

### POWER REQUIREMENTS

- Utilizes standard 9V alkaline battery (not included), which will provide a life span of approx. 70 hours. NOTE: *Input* jack activates battery. To conserve energy, unplug when not in use. Power Consumption: approx. 7mA.
- **USE DC POWER SUPPLY ONLY!** Failure to do so may damage the unit and void warranty. DC Power Supply Specifications:
  - 9V DC regulated or unregulated, 100mA minimum;
  - 2.1mm female plug, center negative (-).

**Optional factory power supply is available: Tech 21 Model #DC9.**

**ONE YEAR LIMITED WARRANTY. PROOF OF PURCHASE REQUIRED.** Manufacturer warrants unit to be free from defects in materials and workmanship for one (1) year from date of purchase to the original purchaser and is not transferable. This warranty does not include damage resulting from accident, misuse, abuse, alteration, or incorrect current or voltage. If unit becomes defective within warranty period, manufacturer will repair or replace it free of charge. After expiration, manufacturer will repair defective unit for a fee.

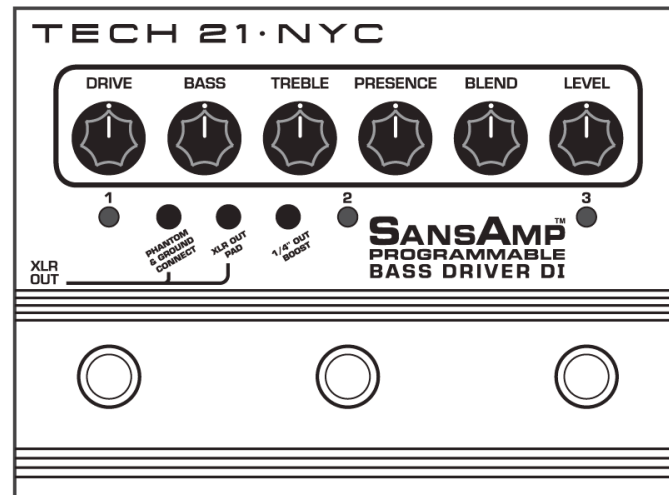
**ALL REPAIRS** for residents of U.S. and Canada: Call Tech 21 for **Return Authorization Number**. Manufacturer will **not** accept packages without prior authorization, pre-paid freight (UPS preferred) and proper insurance.

#### FOR PERSONAL ASSISTANCE & SERVICE:

Contact Tech 21 on normal business weekdays from 9:00 AM to 5:00 PM, EST.

**Hand built in the U.S.A.** using high-quality components sourced domestically and around the globe.

### SansAmp Programmable Bass Driver DI



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**OWNER'S MANUAL**

### WARNINGS:

- Attempting to repair unit is not recommended and may void warranty.
- Missing or altered serial numbers automatically void warranty. For your own protection: be sure serial number labels on the unit's back plate and exterior box are intact, and return your warranty registration card or you can **register online at [www.tech21nyc.com/register](http://www.tech21nyc.com/register)**.
- **DO NOT run the speaker output of any amp directly into the SansAmp. Severe damage to the amp and/or SansAmp may result.**



**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



**Note:** All electrical and electronic products should be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities.

### TECH 21, THE COMPANY

Tech 21 was formed by a guitarist possessing the unusual combination of a trained ear and electronics expertise. In 1989, B. Andrew Barta incorporated Tech 21 and made his invention commercially available to players and studios around the world. His highly-acclaimed **SansAmp™** pioneered Tube Amplifier Emulation in professional applications for recording direct and performing live, and created an entirely new category of signal processing. There have since been many entries into this niche, yet SansAmp continues to maintain its reputation as the industry standard.

In addition to a full line of SansAmp models, Tech 21 also offers "traditional" style amplifiers for guitar and bass, effect pedals, and battery operable MIDI footcontrollers. Each product is thoughtfully and respectfully designed by B. Andrew Barta himself with the player in mind.

Tech 21's goal is to provide you with flexible, versatile tools to cultivate, control, refine and redefine your own individual sound. We take great pride in delivering consistent quality sound, studio to studio, club to club, arena to arena.

### PRODUCT OVERVIEW

The SansAmp Programmable Bass Driver DI combines the warmth of a **100% analog** signal path with the convenience of digital programmability in a super simple, player-friendly stompbox format. Our proprietary technology captures the rich, natural harmonics and sweet overdrive characteristics inherent to tube amplifiers, and does so even at low volume. SansAmp delivers the same dynamics, responsiveness, and sound quality of massive pro stage rigs in a portable, programmable pedal.

The ease of operation allows you to make changes on the fly, at the gig, even during your performance --without having to take this manual with you. There are no complex formulas or numerical calculations to learn, so there's nothing to get in the way of your creative flow.

Independent footswitches put your favorite tones right at your feet, from warm vintage to Sumo-sized overdrive. Custom actuators provide a smooth transition between channels for instantaneous switching, so you can dance to the music instead of your gear.

## APPLICATIONS

**WITH BASS AMP:** Run the 1/4" output of the SansAmp directly into the input of the power amp input, a.k.a. "effects return" (if applicable), of an amp. This will bypass the tone coloring section of the pre-amp and **will defeat the amp's master volume.**

**NOTE: BE SURE the BASS GUITAR VOLUME is OFF --BEFORE you turn on the amp.** Then slowly increase the volume of the bass. If it's too loud overall, check that the 1/4" Out Boost switch is disengaged (up) and then edit your presets accordingly. If it doesn't get loud enough for you, engage (depress) the 1/4" Out Boost switch to add 10dB.

Or, you can run the SansAmp into the front input of an amp. Be sure to keep the Level of SansAmp close to unity gain, so as not to overload the amp's input, which could result in undesirable distortion.

### **Tips for setting up your amp when using front input:**

1. Plug into low gain channel or input.
2. Turn off Bright switch.
3. Turn presence control (if applicable) to 12 o'clock or below.
4. Set tone controls as flat as possible.

**TO DRIVE A POWER AMP:** Run the output of the SansAmp into the input of a power amp with an input sensitivity of -10dB to 0dB. Then use the master volume control of the power amp to adjust your stage volume.

**TO RECORD DIRECT:** You can plug directly into the input of a mixer/recorder and use the on-board sounds of the SansAmp. Bear in mind, full-range systems yield a wide frequency response. Therefore, you may need to adjust the EQ settings of the SansAmp to compensate.

## THE INS AND OUTS

**Standard Audio Procedure: TURN (SansAmp) ON FIRST. TURN OFF LAST.** To avoid unwanted and potentially speaker-damaging "pops" when connecting or disconnecting any equipment, **always mute** mixing board and/or turn down amp volume before plugging or unplugging!

### **WARNING:**

**DO NOT run the speaker output of any amp directly into the SansAmp. Severe damage to the amp and/or SansAmp may result.**

### **SIGNAL LEVEL TO INPUT**

The SansAmp Bass Driver is designed to accommodate instrument level signals to the *Input*, such as the output of a bass, the output of distortion pedals, etc. Signal level to *Input* should be close to that of a standard electric guitar (approx. -10dB / 250mV). NOTE: Hot pickups will increase the gain structure of the SansAmp Bass Driver.

**1/4" INPUT:** 1 megOhm, instrument level. Also switches battery power on/off. To avoid battery drain, unplug when unit is not in use.

**BALANCED XLR OUTPUT:** Balanced 600-Ohm low Z output. Sends effected or bypassed signal to mixing console/recorder.

**XLR Out Pad Switch:** -20dB pad to match the output to equipment with different input level requirements. In the line level (up) position, the output is 0dB. In the instrument level (down) position, the output is -20dB.

**1/4" OUTPUT:** Unbalanced 1KOhm low Z output. Sends effected or bypassed signal to amp rig or power amp.

**1/4" Out Boost Switch:** +10dB boost to match the output to equipment with different input level requirements. In the instrument level (up) position, the nominal output is -10dB. In the line level (down) position, the output is 0dB.

## PHANTOM POWER

Allows you to “tap into” the power of a suitably equipped mixer. As the 3-conductor XLR sends the audio signal to the input of a mixer, the mixer sends voltage back to the unit via the same 3 wires, eliminating the need for an external power supply. Consult your mixer’s owner’s manual for set-up instructions. For live and studio use, let the engineer know your SansAmp is phantom power operable.

**NOTE:** Minimum 24V DC regulated phantom power supply, however, **48V DC** regulated is recommended to optimize headroom and illuminate LEDs.

**PHANTOM & GROUND CONNECT SWITCH:** When engaged (depressed), the ground connects and unit will accept phantom power through the *XLR Output*. Disengaged (up), the ground of your stage system and other interconnected gear is isolated from the ground of the mixing console.

**With a mixer only:** If you are plugging your bass into the Bass Driver and taking the *XLR Output* to a mixer --and do not have any other grounded equipment connected in the setup-- you will have to engage (depress) the switch to connect the ground and activate the phantom power.

**With a mixer and bass amp:** If you are going to the mixer via the *XLR* and using the *1/4" Output* to feed a bass amp (with its own AC ground), you should set the switch in the up position for “Ground Lift” mode. If you experience hum and/or buzz with the switch in either position, there may be a problem with the AC outlets you are plugging into.

**NOTE:** If using vintage equipment without proper grounds, take extra care connecting it to modern grounded equipment. The inadequacies of the ground in vintage gear could result in damaging anything it is connected to.

**NOTE:** While operating under phantom power, we recommend keeping a 9V alkaline battery installed at all times to avoid the previously mentioned “pops” when lifting the ground (see Standard Audio Procedure on page 5).

## GUIDE TO CONTROLS

**PRESENCE** brings out the upper harmonic content and attack. For a smoother high end and for clean settings, decrease to taste.

**DRIVE** adjusts the input sensitivity, as well as the overall amount of gain and overdrive, similar to when the output section of a tube amp is being pushed.

**BASS & TREBLE.** Unlike passive controls that only cut, these active tone controls cut or boost  $\pm 12$ dB from unity gain (12 o'clock). This powerful EQ section effectively reduces the need for a fixed frequency mid control and enables you to achieve an extensive variety of curves --including a “mid-cut” as well as a “mid-boost.”

**Adjusting Mid-Range Content:** The mid-range level is preset. Boosting *Bass* and *Treble* yields a “mid-cut” (at 750 Hz) where the relative mid-range level is lower than the *Bass* and *Treble* frequency levels. Cutting *Bass* and *Treble* yields a “mid-boost” (at 750 Hz) where the relative mid-range level is higher than the *Bass* and *Treble* frequency levels. NOTE: The overall output level will change relative to the EQ settings. Simply adjust the *Level* control accordingly.

**BLEND** allows you to adjust the ratio of direct instrument signal and SansAmp Tube Amplifier Emulation circuitry. In most cases, you will probably have this set at maximum (100% SansAmp). For certain applications, however, such as an ultra-transparent sound or for use with piezo pickup-equipped instruments, you may want to blend-in some of the direct signal to achieve your desired sound. While the SansAmp Tube Amplifier Emulation circuitry is bypassed when *Blend* is at minimum, the *Bass*, *Treble* and *Level* controls remain active.

**LEVEL** adjusts the output level of both the *1/4"* and *XLR* outputs.

## PROGRAMMING THE CHANNELS

### HOW TO SAVE A PROGRAM

Select a channel where you want the setting located. Set the knob controls to taste. Double click on that channel’s footswitch and it’s saved. It’s that easy.

## HOW TO FIND KNOB POSITIONING WITHIN A PRESET

When you turn a knob from its stored position, it “unlocks” and the channel indicator LED will blink. The slower the blink, the farther away you are from the preset point. The faster the blink, the closer you are. At the preset point, the LED stops blinking and remains on.

## LAZY POT™

Another Tech 21 first, this is a unique safety feature engineered for the *Drive* and *Level* controls. When you “unlock” the EQ settings, for instance, they will “jump” to the new setting of the knob position. For the *Drive* and *Level* controls, however, this could result in you jumping out of your skin if they are at a high setting. With the Lazy Pot, there’s a slow, gradual increase to the new setting position giving you time to turn it down. This will only happen when you initially unlock a preset. Once unlocked, the pot will react according to how you reposition it.

## BYPASS

SansAmp Bass Driver can go into bypass mode from any of the three channels. Whichever channel you’re already in, hit that channel’s footswitch once and you’ll be in bypass mode.

## SPEAKER SIMULATION

Built-in speaker simulation is an integral part of the SansAmp circuitry. It shapes the sound to match the particular cabinet of the amp type selected. It is specifically designed for a smooth, even response as would be achieved by a multiply-miked cabinet, without the peaks, valleys, and notches associated with single miking. Therefore, it will not adversely affect or interfere with the sound of your own speaker cabinet.

## PLACEMENT ORDER OF OTHER EFFECTS

One of the key attributes of any SansAmp is its responsiveness to the dynamics and nuances of your playing technique. In most cases, your bass should be plugged directly into the SansAmp. We suggest experimenting to find the order that’s best for you. As a general guide, we recommend:

### Place the following effects BEFORE the SansAmp Bass Driver:

Wah-Wah, Pre-Amp, Compressor, Fuzz Box, Envelope Follower.

### Place the following effects AFTER SansAmp Bass Driver:

Chorus, Delay, EQ, Pitch Shifter, Reverb.

NOTE: Low quality digital effects placed after the SansAmp may compromise your signal and degrade the sound.

## NOTEWORTHY NOTES

**1) Do not A/B (compare) the SansAmp in line with a digital product.** When linked in series with a digital pre-amp/processor, the A/D to D/A conversion will impact the unit’s sound. For an accurate comparison, run them parallel (separately) and manually plug in and out of each.

**2) SansAmp is very responsive.** Our controls are unusually sensitive and powerful. You need not set everything at max to get maximum results. For instance, to brighten your sound, rather than automatically boosting *Treble* all the way up, try cutting back on the *Bass* first.

The tone controls also help compensate for the EQ curves found in bass amps. To find the best settings for interacting with your amp, start with the tone controls at 12 o’clock and cut or boost as necessary. Be aware that amplifiers vary greatly and some may require you to use radical EQ settings on the SansAmp to achieve your desired sound. You need not be discouraged or suspect something is wrong with the unit. If you’ve got your sound, you’ve simply found the right balance for your particular amp.

**3) The noise level of SansAmp is exceptionally low.** However, it may amplify noise emanating from the input source. To minimize noise going into the SansAmp Bass Driver, we recommend active electronic instruments have the volume set at unity gain/maximum and tone controls positioned flat. If you need to boost, do so slowly and sparingly.

Also check for pickup interference by moving your guitar or turning the volume off. Be aware single coil pickups are more likely to generate noise.

**4) Preset and Sample Setting levels and tones will vary** depending on the bass, amp and cabinet you use. They were determined using a “typical” bass and cabinet, and are provided as a starting point. So, some adjustments may be necessary, particularly to the Level control. For instance, if you have a high output bass, a clean setting will be louder than a distorted one. Conversely, a low output bass will require a higher level for a clean setting. If you have a big cabinet, the Fat Tube setting will be louder. With a smaller cabinet, the Flip Top setting will be louder.

**5) REMEMBER THIS WARNING: DO NOT run the speaker output of any amp directly into the SansAmp. Severe damage to the amp and/or SansAmp may result.**

### GLOBAL RESET

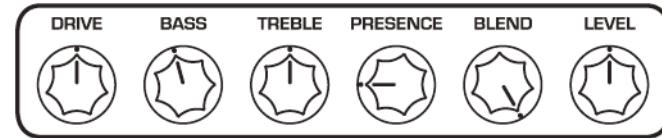
To reset your unit back to factory specifications, you can simply reprogram each of the Sample Settings on page 11:

- (1) Fat Tube      (2) Flip Top      (3) Distorted Bass

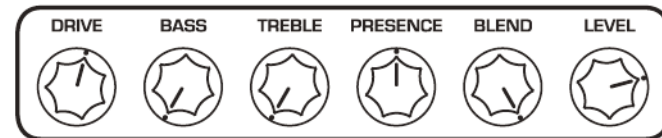
Or you can perform the following procedure: Hold down the footswitches for Channels 1 and 3 *while simultaneously* applying power (either plugging in an adapter or, if a battery is installed, plugging in your guitar cable). Then release the switches.

## SAMPLE SETTINGS

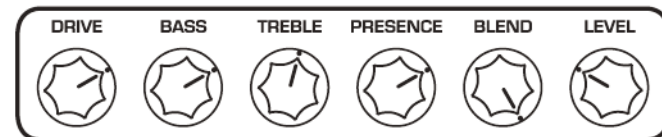
### FAT TUBE



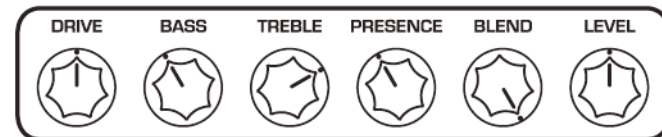
### FLIP TOP



### DISTORTED BASS

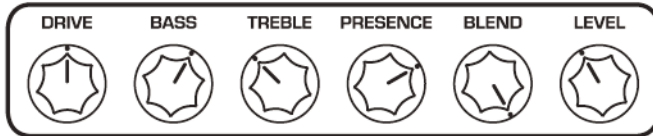


### BASSMAN® STYLE

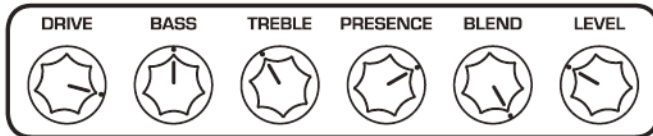


### SAMPLE SETTINGS

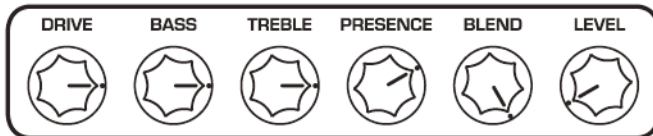
#### SVT® STYLE



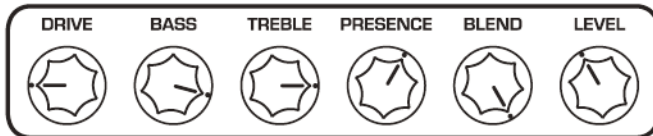
#### KING'S X STYLE



#### CRIMSON STYLE

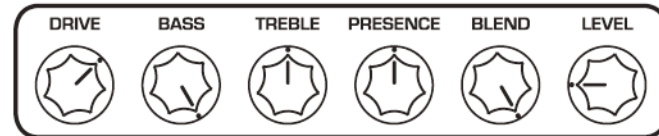


#### SLAP

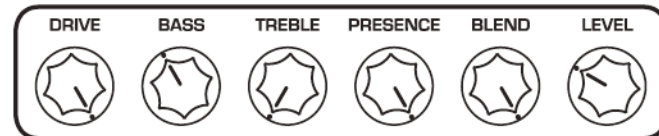


### SAMPLE SETTINGS

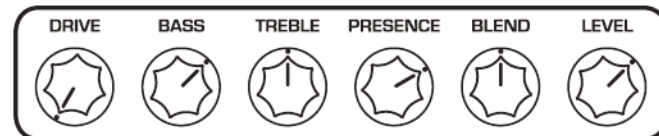
#### REGGAE



#### SOLO



#### FULL RANGE/CLEAN (FOR PIEZO)



#### ACOUSTIC GUITAR

