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.

13. The unit shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the unit.

Thank you for purchasing the **Suhr Hedgehog 50** amplifier. Please take the 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 blackface-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.

OPERATING INSTRUCTIONS

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, with 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 full-range boost with an emphasis between the 400-1200Hz frequency regions. Use this to add 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 page XX.

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.

POWER UP / POWER DOWN

With the power switch in the OFF position and the Standby switch in the Standby position OFF, flip the power switch to the ON position. Wait sixty seconds, then flip the Standby switch to the Standby position. To power down, simply switch the amplifier from Standby to On, then flip power switch to the Off position.

POWER SELECT SWITCH

ON: Power is switched ON

OFF: Power is switched OFF

STANDBY SWITCH

ON: Amplifier is active

O: Power is switched OFF

NOTE: To avoid loud popping or damage, ensure the amplifier is in the Standby position.

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) which separates out your direct signal. 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.

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. 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 included four button footswitch 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: One
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.

Warranty

For warranty information on the Suhr Hedgehog as well as all other Suhr products, please visit, **www.Suhr.com/Warranty**

SUHR.COM

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