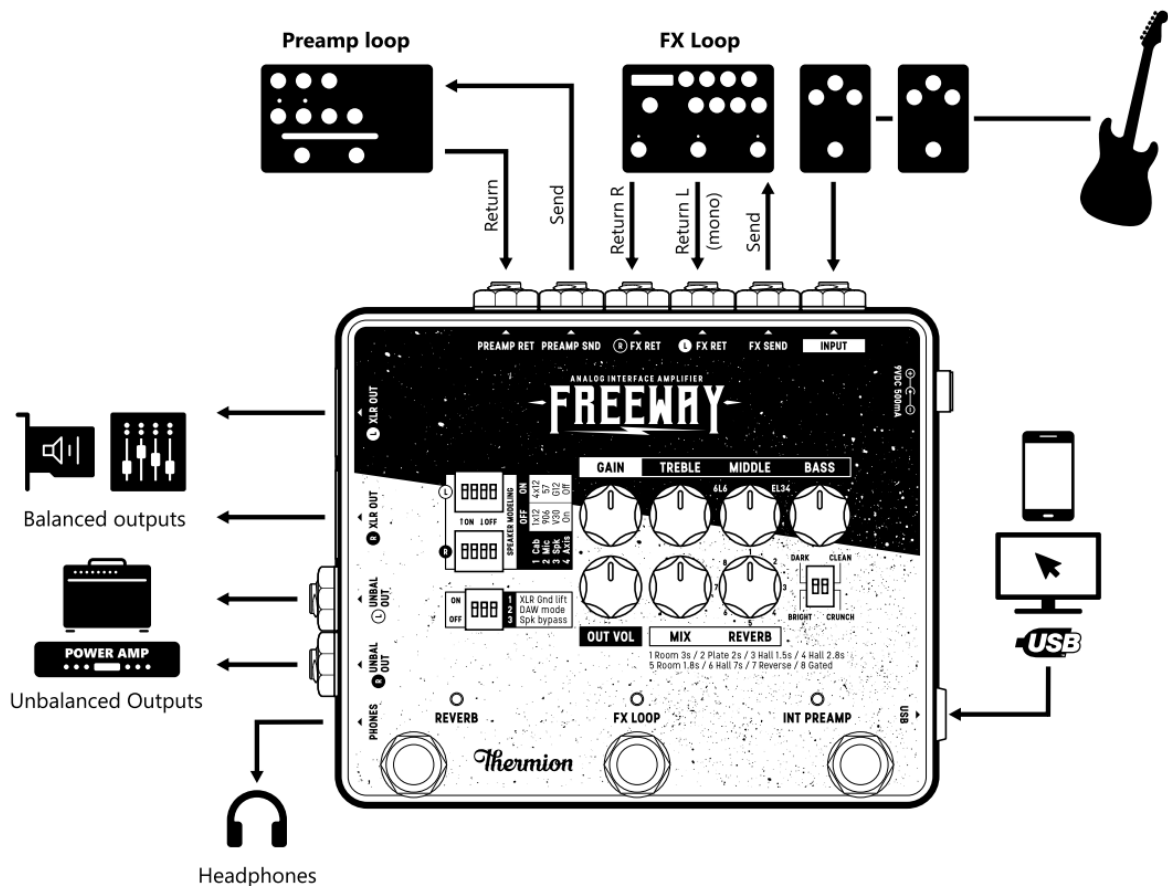
The guitar sound is louder than a backing track I'm playing over

You must increase the volume of the backing track internally on your PC or mobile. Some programs like VLC Media Player allow you to raise the volume of tracks above 100%.

BLOCK DIAGRAM

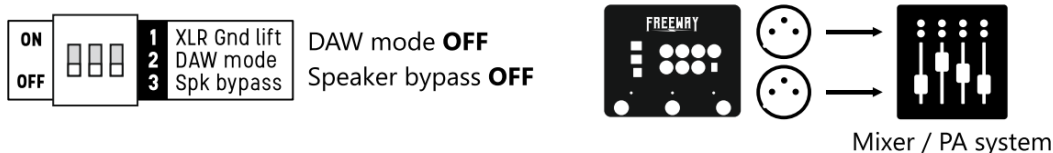


CONNECTIONS

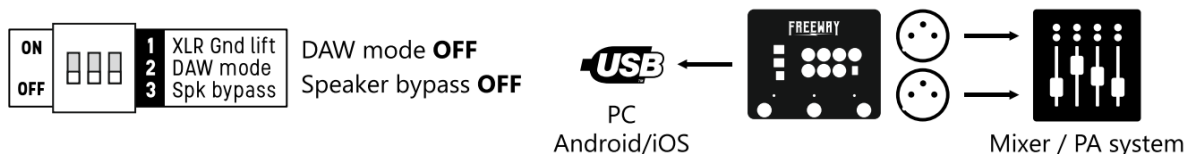


WIRING EXAMPLES

To a PA system or FRFR monitors for live show or rehearsal



To a PA system or headphones for a live show or rehearsal using backing tracks



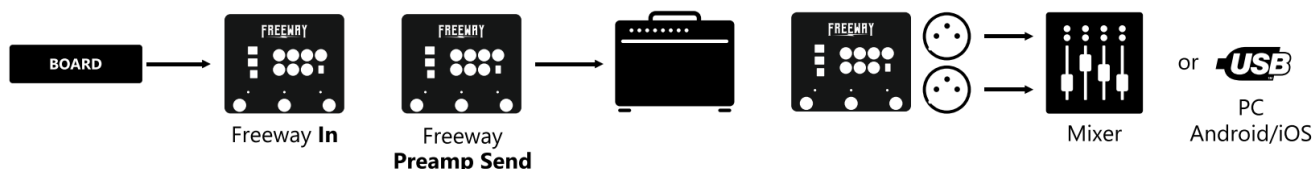
As a main studio recording interface



To an external recording interface



To both a guitar amplifier and Freeway as a speaker modeler



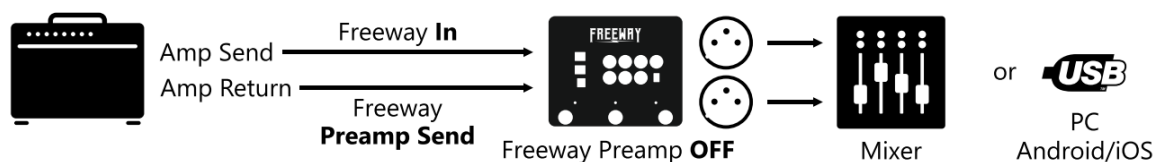
As a preamp going into a power amp and speaker cabinet or the return jack of an amplifier



As a preamplifier going into an external speaker modeler



As a DI speaker modeler for a guitar amplifier



Manufacturer name

Triode Electronic Engineering S.L.

Manufacturer Address

C/ Gabriel Ciscar 23, CP. 02005, Albacete, Espana.

Product name

Freeway

www.thermion.eu

Documents / Resources



[FREEWAY EL34 Analog Interface Amplifier](#) [pdf] User Manual

EL34 Analog Interface Amplifier, EL34, Analog Interface Amplifier, Interface Amplifier, Amplifier, Amplifier EL34

References

- [User Manual](#)