HEDGEHOG 50™
USER GUIDE

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions

2. Keep these instructions

3. Heed all warnings

4. Follow all instructions

5. Do not use this apparatus near water

6. Clean only with dry cloth

7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions

8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus(including amplifiers) that produce heat

9. Protect the power cord from being walked on or pinched particularly at plugs and the point where they exit from the apparatus

10. Unplug this apparatus during lightning storms or when unused for long periods of time

11. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled on, objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

12. **CAUTION:** To disconnect the unit completely from the MAINS, unplug the unit. Turning the power switch off does not disconnect the unit completely from the MAINS.

Thank you for purchasing the **Suhr Hedgehog 50** amplifier. Please take some time to read through this guide to familiarize yourself with its many features and applications.

OVERVIEW

The Hedgehog 50 is an American voiced, multi-stage/single channel amplifier based on a classic era circuit. Hedgehog is built to deliver a wide variety of tonal options that include: punchy full-bodied cleans, thick overdrive with complex mids, and harmonically rich leads with incredible sustain. It combines the simplicity of a single-channel control layout with comprehensive MIDI functionality - making it a snap to dial-in and store great tones.

The Hedgehog's unique ability to select and program overdrive, voicing and effects loop options offers players a myriad of clean and overdriven tones from a single-channel amplifier. With a simple press of the Store button on the Hedgehog's front panel you can instantly store 4 presets.

Hedgehog comes equipped with a 4 button footswitch that provides instant access to your favorite presets.

FRONT PANEL

INPUT
Use this to connect your guitar.

CONTROLS
VOLUME (Standard Mode)
The Volume control is active in both modes and is the key to establishing the amp's basic gain structure.

 • At settings between 1-6, Hedgehog provides pure clean tones, a nice round low-end, and plenty of sustain - ideal for a variety of Jazz, R&B and Pop playing styles.

 • At settings between 7-10, Hedgehog retains a tight punchy low-end, while adding a bit of bark to the mids, while introducing sparkle to the top-end - great for churning out some down home Country rhythm playing.

TREBLE
Turning the Treble control clockwise increases the amount of high frequencies - which adds clarity and brightness. While turning it counter-clockwise produces a warm, Jazzy tone.

MIDDLE
Turning the Middle control clockwise increases the amount of mid frequencies, yielding a richer, more focussed tone. While turning it counter-clockwise will produce a scooped sound.

BASS
Turning the Bass control clockwise increases the amount of lows, adding body to your tone. While turning it counter-clockwise results in a tighter, more defined bottom-end.

LEVEL
Adjusts the overall Master output level of the Hedgehog's Standard Mode.

DRIVE (Overdrive Mode)

Engaging the overdrive circuit opens up a whole new world of possibilities. At the heart of the overdrive circuit is the cascading gain stage, which introduces an additional gain stage to the circuit.

- **At lower settings**, (1 - 2) Hedgehog produces a subtle break-up effect with great punch and sustain - that works equally well in all pickup positions. These settings are ideal for gritty Country, Blues, or Classic Rock rhythm tones.
- **At medium settings**, (3 - 7) Hedgehog yields tight lows with increased saturation and focus in the upper mid and treble regions. Use these settings to achieve authoritative Rock and Blues tones that works equally well with single-coil and humbucking pickups.
- **At higher settings** (8 - 10), Hedgehog delivers a variety of Classic and Hard Rock tones that are thick and clearly defined - even at the highest settings.

NOTE: In Overdrive mode the Volume control cascades into the overdrive circuit. We find that a setting between 5-6 is the "sweet spot" to achieve the widest gain options between both modes.

LEVEL

Adjusts the overall Master output level of the Hedgehog's Overdrive Mode.

PRESENCE

Adjusts the amount of upper-mid frequencies added to Hedgehog's power section. Turning it clockwise will add more cut and sparkle. Turning it counterclockwise decreases it's emphasis, making your tone warmer.

VOICE SWITCHES (Programmable)

BRIGHT

Adds sparkle and clarity to Hedgehog's two modes (Standard and Overdrive).
NOTE: The switch interacts with the Hedgehog's Volume control and has less emphasis at lower volume settings.

BOOST

Produces a modest gain boost that has a full and open sounding character.

MID

Produces a Mid boost with an emphasis centered around the 800Hz frequency region. Use this to add sweetness and focus to your single-coils or humbuckers.

DEEP

Is a dual-mode bass boost (located in the power section) centered around the 135Hz frequency region. Use this to add low-end punch to Jazzy cleans, or bottom-end chunk to Hard Rock tones - without losing clarity or definition.

MODES:

GREEN - In this mode, the Deep switch offers a modest bass boost.
YELLOW - In the mode, the Deep switch offers a deeper more pronounced boost in the bottom-end.

EFFECTS LOOP (Programmable)
SERIES/MIX

Selects between Series or Mix(parallel). For a detailed description please refer to the Effects Loop Modes section located on the following page.

STORE

Stores a preset to the desired location via the front panel buttons (1-4) located under the overdrive, effects loop, and deep buttons, or via the included footswitch.

POWERING INSTRUCTIONS

With the Power Select and Standby Switches in the Off position, flip the Power Select Switch to the On position. Wait sixty seconds and then flip the Standby Switch to the On position.

To power down, simply flip the Standby Switch to the Off position and then flip Power Select Switch to the Off position.

POWER SELECT SWITCH

ON: Power is switched On
OFF: Power is switched Off

STANDBY SWITCH

ON: Power is switched On
OFF: Standby is switched Off

SPEAKER OUTPUTS

These two speaker outputs are wired in parallel and work in tandem with the Selector Output selector to offer the following settings: 4Ω, 8Ω and 16Ω.

IMPORTANT: To avoid damage to your amplifier, do not operate without a speaker or suitable load. Doing so will void your warranty.

EFFECTS LOOP

The Hedgehog is equipped with a hybrid (tube/solid-state), programmable series/parallel (mix) effects loop, which performs equally well with pedals and line-level rack gear via the INST/LINE button.

MODE (Mode select switches on front panel)**:**

SERIES

In Series mode 100% of your signal passes through the effects unit. This is very useful for creating dramatic effects, such as: intense flanging, deep chorus, or chaotic regenerating dub delays. While mix mode is best when you want to create very subtle effects, such as: room ambience, slight detuning (that widens the stereo field), or distant reverb trails.

MIX

In Mix mode the Hedgehog's effects loop utilizes a parallel signal path (similar to a mixing console). Mix mode is ideal for the tone purist because it uses a parallel signal path to blend the un-effected direct signal with the effected signal.

NOTE: When using mix mode, set your effects devices mix control to 100% wet.

LEVEL RETURN

When the Hedgehog's effect loop is engaged, the Level Return control becomes your amplifier's master volume, and the Standard and Overdrive mode level controls become your send levels.

RETURN

Use this input to connect the output of your effects device or chain.

SEND

Use this input to connect the input of your effects device or chain.

LOOP LEVEL

Choose between the following two settings to optimize your outboard effects to the Hedgehog:

INST - Choose this setting to interface instrument level devices (i.e. most pedals).
LINE - Choose this setting to interface with line-level devices (i.e. rack effects).

H.T. FUSE

1 Amp (Fast-Blo)

MAINS FUSE

3 Amp (Slo-Blo)

MAINS INPUT

Connect the supplied AC cable to this inlet to supply power to the Hedgehog.

MIDI

IN/FS (Located on Back Panel)

Use this port to connect the four button footswitch (included) or other MIDI enabled devices.

THRU (Located on Back Panel)

This port emits a copy of everything received at the Midi input port, allowing data to be forwarded to another device in a "daisy chain arrangement".

FOOTSWITCH

Hedgehog is equipped with an anodized aluminum, four button footswitch which enables remote program selection (P1-P4).

FOOTSWITCH PROGRAMMING

Using the supplied 7-pin MIDI cable, connect one end of the cable to the footswitch and the other end to the MIDI IN/FS port on the back of the amplifier.

TO SAVE A PRESET

1. On the amplifier, set the Overdrive, effects loop and voicing switches to the desired setting.

2. Press the STORE button (the selected front panel LEDs and the STORE LED will flash)

    a. Via the front panel, select 1-4 (located under the overdrive, effects loop, and deep buttons)

    b. Or, via the footswitch, select a preset location (P1 - P4)

3. To abort the process, press STORE

MIDI

Hedgehog ships from the factory receiving data on MIDI channel 14 and in OMNI Off mode. It easily integrates with your favorite MIDI footswitch/system, utilizing Program/Controller parameters. For detailed information, please refer to the MIDI Implementation chart shown below.

MIDI IMPLEMENTATION CHART

HEDGEHOG 50 MIDI IMPLEMENTATION SHEET (CONTROLLER ASSIGNMENTS)		
CONTROLLER #	**FUNCTION**	**MIDI CH**
111	Effects Loop Series	14
112	Effects Loop Mix	14
113	OD (Overdrive)	14
114	Boost	14
115	Mid	14
116	Bright	14
117	Deep - Low (Green)	14
118	Deep - High (Yellow)	14
119	Amp Mute	14

TO CHANGE THE MIDI RECEIVE CHANNEL

1) Press and hold STORE. The led will begin to flash
2) Send a MIDI program change message on the desired channel.
3) The channel will be updated. Note - all further messages MUST be on the new channel in order to be recognized.
4) To abort the process, press STORE.

TO CHANGE THE MIDI CONTROLLER NUMBER OF A FRONT PANEL FUNCTION

1) Press and hold the switch of the function to be changed. It's LED will begin to flash.
2) Send a MIDI controller message with the current channel number and the desired controller number.
3) The function's controller number will be updated.
4) To abort the process, press the selected function switch whose LED is flashing.

TO RESET MEMORY TO THE DEFAULT SETTINGS

1) Turn off power to the amp.
2) Hold the STORE switch.
3) Turn on power to the amp.

SAMPLE SETTINGS

SPANKY CLEAN (STANDARD MODE)

PUSHED CLEAN (STANDARD MODE)

FAT OVERDRIVE (OVERDRIVE MODE)

CREAMY OVERDRIVE (OVERDRIVE MODE)

HEDGEHOG 50 HEAD

Head Includes:

• Footswitch
• 7-Pin MIDI Cable
• Slip Cover
• AC Power Cable

ALSO AVAILABLE

HEDGEHOG 2x12 SPEAKER CABINET

Speaker Cabinet Features:

• Birch Ply Open Back
• 2-Celestion G12-65 Speakers

Includes:

• Slip Cover

SPECIFICATIONS*

Channel: Multi-Stage/Single Channel
Modes: Two
Output: 50 Watts
Tubes: 2 x 5881 (Power Section), 4 x 12AX7
Mains Fuse
T 3.0A/250V (Slo-Blo) - 100/120VAC
T 1.5A/250V (Slo-Blo) - 230/240VAC
H.T. Fuse
F 1A/250V (Fast-Blo)
Front Panel: Input, Volume, Treble, Middle, Bass, Gain, Level, Master, Presence, Bright, Boost, Mid, Deep, Series, Mix, Store, On/Standby and On/Off
Back Panel: MIDI (Thru, In/FS), 2 x Speaker Outputs, Impedance Selector:(4Ω, 8Ω, & 16Ω), Effects Loop (Return Level, Return, Send, Loop Level (INST/LINE), HT Fuse, Mains Fuse and Mains Input Inlet)

Dimensions: 22 5/8 ” (W) x 10.5” (D) x 9” (H)
Footswitch Dimensions: 11.5” (L) x 3.26” (W) x 1.72” (H)
Weight: 44 lbs.
All specifications subject to change without prior notice.

SUHR.COM

WARRANTY FOR SUHR AMPLIFIERS AND ELECTRONIC PRODUCTS

JST warrants for lifetime from date of purchase by the initial retail purchaser that this product shall be free from defects in workmanship. Electronic components such as capacitors, resistors, filters, transformers, jacks, and pots are covered for 5 years. Any parts determined defective by JST within the five (5) year term shall be repaired or replaced by JST without charge for parts and labor provided the unit is returned, transportation costs prepaid, to JS Technologies, Inc., 601 Crane Street, Unit A & B, Lake Elsinore, CA 92530, or to such facility authorized by JST. JST will pay shipping costs to return the unit to its owner. Defects in workmanship will be determined by JST for limited lifetime coverage.

This warranty does not cover damage caused by accident, misuse, abuse, neglect, unauthorized or improperly performed repairs, alterations, and/or wear and tear occasioned by use of the product, and does not include any expense or inconvenience or loss of use while the product is being repaired or replaced. JST expressly disclaims any liability for consequential damages arising from the sale, use, or inability to use the product. Any warranty implied by law, including any warranty of merchantability or fitness, is expressly limited to the one (5) year warranty term for the parts on our amplifiers and electronic products. The foregoing statements of warranty are exclusive and in lieu of all other remedies. Workmanship lifetime warranty is limited strictly to the original retail purchase of the instrument registered with JST within 10 days of purchase from an authorized JST dealer or distributor. JST will pay shipping costs to return the unit to its owner within the mainland U.S.

The above warranty policy only applies to customers in USA. If you are an international customer, please check with your distributor and the dealer in your country for warranty matters. Warranty issues must be handled through your dealer or distributor. If you are an international customer who purchased (or plan to purchase) from a US dealer, we can handle warranty matters direct but you will be responsible for shipping both ways. We encourage international customers to purchase through your local distributor or dealer for this reason. Our international distributors are setup to handle warranty issues in their respective countries. If you do not have an authorized Suhr dealer in your country, please contact us direct for further details.

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