

POWER REQUIREMENTS

- *Operable with phantom power supply, minimum 24V DC regulated, however, 48V DC regulated is recommended in order to illuminate LED.
- *Utilizes standard 9V alkaline battery (not included). To install, simply remove door cover. (NOTE: The *Input* activates battery. To conserve energy, unplug when not in use.) Power Consumption: approx. 5mA.
- ***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 #DC2.**

WARNINGS:

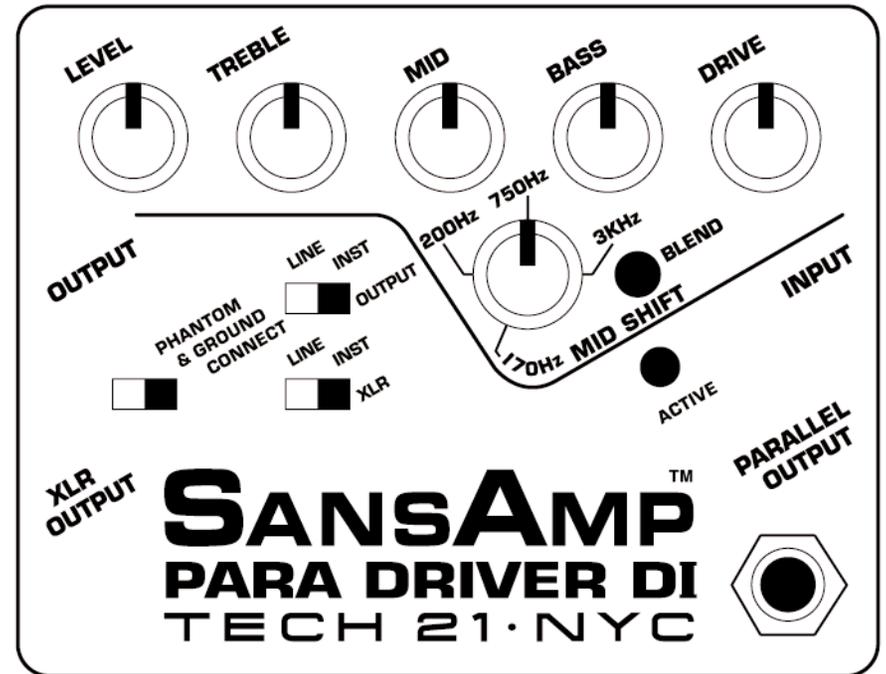
- * Attempting to repair unit is not recommended and may void warranty.
- * Missing or altered serial numbers automatically void warranty. For your own protection: be sure serial number labels on the unit's back plate and exterior box are intact, and return your warranty registration card.

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. Warranty does not include damage resulting from accident, misuse, abuse, alteration, or incorrect current or voltage. If unit becomes defective within warranty period, Tech 21 will elect to repair or replace it at no cost. After expiration, Tech 21 will repair 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 weekdays from 9:00 AM to 5:00 PM, EST.



OWNER'S MANUAL

DESIGNED AND MANUFACTURED IN THE U.S.A.

TECH 21

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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 unique 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. While there have since been many entries into this niche, SansAmp continues to maintain its reputation as the industry standard.

After developing a full line of SansAmp models, Tech 21 expanded its offerings to include effect pedals; a compact, battery operable MIDI footcontroller, the *MIDI Mouse*; as well as “traditional” style amplifiers. Each product is thoughtfully and respectfully designed by Andrew himself with the player in mind.

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

PRODUCT OVERVIEW

Tech 21 redefined the term “direct box” with the development of SansAmp™ Tube Amplifier Emulation technology. For recording and live performances, our exclusive, 100% analog circuitry delivers the sound of a miked-up tube amp in a convenient direct box format.

SansAmp Para Driver DI offers detailed tone shaping for any signal source. The proprietary circuitry (engaged via the *Blend* control) eliminates the unnatural harmonics of piezo pickups. SansAmp Para Driver DI gives your instrument a natural warmth and presence as if you were miking it through a tube pre-amp.

SansAmp Para Driver DI functions as a pre-amp, a stomp box, and as a standard direct box with EQ (when the *Blend* control is at minimum). It also functions solely as a standard transparent direct box (when in bypass) to convert the instrument signal to a low impedance balanced output. This prevents signal loss and sound quality deterioration caused by long cable lengths. When you engage the SansAmp circuitry via the on-board footswitch, it gives you the sound and responsiveness of a miked-up pro stage rig --direct into a recording console or P.A. system. You can also *simultaneously* plug straight into a power amp or conventional amp.

As with each SansAmp model, the controls are designed to give you the flexibility to achieve your desired sound, be it at home, in a local bistro or on a world tour.

APPLICATIONS

WITH AN INSTRUMENT AMP:

- As a Stomp Box:** Run the 1/4” *Output* into the front input of your amp. For best results, keep SansAmp Para Driver DI’s *Level* close to unity gain so as not to overload the amp’s input, which could yield undesirable distortion.
- As a Pre-Amp:** Run the 1/4” *Output* of SansAmp Para Driver DI directly into the power amp input, a.k.a. “effects return” (if applicable), of an amp. This will bypass the amp’s tone-coloring pre-amp section **and defeat the amp’s master volume**. So, be sure your instrument’s volume is off, **BEFORE** you turn on the amp. If a power amp input is not available, use the cleanest channel with the amp’s EQ flat and maximum headroom. For best results, keep the *Level* of SansAmp Para Driver DI close to unity gain to not overload the amp’s input (which could yield undesirable distortion).

TO DRIVE A POWER AMP: Run the 1/4” *Output* or *XLR Output* to the corresponding input of a power amp, and adjust your stage volume with the *Level* control of SansAmp Para Driver DI. **NOTE:** When running into the power amp input of an amp or a power amp alone, make sure the *Output Level Switch* is set to *Line* and adjust the *Level* as needed. If you are so inclined, this is the time to crank it --as long as the power amp volume is close to or at max.

FOR RECORDING DIRECT AND GOING LIVE DIRECTLY TO A P.A. SYSTEM:

Plug the XLR or 1/4” *Output* directly into the input of a mixer/recorder. Work with the input trim control on the mixer/recorder and be sure not to overload its input. If *Level* is below 12 o’clock and it is overloading the board, set the *Output Level* switch to *Instrument*. Additionally, bear in mind that full-range systems yield a wide frequency response. Therefore, we suggest you start with the EQ levels at 12 o’clock and then increase/decrease to taste.

WITH INSTRUMENTS: Use with acoustic, electric and bass guitars, and upright bass, as well as keyboards, violin, drums, sax, harmonica, and even vocals. But don’t stop here. Try your own experimentation.

WITHOUT INSTRUMENTS:

- Insert SansAmp Para Driver DI in your mixing board and use it as an outboard processor to warm up a particular channel.
- Put direct in-line from the microphone to the mixer.
- Enhance existing tracks in the mix-down process.
- Use as a speaker/mic simulator to record your favorite effects/stomp boxes directly (see Sample Settings).

GUIDE TO CONTROLS

DRIVE: adjusts the overall amount of gain and overdrive, similar to when the output section of a tube amp is being pushed.

BASS & TREBLE: These **active** tone controls cut or boost ± 12 dB from unity gain at 12 o’clock. Bass is 80 Hz. Treble is 3.2kHz.

MID SHIFT & MID

Sweepable, semi-parametric EQ controls range from 170 Hz to 3.5 kHz, ± 16 dB, respectively. With *Mid Shift*, you can select the center frequency of the mid-range control (*MID*), enabling you to notch out specific frequencies that may be causing your acoustic guitar to feed back. **To find the feedback frequency of your guitar**, set *MID* at max (5 o’clock). Turn *Mid Shift* to the feedback point and leave it there. Cut *MID* until feedback stops. However, you can achieve various unique sounds by boosting *MID* and selecting different frequencies with *Mid Shift* --such as the “Money for Nothing” sample setting. Note: If you set *Mid Shift* at 1kHz, *MID* operates as a traditional mid-range control.

BLEND allows you to blend the direct instrument signal with SansAmp Tube/Microphone Emulation circuitry. In most cases, you will probably have this set at maximum (100% SansAmp). If you should want to hear some of the distinct timbre of a piezo pickup, or reduce the amount of “compression,” you can simply adjust accordingly by turning the *Blend* control counter clockwise. At minimum, the SansAmp circuitry is bypassed. However, all the other controls remain active. The unit then functions as a standard DI with EQ.

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

THE INS AND OUTS

Follow *Standard Audio Procedure* 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!

IMPORTANT: TURN ON FIRST. TURN OFF LAST.

INPUT: 1/4”, 4.7megOhm, instrument level. Switches battery power on/off. To avoid battery drain, unplug when not in use. **(DON’T FORGET TO MUTE!)**

PARALLEL OUTPUT: 1/4” unbalanced direct output is “hard-wired” to the *Input* jack. Instrument signal passes through, UNEFFECTED, to the input of your stage amplification system. NOTE: The impedance of the 1/4” *Input* will change and assume the impedance of the equipment the *Parallel Output* is connected to. If that equipment has a lower impedance (i.e., vintage effects, tuners, etc.), it will cause the signal to diminish. To avoid signal degradation, we recommend not using the *Parallel Output* when a high impedance is required (for instance, for piezos).

BALANCED XLR OUTPUT: Balanced 600-Ohm low Z output. Sends effected or uneffected signal to mixing console/recorder, depending on the orientation of the *Footswitch*.

XLR Output Level Switch: -20dB pad to match the output to equipment with different input level requirements. In line level position, the output is 0dB. In instrument level position, the output is -20dB.

1/4” OUTPUT: Unbalanced 1KOhm low Z output. Sends effected or uneffected signal to amp rig or power amp, as per the orientation of the *Footswitch*.

1/4” Output Level Switch: +10dB boost to match the output to equipment with different input level requirements. In instrument level position, the output is -10dB. In line level position, the output is 0dB.

FOOTSWITCH, with corresponding LED indicator: Engages/disengages the circuitry. Active, LED will be on. Tonality and gain structure are affected as determined by the setting of the controls. Delivers effected signal through *XLR Output* and *1/4" Output*. Inactive, LED is off. SansAmp Para Driver DI functions as an active *transparent* direct box and does not sonically alter the instrument signal.

PHANTOM POWER

Allows you to “tap into” the power of a suitably equipped mixer, which, today, most are. 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 Para Driver DI is phantom power operable.

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

With a mixer only: If you are plugging your instrument into the Para 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 set the switch to the right to connect the ground and engage the phantom power.

With a mixer and amp: If you are going to the mixer via the *XLR* and using the *1/4" Output* or *Parallel Output* to feed an amp (with its own AC ground), you should set the switch to the left in “Ground Lift” mode. If you experience hum and/or buzz with the switch in either position, there is probably 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.

SPEAKER SIMULATION

Speaker simulation is an integral part of the SansAmp circuitry. It is specifically designed for a smooth, even response as would be achieved by a multiply-miked cabinet --without peaks, valleys, and notches associated with single miking-- and will complement any type of speaker cabinet system.

NOTEWORTHY NOTES & CONSIDERATIONS

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

Be aware that boosting *Treble* and *Bass* increases the high and low frequency content without changing the overdrive structure. However, boosting the *Mid* and the *Mid Shift* controls will increase the amount of saturation. (Refer to the Sample Setting for Sparkle Electric Guitar.) By taking the time to familiarize yourself with how the EQ controls interact, you will be able to achieve the proper mix of frequencies that best suits your needs in any venue.

2) **The noise level is exceptionally low.** However, it may amplify noise emanating from the input source. To minimize noise going into SansAmp Para Driver DI, 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.

3) **Compressors or limiters may not be necessary.** Our unique circuitry emulates the warm, natural, gentle compression of tubes. This limits transient peaks for an even meter reading, so that outboard units typically are not needed.

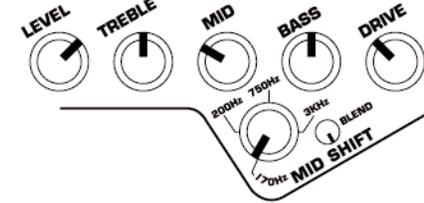
4) **Using effects.** One of the key attributes of SansAmp is the responsiveness to the dynamics and nuances of your playing technique. Therefore, it is best to have your instrument plugged directly into the SansAmp and place effects *after* the SansAmp. If, however, you prefer to place an effect before SansAmp, be sure to set the output level of the effect at unity gain with the output level of the instrument.

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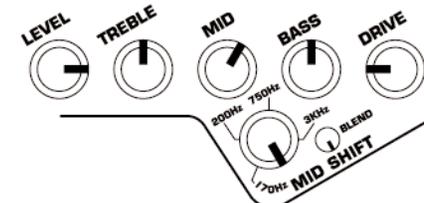
Names of sample settings are intended for descriptive purposes only and should not be construed as an endorsement or affiliation with the companies or artists named.

SAMPLE SETTINGS

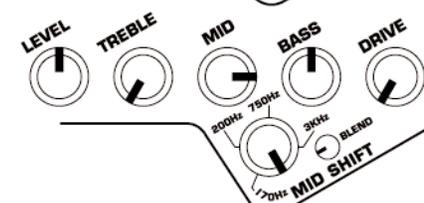
ACOUSTIC GUITAR I



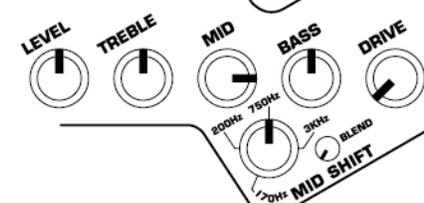
ACOUSTIC GUITAR II



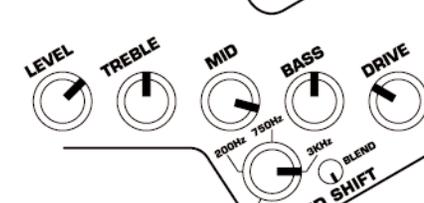
ACOUSTIC GUITAR III



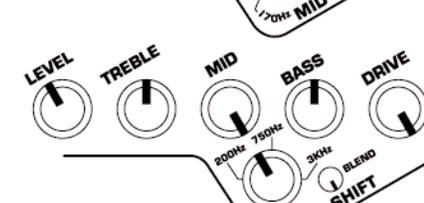
MID-BOOST GUITAR



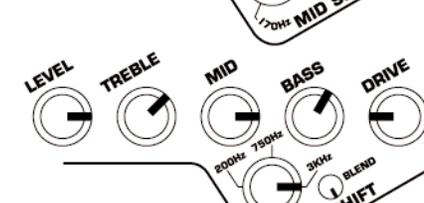
CHAMP®



MONEY FOR NOTHING

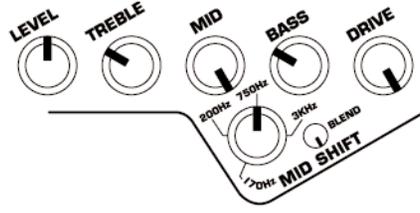


SPARKLE ELEC GUITAR

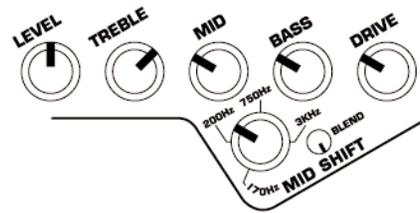


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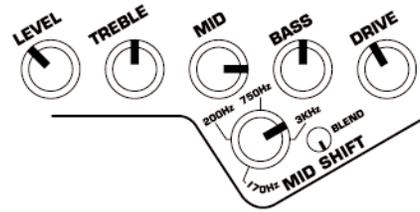
SCHENKER



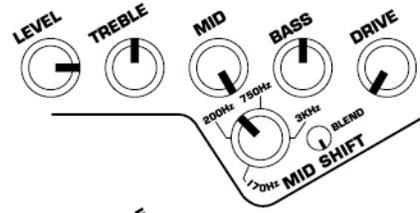
DEEP TUBE BASS



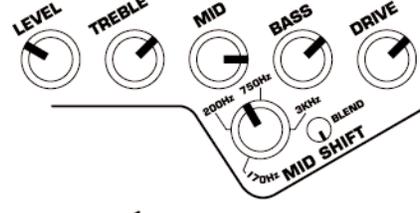
SVT® BASS



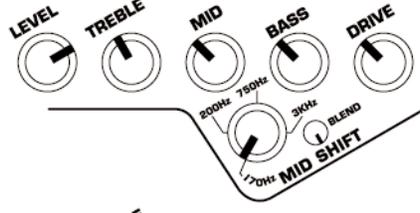
JACO BASS



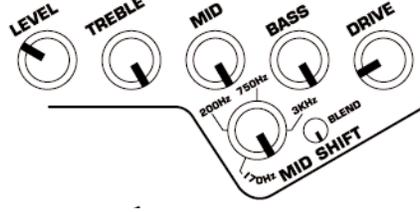
LEAD BASS



UPRIGHT BASS

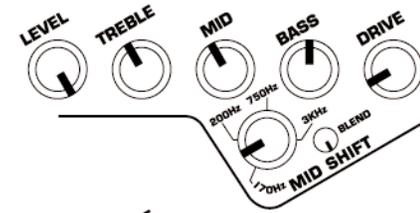


ACTIVE BASS SIMULATOR

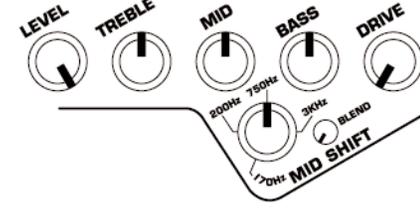


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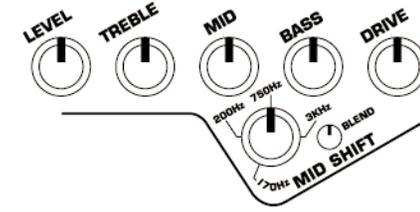
ELECTRIC VIOLIN



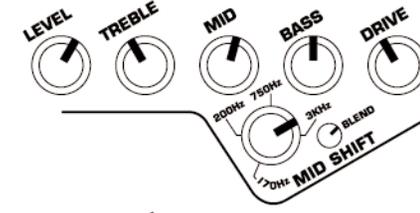
CLEAN BOOST



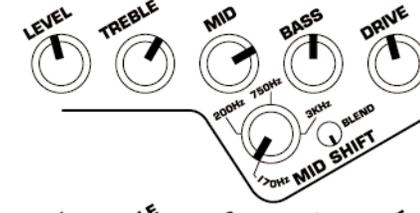
ELECTRIC PIANO



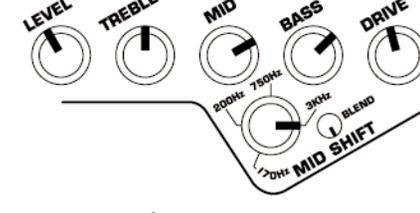
HAMMOND® ORGAN



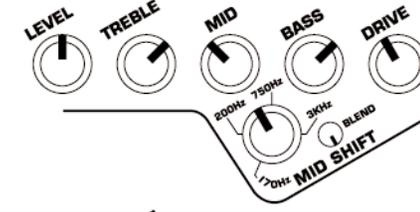
HIP-HOP DRUMS



KICK DRUMS

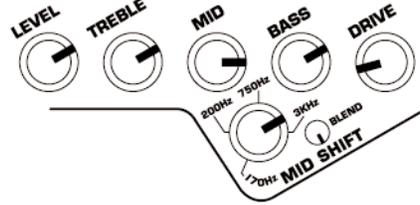


SNARE DRUM

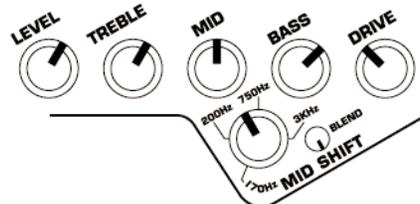


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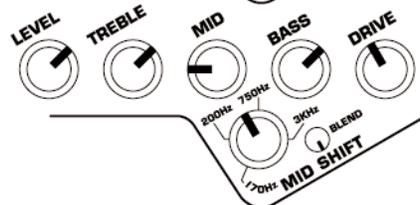
STOMP BOX
(COMPRESSOR)
DIRECT - CLEAN



STOMP BOX
(DISTORTION)
DIRECT - ROCK



STOMP BOX
(DISTORTION)
DIRECT - METAL



CUSTOM SETTINGS

