

POWER REQUIREMENTS

Utilizes included 18V DC universal auto-switching power supply with interchangeable international plugs for use anywhere in the world.

To change the prong assembly, refer to instructions on page 6.

Tech 21 Model #DC18

100-240V; 250mA; center negative.

For replacements, contact your local dealer/distributor or Tech 21.

Maximum power consumption: approx 70mA.

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 register online: tech21nyc.com/register.

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, Tech 21 will repair or replace it free of charge. After expiration, 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.

NOTE: With on-going product development and improvements, specifications and/or the cosmetic appearance of this unit may change without prior notice.

FOR PERSONAL ASSISTANCE & SERVICE:

Contact Tech 21 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.

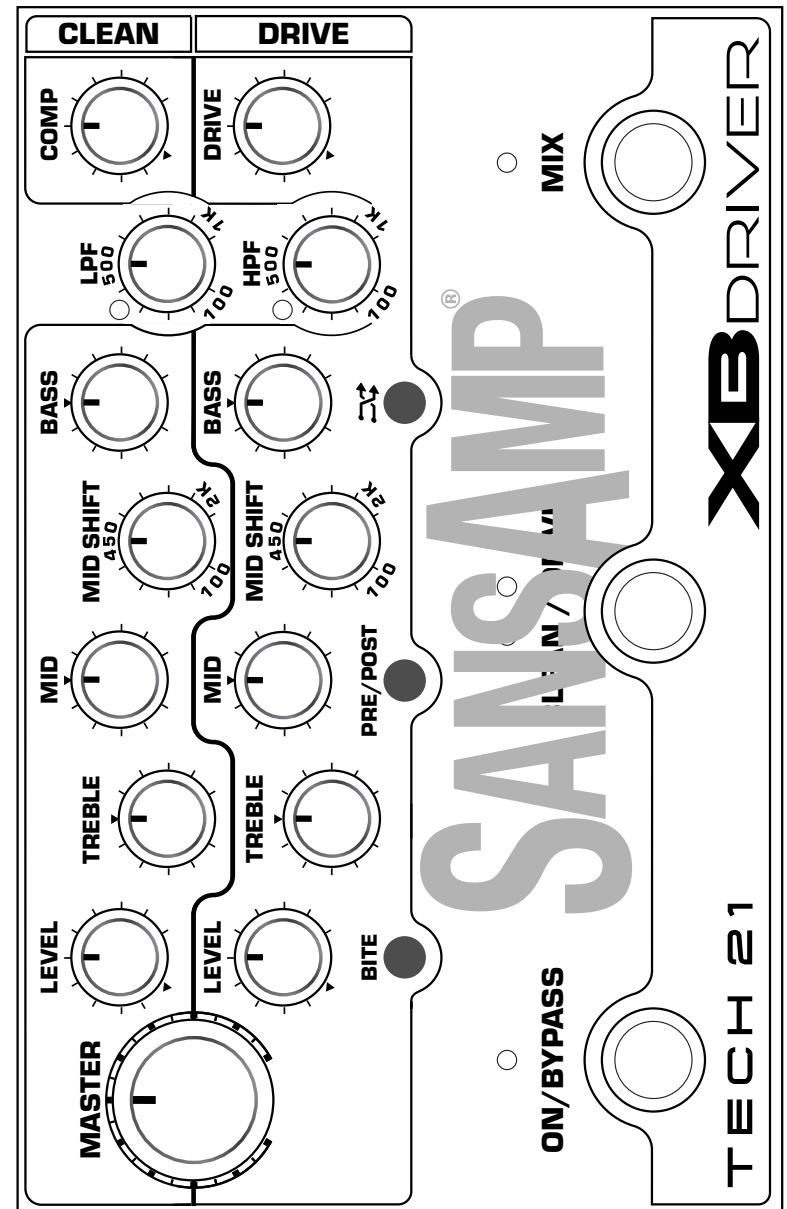
TECH 21

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SansAmp XB Driver
Owner's Manual

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.

Each Tech 21 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.

SansAmp XB Driver, an Overview

The SansAmp XB Driver integrates key elements from Tech 21's most popular bass products into one single, multi-faceted, sleek machine:

SansAmp Bass Driver DI

SansAmp Para Driver DI

Q\Strip

dUg Pinnick Ultra Bass 1000

And just like that, you can go from traditional to diabolical.

The 100% analog, dual-channel SansAmp XB Driver is a sophisticated dual-amp, bi-amp, DI toolbox with 15 knobs and 3 switches. Intuitively arranged, like familiar amplifier controls, you can easily craft a broad range of bass tones without a PhD. The Clean and Drive channels are full-frequency, fully independent channels that can be used individually or blended together via the Mix footswitch. In Mix mode, you can engage the Crossover switch to activate the sweepable LPF & HPF filters, which enables you to even further carve out your own tone footprint.

The dual Clean and Drive channels have individual 3-band active EQ with sweepable semi-parametric mid-range, and Level controls. The Clean channel includes a compressor, while the Drive channel has its own overdrive control to emulate hard-pushed amps, a Bite switch to accentuate high-end harmonics, a Pre/Post SansAmp semi-parametric mid-range switch, and the above mentioned Crossover switch to merge high-end distortion with clean low-end bass. A Master volume completes the package.

While inspired predominantly by dUg Pinnick, the SansAmp XB Driver also gives a nod to other bass tone innovators such as Geddy Lee, John Entwistle, Tom Petersson, Jeff Ament, and Chris Squire. All were notorious for running entirely separate, complicated bass amp systems together in a way that defied common logic yet yielded magical results.

As is the case with all Tech 21 SansAmps, the SansAmp XB Driver offers tons of flexibility and versatility for many different styles so you can create your own magic.

APPLICATIONS

WITH A BASS AMP RIG:

- As a Pre-Amp:** Run the 1/4" Output of the SansAmp XB Driver directly into the power amp input, a.k.a. "effects return" (if applicable), of an amp. This will bypass the tone-coloring pre-amp section of the amp rig.
- As a Stomp Box:** Run the 1/4" Output into the front input of an amp. For best results, keep the SansAmp XB Driver's Master volume close to unity gain so as not to overload the amp's input, which could yield undesirable distortion.

TO DRIVE A POWER AMP: Run the 1/4" Output, or the XLR Output to the corresponding input of a power amp, and adjust your stage volume with the Master control of the SansAmp XB Driver.

NOTE: When running into the power amp input of an amp or a power amp alone, make sure to set the Output Level Switches as follows:

If using 1/4-inch: +10dB engaged (in position).

If using XLR: Line Level engaged (in position).

Then adjust the Master volume level as needed. If you are so inclined, this is the time to crank it!

DIRECT to MIXER: PA Live, Recording Desk, Computer Interface

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 the Master volume on the SansAmp Bass Driver is below 12 o'clock and is overloading the board, use the respective output level switch to reduce the output:

If using 1/4-inch: +10dB disengaged (out position).

If using XLR: Line Level disengaged (out position).

Bear in mind 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.

GUIDE TO CONTROLS: CLEAN CHANNEL

COMP: Utilizes old school, all-analog, FET-based technology from the '50s and '60s, which is inherently warmer, more transparent, and more musical than other methods of compression.

BASS & TREBLE are active tone controls that cut or boost ± 12 dB from unity gain at 12 o'clock. Bass is centered at 80 Hz. Treble is centered at 3.2kHz.

MID SHIFT & MID

Sweepable, semi-parametric EQ controls range from 100 Hz to 2 kHz, ± 16 dB, respectively. With Mid Shift, you can select the center frequency of the mid-range control (MID), enabling you to dial in specific frequencies to combat those pesky cymbals and loud guitar players. You can achieve various unique sounds by boosting MID and selecting different frequencies with Mid Shift. Note: If you set Mid Shift at 1kHz, MID operates as a traditional mid-range control.

LEVEL adjusts the output level of the Clean channel through both the 1/4" and XLR outputs.

GUIDE TO CONTROLS: DRIVE CHANNEL

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 are active tone controls that cut or boost ± 12 dB from unity gain at 12 o'clock. Bass is centered at 80 Hz. Treble is centered at 3.2kHz.

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Sweepable, semi-parametric EQ controls range from 100 Hz to 2 kHz, ± 16 dB, respectively. With Mid Shift, you can select the center frequency of the mid-range control (MID), enabling you to dial in specific frequencies to combat those pesky cymbals and loud guitar players. You can achieve various unique sounds by boosting MID and selecting different frequencies with Mid Shift. Note: If you set Mid Shift at 1kHz, MID operates as a traditional mid-range control.

LEVEL adjusts the output level of the Drive channel through both the 1/4" and XLR outputs.

BITE: Activates a presence boost in the Drive channel to tighten up the sound in distorted settings and add definition in clean settings.

PRE/POST: Changes the position of the semi-parametric Mid control in the Drive circuit.

- In "Pre" mode (out position), the Mids are before the amp emulation (similar to the GED-2112 and SansAmp Para Driver). It will influence the frequency response as well as the attack and Drive characteristics of the sound.
- In "Post" mode (in position), the Mids are after the amp emulation (like Treble and Bass) and will operate similar to our SansAmp Bass Driver DI. Post EQ is like having your own dedicated mixing console at your fingertips.

SPEAKER SIMULATION: The speaker simulation in the Drive channel is an integral part of the 100% analog SansAmp Tube Amplifier Emulation circuitry, and will complement any type of bass speaker cabinet system. You can also place an external IR after any SansAmp to give additional flavor if you so desire. The SansAmp speaker sim is specifically designed and individually tailored for a smooth, even response as would be achieved by a multiply-miked cabinet --without the peaks, valleys, and notches associated with single miking and many IRs.

GUIDE TO SWITCHES & OTHER GOODIES

MIX MODE

Combines the 2 channels together via the Mix footswitch. You can adjust the ratio of the mix with the individual Level controls to blend different amounts of Drive and Clean.

CROSSOVER Switch: When in Mix mode, the Crossover switch activates the sweepable LPF and HPF filters, which enables you to even further carve out your own tone footprint. This magic button splits the lows and highs into 2 separate signal paths and "reassembles" them according to how the LPF and HPF are dialed in. This enables you to achieve an entirely new sound in a much simpler way than artists like Chris Squire, Dug Pinnick, Geddy Lee and John Entwistle originally had to do back in the day with mountainous racks and amps.

LPF and HPF: Activated by the Crossover switch when in Mix mode, these filters are sweepable from 100-1K. Unlike a PA crossover that sweeps in tandem, each frequency is separately adjustable, enabling you to create an entirely new palette of sounds.

MASTER: Adjusts the overall volume of both channels.

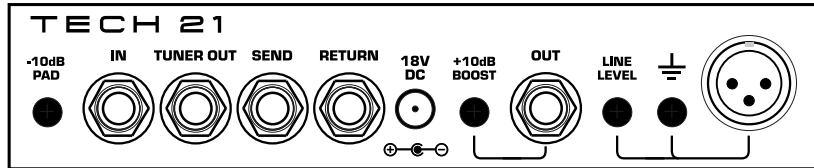
THE INS AND OUTS

WARNING: DO NOT run the speaker output of any amp directly into the SansAmp. Doing so may result in severe damage to the amp and/or the SansAmp.

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.



1/4" INPUT: 1 megOhm, instrument level.

1/4" Input Level Pad Switch: for active basses pads the input by -10dB (in position).

Note: also affects the 1/4" Tuner Output.

UNIVERSAL OUTPUT SECTION

The output sections of the SansAmp XB Driver are designed to be compatible with any application. The outputs can be used for full range (multi-track recorders, studio monitors, P.A. systems) or limited range systems, as well as simultaneously. Note: You can compensate for different frequency responses of speaker enclosures by using the Treble control.

BALANCED XLR OUTPUT: Balanced low Z output. Sends effected or uneffected signal to mixing console/recorder.

GROUND CONNECT SWITCH: When engaged, the ground connects. 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 bass into the XB 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 push the switch in to connect the ground.

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 have the switch disengaged (in the up position) to be in “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 using.

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

XLR Output Line Level Switch: toggles between mic level (-20dB) and line level (0dB) to match the output to equipment with different input level requirements. Disengaged (out position), the output is -20dB. Engaged (in position), the output is 0dB.

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

1/4" Output Level Boost Switch: +10dB boost to match the output to equipment with different input level requirements. Disengaged (out position), the output is -10dB. Engaged (in position), the output is 0dB. Also affects the 1/4" Tuner Output.

NOTE: Both outputs can be used simultaneously. For example, 1/4" Out to your amp and XLR Out to PA mixer, which is one instance where the Ground might need to be disengaged.

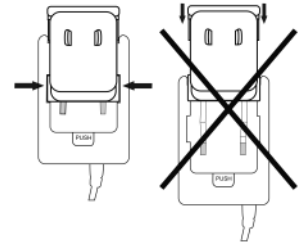
1/4" TUNER OUTPUT: As long as the unit is plugged in, the tuner output provides a constant, uneffected signal at all times, regardless of the position of the Level controls. This output can also be used as a buffered out to send a transparent signal to other outboard gear. Note: the 1/4" Input pad also affects the 1/4" Tuner Output.

SEND/RETURN Effects Loop: For external effects, connect the input of your processor to Send; output of your processor to Return. Note: When nothing is plugged into the Effects Loop, the signal passes through from the XB Driver to the Output jacks, with both the SansAmp 1/4" and XLR Outputs receiving the same signal.

UNIVERSAL POWER SUPPLY

The SansAmp XB Driver is shipped with an 18V power supply set up with a U.S. prong assembly. To change the prong assembly to one of the included European, UK or Australia/New Zealand styles, be sure the power supply is unplugged and follow these instructions:

Press the PUSH switch to release the prong assembly. Slide the assembly up (about halfway) to align the side tabs of the prong assembly with the slots of the power supply housing. Then pull up to remove the assembly. Choose the new prong assembly, align the side tabs with the slot of the housing, slide down until it clicks into position.



NOTE: You cannot slide the prong assembly all the way out or all the way in.

NOTEWORTHY NOTES & CONSIDERATIONS

1) Set Level controls for UNITY GAIN. Set the Level controls so you have the same volume coming from your speaker/monitor whether the pedal is active or in bypass. This ensures the next device in the signal chain won't get slammed by a much hotter signal than what would normally come from the instrument. Similarly, you wouldn't want a drop in volume, either which would force the next device to struggle for enough signal.

If, however, you're driving a power amp that requires extra volume, you need not concern yourself with unity gain. Feel free to crank the Master volume!

2) Tech 21 controls are unusually sensitive and tend to perform well beyond what would be considered "normal." So you need not set everything at max to get maximum results. For instance, to brighten your sound, rather than automatically boosting Treble, try cutting back on Bass first.

3) SansAmp XB Driver is an interactive tool. It will react differently to various signal levels, as well as your individual touch. For instance, a hotter signal and a heavy hand will increase the gain structure and result in more overdrive. A softer signal and a light touch decreases the gain structure for a cleaner sound. By using Bite, Drive and the EQ controls, you can achieve the proper mix of tonality and gain structure that best suits your style. For instance, if you want the high end to be cleaner and smoother, increase Treble and disengage Bite. If you want more overdrive, engage Bite and decrease Treble. This will bring out the upper harmonic content and attack. As you increase Treble, the high frequency content increases without changing the harmonic content.

3) Tech 21 pedals have exceptionally low noise levels. However, they may amplify noise emanating from the input source. 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.

To minimize noise going into SansAmp XB Driver, we recommend the following:

- a) **Active electronic instruments** should have tone controls positioned flat. If you need to boost, do so slowly and sparingly.
- b) **Passive electronic instruments** should have volume and tone controls set at maximum.

4) When you push SansAmp XB Driver to saturation, you get enhanced harmonics, just as you would with an overdriven tube amplifier. Depending on the setting, the unique circuitry limits transient peaks for an even meter reading, so that outboard compressors or limiters may not be necessary.

5) To find the best settings for interacting with your other gear, you may need to use radically different settings for each individual way you use it. 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 to complement each individual piece of gear. We recommend you start with the tone controls at 12 o'clock and cut or boost as necessary.

6) Using effects. One of the key attributes of SansAmp is the responsiveness to the dynamics and nuances of your playing technique. Therefore, your time-modifying effects should be placed in the Effect Loop or *after* the SansAmp XB Driver. If placing a tone-modifying effect *before* the XB Driver, be sure to set the output level of the effect at unity gain with the output level of the instrument.

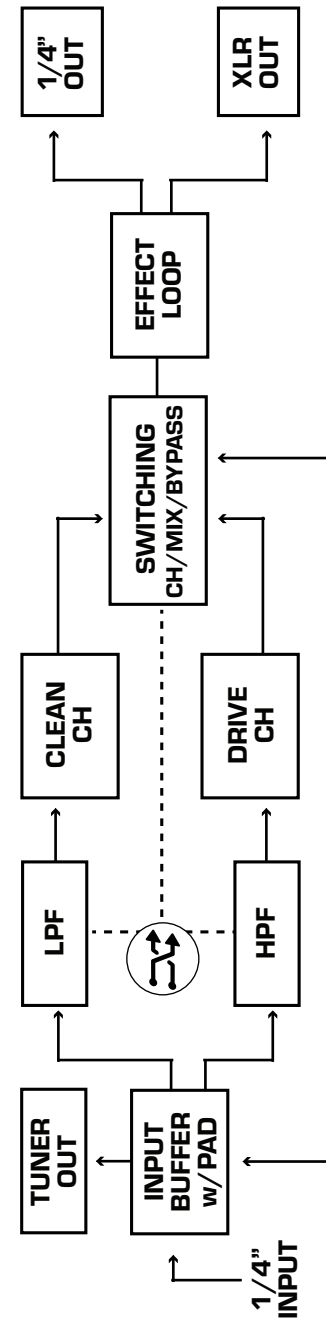
7) Buffered bypass eliminates the shortcomings associated with "true bypass" (pops and clicks, and high-end loss when multiple pedals are connected together), as well as signal loss associated with other types of switching circuits.

8) Custom actuators. All Tech 21 pedals feature smooth, custom, silent-switching metal actuators.

9) Other features:

- Rugged, all-metal housing
- Metal knobs, footswitches and jacks
- Measures 7.5"l x 4.75"w x 2.25"h

ALL ANALOG SIGNAL PATH



CLEAN CHANNEL PATH: COMP - EQ
 DRIVE CHANNEL PATH: BITE - MID (PRE) - SANSAMP EMULATION - MID (POST) - EQ - SPKR SIM

**SAMPLE SETTINGS
TO COME**