

WARNINGS

- Attempting to repair this unit is not recommended and may void its warranty.
- Missing or altered serial numbers automatically void the warranty. For your own protection, be sure the serial number labels on the unit and exterior box are intact.

ONE-YEAR LIMITED WARRANTY

Manufacturer warrants unit to be free from defects in materials and workmanship for a period of one (1) year from the 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 elect to repair or replace it free of charge. After warranty period expires, manufacturer will repair defective unit for a fee.

PROOF OF PURCHASE IS REQUIRED FOR ANY REPAIR

For residents of the U.S. and Canada, please call Tech 21 for shipping instructions and a Return Authorization Number. Tech 21 will not accept packages without prior authorization, pre-paid freight (UPS preferred), and proper insurance.

FOR PERSONAL ASSISTANCE & INQUIRIES

Contact Tech 21 weekdays from 9:00 AM to 5:00 PM, Eastern Standard Time.

HAND-BUILT IN THE U.S.A. using high-quality components sourced domestically and around the globe.

Fill in the following information for future reference:

Serial Number _____

Dealer's Name _____

Dealer's Address _____

Date of Purchase _____

TECH 21

T: 973-777-6996

E: info@tech21nyc.com

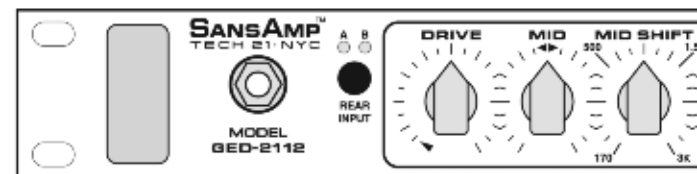
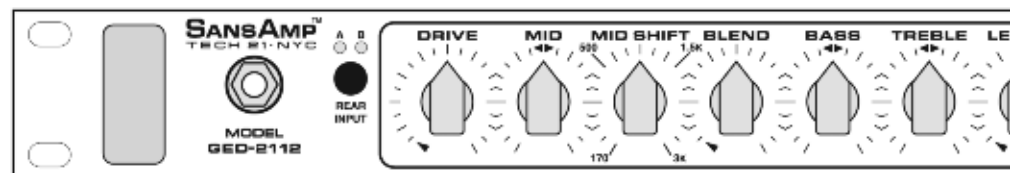
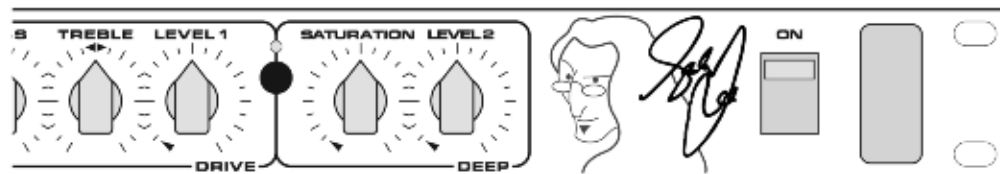
W: tech21nyc.com

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SansAMP™ GED-2112
GEDDY LEE SIGNATURE SANSAMP

TECH 21·NYC



Owner's Manual

IMPORTANT SAFETY INSTRUCTIONS. READ AND SAVE THESE INSTRUCTIONS. HEED ALL WARNINGS.



This symbol, wherever it appears, alerts the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol, wherever it appears, alerts the user to important operating and maintenance instructions in the accompanying literature. Read the manual.

This unit is powered by potentially hazardous voltage. Therefore, observe the following safety precautions:



1. Read and follow all instructions before using product.
2. Do not use product near water (such as near a bathtub, washbowl, kitchen sink, swimming pool, in a wet basement, etc.).
3. Unit should be located so that its location or position does not impede the flow of air through the ventilation openings.
4. Product should be located away from heat sources such as radiators, heat registers, or other products, including amplifiers, that produce heat.
5. Product should be connected to a power supply only of the type described in the operating instructions or as marked on the product.

6. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the unit.
7. Do not allow objects or liquids to penetrate the enclosure through openings.
8. During heavy use, chassis may get hot to the touch. Handle with care.
9. Protect unit from strong impact.
10. Unplug product before cleaning. Never spray liquid cleaners into the unit. Wipe with a clean, lint-free cloth to remove dirt and film.
11. Only use attachments/accessories specified by the manufacturer.
12. This product should be used only with a cart or stand, if necessary, that is recommended by the manufacturer. When a cart is used, use caution when moving the cart/product combination to avoid injury from tipping over.
13. Amplifiers may be capable of producing high volume levels that could cause permanent hearing loss or damage, if the exposure to such levels is prolonged. Such damage is progressive and irreversible! If you experience any hearing loss or ringing in the ears, consult an audiologist.



14. Unplug unit during lightning storms or when unused for long periods of time.

15. This unit must be earth grounded. To reduce the risk of electric shock, NEVER remove or otherwise attempt to defeat the ground pin of the power cord. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

WARNING: To avoid the risk of fire, electric shock or injury, do not expose this unit to rain or moisture. Do not remove metal coverings from its enclosure. Removing the coverings exposes extremely dangerous high voltages. There are no user-serviceable parts inside. Hazardous voltages are present inside the chassis. Refer all servicing to qualified personnel.

CAUTION: Never modify the power cord. If original power cord becomes damaged, frayed, or has exposed wires, replace immediately with same rating and gauge, or higher. Replacements are commercially available or you can contact Tech 21 directly.

WARNING: Attempting to repair this unit is not recommended and may void its warranty. NOTE: In the U.S. and Canada, servicing is performed at factory only. In other countries, please refer repairs to the local Tech 21 authorized distributor.

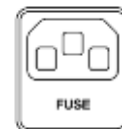
FUSE



Fuse holder is located inside A/C cord receptacle. **You must unplug and remove power cord to change fuse.** Replace with similar type and same value:

100V and 117V units: use F 1A L

230V and 240V units: use F 0.5A L



QUICK START INSTRUCTIONS

Get your SansAmp GED-2112 up and running before reading the entire manual. But by not reading the manual, you'll miss out on getting the most out of your new investment!

1. Plug your instrument into the front panel Input jack (on the left side).
2. Connect either the 1/4" or XLR SansAmp Outputs to the input of your mixer, power amp, powered monitor or amp. Set all 3 Level Selector switches in the "in" position.
3. Attach the AC cord to the unit and plug into a wall socket. Set the Level controls to minimum, then turn the SansAmp GED-2112 on and engage the Function switch (between the Drive and Deep section).
4. Turn on the mixer or amp and bring up the Level controls of the SansAmp GED-2112. If the signal is too "hot," resulting in unwanted distortion, or too weak, check the mixer's or amp's input control as well as the Level controls of the SansAmp GED-2112.
5. Play your instrument and you should hear sound coming through your system. If not, check that your instrument's volume control is turned up, recheck your connections, and be sure your cable isn't faulty. If there is still no sound, refer to factory or qualified technician.

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.

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 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 GED-2112, an Overview

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 go straight into the mixer of a recorder or PA system via the XLR Direct Outputs.

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 and simplify his gear for new projects, Geddy 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. It resulted in a new format for Parallel Pre-Amping --having two separate internal pre-amps that run in parallel.

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. With selectable A/B inputs, and separate balanced and unbalanced direct outputs, this box is the foundation for great bass tone in any setup. Plus it's green!”

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.

Unconventional? Unorthodox? Unique? You betcha.

FRONT PANEL

Input Jack

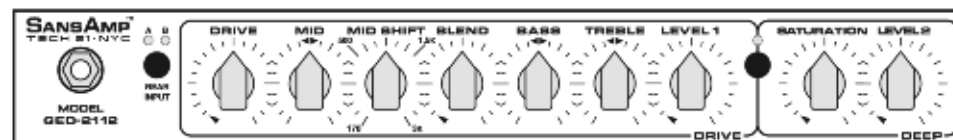
1/4" Input is 1M Ω , factory set at instrument level. Plugging into the front Input jack overrides and disconnects the rear panel jacks (Input A and Input B).

Input Selector Switch

There are dual input jacks located on the rear panel to have 2 instruments plugged in and ready to go. The front panel switch allows you to choose between Input A and Input B, as long as you are not plugged into the front Input jack.

DRIVE SECTION

The Drive section of the SansAmp GED-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 fatter, more robust clean sounds, increase Drive until it starts to distort, then gradually decrease until it 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 Shift and Mid

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 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.

Function Switch (located between the Drive and Deep Sections)

Activates the circuitry and has a corresponding LED status indicator. To engage, push the switch to the in position. For Mute, the switch should be in the out position. Note: The Mute function affects all outputs, except the Tuner.

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.

REAR PANEL

Inputs A and B

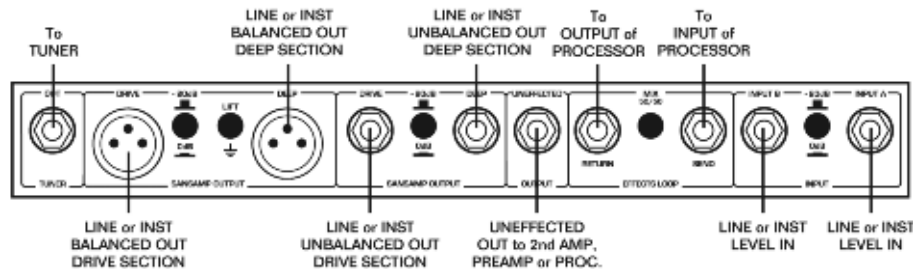
Dual inputs to have 2 instruments ready to go. Reminder: when you plug into the front panel's Input, rear panel Inputs A and B will be disconnected.

Inputs A and B Level Selector Switch

This switch lets you connect the SansAmp GED-2112 to a wide variety of equipment with a variety of signal levels. Also, you can set the Input level selector switch to its -20dB position when you plug in extra-hot signals, such as the output from active bass guitars. There are two positions:

0dB (in position). Optimizes the rear panel Inputs to accept instrument level signals. In this position, Input A and B's sensitivity is the same as the front panel's Input. NOTE: We recommend you start with the switch in this position.

-20dB (out position). Set the switch in this position to engage the pad when sending a line-level signal into the SansAmp GED-2112. When the switch is in this position, the signal coming into the unit is padded down by 20dB.



EFFECTS LOOP (Drive Section Only)

Send and Return

The Effects Loop allows you to connect external effects with the SansAmp GED-2112 and is placed between the tone controls and Level controls of the Drive Section. 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 SansAmp GED-2112 to the Drive Output jacks, with both the SansAmp 1/4" and XLR Outputs receiving the same signal.

Mix 50/50 Switch

The 1/4" Send routes 100% of the SansAmp GED-2112's signal through your effects processor when the 50/50 switch is not engaged. If you engage the 50/50 switch, then 50% of the SansAmp GED-2112 signal goes through your effects processor, and the other 50% passes directly to the SansAmp 1/4" and XLR Outputs of the Drive Section.

To preserve the signal integrity of the SansAmp GED-2112, use the Effects Loop with the Mix 50/50 switch engaged. When the SansAmp GED-2112 is in this mode, the effects processor's mix control should be set at 100% wet. Your relative wet/dry mix can then be controlled by increasing/decreasing the effects processor's output level. NOTE: If you experience a thin, undesirable sound or phase cancellation, the effect may not be capable of a 100% wet signal. Therefore, we suggest disengaging the Mix 50/50 switch.

UNIVERSAL OUTPUT SECTION

The output sections of the SansAmp GED-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), as well as *simultaneously*. For recording, the SansAmp outputs are like having a built-in direct box. Designed without a transformer, they provide a balanced, 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 tape or disc. 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.

1/4" Unaffected Output

Buffered output without processing. Sends a direct signal, right from the input, to another channel on your amp, pre-amp, or effects chain.

1/4" SansAmp Outputs

Each 1/4" SansAmp Output carries the signal from its corresponding section of the SansAmp GED-2112, including any effects that are placed in the Effects Loop of the Drive Section.

Level Selector Switch:

0dB (in position): Unity gain output. NOTE: Start with the switch in this position.
-20dB (out position): Pads down the signal by 20dB.

SansAmp XLR Direct Outputs

Each XLR Output carries the signal from its corresponding section of the SansAmp GED-2112, including any effects that are placed in the Effects Loop of the Drive Section.

Level Selector Switch:

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

Ground Lift

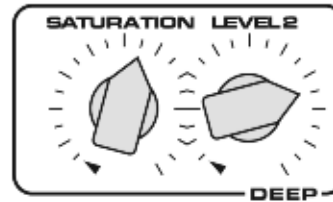
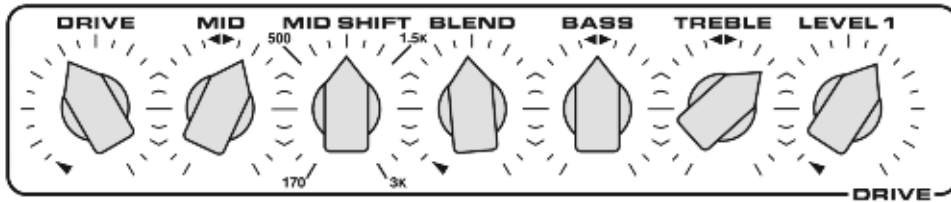
Connects or disconnects the ground circuits between both XLR Outputs of the SansAmp GED-2112 and a (grounded) mixer. We recommend starting with the ground lifted. If necessary, connect the ground by pushing the switch in.

Tuner Output

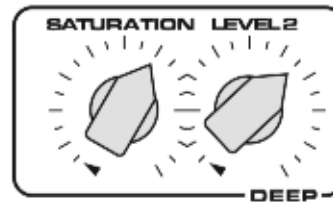
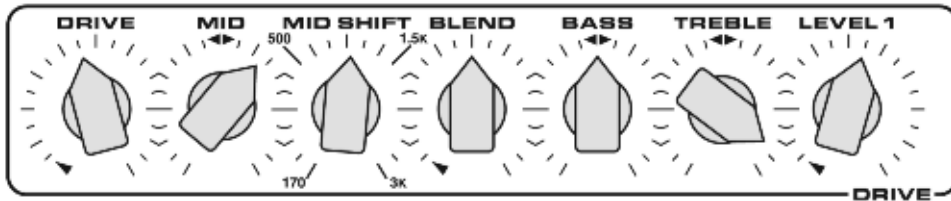
As long as the unit is plugged in, the tuner output provides a constant, unaffected signal at all times, regardless of the position of the Level controls or the status of the Mute switch on the front panel. This output can also be used as a buffered out to send a transparent signal to other outboard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

SansAmp GED-2112 Geddy Lee's Settings

Geddy Lee, Standard



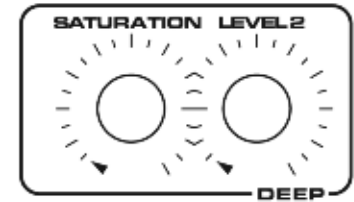
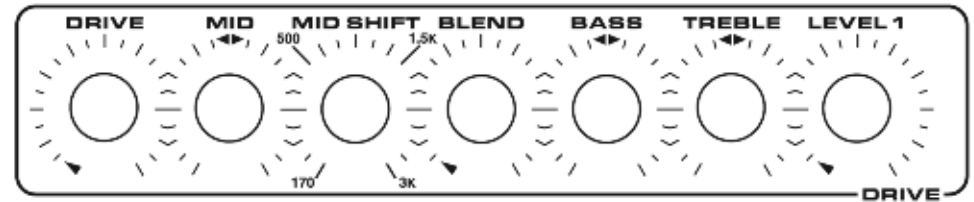
"Roundabout"™ as used at the 2017 Rock & Roll Hall of Fame Performance



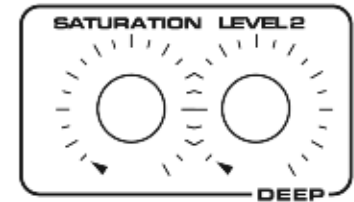
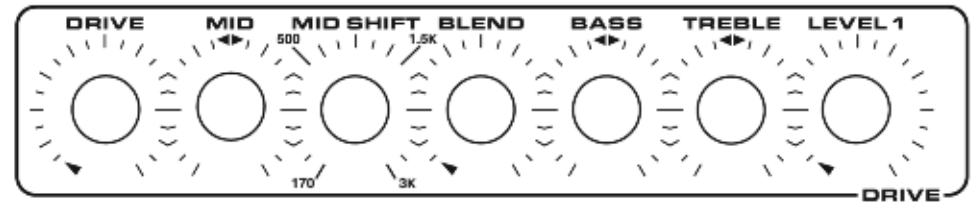
Note: Geddy's settings are based on a direct connection to a PA or recording set up and meant to be monitored through a full range system (studio monitors, IEMs, etc.). Levels may vary. Limited range systems, such as a bass amp, may require some adjustments. Be aware your instrument type and playing style will have a pronounced effect on the final results. ©Copyright.

SansAmp GED-2112 Custom Settings

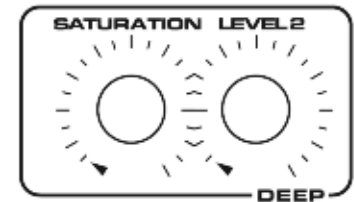
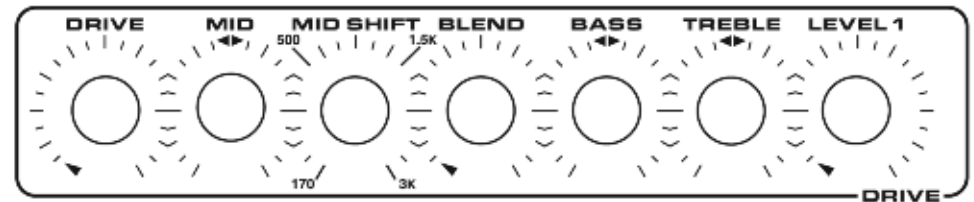
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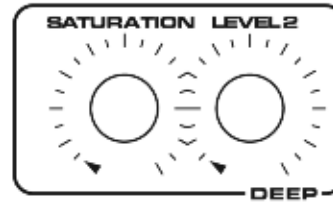
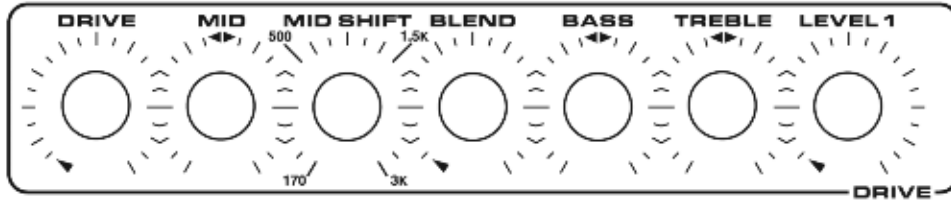


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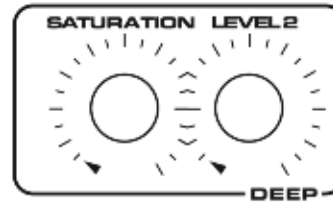
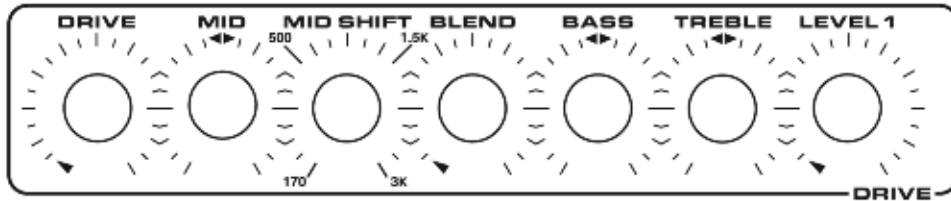


SansAmp GED-2112 Custom Settings

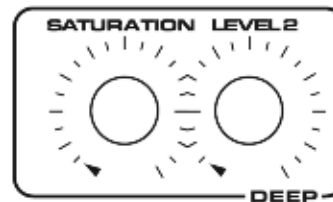
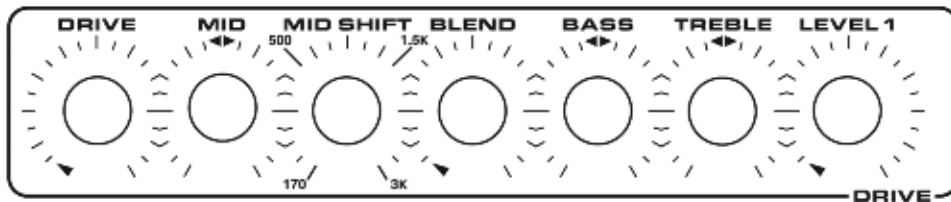
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Name/Description: _____



SansAmp GED-2112 Specifications

Note: With on-going product development and improvements, specifications and/or the cosmetic appearance of this unit may change without prior notice. **Replacement parts** are available, i.e., knobs, rack handles, faceplate, etc. For more information, please contact Tech 21.

Model Number:	GED-2112
Input Impedance- Front Input:	1M Ω
Input Impedance-Inputs A & B:	1M Ω
Output Impedance-1/4" SansAmps:	1K Ω min
Output Impedance-XLRs:	600 Ω min
Input Level-Front Input:	1V RMS max
Input Level-Inputs A & B:	1V RMS or 10V max, with -20dB pad engaged
Output Level-XLRs:	Switchable to -20dB or 0dB range
Effects Loop Send:	1K Ω min, -20dB
Effects Loop Return:	100K Ω min, -20dB
Low Frequency Response:	10Hz or better*
High Frequency Response:	Harmonic content, 20kHz or better*
Maximum Power Consumption:	5 Watts
AC Input Power (factory set):	100V, 117V, 230V, 240V
Cycles:	50/60 Hz
NOTE: Each unit constructed for specific voltages. AC power cannot be switched.	
Enclosure:	Aluminum and steel, fully shielded
Dimensions:	19.0"w x 1.75"h x 5.25"d / Overall depth: 6.25"
Weight:	5 lbs.

*Due to the variety of amplifier emulations available, frequency response characteristics will vary.