

POWER REQUIREMENTS

- Utilizes two (2) standard 9V alkaline batteries (not included). NOTE: *Input* jack activates batteries. To conserve energy, unplug when not in use. Power Consumption: approx. 55mA.
- USE **DC POWER SUPPLY ONLY!** Failure to do so may damage the unit and void warranty. DC Power Supply Specifications:
 - 18V DC regulated or unregulated, 100mA minimum;
 - 2.1mm female plug, center negative (-).
- Refer to "Power Considerations" in Noteworthy Notes on page 8.

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. 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.

FOR PERSONAL ASSISTANCE & SERVICE:

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

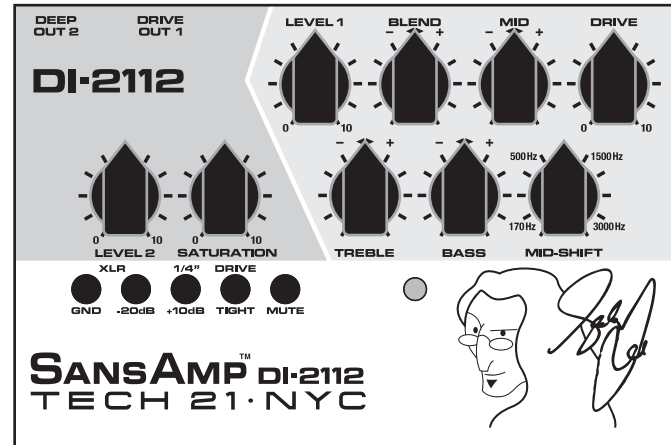
Hand-built in the U.S.A. using high-quality components sourced domestically and around the globe.

TECH 21

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Geddy Lee Signature SansAmp DI-2112



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 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.

Tech 21's proprietary, **100% analog** circuitry gives your instrument a natural warmth and presence as if you were miking your instrument through a tube pre-amp. For studio and live applications, our SansAmp Tube Amplifier Emulation technology enables you to run directly into mixers of recording desks and PA systems, as well as augment your existing amplifier set-up.

With a full line of SansAmp models, Tech 21 also offers effect pedals and MIDI products, as well as "traditional" style amplifiers for guitar and bass. Each product is thoughtfully and respectfully designed by B. Andrew Barta himself with the player in mind. Our goal is to provide you with flexible, versatile tools to explore, build and rebuild your sound, and ultimately stimulating your creativity to inspire you to play your best. Tech 21 takes great pride in delivering consistent quality sound, studio to studio, club to club, arena to arena.

PRODUCT OVERVIEW

Geddy Lee has been performing without onstage amps and speakers since the Test for Echo Tour in 1996, favoring major household appliances instead. Wanting to streamline his gear for new projects, Geddy initially partnered with Tech 21 to design a Signature SansAmp, the GED-2112. This challenging collaboration involved distilling a rackload of equipment into a single rackspace. According to Geddy, "The GED-2112 is really a continuation of my long-time approach to bass tone. A 'deep clean' tone coupled with the 'edgy crunch' I get from the SansAmp RPM now all in one box."

The GED-2112 rackmount introduced a new framework for Parallel Pre-Amping --having two separate internal pre-amps that run in parallel. Following this concept, the compact SansAmp YYZ pedal adapted the architectural structure to simplify blending the two signal paths.

Merging the design of the rackmount and the portability of the pedal, the SansAmp DI-2112 offers yet another new format that is designed to be equally at home on a studio desktop as well as an amp top.

The Drive pre-amp section is based upon the versatile SansAmp RPM, for a wide range of sonic possibilities. The Deep pre-amp section offers thick, meaty tones. Saturation goes from clean in lower settings to increased harmonics and tube-like compression in higher settings. You can use either section independently or blend them externally direct to a mixing board as well as to two amplifiers.

Each Signature SansAmp offers Geddy's core sound and the versatility for many different styles.

APPLICATIONS

AS A PRE-AMP WITH A BASS AMP RIG: Run the 1/4" Outputs of the SansAmp DI-2112 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.

TO DRIVE A POWER AMP: Run the 1/4" Outputs or the XLR Outputs to the corresponding inputs of a power amp, and adjust your stage volume with the Level controls of the SansAmp DI-2112.

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: -20dB disengaged (out position).

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

TO RECORD DIRECT: Plug the XLR or 1/4" Outputs directly into the inputs of a mixer/recorder. Work with the input trim control on the mixer/recorder and be sure not to overload its input. If the Levels on the SansAmp DI-2112 are 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: -20dB engaged (in 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.

BE CREATIVE!

The SansAmp DI-2112 is not necessarily just for bass. Try it with cellos, keyboards, fiddle, drums, sax, harmonica, vocals, etc. Also try using the SansAmp DI-2112 in other applications, such as reamping in mixdowns to liven up existing tracks.

SIGNAL LEVEL TO INPUT

The SansAmp DI-2112 is designed to accommodate instrument level signals to the Input, such as the output of a guitar, the output of distortion pedals, etc. For normal operation, signal level to Input should be close to that of a standard bass guitar (approx -10dB / 250mV). Hotter signals can over-overdrive the Input of the SansAmp DI-2112, even in the cleanest settings, which may result in undesirable distortion. NOTE: Should you purposely or accidentally send a hot signal, it will not harm the unit.

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", 1MegOhm, instrument level. Switches battery power on/off. To avoid battery drain, **unplug when unit is not in use. AND... DON'T FORGET TO MUTE!**

TUNER 1/4" OUT: As long as the unit is plugged in, the tuner output provides a constant, unaffected signal at all times, regardless of the position of the Level controls or the status of the Mute switch. This output can also be used as a buffered out to send a transparent signal to other outboard gear.

LED: Turns on when the SansAmp DI-2112 is in active mode. It will pulsate when playing to indicate there is output. In Mute mode, the LED will turn off.

UNIVERSAL OUTPUT SECTION

The output sections of the SansAmp DI-2112 are designed to be compatible with any application. The outputs can be used for full range (P.A. systems, multi-track recorders, powered studio monitors) or limited range systems (amplifiers utilizing limited range guitar or speaker cabinets) simultaneously. For recording, the SansAmp outputs are like having a built-in direct box. Designed without a transformer, they provide low-impedance output of extremely high quality for recording or interfacing with professional-quality signal processors. You can go direct to the board and get the same sound you hear coming out of the speakers right onto your recording media, be it analog or digital. The SansAmp circuitry not only captures the warm, rich, natural harmonics and sweet overdrive characteristics inherent to tube amplifiers, its speaker emulation encompasses all aspects of multiply-miked tube amp rigs. For live gigs, you can use these outputs direct into the P.A. system and you won't need a microphone in front of your amp.

DRIVE and DEEP 1/4" OUTS: Unbalanced low Z outputs. Each carries the signal from its corresponding section of the SansAmp DI-2112.

1/4" Level Selector Switch: +10dB boost.

0dB (out position): Unity gain output. Note: Start with switch in this position.
+10dB (in position): Boosts the signal by 10dB.

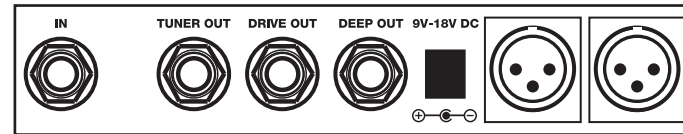
DRIVE and DEEP XLR OUTPUTS: Balanced low Z outputs. Each carries the signal from its corresponding section of the SansAmp DI-2112.

XLR Level Selector Switch: -20dB pad to match the output to equipment with different input level requirements.

0dB (out position): Line-level output. Note: Start with switch in this position.
-20dB (in position): Pads down the line-level signal by 20dB.

Ground Lift Switch: Connects or disconnects the ground circuits between both XLR Outputs of the SansAmp DI-2112 and a (grounded) mixer or power amp. We recommend starting with the ground lifted (out position). If necessary, connect the ground by pushing the switch in.

NOTE: Each output, whether 1/4" or XLR, can be used individually, if, in certain cases, you only want either the Drive or Deep section and not both.



MUTE SWITCH

The Mute function affects all outputs, except the Tuner Out.

GUIDE TO CONTROLS

DRIVE SECTION

The Drive section of the SansAmp DI-2112 is designed with active controls, which cut and boost, rather than traditional passive controls which only cut. This effectively doubles many of the control's capabilities, giving you a much larger range of adjustability and, ultimately, more variety. It should be noted that you need not necessarily set everything at max to achieve maximum results. As you experiment and become familiar with the interrelationship of the controls, you'll easily be able to customize your own sounds.

DRIVE

Adjusts the overall amount of gain and overdrive, similar to when the output section of a tube amp is being pushed. Also controls the input sensitivity with clean sounds. For the fattest, most robust clean sounds, increase Drive until it starts to distort, then gradually decrease until it just disappears.

BASS and 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 and MID-SHIFT

Mid Shift is a parametric EQ control, with a sweep ranging from 170 Hz to 3.0 kHz, which allows you to select the center frequency of the Mid control. Mid will then cut or boost ± 12 dB from the frequency selected by the Mid Shift.

BLEND

Blends the ratio of the direct instrument signal with the SansAmp circuitry. In most cases, you will probably have this set at maximum (100% SansAmp). For certain applications, however, you may want to adjust the ratio of your direct signal to achieve your desired sound. While the SansAmp Tube Amplifier Emulation circuitry is bypassed when Blend is at minimum, the Bass, Mid Shift, Mid, Treble, and Level controls remain active.

LEVEL 1

Adjusts the output level of the Drive Section.

TIGHT BUTTON

Adds definition to your notes in cleaner settings and makes distorted tones snappier.

DEEP SECTION

The Deep Section is an independent, parallel pre-amp with individual Level and Saturation controls. To keep things lean and efficient, the EQ curve is preset to Geddy's personal specs.

SATURATION

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

LEVEL 2

Adjusts the output level of the Deep Section.

PLACEMENT ORDER OF EFFECTS

For best results, plug your instrument directly into the SansAmp DI-2112. This will preserve the interactive nature of the unit. When incorporating into a pedalboard, 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 DI-2112:

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

Place the following effects AFTER the SansAmp DI-2112:

Chorus, Delay, EQ, Pitch Shifter, Reverb.

NOTEWORTHY NOTES

1) Combining the channels. Combining the outputs passively, such as with an ABY box, is not recommended as it will typically degrade the signal. There is a jumper switch provided internally to pre-mix the two channels. For instructions how to engage it, please contact us directly.

2) Power considerations. The DI-2112 runs optimally on 18V for increased headroom and clarity. You can safely use a 9V power supply in a pinch, but it will provide less headroom. You must, however, use two 9V alkaline batteries, as it will not run on a single battery.

3) SansAmp DI-2112 is not phantom power operable. Phantom power, as it is supplied on mixing boards, has very low current and is designed only to power a simple microphone. There is too much circuitry in the SansAmp DI-2112 to operate properly on such a weak power supply.

4) SansAmp DI-2112 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. Conversely, a cooler signal and a light touch decreases the gain structure for a cleaner sound.

5) SansAmp DI-2112 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 High all the way up, try cutting back on Low first.

The tone controls also help compensate for the EQ curves found in instrument 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 SansAmp DI-2112 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 to complement your particular amp.

6) The noise level of SansAmp DI-2112 is exceptionally low.

However, it may amplify noise emanating from the input source. To minimize noise going into the SansAmp DI-2112, we recommend active electronic instruments have the volume set at 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.
- As is the case with any tube amplifier or electronic device, particularly in high gain settings, you may be getting outside interference caused by lights, transformers, etc.

- Be conscious of how the controls interact. Remember, they are atypically sensitive, so start out "normal" and then go as nuts as you like.

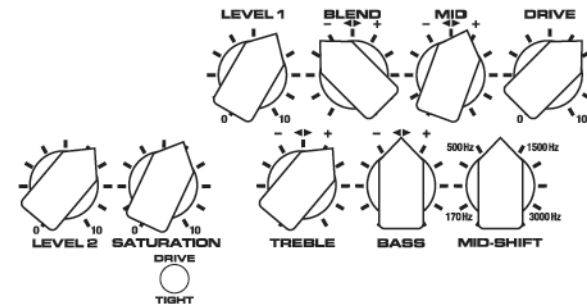
7) LED indicator light. When the battery power begins running low, the LED will become noticeably dim.

Names of sample settings are intended for descriptive purposes only and should not be construed as an endorsement or affiliation with the companies, products, artists or songs named, except, of course, Geddy Lee.

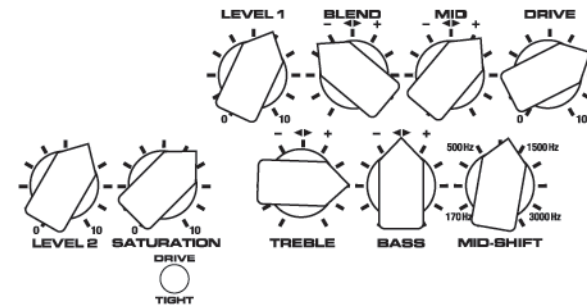
SansAmp DI-2112 Sample Settings

ON (IN) OFF (OUT)

Geddy Lee, Standard



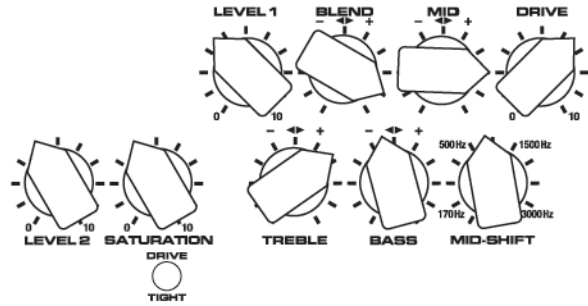
Geddy Lee, "Roundabout"-style



SansAmp DI-21 I2 Sample Settings

ON (IN) OFF (OUT)

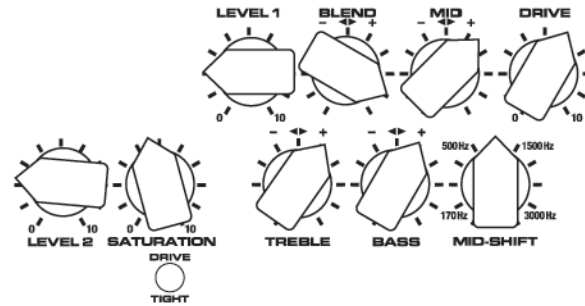
YYZ Jazz Bass-style



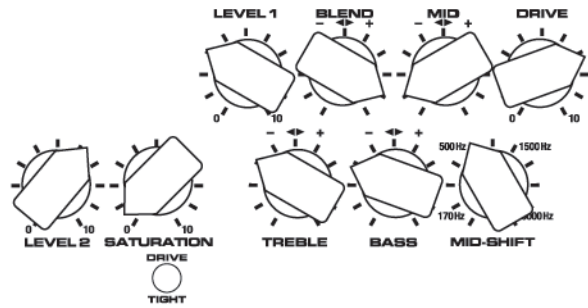
SansAmp DI-21 I2 Sample Settings

ON (IN) OFF (OUT)

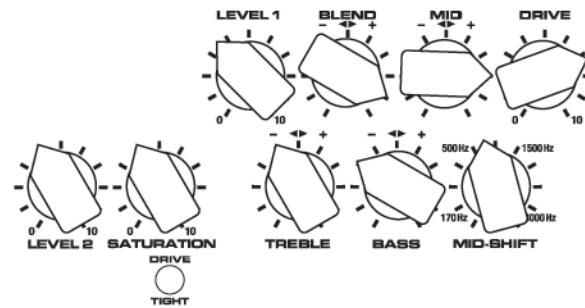
Les Claypool-style



Jack Bruce / Cream-style



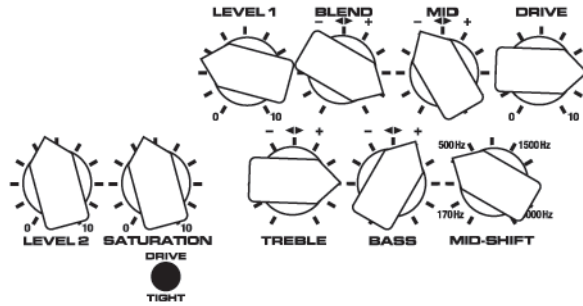
John Paul Jones / "Heartbreaker"-style



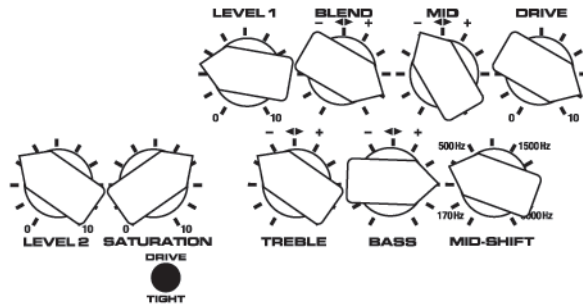
SansAmp DI-2112 Sample Settings

ON (IN) OFF (OUT)

John Entwistle / "Leeds"-style



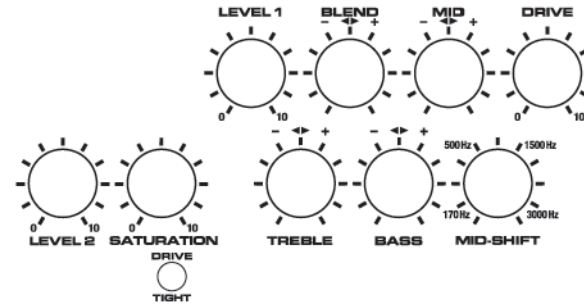
Radiohead / "National Anthem"-style



SansAmp DI-2112 Custom Settings

ON (IN) OFF (OUT)

NAME: _____



NAME: _____

