JunctionDrive

产品说明书

User Manual

产品简介

1. 激励电路

- JunctionDrive的激励电路基于JFET设计。JFET具有独特的类似电子管的失真特性。与运放或二极管不同，基于JFET的激励电路能够提供流畅且自然的音色。
- Tubescreamer虽然也具有一定的流畅特性，但同时存在不自然的高频嘶嘶声和塑料质感的中高频；而纯运放驱动的 Clean Boost 虽然干净，但音色往往显得呆板、生硬，且难以与噪声门协同工作——因为它需要极高的动态余量来避免削波（clipping），但大多数噪声门在这种电平下无法正常工作。
- JunctionDrive使用JFET激励电路则巧妙地解决了这些问题。它不仅能够提供自然流畅的音色，还能与噪声门完美搭配，为您的演奏带来更加纯净、自然且富有表现力的音色体验。

产品简介

2. 噪声门设计

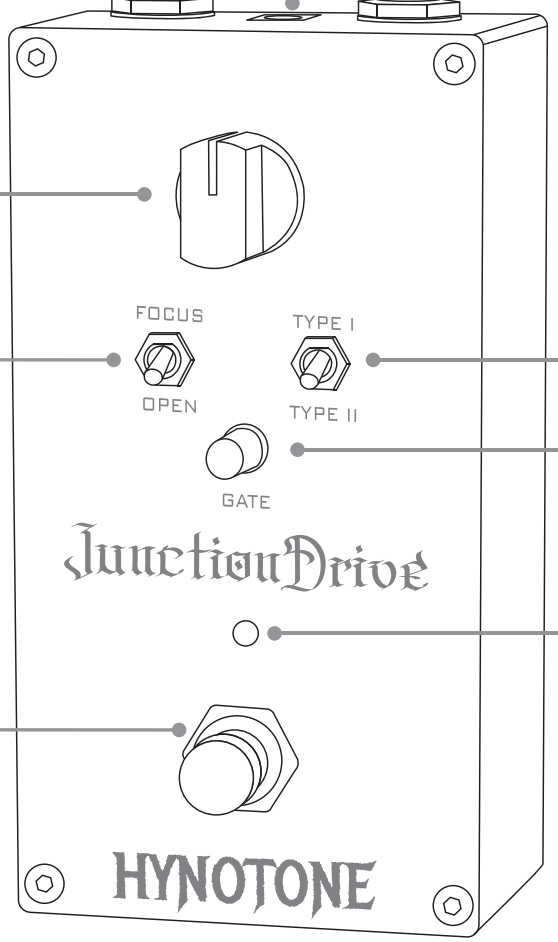
我们从零开始设计了噪声门，核心理念是实现极低噪声，同时保留自然的手感与弹奏响应。

- **JFET 架构**
  噪声门的电路核心同样采用 JFET。虽然它在理论上比 VCA（可变增益放大器）线性度略低，但这并不会带来问题，反而可能在声音中加入更丰富的质感与音色变化。

- **超低噪声**
  最重要的是，本噪声门拥有极低的本底噪声，远低于市面上大多数产品。很多噪声门在信号链中反而会引入白噪声或嘶嘶声，这与“消除噪声”的本意背道而驰，而JunctionDrive有效避免了这一现象。

- **自适应降噪释放**
  本噪声门最独特的功能之一，它会根据弹奏动态实时调整工作状态：
  在快速断音等节奏性较强的弹奏中，噪声门能迅速、干净地切断信号，不留尾音。
  在处理延音时则平缓释放，保留自然尾音，确保声音的自然过渡。

面板说明



输出接口

电源输入（DC9V）

输入接口

增益旋钮

聚焦开关

类型切换

噪声门

指示灯

指示单块效果器的开/关状态。

脚踏开关

控制设备开关。

增益旋钮

- 10点位置：音色干净、动态丰富且流畅，对拨弦响应灵敏，适合快速且紧凑的音色需求。
- 2点位置：饱满的过载音色，同时保持出色的琴弦分离度，声音更均衡、厚实。
- 最大位置：压缩感增强，音色厚重但不混浊，层次饱满，各个频段自然融合。

聚焦开关

聚焦开关用于削减高频，强化中频段的表现力：

- 在 Type I 模式下，切换到FOCUS，会将声音重心向低频移动，产生更具冲击力的低频响应和更圆润饱满的整体音色。
- 在 Type II 模式下，切换到FOCUS，可压制高频的刺耳感，使中频凸显，音色更集中、具有穿透力。

类型切换

Type I和Type II采用两种不同的基于JFET的电路设计，这两种类型在与聚焦开关配合时，表现也截然不同。

- Type I：增强感更强，提升频段更集中，音色更加有冲击力；
- Type II：低频更紧致，整体表现更有节奏感，适合快速击弦。

音色模式说明（聚焦开关 + 类型切换组合）

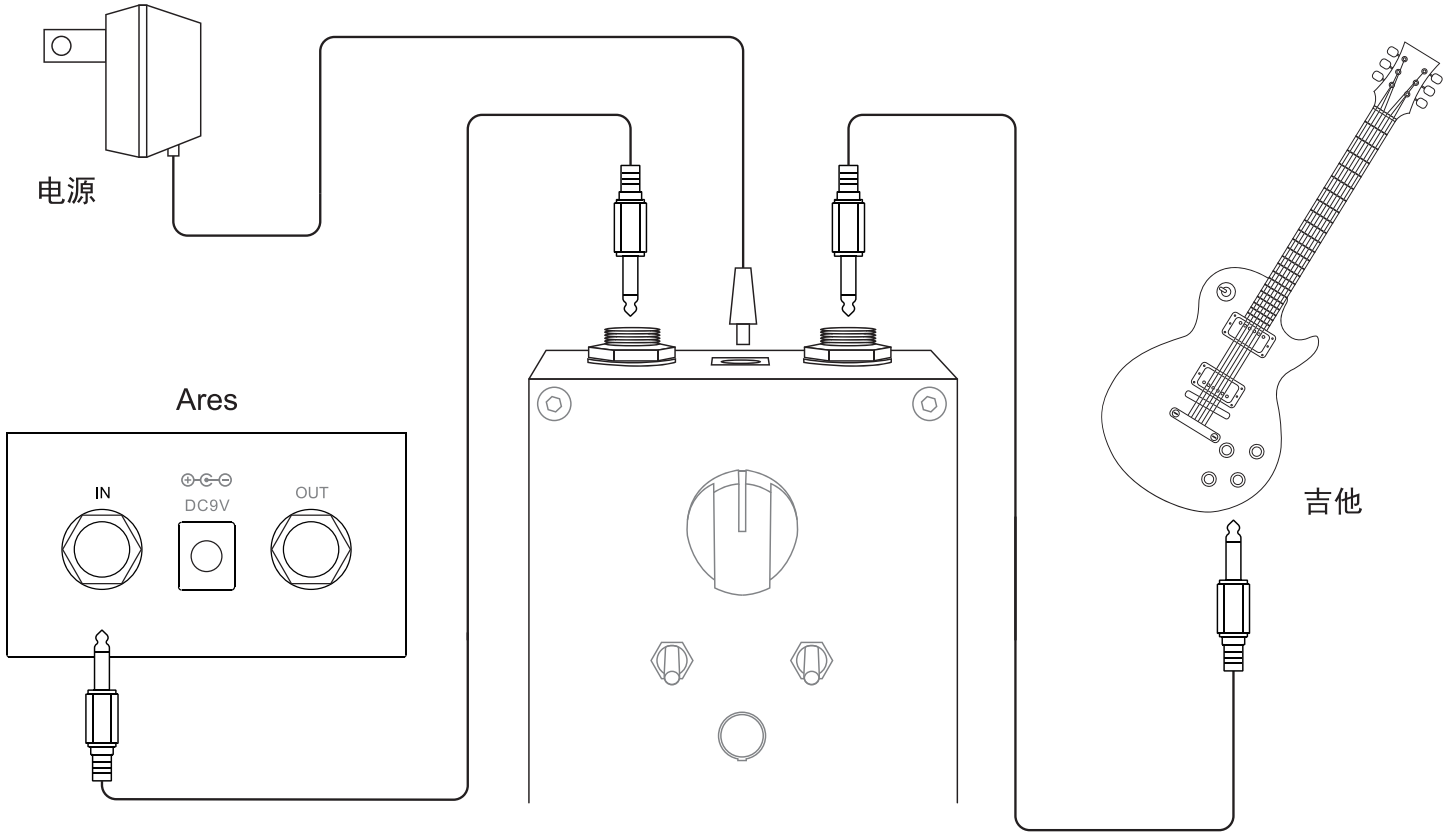
- 模式1（OPEN + TYPE II）
  与33/Grind类似，声音收紧且具有中频磨砂感和节奏感强的高频，充满泛音，极具侵略性。
- 模式2（FOCUS + TYPE II）
  相比模式1，高频更加柔和，中频更加聚焦。降低了侵略性，适用性更广，适合多种演奏风格。
- 模式3（OPEN + TYPE I）
  受Precision Drive启发，突出中高频/次高频表现，保持卓越的琴弦清晰度，音色紧致有力，完美呈现现代Djent风格特质。
- 模式4（FOCUS + TYPE I）
  类似于TS-9/808的典型设置，收紧低频但不过度，使声音富有冲击力且饱满。中频突出且聚焦，降低了侵略性，更具音乐性和韵味。

噪声门

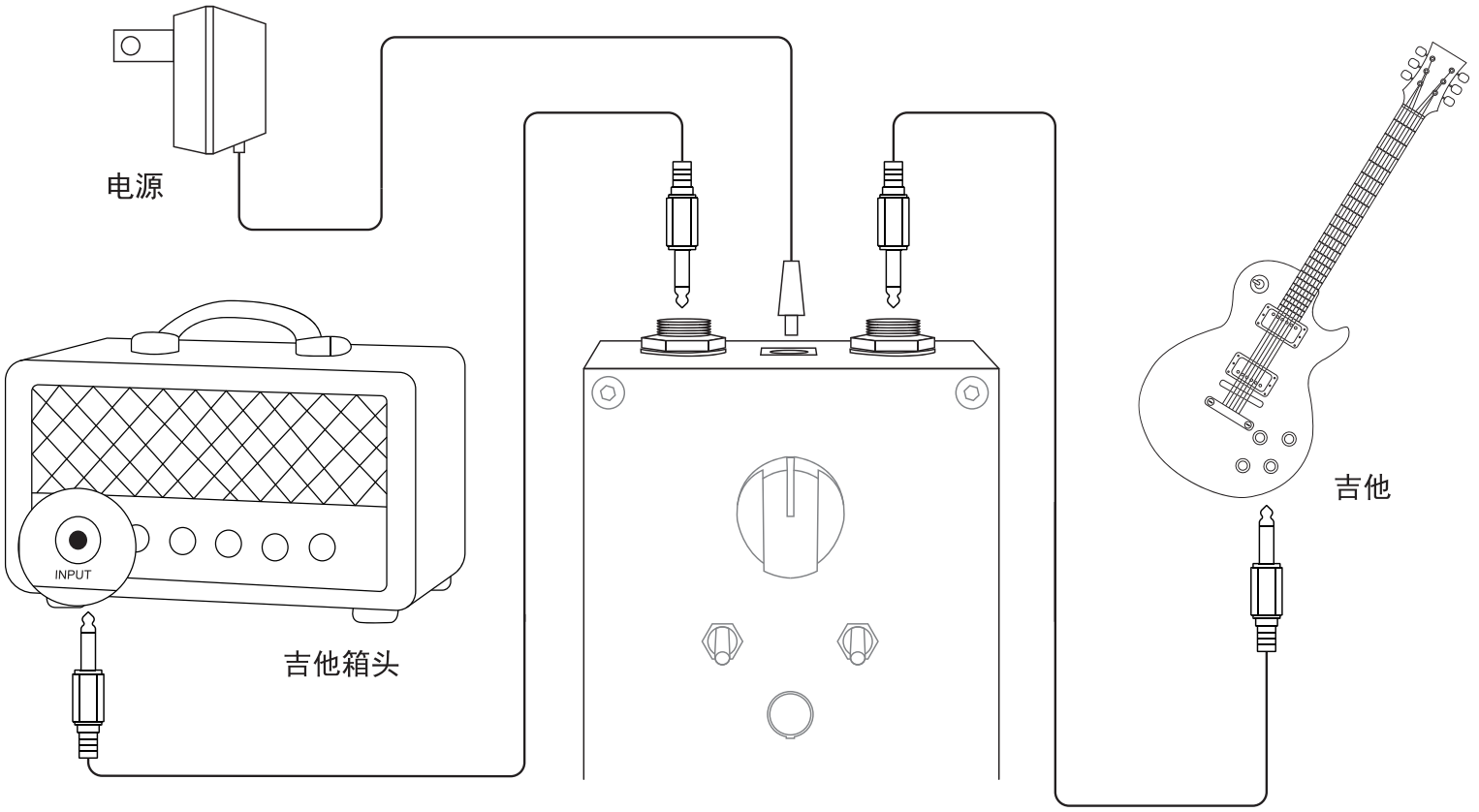
该旋钮可调整噪声门的阈值，顺时针旋转提高阈值。阈值越高，降噪效果越强；阈值越低，保留更多信号。
无论阈值设置如何，噪声门的自适应释放的设计都能确保声音的自然过渡。

连接

JunctionDrive的输入连接吉他，输出可连接其他单块（例如Ares）或吉他箱头的Input接口。



连接



注意事项

- 请使用正确的9V电源连接，不使用时或雷雨天气请拔下电源。
- 为避免错误操作，请在进行任何连接前调低音量并关闭所有设备电源。
- 不得将本机搁置在高温、潮湿的环境，更不得淋雨或者受强烈冲击。
- 不得随意拆开机壳，如需维修应请专业维修人员处理。
- 对因产品的故障而直接或间接引起的任何损失或损坏不予负责。
- 因产品改进，规格及功能若有变动恕不另行通知。

参数

尺　　寸：	65*125*60 mm
重　　量：	300g
输入阻抗：	1MOhm
输出阻抗：	1kOhm
输入电源：	DC 9V（内负外正）范围7-12Vdc
电流消耗：	20mA典型 100mA最大

合 格 证
QC PASS

Introduction

1. Boost Circuit

- The boost circuits of JunctionDrive are JFET based. JFET has a unique tube-like clipping behavior. Unlike opamps or diodes, the JFET based boost circuits provide a liquid and organic feel.

- Tubescreamer has some of the liquid characteristics but also has an unnatural high-end grind and plastic-y mid highs. Pure opamp based clean boosts are somewhat sterile and don't work well with noise gates. Because they need very high headroom to be able to boost the signal without clipping, but noise gates hardly work well at that signal level.

- JFET solves both problems in one shot. It is very liquid and organic sounding while able to boost the overall sound without having very high peak voltages.

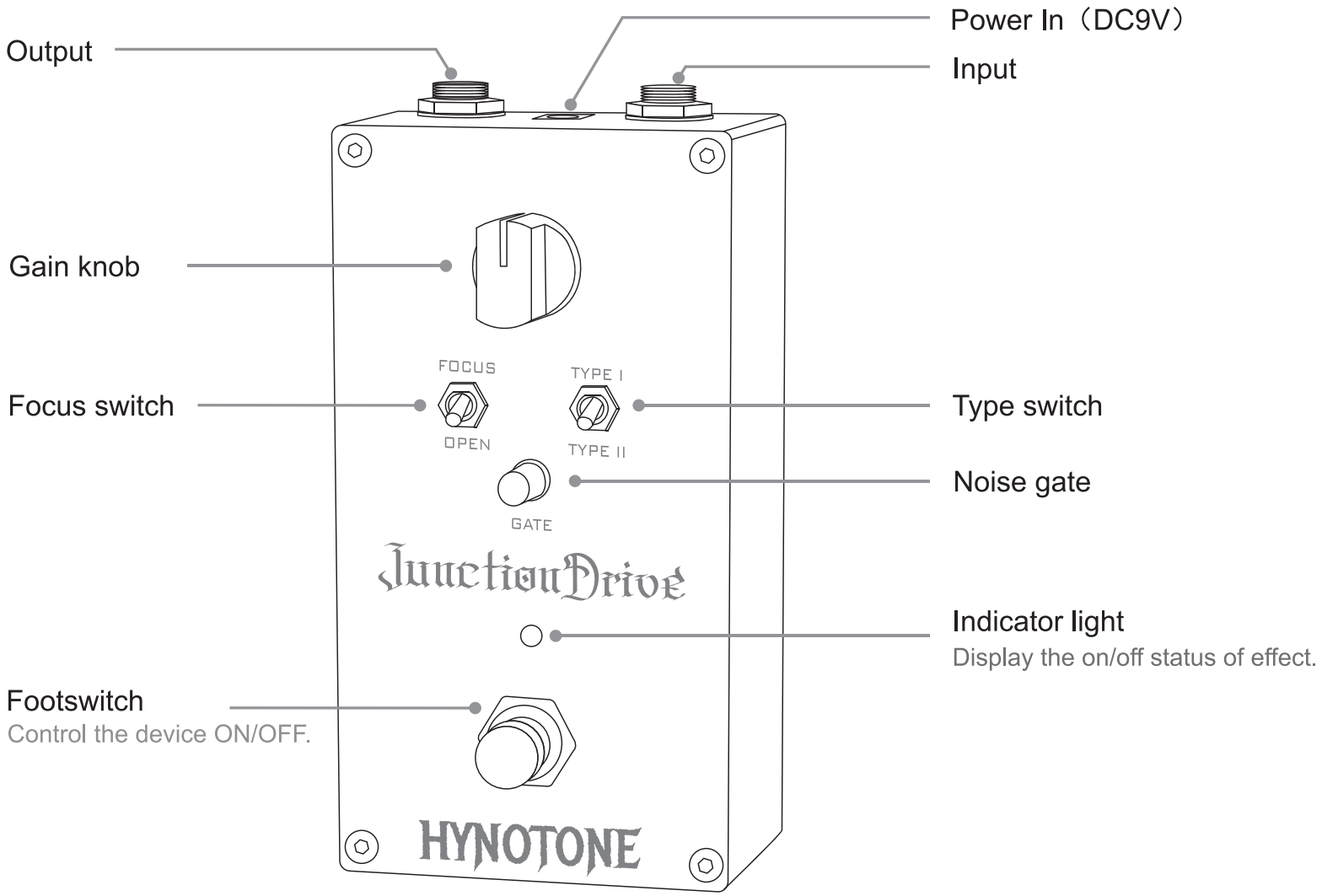
Introduction

2. Noise Gate Design

The noise gate is designed from ground up with low noise and hand feel/response in mind.

- JFET
  The noise gate is built around a JFET, although it's less linear than VCA, it's not really an issue. It may even add flavour and texture to the sound.
- Ultra Low noise
  The most important is that it's very low noise, much lower self noise than most gates on the market. Most gates adds white or hissing noise as long it's put in the signal chain. It's disappointing since you want to eliminate noises not to add noise.
- Playing dependent time constant
  The most unique feature is that the gate turns off much faster when playing percussive riffs with fast mutes. It cuts off quickly and cleanly. When playing with sustained notes, the gate turns off gradually and very gently.

Panel Descriptions



Gain Knob

- 10 o'clock Clean, dynamic and liquid. Responds well to picking and techniques. Suitable for fast and tight sound.
- 2 o'clock Saturated but still has great string clarity. More even and full sounding.
- Dimed Compressed, thick but not congested. Very full, blends everything together.

Focus switch

The switch reduces highs, giving more focus in the mid range.

- For Type I the focus switch shifts the focused frequency to a lower frequency, resulting in more punchy bass and much more rounded sound.
- For Type II, the focus switch tames the highs so that the mid peak is more pronounced.

Type switch

Type I and Type II use two different JFET based circuits. Type I is more punchy and more selected in the range it boosts while Type II is tighter and more percussive. The two types respond quite differently with the focus switch.

Tone mode reference（Type + Focus switch combinations）

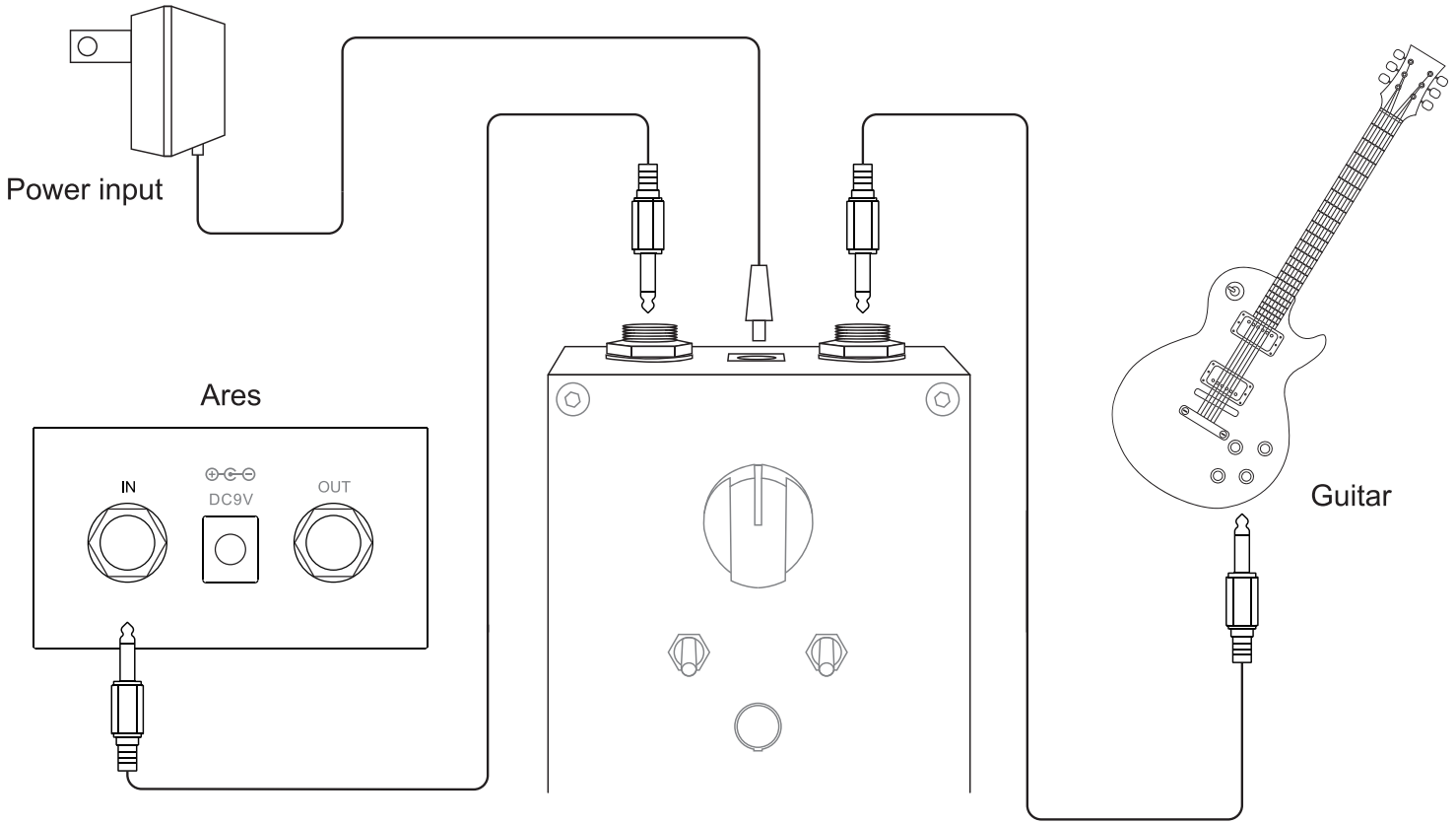
- **Mode 1**（OPEN + TYPE II）
  Similar response to 33/Grind. It tightens it right up and gives a mid grind and percussive highs. Maximized aggression filled with overtones.
- **Mode 2**（FOCUS + TYPE II）
  Compared to mode 1, the sound is more tamed in the highs but more focused in the mid range. Less aggressiveness makes it more versatile.
- **Mode 3**（OPEN + TYPE I）
  Inspired by precision drive. More forward in the higher mids/lower treble. Superior string clarity also tight and djenty.
- **Mode 4**（FOCUS + TYPE I）
  Similar to typical setting of TS-9/808. Tightens the bass but not too much, making it punchy and full. Mids are forward and focused. Less aggression but more musical and flavorful.

Noise gate

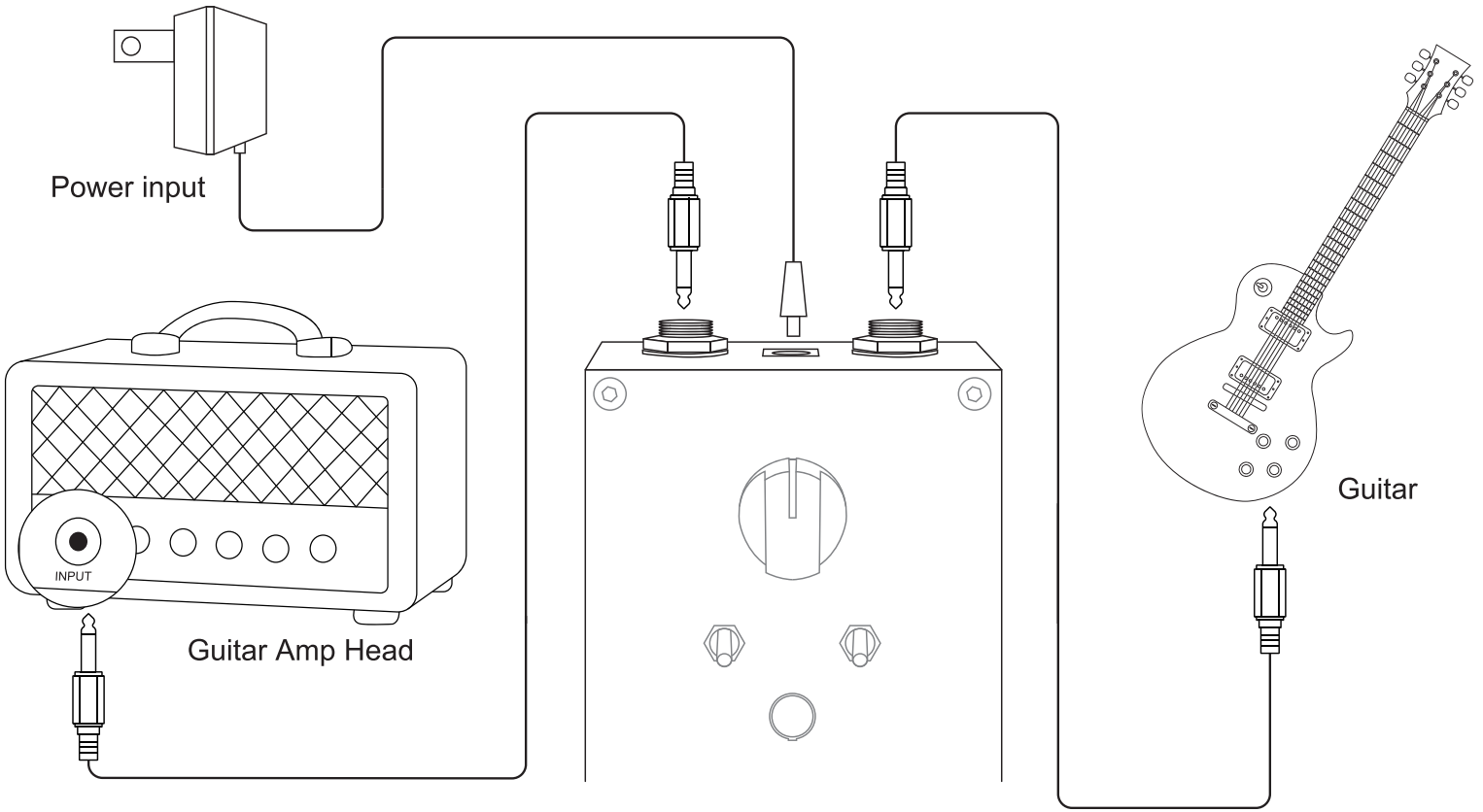
Adjusts the threshold at which the gate begins to attenuate the signal. Clockwise rotation increases the threshold for more aggressive gating, while counterclockwise rotation lowers the threshold, allowing more of the signal to pass through. The gate’s adaptive release ensures smooth and natural decay at any setting.

Connection

Connect your guitar to the input of JunctionDrive. The output can be routed to other pedals (such as the Ares) or directly into the input of a guitar amp head.



Connection



Precautions

- Please use a proper 9V power supply for connection, and unplug the power supply when not in use or during thunderstorms.
- To avoid incorrect operation, please lower the volume and turn off all devices before making any connections.
- Do not keep the unit in a hot, humid environment or hit the unit strongly.
- Opening the case instantly voids the warranty!
- Topping accepts no liability for any loss or damage arising directly or indirectly from the failure of JunctionDrive.
- For improvement purpose, specifications subject to changes without prior notice.

Specifications

Measured:	65*125*60mm
Weight:	300g
Input impedance:	1MOhm
Output impedance:	1kOhm
Power input:	Center-negative 9V normal, 7-12V range
Current draw:	20mA typical, 100mA max