



**Real Tube Discharge®
Owner's Manual**

Introduction

Congratulations and thank you for choosing the FRYETTE S.A.S.[®] Real Tube Discharge!

As a player, you are constantly searching for new sounds and new ways to improve your existing setup. We understand the constantly evolving nature of artistic creativity and the search for the perfect sound to complement your musical vision.

The S.A.S.[®] is unique among distortion pedals in general and tube distortion pedals in particular. It utilizes an EF86 “Pentode” type preamp tube rather than the typical 12AX7 “Triode” type. The EF86 produces power amp distortion qualities not available from a triode tube type and therefore delivers real amp distortion sounds similar to that which you would experience with a cranked, low powered vintage tube amp.

How it works

Most distortion pedals, in fact most pedals in general, operate at very low voltages which typically limit dynamic range. Dynamic range is the ability of a device to react to and reproduce large changes in volume or string attack. If you hit your strings hard and the tone seems thin and squeezed rather than fat and snappy, you may be experiencing compression due to lack of dynamic range.

The S.A.S.[®] is a high-voltage pentode tube design which produces greater dynamic range than a typical pedal. This coupled with a high gain distortion stage produces not only a wide range of cool distortion effects, but does so with the clarity of a clean amp. As a result, you will be able to hear all of the notes and harmonics in a complex chord pattern as well as the subtle sonic signatures of your different guitars. You can also achieve a wide variety of vintage and modern tones at any volume level.

Because of the unique design and wide dynamic range, the S.A.S.[®] will work well with any instrument, such as bass, keyboards and it even makes a great vintage blues harp tone!

Fryette products are renowned for outstanding performance and are designed and built to last a lifetime. Your S.A.S.[®] will require very

little maintenance. The EF86 tube is shock-mounted and will last typically 2-3 years depending on usage and other conditions. Should you decide to replace the tube, we recommend that you refer this service to qualified service personnel. However if you have electronic repair experience and wish to replace the tube yourself, please observe all necessary precautions and remove the power cord before opening the unit.

An EF86 is the factory installed tube and is selected for its superior performance, low noise, and low microphonic sensitivity. **CAUTION: THE EF86 IS NOT INTERCHANGEABLE WITH A 12AX7 OR ANY OTHER TUBE TYPE. USE ONLY AN EF86/6267 TYPE.** Since the performance of this device is dependent upon the quality of the tube, the warranty is only valid if the factory recommended tube is used.

Operation

GAIN: This is the amount of signal level that drives the tube. Turning it up will provide additional sustain and distortion. You can also back down the volume control on your guitar for a cleaner sound. Start with the Gain set fully counter-clockwise and gradually increase the gain while compensating with the Volume control for optimum balance.

BIAS: This control affects the operation of the tube. All the way to the left (BLISS) is the least distorted setting and produces the most clean headroom. As you progressively turn this knob to the right the tube gets progressively more distorted and unbalanced, causing greater degrees of interesting fuzz, distortion and overdrive effects. Start with this control set fully counterclockwise. Set the Gain and Volume at around 9 o'clock and gradually turn up the Bias. As the bias is increased, also increase the volume slightly to compensate for the reduction in output level caused by the bias control. You may hear a slight "rushing" noise as you turn the Bias control. This is normal.

VOLUME: This sets the output level. Simply set it for the desired output. There is plenty of juice available to overdrive your tube amp even with the gain and bias set low. Increasing the gain will increase the output volume, so you will need to reduce the volume to compensate for the gain increase. Conversely, increasing the bias will decrease the output volume, so you will need to increase the volume to compensate for the bias increase.

FOOTSWITCH: Activates the true bypass internal relay. With the effect switched off there is no load on the guitar pick-ups or previous effects. In this state the internal tube and indicator LED produce a warm amber color behind the tube vent grill. When the effect is activated the LED changes to a bright red behind the tube vent grill. If power to the pedal should be reduced or interrupted for any reason, the device automatically goes into bypass mode.

External Power

Plugging the AC adapter into the 12VAC input jack turns on the power to your S.A.S.[®] The Fryette S.A.S.[®] is powered externally with a 12VAC power supply. The external power supply connector is a 5.5x2.5mm barrel type. To insure reliable performance use only the supplied AC adapter.

Specifications

Input Impedance: 1M ohm

Output Impedance: 100K ohm

Power Input Connector: 2.5mm x 5.5mm

Operating Voltage: 12VAC

Maximum Voltage: 14VAC

Current Consumption: 500mA

Tube Requirement: EF86/6267 or equivalent. **NOT INTER-CHANGEABLE WITH A 12AX7 OR ANY OTHER TYPE!**

Dimensions: 5" W x 4.75" D x 1.25" H

Weight: 1.5 Pounds

Quick Start Settings

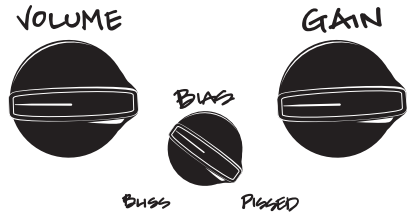
Below are 4 sample settings to get you off on the right foot.

Example 1 - Clean Boost



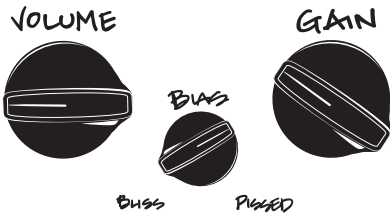
Neck or Bridge pick-up.
Guitar volume down 1 or 2 notches
Guitar tone full up.

Example 2 - Vintage Small Amp Clean



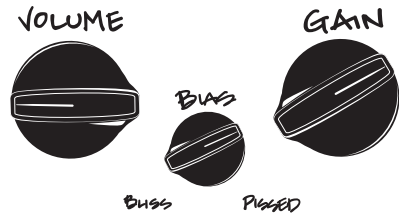
Bridge pick-up.
Guitar volume and tone full up.

Example 3 - Woman Tone



Neck pick-up.
Guitar tone down about half.

Example 4 - Manic Depression



Bridge pick-up.
Guitar volume and tone full up.

NOTE: Be sure to experiment with different guitar pick-ups, and the guitar volume and tone controls. These will have a radical effect on the behavior of the distortion circuit allowing you to fully explore the capabilities of the S.A.S.® and your various instruments and amplifiers. Even small amounts of Gain and Bias will open up a whole new dimension of possibilities for your guitar. And once you add sufficient boost to overload the front of your amplifier, there will be some interesting frequency shifting depending on the amp and how it reacts to being boosted. Every amp will react differently - to what extent depends on your gear and the various settings, playing volume, other effects etc.



**Certificate of Compliance
Restriction of the use of Hazardous Substances (RoHS)**

We certify that all of our products (exceptions see listed below) are compliant with the European Union Directive 2002/95/EC for the Restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment (RoHS).

No Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr+6), PBB or PBDE is intentionally added to these devices. Any trace impurities of these substances contained in the parts are below the RoHS specified threshold levels.

All information provided in this Certificate of Compliance is accurate to the best of our knowledge as of the date this Certification was issued.

**Certificate of Compliance
Registration, Evaluation, Authorization and Restriction of
chemicals (REACH)**

We declare that all of our products are compliant with European Union Directive EC1907/2006 for the Registration, Evaluation, Authorization and Restriction of chemicals (REACH), and contain none or less than 0.1% of the chemicals listed as hazardous chemicals in the REACH regulation. All information provided in this Certificate of Compliance is accurate to the best of our knowledge as of the date this Certification was issued.

**Declaration of Conformity
EMC and Low Voltage Directive (CE)**

Product Name: S.A.S.[®] Real Tube Discharge[®]
Model Number: SAS-PG

This is to certify that the product listed above complies with the following European Union Council Directives and Standards relating to electromagnetic compatibility (EMC Directive 89/336/EEC) and the low voltage Directive (73/23/EEC).

This declaration of conformity of the European Communities is the result of an examination carried out by Electromagnetic Engineering Services, Inc. in accordance with European Standards EN 50081-1, EN 50082-1 and EN 60065 for low voltage, as laid down in Article 10 of the EMC Directive.

Steven Fryette Design, Inc
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LIMITED WARRANTY

Subject to the obligations and exclusions found below, this product is warranted by Steven Fryette Design, Inc., (herein SFD) against manufacturing defects in materials and workmanship for the period of Five (5) Years from the date of purchase, with the exception of the tubes, fuses and speakers where applicable, which carry a 90 day warranty.

The warranty period commences on the date of purchase by the original user. Performance under this warranty must be obtained at one of the following: an SFD Authorized Service Station, by returning the unit to the SFD factory with prior written authorization, or (in countries outside of the United States) by a representative SFD distributor.

Obligations

1. This warranty will be honored only on the presentation of the original proof of purchase.
2. Transportation of the product to and from an authorized SFD service outlet is the responsibility of the user. Units sent directly to the SFD factory for warranty repairs must be authorized by SFD and shipped prepaid.

Exclusions

1. This warranty shall not cover adjustment of consumer-operated controls as explained in the appropriate instruction manual, or products that have been altered or have missing, or defaced serial numbers.
2. This warranty shall not apply to the appearance of accessory items including but not limited to, cabinets, cabinet parts, or knobs.
3. This warranty does not apply to uncrating, setup, installation, or the removal and reinstallation of products for repair.
4. This warranty shall not apply to repair or replacements necessitated by any cause beyond the control of SFD including, but not limited to, any malfunction, defects, or failure caused by or resulting from unauthorized service or parts, damaged or broken tubes, incorrect line voltage, improper maintenance, modification or repair by the user, abuse, misuse, neglect, accident, fire, flood, or other Acts of God.
5. Responsibility for the repair of any SFD product sold outside of U.S. boundaries is borne by the SFD representative in that particular country or territory. Also, the warranty term and conditions may be different from those stated above. Please contact the SFD distributor or dealer in your country for more information.

The foregoing is in lieu of all other expressed warranties, and SFD does not authorize any party to assume for it any other obligation or liability. In no event shall SFD be liable for special or consequential damages arising from the use of this product, or for any delay in the performance of this warranty, due to causes beyond our control. Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of consequential damages, so the above limitations on implied warranty and consequential damages may not apply to you. This warranty gives you specific legal rights. You may have other rights that vary from state to state.

WARRANTY REGISTRATION

U.S. and Canadian residents may register their Fryette product(s) online at www.fryette.com/support_form.aspx by selecting and completing the Warranty Registration form. All other international residents please contact the authorized distributor your Fryette product was purchased from. For a list of international distributors please visit www.fryette.com/dealers.html

FRYETTE®

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