Seymour Duncan®

Twin Tube BLUE™

Two Channel Tube Overdrive / Distortion Pedal

Congratulations on your purchase of the Seymour Duncan Twin Tube Blue™. You can start using your Twin Tube Blue right away after reading the safety precautions below, and you'll immediately enjoy the versatility of having two channels of gain and a wide range of great tones. However, you might want to read through these instructions in their entirety first, to gain valuable information, which will enhance your enjoyment of your Twin Tube Blue.

SFX-11

Safety Precautions

Hazardous voltages are present. For your protection, and to reduce the risk of electric shock and danger to personal health, please observe the following safety precautions when setting up and using your Twin Tube Blue. Most of this is common sense, but please read it anyway.

Your Twin Tube Blue is designed to work with typical power systems utilizing a three-prong outlet. To reduce the risk of electric shock, do not plug your Twin Tube Blue into any other type of power system. Contact your facilities manager or a qualified electrician if you are not sure what type of power is supplied to your building or performance stage. Do not use your Twin Tube Blue with amplifiers or other gear that have two prong AC plugs. Do not overload wall outlets, extension cords, or multiple power strips as this can result in a risk of fire or electric shock.

Never open the chassis. Do not attempt to tamper with or service your Twin Tube Blue yourself. You're just asking for trouble. Opening or removing the cover may expose you to dangerous voltage or other hazards, which could result in serious injury or death – not to mention damage to the Twin Tube Blue. Wouldn't that suck? Refer all servicing to qualified service personnel.

Do not block or cover the side vents on your Twin Tube Blue. Never push objects of any kind through openings in the equipment. No drummer jokes, please. Dangerous voltages may be present. Conductive foreign objects could produce a short circuit that could cause fire, electric shock, or damage to your Twin Tube Blue.

Never place a Twin Tube Blue near a radiator or heat register. Failure to follow these guidelines can cause overheating and affect the reliability of your Twin Tube Blue.

Unplug your Twin Tube Blue from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

Do not use your Twin Tube Blue near water - for example, near a bathtub, washbowl, kitchen sink, or laundry tub; in a wet basement; near a swimming pool; on stage with water effects or precipitation; and the like. Do not expose the Twin Tube Blue to dripping or splashing liquids and do not place objects filled with liquid on or near your Twin Tube Blue (yes, unfortunately, this includes bottled malt beverage liquids). And for heaven sakes, don't use it while you're sitting on the can... OK, enough of that.

General Information

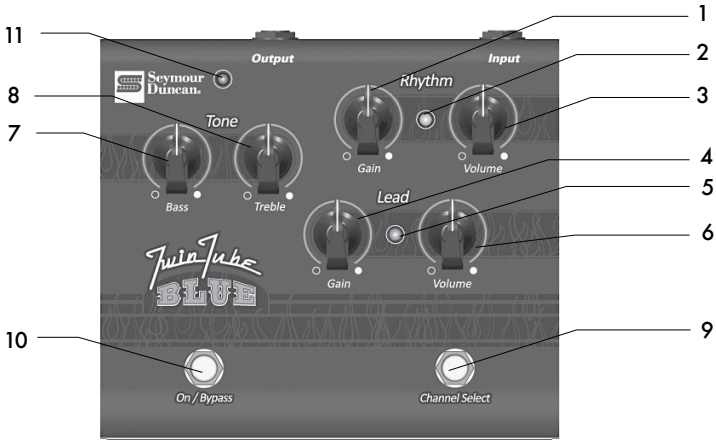
The Twin Tube Blue is designed for years of solid performance. One of the secrets is the duo of type 6111 tubes. These sub-miniature triodes represent the pinnacle of tube technology advancement. The 6111s were designed and manufactured to meet the MIL-E-1 spec for reliability under conditions of severe shock, vibration and temperature. They provide extremely long service life with virtually no tendency towards microphonics (see USA Department of Defense Standards, Test Methods for Electron Tubes). Also, unlike some "tube" stomp boxes that only use the tubes as a clipping diode, the Twin Tube Blue employs a 100% vacuum tube signal path with a high voltage power supply. This allows the tubes to operate to their fullest potential and provides the most gain and the smoothest tone. The result is the classic tube sound, smooth distortion, and low order harmonics you expect from a great tube preamp.

Tube Life

The 6111 tubes will typically last many times longer than even the best 12AX7s. For most Twin Tube Blue owners, this means you'll never have to change your tubes. However, nothing lasts forever. Should you find your Twin Tube Blue in need of new tubes (e.g., exhibiting erratically fluctuating signal levels, spurious increases in noise, sputtering, low level whistling, extreme loss in frequency response), contact Seymour Duncan or your favorite authorized Seymour Duncan dealer for your options. ***Do not try changing the tubes yourself.*** Changing tubes on the Twin Tube Blue is more complicated than plugging pins into a socket and could be dangerous. Make sure a professional does the work.

Two channels means versatility. When coupled with (true) bypass, this effectively provides three-channels: Rhythm, Lead and bypass. Separate gain and volume controls allow Lead and Rhythm Channel levels to be independently set. The meticulous internal layout minimizes cross coupling and unwanted circuit interactions that can be a major problem in high gain-high impedance vacuum tube circuits.

Explanation of Controls



Top Panel

1 Rhythm Gain – Inter-stage gain control for the Rhythm Channel. Provides varying degrees of overdrive, from clean tube tone to crunch.

2 Rhythm Channel Status Indicator – When lit, it indicates that the Rhythm Channel is active or staged for activation if the unit is bypassed.

3 Rhythm Volume – Master volume control for Rhythm Channel. Positioned at the end of the gain chain, it regulates the loudness relative to the other channel, and to the bypassed sound.

4 Lead Gain – Inter-stage gain control for the Lead Channel. Provides varying degrees of overdrive, from bite to super hot lead tones.

5 Lead Channel Status Indicator – When lit, it indicates that the Lead Channel is active or staged for activation if the unit is bypassed.

6 Lead Volume – Master volume control for Lead Channel. Positioned at the end of the gain chain, it regulates the loudness relative to the other channel, and to the bypassed sound.

7 Bass – Controls low frequency content in both channels with greatest effect in the range of 40 Hz to 200 Hz.

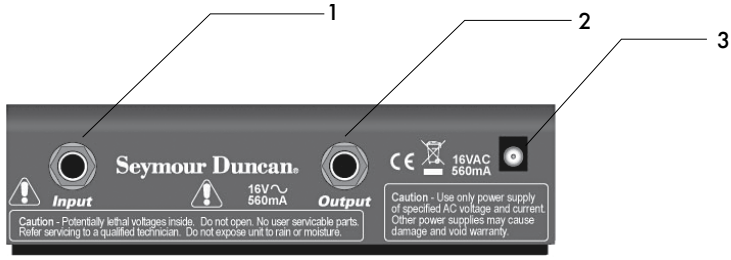
8 Treble – Controls high frequency content in both channels with greatest effect in the range of 2 KHz to 20 KHz.

9 Channel Selector – Selects between the Lead and Rhythm channels. It is possible to pre-select the gain or volume for a channel when in bypassed mode. This allows the flexibility of transitioning from bypass to either channel without having to step through different sounds.

Explanation of Controls

10 On/Bypass button – Selects between true bypass and whichever channel has been selected by the Channel button.

11 Active/Bypass status indicator – When lit, it indicates that the Twin Tube Blue is engaged and operational. When dark, it indicates that the unit is in bypass mode and that the guitar signal is passing straight through unaltered.



Back Panel

1 Input Jack – Plug your guitar in here

2 Output Jack – Provides the output signal. Connect to the input of a guitar amp, power amp or other device here.

3 Power Jack – This is where you connect the provided wall-mounted power supply ("wall wart") to the Twin Tube Blue. Note: it is a 16 VAC/600mA unit. Do not try to substitute a DC power supply or another AC supply with a different voltage value or current rating. If you lose your transformer or if it breaks, contact an authorized Seymour Duncan dealer for a replacement. As an alternative, for North America and Japan, you can order a 16 VAC/600mA transformer from Digi-Key (www.digikey.com). The part numbers for each common voltage is as follows:

North America: 120 Volt/60Hz – Digi-Key part # MT7123-ND
Europe and Asia: 230 Volt/50Hz – Seymour Duncan part # 352301-230 (no known off-the-shelf replacements available)
Japan Only: 100 Volt/50Hz – Digi-Key part # MT7127-ND (note: this transformer is rated by the manufacturer as 20 Volt/450mA output with 120 Volt input, but will produce the proper output voltage and current when coupled to a 100 Volt mains supply)

Explanation of Controls

You may be wondering why the Twin Tube Blue uses a 16-volt AC transformer instead of a common 9-volt DC adaptor or even a battery. The Twin Tube Blue relies on an internal transformer to obtain the high voltage the dual triodes require. The transformer cannot work on DC voltage. One alternative would be to run the tubes on low voltage in "starved plate mode." Here, the tubes are used like a clipping diode and do not actually amplify. Though starved plate voltage is used in some inexpensive tube stomp boxes, it is not true tube amplification. The circuitry in the Twin Tube Blue enables the tubes to work like the tubes in the preamp section of a high quality tube amplifier. Another alternative would be to supply a dedicated AC power cord and an internal high voltage transformer or a DC-to-DC switching converter. However, these options would make the Twin Tube Blue larger, heavier and more costly. With the Twin Tube Blue you are getting true tube tone AND tube amplification with minimal size, weight and cost.

Basic Operation

The ¼" mono instrument cable that leaves your guitar's jack plugs into the Twin Tube Blue's jack marked "Input." The cable that exits from the "Output" jack on the Twin Tube Blue goes to the next effect in the signal chain, or to the amplifier.

When first activating the Twin Tube Blue, start with the Rhythm Channel Volume and Gain control knobs in the full counter-clockwise position. Then, start rotating the knobs clockwise until the desired volume level and overdrive are achieved.

Next, with the Lead Channel Volume and Gain control knobs in the full counter-clockwise position, depress the Channel Selector switch. This mutes the Rhythm Channel and activates the Lead Channel. As with the Rhythm Channel, start rotating the knobs clockwise until the desired volume level and distortion are achieved, relative to the Rhythm Channel and to the bypassed sound of the Twin Tube Blue.

Experiment with different Volume and Gain settings. Some of the coolest tones are achieved with a little discovery. Because of the Twin Tube Blue's incredible amount of gain and distortion in the Lead Channel, be aware that extreme settings can result in uncontrollable feedback. And, as always, musicians and audience members are best advised to use ear protection when exposed to loud volume.

Here are some sample settings to get your started:

Example Settings

Austin Texas Crunch

Tune your Strat® to E flat and let it rip. Sweet and soulful and downright nasty at the same time, all at your fingertips.

Basic Operation

Memphis Boogie

With a semi-hollow and humbuckers, you can feel the connection between guitar and tubes. You can push it just hard enough to break up, while most of your notes are clean and clear.

Chicago club

Dirty blues will hit your amp hard, if you've got the chops. This will dirty up your Strat®, but you'd better hit hard and dig in if you want it to get greasy.

Searing lead

Explode into modded tube amp territory. No additional overdrive pedal needed with this setting. There's enough gain on tap for searing leads and loads of sustain.

Detailed Step-By-Step Instructions

1. Plug in the cable of the provided 16 VAC power supply to the distortion box then plug the "wall wart" end into a 120V wall outlet or power strip. You should see the green LED on the Rhythm channel light up. All other status indicators will be dark. When first powered up, the Twin Tube Blue will always default to bypassed mode with the Rhythm channel staged in waiting mode.

2. Turn both master volumes fully down (counter-clockwise). Set the Bass and Treble controls at 12 o'clock.

3. Connect a good quality, shielded ¼" cable from the output jack to the input of your amplifier.

4. Connect another good quality, shielded ¼" cable, first to the output jack on you guitar, and then to the input jack of the Twin Tube Blue. Note that the tubes in the Twin Tube Blue may require two to three minutes to warm up and begin to produce sound.

5. Press the "On/Bypass" button to activate the Rhythm Channel. Turn the Gain control up about half way. Slowly turn the Master Volume up as you pluck a string. Fine-tune the Gain setting to achieve the level of overdrive and saturation you want. Set the Master to achieve the playing volume you want.

6. Press the "Channel Selector" button to switch to the Lead Channel. Repeat the previous process of setting up the Gain and Master Volumes.

7. Adjust the Bass and Treble controls as desired. Note that they influence both channels. We have "pre-voiced" the two channels to provide what we feel is a balanced tone when switching from Lead Channel to Rhythm Channel and to facilitate using one common set of tone controls.

8. Balance your wet to dry levels by working with the Volume control(s) on your amp and the Master Volumes on the distortion box.

9. Never open the chassis. There are no user serviceable parts inside and tampering with the high voltage tube circuits could result in serious injury or death – not to mention damage to the unit.

Specifications

Description – The SFX-11 is a two-channel guitar preamp employing premium subminiature type 6111 vacuum tubes. The 6111 is manufactured to meet the stringent MIL-E-1 specification for reliability and is optimized to provide long service life under conditions of severe shock, vibration, high temperature and high altitude. The tubes are configured with a high voltage power supply for maximum dynamic range. True bypass capabilities are provided to allow uncolored feed-through.

Gain:

- Before level compensation
  - Rhythm channel – 74dB
  - Lead channel – 98dB
- After level compensation
  - Rhythm channel – 52dB
  - Lead channel – 76dB
  - (Gain measured at 500Hz).

Nominal output level

- Rhythm channel – 0.4 Vrms (-5dBu)
- Lead channel – 0.5 Vrms (-4dBu)

(Nom. output level measured with 100mV 500Hz input signal and all controls set to 12 o'clock).

Max. output level before clipping – 2 Vrms (+8dBu)
(Max. output measured with all controls set fully up).

THD @ 1 Volt RMS output – 3%

Harmonic spectrum @ 1Vo – predominantly 2nd harmonic with minor amounts of 3rd harmonic @ > 20dB below.

Noise @ output:

- Rhythm channel - < 3 mV (< 3 dB hum content)
- Lead channel - < 10 mV (< 3 dB hum content)

(Noise measured with all controls set fully up and input shorted).

Power consumption – 10.4 W

External dimensions – 7.50 X 6.62 X 1.96 in. (190 X 168 X 50 mm)

Weight – 3.15 lbs. (1.43KG)

Limited Warranty

Seymour Duncan offers the original purchaser a one-year limited warranty on both labor and materials (except tubes) starting from the day this product is purchased from an Authorized Seymour Duncan Dealer. The warranty on the tubes is 90 days. We will repair or replace this product, at our option, if it fails due to faulty workmanship or materials during this period. Defective products should be returned to your USA dealer, international distributor, or sent direct to our factory postage prepaid along with dated proof of purchase (e.g., original store receipt) and a RMA number clearly written on the outside of the box. Please call our factory for issuance of an RMA number.

This warranty does not apply to damage to this product or an instrument caused by misuse, mishandling, accident, abuse, alteration or faulty installation. Product appearance and normal wear and tear (worn pain, scratches, etc.) are not covered by this warranty. Seymour Duncan reserves the right to be the sole arbiter as to the misuse or abuse of this product. Seymour Duncan assumes no liability for any incidental or consequential damages, which may result from the failure of this product. Any warranties implied in fact or by law are limited to the duration of this express limited warranty.

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