SansAmp™ PSA-1.1

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 that the serial number labels on the unit's back panel 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's main headquarters 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.

MADE IN THE U.S.A.

Fill in the following information for future reference:

Serial Number _____

Dealer's Name _____

Dealer's Address _____

Date of Purchase _____

TECH 21

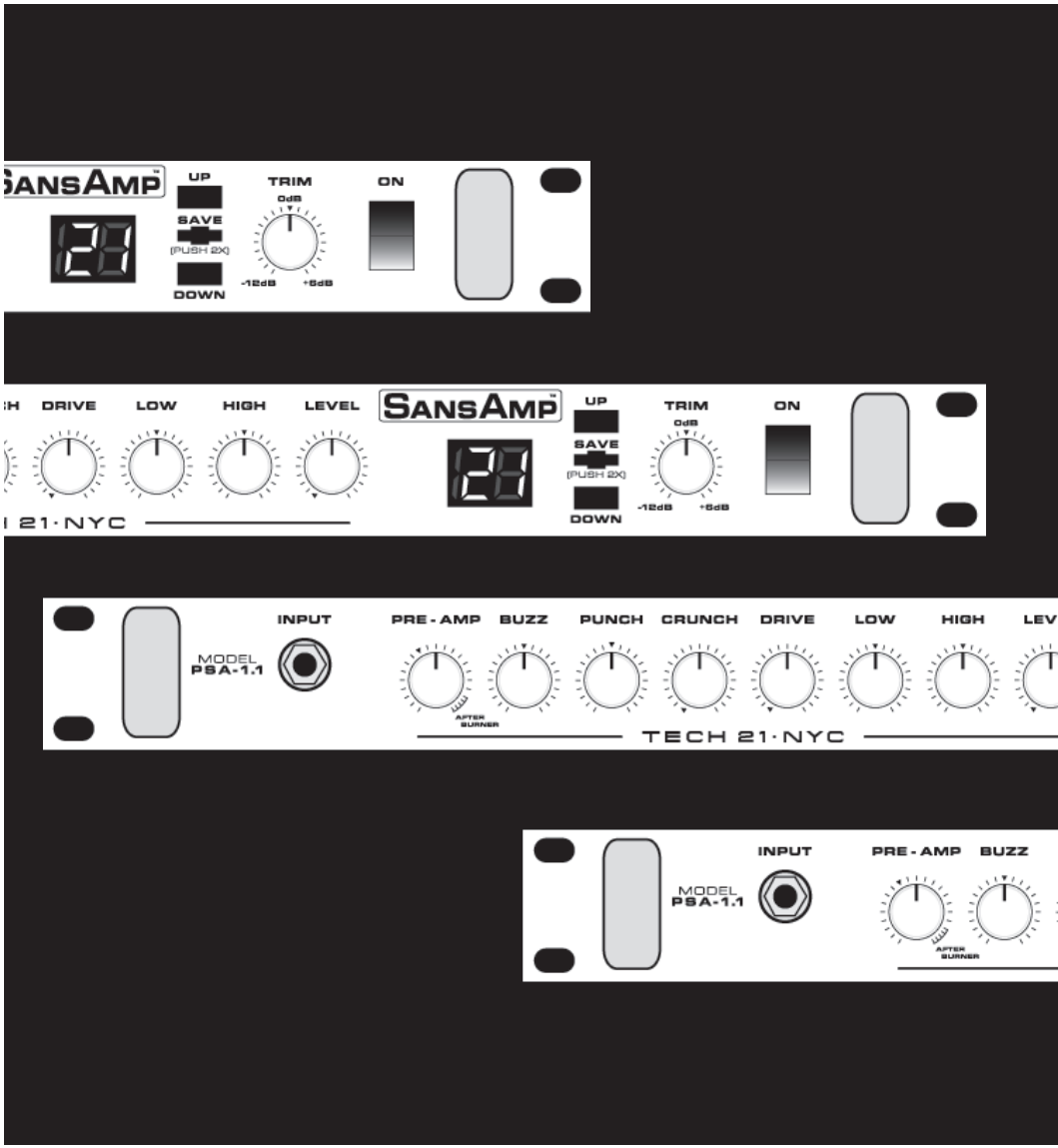
T: 973-777-6996

E: info@tech21nyc.com

W: www.tech 21nyc.com

CE

TECH 21·NYC



SansAmp™ PSA-1.1

USER'S GUIDE

SansAmp™ PSA-1.1

TABLE OF CONTENTS

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:

CAUTION
RISK OF ELECTRICAL SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

ATTENTION
RISQUE D'ELECTROCUTION
NE PAS OUVRIR

ATTENTION: POUR REDUIRE LES RISQUES D'ELECTROCUTION NE PAS ENLEVER LE COUVERCLE. AUCUNE PIECE INTERNE N'EST REPARABLE PAR L'UTILISATEUR. POUR TOUTE REPARATION, S'ADRESSER A UN TECHNICIEN QUALIFIE.

VORSICHT
ELEKTRISCHE SCHLAGGEFAHR
NICHT OFFNEN

VORSICHT: ZUR MINIMIERUNG ELEKTRISCHER SCHLAGGEFAHR NICHT DEN DECKEL ABNEHMEN. INTERNE TEILE KONNEN NICHT VOM BENUTZER GEWARTET WERDEN. DIE WARTUNG IST QUALIFIZIERTEM WARTUNGSPERSONAL ZU UBERLASSEN.

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 amp: 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 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 covering from chassis parts. Doing so 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 located inside A/C cord receptacle. **You must remove power cord to change fuse.** Replace with similar type & same value: F 0.5A L.

QUICK START INSTRUCTIONS

Here's how you can get your SansAmp PSA up and running before you read the entire manual.

1. Plug your instrument into the front-panel **Input** jack (on the left side).
2. Plug one end of a cord into the rear panel's left **Output** jack, and plug the other end into the input of a mixer or an amp or power amp.
3. Attach the AC cord and plug into a wall socket. Turn on the SansAmp PSA.
4. Turn on your amp or mixer. (If the mixer is patched into a monitor or recorder setup, make sure the power amp and speakers are turned on, too.)
5. Turn up the input level on your amp or mixer. If the signal is too "hot," resulting in unwanted distortion, or too weak, check the amp's or mixer's input control. Also check the **Trim** control on the front of the SansAmp PSA and **Output Level Switch** on the back of the SansAmp PSA.
6. Play your favorite riff or chord changes, and you should hear a sound coming through your system. If not, recheck your connections, and make sure your guitar's volume control is turned up.
7. Select a program by pushing either the **Up** or **Down** buttons. The unit is shipped with the first 49 programs (01-49) as factory presets (refer to the list on page 22). Programs 51-99 are duplicates of presets 01-49. From 100-127, all knobs are preset neutral at 12 o'clock. Programs 00 and 50 are permanent bypass settings. For more details, refer to "Programming" on page 8.

If you need further guidance in setting up your SansAmp PSA, check out the diagrams and information on pages 13 through 15.

Tech 21, the Company

Tech 21 introduced the SansAmp™ Classic (the original pedal design) in 1989. Our proprietary circuitry 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.

Engineered for the studio and stage, SansAmp delivers consistent quality sound. Players, engineers, and producers can obtain a wide spectrum of warm, natural tube amplifier sounds from one convenient unit. Available in various formats and models, each SansAmp is suitable for any music style, from jazz to metal, and can be used with a variety of instruments --guitar, bass, keyboards, samplers, even sax and vocals.

The SansAmp Classic was conceived and developed by a guitarist who possesses the unusual combination of a trained ear and electronics expertise. The technology is designed in the true tradition of tube amplifiers in their *totality*—with a pre-amp stage and an output stage. It incorporates the harmonics and sweet overdrive characteristics unique to tube amplifiers. SansAmp captures these characteristics, and does so even at low volume levels.

SansAmp gives you the most coveted trademarked sounds and the flexibility to refine and redefine your own. Each model responds to and interacts with the dynamics of your individual playing style, your individual musical style, and your instrument's individual tonality. All of these factors play an important role in the resulting sound, which will ultimately be yours alone.

SansAmp PSA-1.1, an Overview

SansAmp PSA-1.1 maintains its superior tone with our exclusive, **100% analog circuitry.** Only the programming and memory sections are digital. The results are easy to hear: punchy, responsive, powerful sounds that bring out the best in any instrument.

The SansAmp PSA can be used for various applications. In the studio, you can record direct, enhance existing tracks in mixdowns, as well as add interesting touches to any instrument. Live, it can be used as a pre-amp direct into a power amp with guitar or bass speaker cabinets, as a "monster direct box" to a P.A. system, (or both simultaneously), and as an outboard processor.

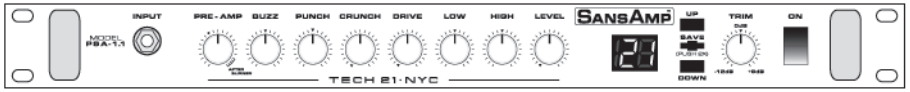
The SansAmp PSA features MIDI capability for calling up programs and storing program data. There are 49 factory presets and 77 memory locations to store your own custom sounds, plus two bypass programs. When you switch between programs, there is no lag time, or "cutting out." The controls on the SansAmp PSA work very much like those found on a sophisticated amp. You don't need special training or a degree in physics to operate your unit. Storing and recalling programs is simple: set your tones and push the **Save** button. You just turn a knob and hear the difference immediately --in real time. There are 256 incremental steps in the rotation of each control, so increases and decreases occur in a smooth, gradual, linear fashion.

The SansAmp PSA is designed to provide you with the flexibility to find almost any conceivable tonal personality within the tube amplifier sound spectrum.

FRONT PANEL

Introduction

The SansAmp PSA gives you access to specific tone-shaping characteristics within the tube amplifier sound spectrum. Controls of this nature are traditionally inaccessible on stock amps. Adjustments like these are ordinarily achieved only by permanent professional modification.



Tonality, for instance, can be adjusted in a variety of ways. The individual Character Controls, labeled **Buzz**, **Punch**, **Crunch**, and **Drive**, offer different results than the post EQ section (the controls labeled **Low** and **High**).

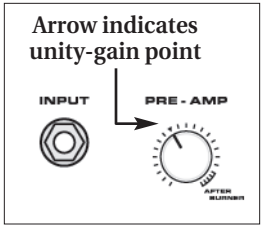
Gain structure can be adjusted via the **Pre-Amp** control, which results in a different kind of overdrive than the **Drive** control. Additionally, **Buzz**, **Punch**, and **Crunch** each affect the gain structure within specific frequency bands.

As you experiment and become familiar with the controls' interrelationships, you'll be able to customize your own sounds and store them in the SansAmp PSA's memory.

Input Jack

This 1/4" **Input** features an impedance buffer so that the tone from a guitar's or bass' pickups, or the signal from other instruments, reaches the SansAmp PSA without degradation. A second input jack is located on the rear panel. Note: plugging into the front-panel **Input** jack overrides and disconnects the rear-panel jack. So you can set up your SansAmp PSA as a permanent part of a rack or patch-bay setup, with its usual input source plugged into the rear-panel jack. If you want to plug straight into the SansAmp PSA, bypassing other parts of the system, use the front **Input.**

Pre-Amp



This is the input sensitivity control. The **Pre-Amp** control adjusts the signal level going into the input section of the SansAmp PSA. The arrow indicates the unity-gain point (that is, no boost or cut). When clean sounds are desired with the use of a hot-output instrument, decrease from the unity-gain point. Increasing the position of the **Pre-Amp** control produces an effect similar to putting a clean booster pedal into the input of a tube amp.

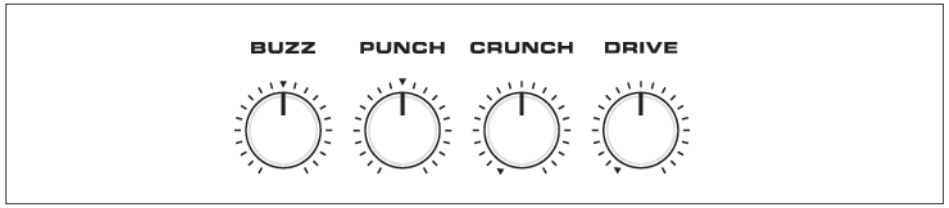
After Burner Zone: The area where a low-cut/hi-boost function is activated. This gives more definition to individual notes when using high gain sounds. If buzzier, fuzzier sounds are desired, increase the gain by using the **Drive** control and set the **Pre-Amp** control outside the After Burner zone.

To achieve the least amount of noise, we recommend keeping the **Pre-Amp** knob at unity gain or higher. Experiment with the interplay between your instrument and the SansAmp PSA.

For best results, do not set the **Pre-Amp** level lower than unity gain when the **Drive** knob is at 9 o'clock or higher. However, if you want a crystal-clear sound and the **Drive** control is already near minimum and there's still too much overdrive, decrease the **Pre-Amp**'s level as needed. **Pre-Amp** also influences different types of overdrive. For instance, a high setting emphasizes pre-amp distortion (see Boogie® Lead-style setting), as opposed to when **Drive** is in a high setting, which emphasizes power amp distortion (see Vintage Marshall®-style setting).

Character Controls

Character Controls offer tremendous flexibility in adjusting tonality, gain structure, and harmonic content.



Buzz

Controls the low-end break-up and overdrive. You can boost the effect by turning clockwise from the center point indicated by the arrows, and cut by turning counterclockwise. When you turn towards maximum, the sound becomes (you guessed it) buzzy. For a clean setting, increase the setting in small increments. For increased definition when using distortion, position the knob at its midpoint or towards minimum.

Punch

Sets the amount of midrange break-up and overdrive. Boost or cut from the center point indicated by the arrows. Decreasing from the center point produces a softer, Fender®-style break-up. Increasing its setting creates a harder, heavier distortion. At maximum, it produces a sound similar to a wah pedal at mid-boost position placed in front of a Marshall® amp.

Crunch

Brings out the upper harmonic content and pick attack. For a smoother high end and for clean settings, decrease to taste.

Drive

Like the volume control on a non-master-volume tube amp, **Drive** increases the amount of power amp distortion. In live applications, we recommend using less **Drive** than when direct recording. This compensates for the natural sustain of high volumes.

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Low and High

These active low-end tone controls are specially tuned for maximum musicality when used to EQ instruments. Boost or cut ±12dB from its center point indicated by the arrows.

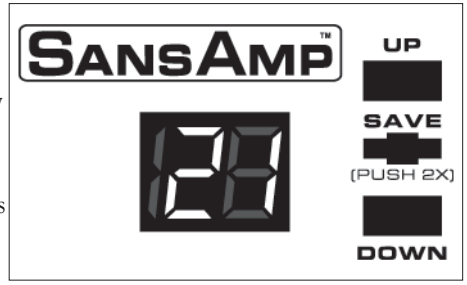
Level

Simultaneously adjusts the output level of the rear-panel **XLR and 1/4" outputs, and Effects Loop Send.**

Trim

For live performances, this control globally adjusts the level of ***all*** presets so you don't have to individually adjust each setting on stage. Be aware that if you have any settings with the **Level** programmed close to/at minimum or maximum, the **Trim** pot will not be as effective. Additionally, when using an external effects processor in the **Effects Loop**, set **Trim** at maximum before you adjust the input level of the processor. This will ensure you have enough headroom when you utilize the **Trim** control on stage.

3-Digit LED Display



Because the SansAmp PSA is fully programmable, everything you do is monitored by its internal processor. And everything you need to know is in these three digits. This display is readable from any angle, in daylight or darkness. It tells you which program is active, whether any knob's setting has been changed, when a program is stored, and when MIDI functions have been activated. (Refer to the sections on programming your SansAmp PSA and using MIDI for specific information regarding the display's functions.)

Save Switch

The **Save** switch stores your custom settings in the memory of the SansAmp PSA. It also gives you access to the Special Page function menu. It is purposely recessed into the front panel to make it difficult to inadvertently push. You can use a guitar pick, a pen tip, or a well-placed fingernail to push it.

Up and Down Buttons

Pushing either of these switches once counts up or down through the programs one at a time. Holding the switch down moves quickly through the program numbers.

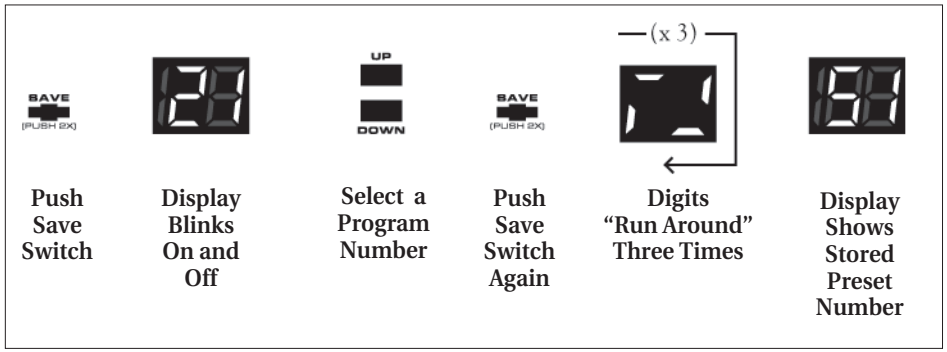
PROGRAMMING

Programs 01-49 are factory presets (refer to list on page 22). If you try to save over a factory preset, you will get a flashing "EE" indicating you're making an error. Note: You can choose to be able to overwrite any location, except 00 and 50, including factory presets, or to lock all program locations by changing the protection scheme. See Special Page Function #4 on page 19.
Programs 51-99 are duplicates of presets 01-49 and are rewritable locations for custom settings.
Programs 100-127 are preset with all knobs set neutral at 12 o'clock and are rewritable locations for custom settings.
Programs 00 and 50 are permanent bypass locations for the instrument signal to pass straight through the SansAmp PSA.
NOTE: Being all-analog circuitry, there are no special algorithms within the different amplifier styles. Individual control functions do not change from preset to preset (custom or factory).

Saving a program

If you want to create a custom setting from scratch:
1. Go to any program location from 51-127.
2. Edit controls to taste.
3. Push the **Save** twice. The display will "run around" three times and then show the selected program number (it will stop blinking). That's it. You've stored a new program.

When you tweak an existing setting (factory or custom):
1. Push the **Save** switch once. The digits of the display blink on and off.
2. Use the **Up** or **Down** buttons to go to a new location (51-127) to be saved.
3. Push the **Save** switch a second time. The display will "run around" three times and then show the selected program number (it will stop blinking). That's it. You've stored the program.



Be careful not to overwrite a custom program you wanted. Accidents can happen, so we recommend keeping track of your programs. Blank diagrams are provided on pages 24-27 and can be photocopied. Write in the knob settings and give each program a name (song title, description of the tone, etc.) for easy reference later.

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Note: You can off-load your custom presets to a computer, sequencer, etc., using a Custom Preset Data Dump. For more on this, see page 17.

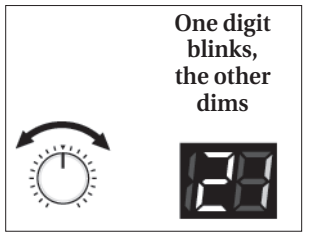
Moving/Copying a Program to a New Location

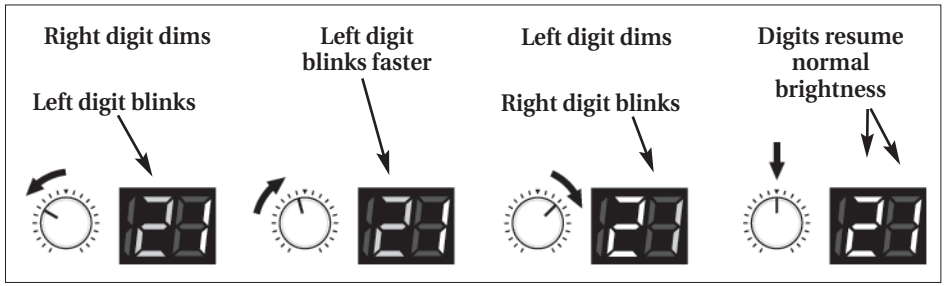
1. Choose the preset number you want to move or copy.
2. Push the **Save** switch once. The digits of the display blink on and off.
3. Use the **Up** or **Down** buttons to a new location where you want to save it (51-127).
4. Push the **Save** switch a second time. The display will "run around" three times and then show the selected program number (it will stop blinking). That's it. You've moved/copied a program. Note: The original preset number doesn't change until it is overwritten.

Locating Individual Control Values Within a Preset

When recalling presets, the positions of the front panel controls do not reflect the actual stored values of each of their parameters. When you turn any of the knobs (except for the **Trim**), the SansAmp PSA will go into edit mode and "unlock" whichever control you turn. The circuitry will then revert to the actual value of that control's position (vs. the stored value), allowing you to edit the sound to your liking.

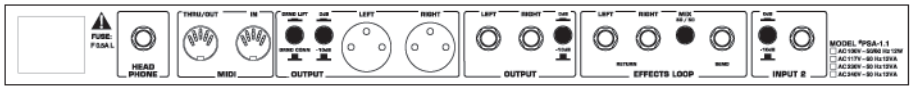
When you turn/unlock a control from the setting that's stored in the memory, one of the digits in the LED numerical display will blink, the other will dim. Note: When you're in program 100 or higher, the two left digits blink or dim together as one number. This tuner-like feature is useful when you want to know the stored position of each knob's setting in a particular preset.





Assume the preset point for a particular knob is 12 o'clock. If the left digit blinks and the right dims after unlocking it, you will need to turn the knob clockwise to reach the preset value. As you get closer, the left digit will blink faster, then stop when you've reached the stored value. The right digit then resumes its full brightness. Conversely, if the right digit blinks and the left dims, you will need to turn the knob counter-clockwise, etc.
Note: If desired, you can alter the display mode to be dashes or numerical values instead of digits. See Special Page Function #7 on page 20.

REAR PANEL



INPUT 2 SECTION

Input 2 jack

1/4-inch, 4.7megOhm. This high impedance input is designed with piezo pickups in mind to provide maximum output and dynamics. Plugging into **Input 2** lets you match the SansAmp PSA's input circuitry to the signal level being fed into it, assuring the best signal-to-noise ratio and least distortion. This input is ideal for rack and patch-bay applications, especially if you use other signal processors or multi-track recorders before the SansAmp PSA. Note: When you plug into the front panel **Input**, the rear panel **Input 2** is disconnected. Also, you can set the **Input Level Selector Switch** to its 0dB position when you plug in extra-hot signals, such as the output from active bass guitars.

Level selector switch

This switch lets you connect the SansAmp PSA to a wide variety of equipment with a variety of signal levels. It has two positions:

0dB position. This engages the input pad. Set the switch in this position when sending a line-level signal into the SansAmp PSA. When the switch is in this position, the signal coming into the unit is padded down by 10dB.

-10dB position. When the input pad switch is disengaged (at its -10dB setting), the rear panel **Input 2** is optimized to receive an instrument level signal. In this position, **Input 2**'s sensitivity is exactly the same as the front panel's **Input**.

EFFECTS LOOP

Effects Send

Sends the SansAmp PSA's signal to processors. When nothing is plugged into the **Effects Loop**, the signal passes through from the SansAmp PSA to the **Output** jacks, with both left and right **Output** jacks receiving the same signal. Note: **Effects Loop Send** is muted in bypass programs.

Mix 50/50 switch

The **1/4" Send** routes 100% of the SansAmp PSA's signal through your effects processor when the **50/50** switch is disengaged. If you engage the **50/50** switch, then 50% of the SansAmp PSA signal goes through your effects processor, and the other 50% passes directly to the **1/4"** and **XLR Outputs**.

To preserve the signal integrity of the SansAmp PSA, use the **Effects Loop** with the **50/50** switch engaged. When the SansAmp PSA is in this mode, the effects processor's mix control should be set at 100% wet. Your relative wet/dry mixture can then be controlled by increasing or decreasing the effects processor's output level.

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Right return

When using a mono effects processor, plug the processor's output into the SansAmp PSA's **Right Return**. This will route the signal to both pairs of left and right **Outputs**.

Left Return

This is one of two stereo returns for the **Effects Loop**. If your signal processor has only one output (mono), then plug it into the **Right Return**.

UNIVERSAL OUTPUT SECTION

Another aspect of the technological advancement of the SansAmp PSA is that its output sections are physically compatible with *any* application. The outputs can be used for full range (multi-track recorders, studio monitors, P.A. systems) as well as limited range systems (guitar or bass speaker cabinets). Note: You can compensate for different frequency responses of speaker enclosures by using the **High** control.

1/4" Output Jacks

These left and right 1/4" jacks carry the signal from the SansAmp PSA. This includes any effects that are placed in the **Effects Loop**. The **Output** level switch (0dB/-10dB) lets you interface the SansAmp PSA with a variety of line and instrument level inputs, including recorders and mixers requiring low-level signals, signal processors, and power amps.

1/4" Output Level Switch

Selects the **Output** level's range. When in its 0dB position (engaged), the **Output** is at line level. When the switch is in -10dB position (disengaged), the **Output** is at instrument level.

XLR Output Jacks

The SansAmp PSA's two **XLR Outputs** are designed without transformers to provide a low-impedance output of extremely high quality for recording or interface with professional-quality signal processors. (It includes any effects that are placed in the **Effects Loop**.) **XLR** and **1/4" Outputs** may be used simultaneously. Minimum output impedance is 600 Ohms.

XLR Output level switch

Sets the range of the signal level sent out of the **XLR Output** jacks. When in the 0dB position (engaged), the **Output** is in the line level range. When the switch is in its -10dB position (disengaged), the **Output** is in the instrument level range.

Note: The standard output level range of the SansAmp PSA is 0dB due to the wide availability of digital recorders, which are unforgiving to excessive input levels. This prevents overloading the input of a digital recorder.

XLR Ground Lift

Connects or disconnects the ground circuits between the XLR Direct Out of the SansAmp PSA and the mixer. We recommend starting with the ground lifted (button in). If necessary, connect the ground (button out).

MIDI

Midi In

This jack receives MIDI signals, including Program Change commands and MIDI data dumps. NOTE: Pins 1 and 3 of the MIDI connector are set up to output 10V DC phantom power to our ***MIDI Mouse***™ footcontroller (see Options on page 28).

Midi Thru/Out

This jack normally functions as a **MIDI Thru**, which lets MIDI data entering the SansAmp PSA pass through to other MIDI-controlled gear. This is useful when you employ a MIDI footcontroller to control the SansAmp PSA and an effects processor. You can disengage the **MIDI Thru** by using Special Page Function 9 (see page 21).

When you off-load custom preset data or MIDI map data , this jack operates as a **MIDI Out**. (See Special Page Function 1, page 17.)

Always use good-quality MIDI cables for connecting the SansAmp PSA with other gear.

HEADPHONE

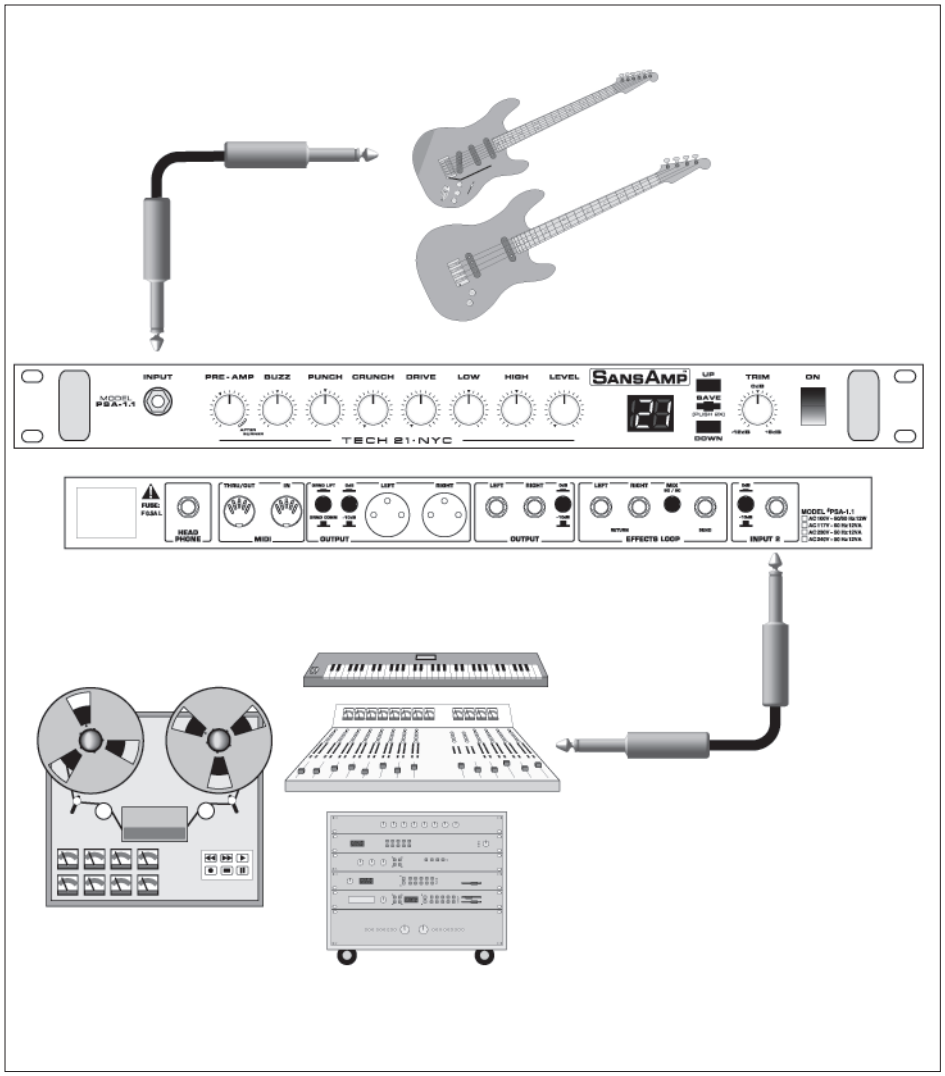
Dedicated stereo 1/4-inch output. Be aware that you will hear in stereo only if you use a stereo effect in the **Effects Loop**.

CAUTION: Do not use a mono 1/4-inch cable in this output.

SUGGESTED SETUPS

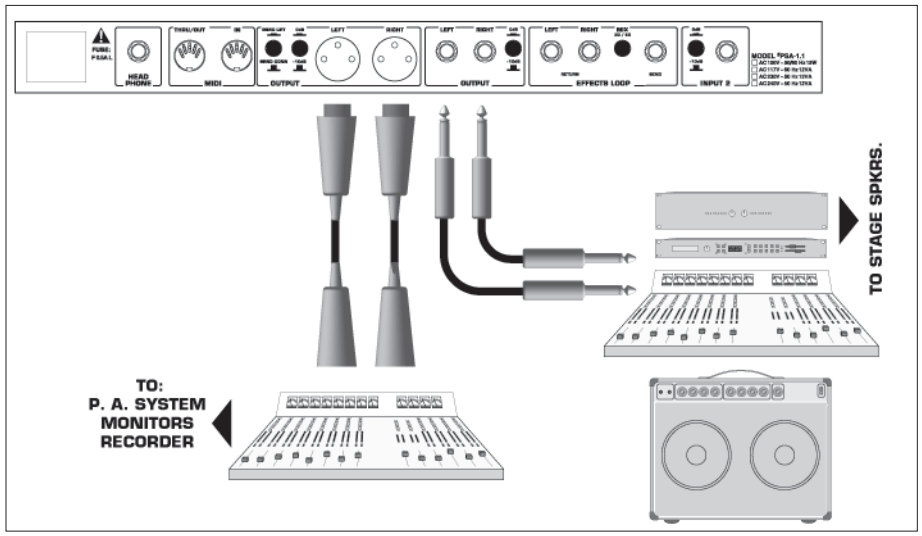
The following three pages show you how to interface your SansAmp PSA with other gear, including MIDI equipment.

Using the SansAmp PSA's Inputs



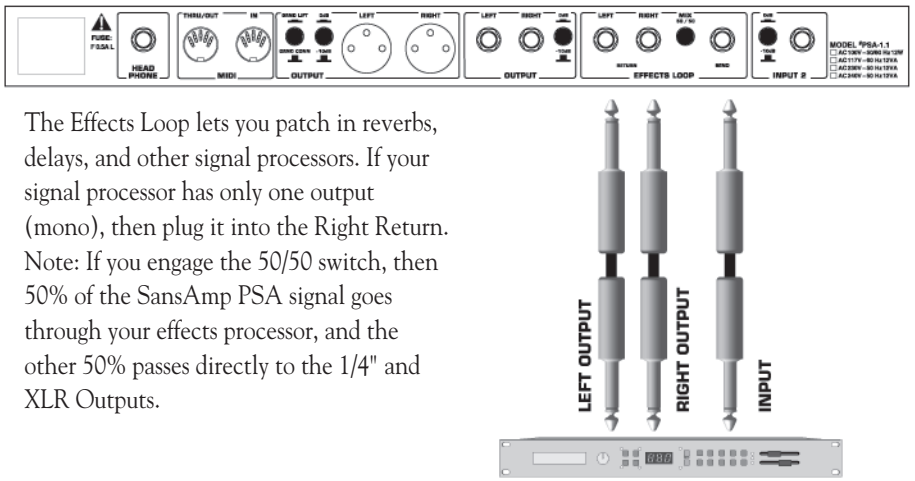
The front-panel Input jack is designed to accept signals from guitars, basses, keyboards, etc. You can set up your SansAmp PSA as a permanent part of a rack or patch-bay setup, with its usual input source plugged into the rear-panel jack. Then, if you want to plug straight into the SansAmp PSA, use the front-panel Input, which overrides the rear-panel Input 2.

Using the SansAmp PSA's Outputs



The SansAmp PSA has dual 1/4" unbalanced and XLR balanced Outputs for interfacting with all types of gear. XLR Outputs provide a signal for driving pro gear, including P.A. systems, mixers, signal processors. 1/4" Outputs are ideal for feeding most mixers, signal processors, and instrument amplifiers. Each set can be used simultaneously and independently.

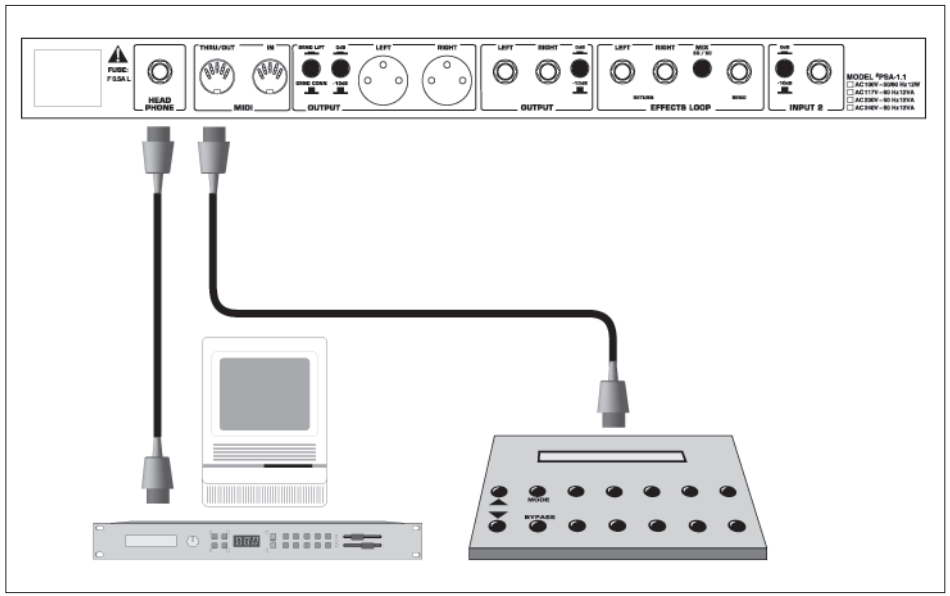
Using the Effects Loop



The Effects Loop lets you patch in reverbs, delays, and other signal processors. If your signal processor has only one output (mono), then plug it into the Right Return. Note: If you engage the 50/50 switch, then 50% of the SansAmp PSA signal goes through your effects processor, and the other 50% passes directly to the 1/4" and XLR Outputs.

SansAmp™ PSA-1.1

Using MIDI



All MIDI gear, including MIDI footcontrollers, signal processors, keyboards, and computers, can be connected to the SansAmp PSA. The MIDI In accepts Program Change commands, as well as MIDI Map and Program dumps. The MIDI Thru/Out jack is usually configured as a MIDI Thru, except when data is being transmitted from the SansAmp PSA.

SPECIAL PAGE FUNCTIONS & MIDI IMPLEMENTATION

Special Page Functions

Some very important features lurk inside your SansAmp PSA and aren't accessible through the knobs and **Up** and **Down** switches alone. They're very important and useful, so take the time to check them out, especially if you are using a MIDI footcontroller or other MIDI gear to interface with your SansAmp PSA.

To operate the Special Page functions, select Program 00 and press the Save button once. (Use a guitar pick or a pen tip.) The digits in the numerical display should now be flashing together.

Select Program 00 to Access Special Page Menu | **Push the Save Switch** | **Digits Blink** | **Select Special Page Function (00 - 09)** | **Push the Save Switch Again**

Use the **Up** and **Down** buttons to select any of these functions:

00 Exit Special Page
01 Custom Preset Data Dump out through the MIDI Thru/Out port
02 Define MIDI Mapping
03 0-127 / 1-128 Patch Offset
04 Preset Protection Writer
05 MIDI Channel Select
06 Software Revision Number
07 Edit Pot Display Mode
08 Disengage All Pots
09 MIDI Thru Disable

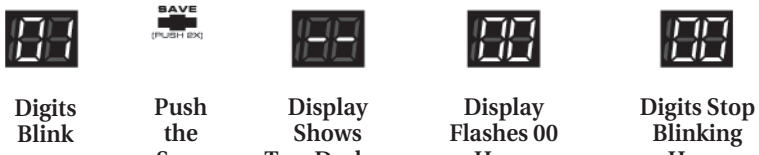
When you select a function, press the **Save** button a second time and the digits will stop flashing. (NOTE: If you select function 00, you will exit the Special Page function menu and return to Bypass Program 00.)

Then you can proceed to do any of the following:

SansAmp™ PSA-1.1

Special Page Function 1: Custom Preset Data Dump

This lets you off-load your custom presets to another **SansAmp PSA-1.1** (note: must be the same "1.1" model number) or other external MIDI gear, such as a sequencer. Connect a MIDI cable from the SansAmp PSA's MIDI Thru/Out jack, and plug the other end into a second SansAmp PSA-1.1, sequencer, MIDI-able computer, etc. Set up the sequencer or computer to receive the MIDI data (a second SansAmp PSA-1.1 will automatically detect and accept the data dump, so you don't have to adjust anything), and then press the SansAmp PSA's **Save**



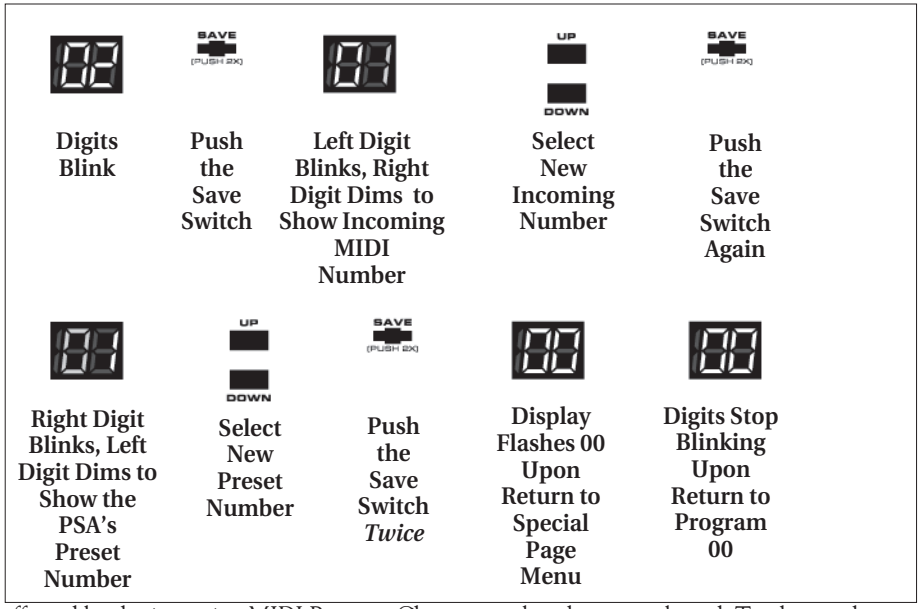
Digits Blink | **Push the Save Switch** | **Display Shows Two Dashes While Dumping MIDI Data** | **Display Flashes 00 Upon Return to Special Page Menu** | **Digits Stop Blinking Upon Return to Program 00**

switch. The SansAmp PSA's display will show two dashes for approximately 10 seconds, and then a flashing 00, meaning that it has completed the dump and returned to the Special Page function menu. You may now choose either a new Special Page function, or press **Save** again to exit. If you don't make a choice in about 15 seconds, the display stops blinking, indicating that the SansAmp PSA is in Program 00, bypass.
NOTE: Use one cable at a time. To use 2 cables, you will need to disable the MIDI Thru. See Special Page Function #9 on page 21.

Special Page Function 2: Define MIDI Mapping

This function defines internal MIDI mapping. That is, it tells your SansAmp PSA which program to call up when a MIDI Program Change command comes in. For example, if your MIDI footcontroller sends out a Program Change command that says Program 26, and you want your SansAmp PSA to respond to that Program 26 message by calling up preset number 15, you can set the SansAmp PSA to *map* that message to the appropriate location. NOTE: The SansAmp PSA comes from the factory with its MIDI map set by default to map incoming programs to the same numbered displayed programs. That is, MIDI 01 calls up Program 01, etc.

To remap a MIDI Program Change command, here's what you do:
Select function 02 and push **Save**. The left digit will blink with the right digit dim, telling you that the display is showing the number of the incoming program. To change that number, use the **Up** and **Down** switches to select a new number. Now push the **Save** button and the right digit blinks; the left digit dims, indicating the SansAmp PSA program that will be



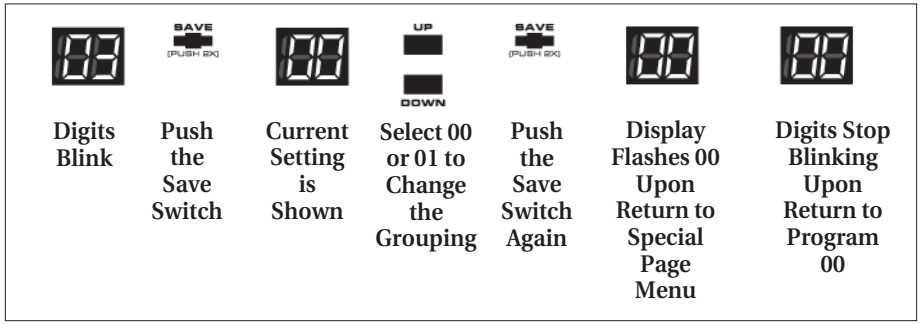
affected by the incoming MIDI Program Change number that you selected. To change the program, use the **Up** and **Down** buttons. Then push the **Save** button ***twice*** to store your change. The display will then flash 00 to indicate you're back in the Special Page menu. You may now choose either a new Special Page function, or press **Save** again to exit. If you don't make a choice in about 15 seconds, the display stops blinking, indicating the SansAmp PSA is in Bypass Program 00.

Special Page Function 3: 0-127 / 1-128 Patch Offset

Some MIDI program changers use the numerical grouping of 0-127, others 1-128. With Special Page Function 3, you can choose the corresponding grouping of the SansAmp PSA to match. If you have selected Special Page Function 3, the display will show either 00 or 01.

00: 00 - 127 (as shipped)

01: 01 - 128



To change the setting, use the **Up** and **Down** buttons to select 00 or 01. Then push **Save** to store your selection. The display will then flash 00 to indicate you're back in the Special Page menu. You may now choose either a new Special Page function, or press **Save** again to exit. If no choice is made in about 15 seconds, the display stops blinking, indicating the SansAmp PSA is in Bypass Program 00.

Special Page Function 4: Preset Protection Writer

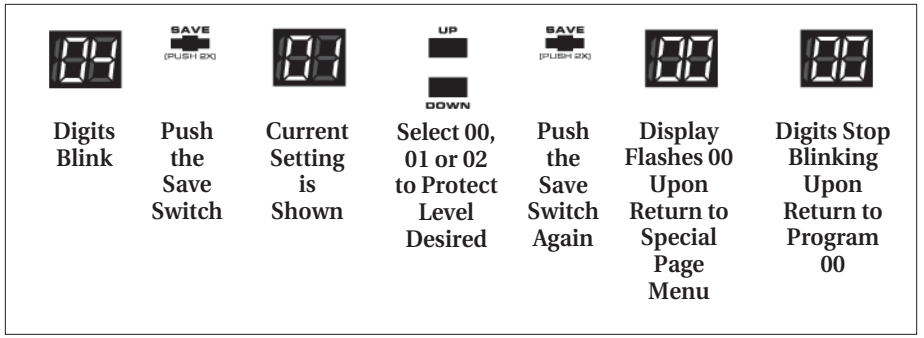
This allows you to change the level of protection for factory and custom presets. When you select Function 4, the display will show either 00, 01 or 02.

00: All Protect. All programs are locked and cannot be overwritten.

01: Normal. Protects Programs 00-50 (as shipped).

02: No Protect. All programs can be overwritten, except Bypass 00 and 50.

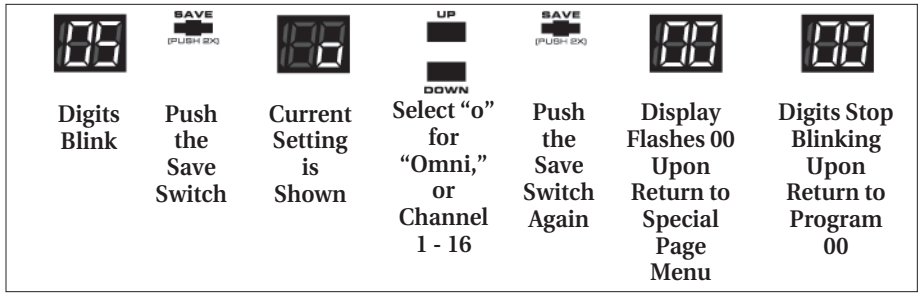
Note: Bypass locations 00 and 50 are permanently locked and cannot be overwritten.



To change the setting, use the **Up** and **Down** buttons to select 00, 01, or 02. Then push **Save** to store your selection. The display will then flash 00 to indicate you're back in the Special Page menu. You may now choose either a new Special Page function, or press **Save** again to exit. If you don't make a choice in about 15 seconds, the display stops blinking, indicating the SansAmp PSA is in Bypass Program 00.

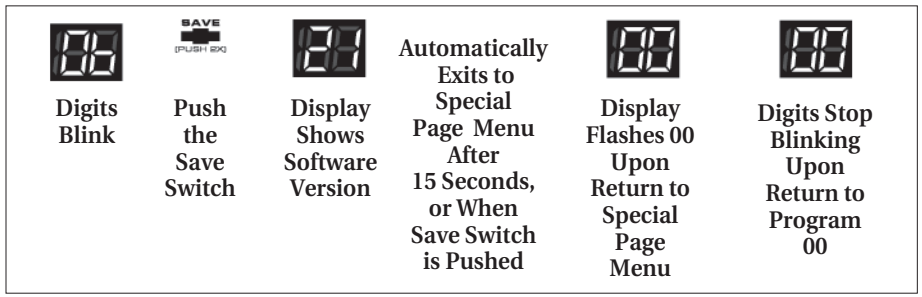
Special Page Function 5: MIDI Channel Select

This function sets the MIDI channel on which the SansAmp PSA receives MIDI data. It can be set to Omni (receive on any or all channels), or specific channels 1 through 16. Push the **Save** button, and the display shows the current setting. Press the **Up** or **Down** buttons to select either Omni (the default value, indicated by a small "o" in the right digit), or any number between 1 and 16. Push **Save** to store your selection. The display will then flash 00 to indicate you're still in the Special Page menu. You may now choose either a new Special Page function, or press **Save** again to exit. If you don't make a choice in about 15 seconds, the display stops blinking, indicating the SansAmp PSA is in Bypass Program 00.



Special Page Function 6: Software Revision Number

This function tells you which version of software is in your SansAmp PSA. You cannot alter this, but the information may come in handy in the future if software upgrades become available. When you select Special Page Function 6, the display will show a two-digit number.



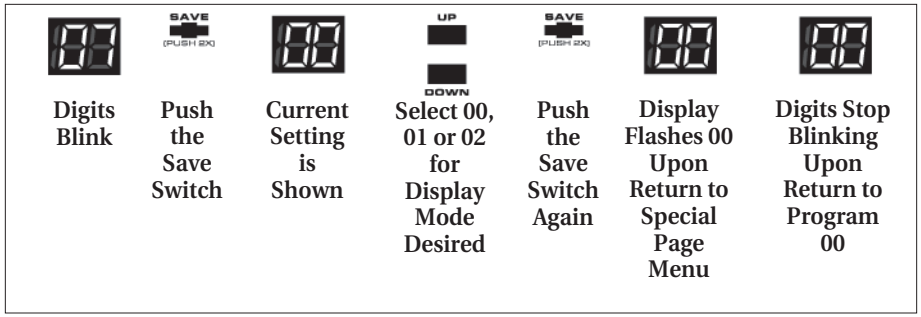
After showing you the software version, the display will flash 00 to indicate you're back in the Special Page menu. You may now choose either a new Special Page function, or press **Save** again to exit. If you don't make a choice in about 15 seconds, the display stops blinking, indicating the SansAmp PSA is in Program 00, bypass.

Special Page Function 7: Edit Pot Display Mode

For finding presets, you can change how the information is displayed for a stored pot's position. You can choose to use digits, dashes or the numerical value of the pot. When you select Function 7, the display will show either 00, 01 or 02.

00: Digits (as shipped)
01: Dashes
02: Numerical Value (0-127)

To change the setting, use the **Up** and **Down** buttons to select 00, 01, or 02. Then push **Save** to store your selection. The display will then show a flashing 00 to indicate you're back in the Special Page menu. You may now choose either a new Special Page function, or press **Save** again to exit. If you don't make a choice in about 15 seconds, the display stops blinking, indicating that the SansAmp PSA is in Program 00, bypass.



Special Page Function 8: Disengage All Pots

This function renders all eight front panel potentiometers *inactive*. This advanced feature prevents accidental setting changes during performances. All presets remain in the memory and are accessible via MIDI, however, you cannot edit the programs while in this mode. Select function 08 and press **Save**. Use the **Up** and **Down** buttons to select between two options:

00: All pots engaged (normal operation, as shipped)
01: All pots disengaged

Then push **Save** to store your selection. The display will then flash 00 to indicate you're back in the Special Page menu. You may now choose either a new Special Page function, or press **Save** again to exit. If you don't make a choice in about 15 seconds, the display stops blinking, indicating that the SansAmp PSA is in Program 00, bypass.

Special Page Function 9: MIDI Thru Disable

This function disables MIDI Thru on the MIDI Thru/Out port. If you are using a multi-port MIDI interface, you should disable MIDI Thru. If you are daisy chaining your MIDI devices, leave it enabled. Select function 09 and press **Save**. Use the **Up** and **Down** buttons to select:

00: MIDI Thru enabled (normal operation, as shipped)
01: MIDI Thru disabled

Then push **Save** to store your selection. The display will then flash 00 to indicate you're back in the Special Page menu. You may now choose either a new Special Page function, or press **Save** again to exit. If you don't make a choice in about 15 seconds, the display stops blinking, indicating that the SansAmp PSA is in Program 00, bypass.

FACTORY PRESETS

Note: Factory presets are based upon using the appropriate types of instruments and/or accessories associated with each particular sound.

Sound Group	Preset	Sound
	00	Bypass
Marshall® styles	01	Plexi
	02	Vintage
	03	Schenker
	04	JMP-1®
	05	High Gain
	06	Bluesbreaker
	07	Hendrix
	08	Van Halen I
	09	Classic Clean
Fender® styles	10	Stock
	11	B.B. King
	12	Stevie Ray
	13	Funk
	14	Champ®
	15	Twin®
	16	Super Bright
	17	Classic Rock
	18	Super Clean
	19	Jazz
Mesa/Boogie® styles	20	Mark I®
	21	Metallica
	22	Santana
	23	Clean
	24	Rectifier®
	25	Triaxis®
	26	Lead
	27	Rhythm
	28	Too Much Gain
	29	Mutant
Bass styles	30	SVT®
	31	Bassman®
	32	Jazz
	33	Metal
	34	Slap
	35	King's X
	36	Yes
	37	Lead
	38	Doug Wimbish
	39	Crimson
Miscellaneous styles	40	Fuzz Face®
	41	Big Muff Pi®
	42	Pignose®
	43	MXR+®
	44	Tele® Simulator
	45	American Woman
	46	Pantera
	47	Hiwatt®
	48	AC30® Queen
	49	Speaker Simulator
	50	Bypass

SansAmp™ PSA-1.1

CUSTOM SETTINGS

(Keep a checklist of your customized programs.)

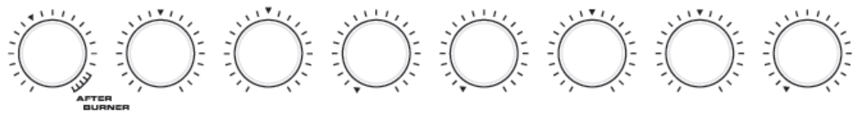
Program #	Sound/Name	Program #	Sound/Name

CUSTOM SETTINGS DIAGRAMS

(Photocopy these pages and keep a record of your customized programs.)

Program Number ____________________

PRE - AMP BUZZ PUNCH CRUNCH DRIVE LOW HIGH LEVEL



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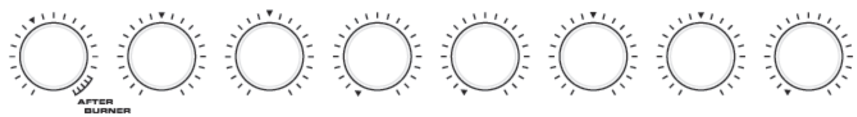
Program Number ____________________

PRE - AMP BUZZ PUNCH CRUNCH DRIVE LOW HIGH LEVEL



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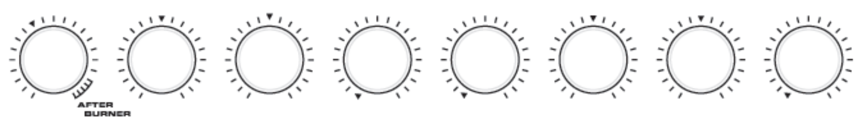
Program Number ____________________

PRE - AMP BUZZ PUNCH CRUNCH DRIVE LOW HIGH LEVEL



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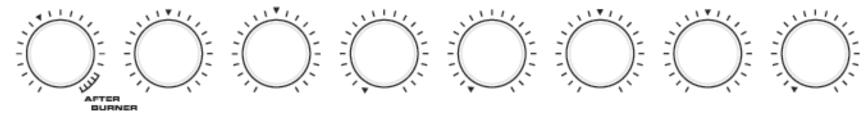
Program Number ____________________

PRE - AMP BUZZ PUNCH CRUNCH DRIVE LOW HIGH LEVEL



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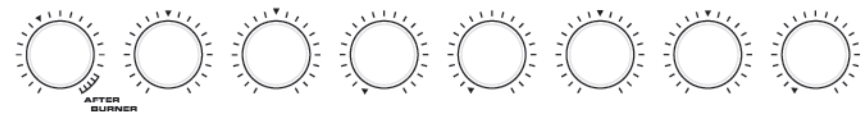
Program Number ____________________

PRE - AMP BUZZ PUNCH CRUNCH DRIVE LOW HIGH LEVEL



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Program Number ____________________

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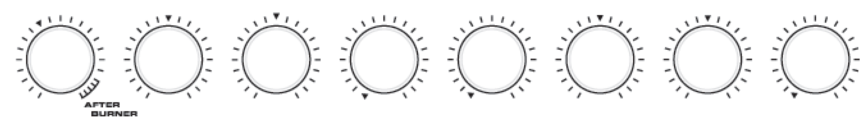

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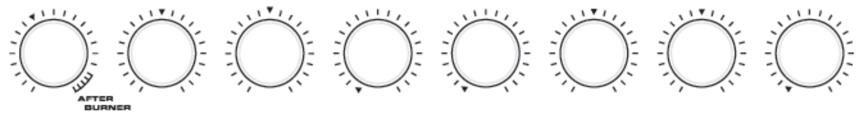
CUSTOM SETTINGS DIAGRAMS

(Photocopy these pages and keep a record of your customized programs.)

Program Number ______________

PRE - AMP BUZZ PUNCH CRUNCH DRIVE LOW HIGH LEVEL



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Program Number ______________

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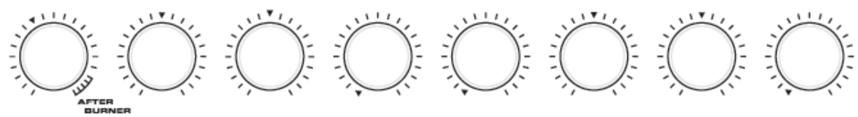

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Program Number ______________

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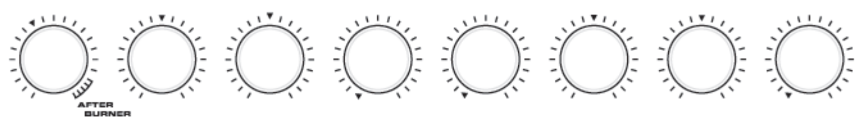

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Program Number ______________

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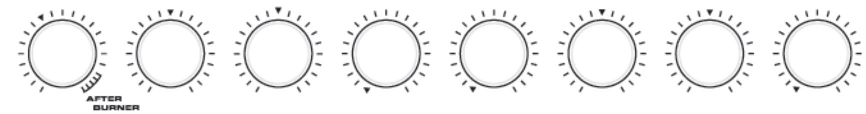

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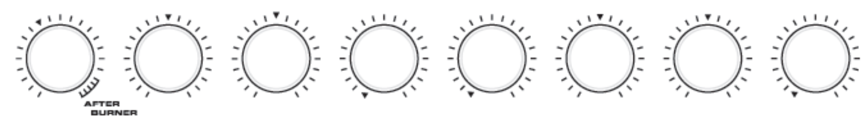
Program Number ______________

PRE - AMP BUZZ PUNCH CRUNCH DRIVE LOW HIGH LEVEL



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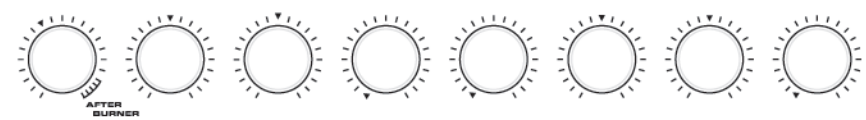
Program Number ______________

PRE - AMP BUZZ PUNCH CRUNCH DRIVE LOW HIGH LEVEL



Notes ____

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SPECIAL PAGE RESTORE

You can reset the settings of the Special Page Functions and MIDI mapping to their original factory values, as shipped, without disturbing your stored settings:

- Turn the power switch off.
- Turn all pots counter-clockwise to minimum.
- Press and hold the **Save** switch (with a pick or pen), while turning the power switch back on. The display will show "Sr" to represent Special-page reset.
- Continue to hold the **Save** switch for 3 seconds.
- When restored, the display will show "00" to indicate you're in Program 00, bypass.

That's it. You're back to the original Special Page Functions and MIDI mapping.

FACTORY PRESET RESET

To reset the factory presets only (01-49), follow this procedure:

- Turn the power switch off.
- Turn all pots counter-clockwise to minimum.
- Press and hold the **Up** and **Down** buttons simultaneously, while turning the power switch back on. The display will show "Fr" to represent Factory reset.
- Continue to hold the **Up** and **Down** buttons for 3 seconds.
- When reset, the display will show "00" to indicate you're in Program 00, bypass.

That's it. Factory preset Programs 01-49 are back to how the unit was originally shipped.

OPTIONS

MIDI Mouse™

Exceptionally player-friendly MIDI foot controller. Heavy duty, compact, stomp box format (4-1/2" x 3-1/2") that fits in a gig bag. There are no banks to change --just scroll up or down to 128 program locations on any of the 16 MIDI channels.

Power Engine 300 and Power Engine 400

2U Rackmount Instrument Power Amplifiers

- 300-watt/4-Ohm mono and 400-watt/8-Ohm stereo formats
- Dimensions: 17"w x 3.5"h x 10"d / Overall: 19"w x 3.8125"h x 11.5"d
- Weight: Power Engine 300 @ 22.3 lbs; Power Engine 400 @ 26.25 lbs

Power Engine 60

1x12 open-back cabinet with 60 watts of transparent power

- 8 Ohms / 100 watts handling
- 12" Celestion® speaker
- 3-band active EQ controls
- Dimensions: 18.25"w x 18.75"h x 14.25"d • Weight: 36 lbs.

SansAmp™ PSA-1.1

SansAmp PSA-1.1 Specifications

Model Number:	PSA-1.1
Input Impedance-Input 1:	1MegOhm
Input Impedance-Input 2:	4.7MegOhm
Input Level-Input 1:	-10dB
Input Level-Input 2:	Switchable to -10dB or 0dB range
Output Impedance-1/4":	1K Ohm min
Output Impedance-XLRs:	600 Ohm min
Output Level-1/4":	Switchable to -10dB or 0dB range
Output Level-XLR:	Switchable to -10dB or 0dB range
Maximum Output Level:	+10dB or better
XLR Pin Configuration:	Pin 1: Ground / Pin 2: In phase / Pin 3: Reverse
phase	
Effects Loop Send:	1K Ohm min, -10dB, Mono
Effects Loop Return:	100K Ohm min, -10dB, Stereo/Mono
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 is 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"d / Overall depth: 6"
Weight:	5 lbs.

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

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 your authorized dealer or Tech 21.