BASS MID TREBLE BLEND LEVEL

INPUT

INPUT TO XLR

ACTIVE

MID SHIFT
3kHz
750Hz
200Hz
170Hz

SansAmp™
Acoustic DI
TECH 21·NYC

-20dB PAD ACTIVE

PHANTOM & GROUND CONNECT

OUTPUT

XLR OUTPUT

POWER REQUIREMENTS

*Operable with phantom power supply, minimum 24V DC, however, 48V DC, is recommended.

*Utilizes standard 9V alkaline battery (not included). NOTE: The *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 #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. This 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 free of charge. After warranty expires, Tech 21 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, Inc., any weekday from 10:00 AM to 6:00 PM, EST.

MADE IN THE U.S.A.

TECH 21· NYC

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212-315-1116 / Fax: 212-315-0825 / www.tech21nyc.com

PRODUCT OVERVIEW

Tech 21 redefined the term "direct box" with the development of SansAmp™ Bass DI, and again with SansAmp Bass Driver DI. For recording and live performances, our exclusive Tube Amplifier Emulation circuitry delivers the sound of a miked-up bass amp system in a convenient direct box format.

We have now adapted our proprietary technology specifically for the acoustic guitar player, whose seemingly simplistic desire to just put a good quality microphone in front of an acoustic guitar is foiled by feedback or unbalanced sound. Piezo pickups have helped, but their characteristic high frequencies tend to sound artificial and abrasive.

With SansAmp Acoustic DI, the parametric equalizer (the *Mid Shift* control) removes unwanted feedback. The Tube/Microphone Emulation circuitry (engaged via the *Blend* control) eliminates the unnatural harmonics of piezo pickups. SansAmp Acoustic DI gives your acoustic guitar a natural warmth and presence as if you were miking the guitar through a tube pre-amp.

SansAmp Acoustic DI also functions as a standard direct box with EQ when the *Blend* control is at minimum. In bypass (inactive), SansAmp Acoustic DI functions solely as a standard transparent direct box.

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.

SansAmp Acoustic DI.
Consistent quality sound studio to studio, club to club, arena to arena.

APPLICATIONS

WITH ACOUSTIC GUITAR:
  -Direct to the mixing console of a recorder or a P.A. system: For live and studio use, you can plug the *XLR Output* 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. 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 increase/decrease to taste.
  -With a conventional acoustic guitar amplifier: To enhance your acoustic amplifier with a more natural sound, run the 1/4" *Output* into the front input of your amp. For best results, keep the *Level* control of SansAmp Acoustic DI close to unity gain so as not to overload the amp's input (which could yield undesirable distortion).
  -With a conventional electric guitar amplifier: To expand the capabilities of your electric amp, run the 1/4" *Output* into the power amp input, a.k.a. "effects return" (if available) of the amp. This will bypass the tone-coloring pre-amp section. 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* control of SansAmp Acoustic DI close to unity gain so as not to overload the amp's input (which could yield undesirable distortion).

WITH OTHER INSTRUMENTS:
SansAmp Acoustic DI can be used with electric and bass guitars, and upright bass, as well as drums, sax, harmonica, and even vocals. But don't stop here. Try your own experimentation.

WITHOUT INSTRUMENTS:
  -Insert SansAmp Acoustic 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).

THE INS AND OUTS.

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

INPUT: 1/4", 4.7megOhm, instrument level. The unusually high impedance was designed with piezo pickups in mind to provide maximum output and dynamics. Switches battery power on/off. To avoid battery drain, **unplug when unit is not in use. AND... DON'T FORGET TO MUTE !**

INPUT TO XLR/"Effect Return:" This triple-function 1/4" input converts a high impedance instrument signal to a low impedance, balanced line through the *XLR Output*. This input bypasses all the circuitry, which enables the unit to be used as a standard transparent DI. You can also create an effect loop by utilizing this input as an "Effect Return" in conjunction with the 1/4" *Output*. See illustration below.

1/4" OUTPUT/"Effect Send:" Unbalanced low Z output. Sends signal to your amp or power amp. It can also be used with a home recorder should an XLR input not be available. Also functions as an "Effects Send" when utilized in conjunction with the *Input to XLR*. See illustration below.

BALANCED XLR OUTPUT: Balanced low Z output sends signal to mixing console/recorder. Switchable between 0 and -20dB by using the *-20 dB Pad* switch. Also accepts phantom power (see page 4).

EFFECT LOOP HOOK-UP:
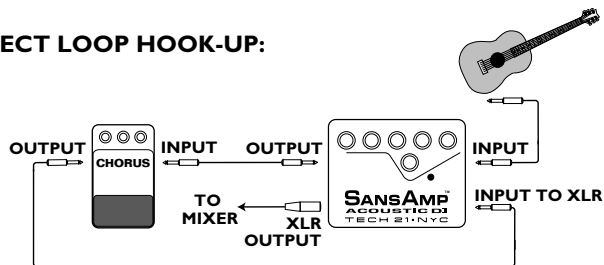
ACTIVE SWITCH: Active, LED will be on. All controls will respond to their settings. Inactive, LED will be off and SansAmp Acoustic DI is in bypass mode. It then functions as a transparent direct box and will not sonically alter the instrument signal.

-20dB PAD: Attenuates the volume of the *XLR Output* between 0 and -20dB. If you're using a mixer with a mic level input, be sure to pad at -20dB so as not to overdrive the input. To obtain a better signal to noise ratio, use the 0dB position. Just be sure your mixer can accept a line level (0dB) signal input (not all can).

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.

PHANTOM POWER OPERABILITY eliminates the need for an external power supply. If you are using a suitably equipped mixer, consult its owner's manual for set-up instructions. For live and studio use, let the engineer know your SansAmp Acoustic DI is phantom power operable.

NOTE: When lifting the ground, phantom power disconnects, and battery (if installed) becomes activated. 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 page 3).

GUIDE TO CONTROLS

BASS & TREBLE
Unlike passive controls that can only cut, these **active** tone controls cut or boost ±12dB from unity gain at 12 o'clock.

MID SHIFT & MID
These sweepable, semi-parametric EQ controls range from 170 Hz to 3.5 kHz, ±16dB, respectively. With the *Mid Shift* control, you can select the center frequency of the mid-range control (*MID*). This, in turn, enables you to notch out any specific frequencies that may be causing your guitar to feed back. **To find the feedback frequency of your guitar**, set *MID* at maximum boost (5 o'clock). Turn *Mid Shift* to the feedback point and leave it there. Then cut the *MID* control until the feedback stops.

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.

TUBE/MIC EMULATION

Tube/Microphone Emulation is an integral part of the SansAmp Acoustic DI's circuitry. The tube emulation yields a warm, gentle saturation to limit dynamic peaks, while the microphone emulation removes the unnatural harmonics associated with piezo pickups. It is specifically engineered to yield a smooth, even response as would be achieved by a properly miked acoustic guitar.

NOTEWORTHY NOTES & CONSIDERATIONS

1) SansAmp Acoustic 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, restrain yourself from automatically boosting *Treble* all the way up. Try cutting back on the *Bass* first.

Be aware that boosting *Treble* and *Bass* increases the high and low frequency content without changing the gain structure. However, boosting the *Mid* and the *Mid Shift* controls will increase the amount of saturation. (Refer to the Sample Setting for 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 of SansAmp Acoustic DI is exceptionally low. However, it may amplify noise emanating from the input source. To minimize noise going into SansAmp Acoustic 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 aren't needed.

4) Using effects. One of the key attributes of SansAmp is the responsiveness to the dynamics and nuances of your playing technique. Therefore, your guitar should be plugged directly into SansAmp and effects should be placed *after* SansAmp.
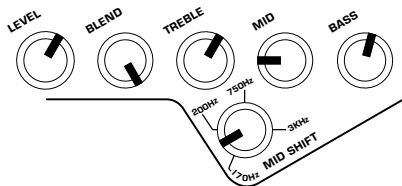
> With an amp: use 1/4" *Output* to effect to amp.
> With XLR: place effect in effect loop of SansAmp Acoustic DI (see page 3).

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.
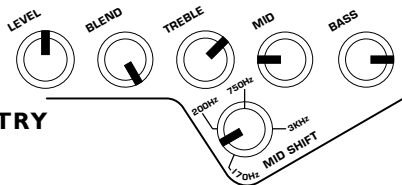
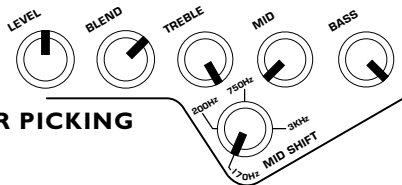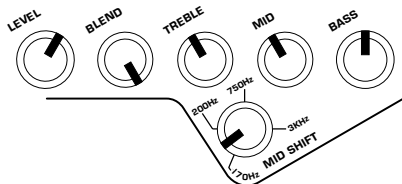# SAMPLE SETTINGS
(for acoustic guitars)

FOLK

COUNTRY

FINGER PICKING

JAZZ
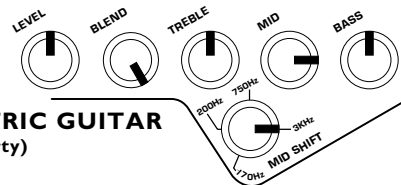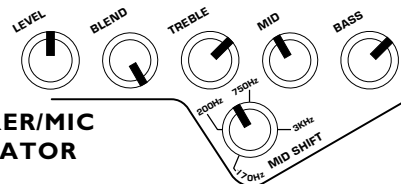
SAMPLE SETTINGS
(other)

BASS GUITAR
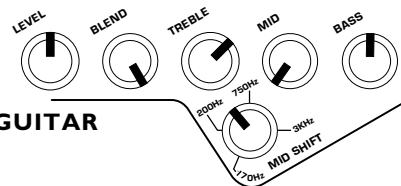
BASS GUITAR
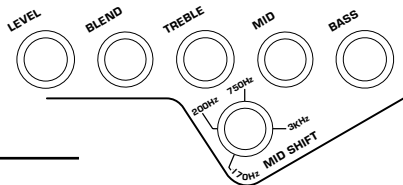(hard driven)
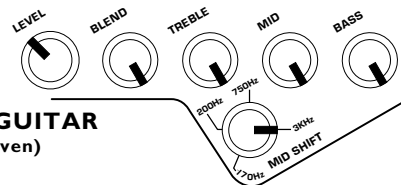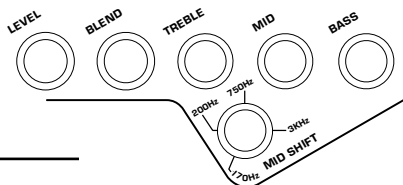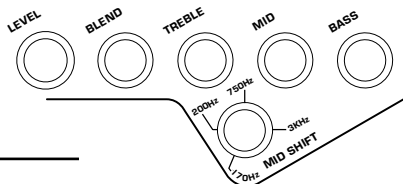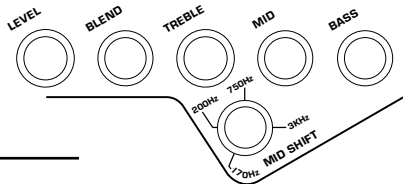
ELECTRIC GUITAR
(semi dirty)

SPEAKER/MIC SIMULATOR

NOTE: Sample settings are provided as a starting point. As acoustic guitar designs vary greatly, controls may have to be adjusted accordingly.

CUSTOM SETTINGS

LEVEL BLEND TREBLE MID BASS

200Hz 750Hz 3KHz 170Hz MID SHIFT

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LEVEL BLEND TREBLE MID BASS

200Hz 750Hz 3KHz 170Hz MID SHIFT

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LEVEL BLEND TREBLE MID BASS

200Hz 750Hz 3KHz 170Hz MID SHIFT

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