

AMT StoneHead-50-4

GUITAR AMPLIFIER

USER'S MANUAL



<http://amtelectronics.com/new/amt-stonehead-50-4/>
<http://media.amtelectronics.com/amt-stonehead-50-4/>

AMT

© 2015 AMT Electronics. Omsk, Russia.
EVERYTHING IS JUST BEGINNING

INTRODUCTION

-  Thank you for purchasing an **AMT SH-50-4**.
-  Please take the time to read through this manual to become acquainted with the **AMT SH-50-4**.



TABLE OF CONTENTS

Nº	Title	Page
1.	Important instructions	4
2.	Short review.....	5
3.	Front panel.....	6
4.	Rear panel.....	8
5.	Amplifier's control with AMT FS-2 Foot Switches.....	9
6.	Connections and beginning of work.....	10
7.	Short description of the preamplifier's channels.....	10
8.	Master-section description.....	11
9.	Serial/Parallel Effect Loop.....	11
10.	Specifications.....	12
11.	Complete set.....	12

1. IMPORTANT INSTRUCTIONS

! 1. In any case, do not disassemble the amplifier by yourself. It can cause the amplifier's breakdown or can give you an electric shock.

2. Do not let water or other liquid get inside the device. Do not place vessels such as vases filled with liquid on top of the device.

3. Perform surface cleaning of the amplifier only with dry cloth.

4. Please, avoid condensation inside the amplifier; this could cause its breakdown. Do not turn on the amplifier if it was subjected to sudden temperature changes from cold to warm, keep it at room temperature at least one hour before turning on.

5. Do not cover the vent slots of the amplifier; it can cause its overheating and a breakdown.

6. Try do not place the amplifier near heat sources (radiators, heaters, and others emitting heat devices).

7. The amplifier must be connected to the wall outlet with a protective earthing connection.

! 8. In case of moving or not using the amp for a long time, or during lightning storms - unplug it from the AC network.

9. All works, related to the device repair and service, must be done only by qualified service personnel.

10. All works, related to the device repair and service, must be done only by qualified service personnel.





11. The main fuse current value is 3A, the value is written on the rear panel. Do not use fuses of other values.

12. A guitar cabinet, connected to the amplifier, must have impedance not lower than 8 Ohm.

13. Do not try to repair the amplifier by yourself. If it is needed, please address a qualified service repair man or the service support of the producer: support@amtelectronics.com

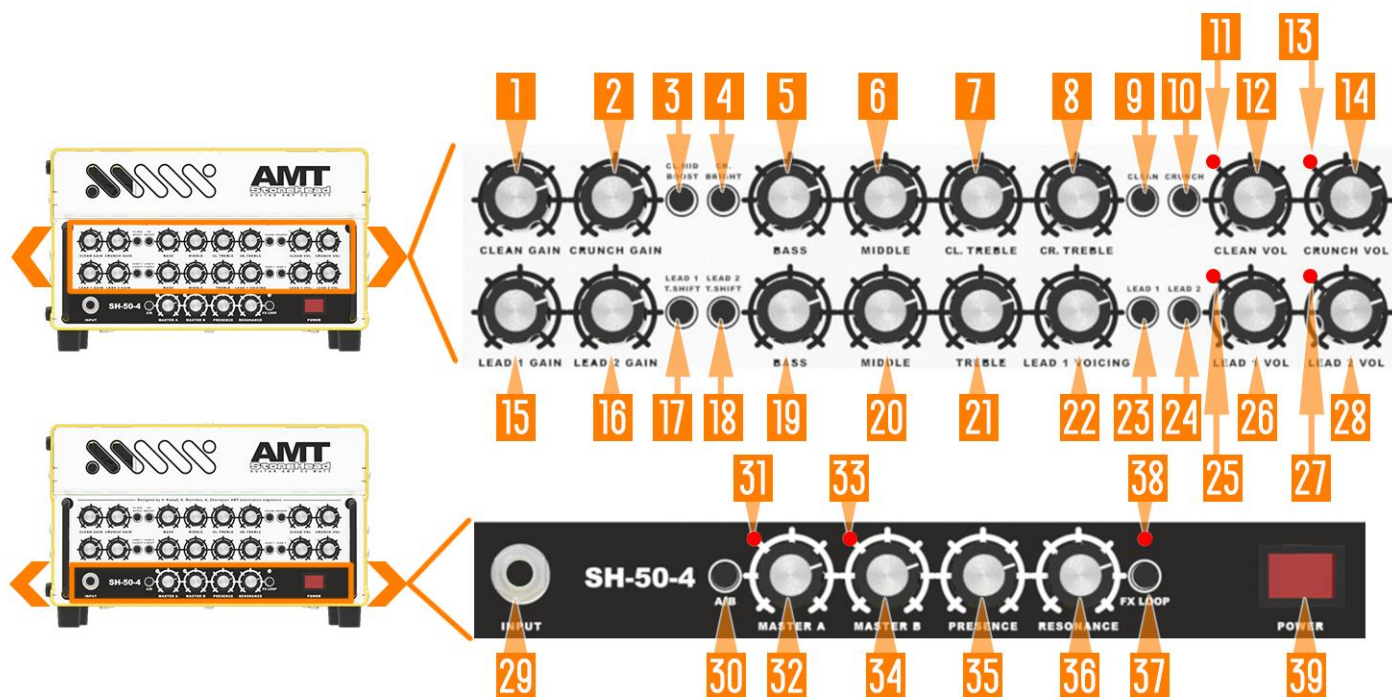
! **IGNORING THE ABOVE RULES CAN CAUSE THE AMPLIFIER'S BREAKDOWN AND CAUSES THE LOST OF WARRANTY SERVICE!**



2. SHORT REVIEW


-  AMT Electronics Company presents a renewed version of **AMT SH 50-4**. The 50 Watt, four channels, solid-state guitar amplifier. All four channels of the preamplifier section are made on the base of the AMT private JFET-technology which, in details, emulates the work of vacuum triodes. That made it possible to reliably form a so-called "tube sounding" of a guitar amp.
-  The **SH-50-4** power amplifier section is based on well-proven amplifiers **Tube Cake** series, which ensures its correct behavior with the guitar signal on "pre-loaded" power amplifier.
-  Due to logic structure and intuitive interface of the front and rear panels, it is rather easy to work with the **StoneHead 50-4**. Dimensions and weight make **StoneHead** quite mobile.
-  **SH-50-4** is an amplifier with its unique features, which make an opportunity to use it not only for home playing and at rehearsal premises, but at big stages and at studios.



3. FRONT PANEL

This section contains the description of the amplifier's controls on the front panel.

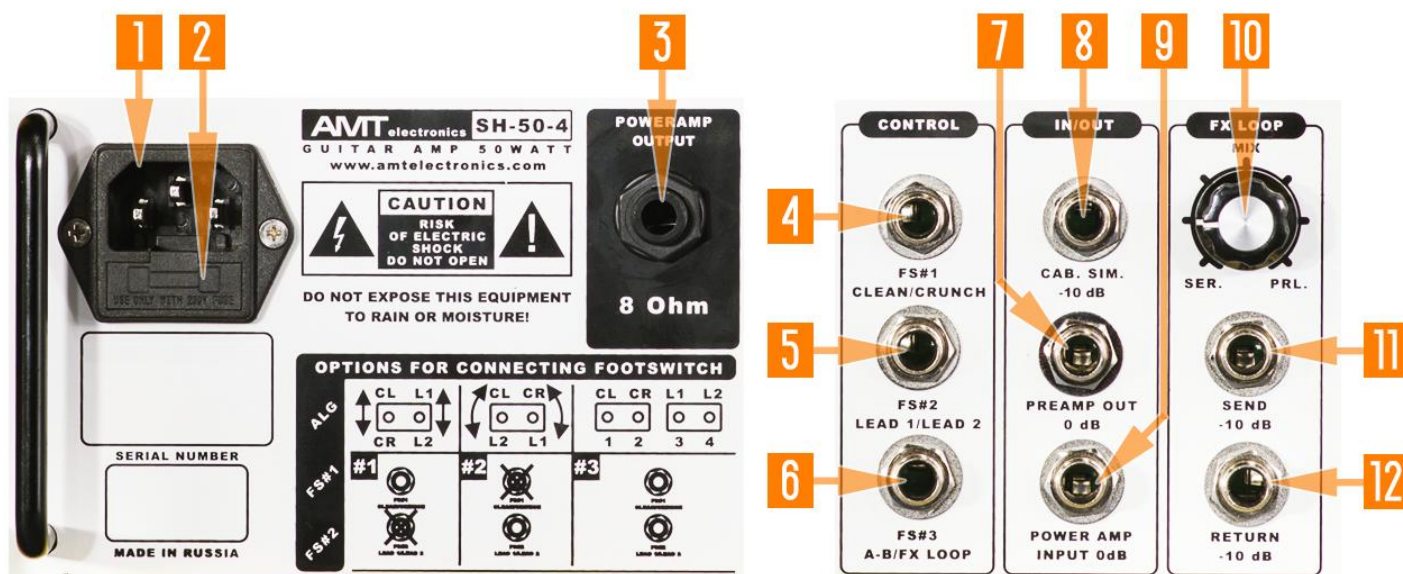





-  **1. Clean Gain** – potentiometer defines the sensitivity of the channel “Clean” for a sound signal.
- 2. Crunch Gain** – potentiometer defines the sensitivity of the channel “Crunch” for a sound signal.
- 3. Cl. Mid. Boost** - turning on this button gives light “Crunch” sounding to the channel “Clean”, due to rising of middle frequencies spectrum range.
- 4. Bright** - turning on this button gives more “brightness” to the “Crunch” channel sounding (the most effective at the middle position of the “CRUNCH GAIN” knob), due to rising of high frequencies spectrum range.
- 5. Bass** – potentiometer regulates low frequencies of the channels “Clean” and “Crunch”.
-  **6. Middle** - potentiometer regulates middle frequencies of the channels “Clean” and “Crunch”.
- 7. Cl. Treble** - potentiometer regulates high frequencies of the channel “Clean”.
- 8. Cr. Treble** - potentiometer regulates high frequencies of the channel “Crunch”.
- 9. Clean** - pressing this button you choose the channel “Clean”.
- 10. Crunch** - pressing this button you choose the channel “Crunch”.
- 11. “Clean” channel on-indicator.**
- 12. Clean Vol** - potentiometer regulates volume of the channel “Clean”.



-  13. “Crunch” channel **on-indicator**.
14. **Crunch Vol** - potentiometer regulates volume of the channel “Crunch”.
15. **Lead 1 Gain** - potentiometer defines the sensitivity of the channel “Lead1” for a sound signal.
16. **Lead 2 Gain** - potentiometer defines the sensitivity of the channel “Lead2” for a sound signal.
17. **Lead 1 T.Shift** - tuning on this button raises the “brightness” of the channel “Lead1”, due to changing middle frequencies range of sound spectrum.
18. **Lead 2 T.Shift** - tuning on this button raises the “brightness” of channel “Lead2”, due to changing middle frequencies range of sound spectrum.
19. **Bass** - potentiometer regulates low frequencies of the channels “Lead1” and “Lead2”.
20. **Middle** - potentiometer regulates middle frequencies of the channels “Lead1” and “Lead2”.
21. **Treble** - potentiometer regulates high frequencies of the channels “Lead1” and “Lead2”.
22. **Lead 1 Voicing** - individual regulator for channel “Lead1”, it lets to change tone of sound in a wide range. It gives the opportunity more precise to balance a sound of the channel for needs of guitarist.
-  23. **Lead 1** - turning on this button you choose the channel “Lead1”.
24. **Lead 2** - turning on this button you choose the channel “Lead2”.
25. “Lead 1” channel **on-indicator**.
26. **Lead 1 Vol** - potentiometer regulates volume of the channel “Lead1”.
27. “Lead 2” channel **on-indicator**.
28. **Lead 2 Vol** - potentiometer regulates volume of the channel “Lead2”.
29. **Input** - socket for connecting a guitar cable to the AMT SH-50-4 preamplifier.
30. **A/B** - pressing this button you choose one of preset output signals’ levels “Master A” or “Master B”.
31. “Master A” **on-indicator**.
32. **Master A** - potentiometer regulates common volume for four preamplifier channels for “Master A” choice.
33. “Master B” **on-indicator**.
34. **Master B** - potentiometer regulates common volume for four preamplifier channels for “Master B” choice.
35. **Presence** – potentiometer adjusts amplitude frequency response of the power amplifier in the high frequencies range.

-  36. **Resonance** – potentiometer adjusts amplitude frequency response of the power amplifier in the low frequencies range.
- 37. **FX Loop** - pressing this button you switch on/off external guitar effects (Effect loop).
-  38. Effect Loop **on/off-indicator**.
- 39. **Power** - On/Off power button.


4. REAR PANEL




-  1. Main AC net power **connector**.
- 2. Main AC net work **fuse**.
- 3. **POWER AMP OUTPUT** - guitar cabinet's connector.
- 4. **FS#1 Clean/Crunch** - connector for dual foot controller.
- 5. **FS#2 Lead1/Lead2** - connector for dual foot controller.
- 6. **FS#3 A-B/FX Loop** - connector for dual foot controller.
-  Variants of using FS#1, FS#2 and FS#3 will be discussed later in the section "Amplifier's control with AMT FS-2 Foot Switches".
-  7. **PREAMP OUT 0db** – SH-50-4 preamplifier's output for connecting to an external power amplifier. Output level: 0dBu.
- 8. **CAB.SIM -10dB** – SH-50-4 preamplifier's output with guitar cabinet's simulation for connecting to a mixer or a PC sound card. Output level:-10dBV.
- 9. **POWER AMP INPUT 0dB** – SH-50-4 power amplifier input for connecting an external preamplifier. Input level: 0dBu.


-  10. **MIX** - potentiometer regulates the levels' ratio of an external Effect Loop signal and a direct signal from the preamp.
11. **SEND -10dB** - output for connecting an external Effect Loop. Output level:-10dBV.
-  12. **RETURN** - input for connecting an external Effect Loop. Input level:-10dBV.

5. AMPLIFIER'S CONTROL WITH AMT FS-2 FOOT SWITCHES

-  The amplifier can be distantly controlled with a help external foot switches. You can choose any of four preamplifiers' channels, choose master volume sections – A or B, turn on/off an external Effect Loop.

Let's look at possible variants of the amplifier's control of (they are schematically shown on the rear panel):

-  1. When you use two dual foot controllers, connected to sockets FS#1 and FS#2, FS#1 button "1" turns on channel "Clean", FS#1 button "2" turns on channel "Crunch", FS#2 button "1" turns on channel "Lead 1", FS#2 button "2" turns on channel "Lead 2".

-  2. When you use one dual foot controllers, connected to a socket FS#1 or FS#2, FS#1 button "1" makes toggles between channels "Clean" and "Crunch", FS#1 button "2" makes toggles between channels "Lead 1" and "Lead 2".

FS#2 button "1" lets you to list channels from left to right, FS#2 button "2" lets to list channels in opposite direction, from right to left.





3. Dual foot controller connected to the socket FS#3, by pressing the button "1", switches between Master Volumes "A" and "B", by pressing the button "2", switches on and off the external Effect Loop.





Note: For all Footswitch controllers stereo cables have to be used.

6. CONNECTIONS AND BEGINNING OF WORK

- 


Before you turn on the amplifier, make it sure that a cabinet, connected to the amplifier's Output, has impedance **8 Ohm**. Make it sure that your cabinet can be used with a 50Watt amplifier and you have the right cables.
- 


Set both regulators of Master Volume A and B to leftmost positions.
- 


Connect footswitch controllers' cables to proper sockets on the rear panel. Connect the power cable to the appropriate socket on the rear panel and, after it, to the main AC network socket.
- 


Connect a guitar to the **"INPUT"** socket on the front panel. Turn on the amplifier by the switch **"POWER"** and your amplifier is ready to work.


7. SHORT DESCRIPTION OF THE PREAMPLIFIER'S CHANNELS

- 

Every channel has its own and unique structure of sound shaping.
- 


The channel **"Clean"**- the name speaks for itself; it has a clear sound, even in the extreme position of "Gain". When the button "Cl. Mid. Boost" is pressed the sound becomes much brighter.
- 


Channel **"Crunch"** - this channel includes both old-school, slightly loaded tone, and quite modern HighGain with arrogant and cutting sound.
- 


Channel **"Lead 1"** - extremely versatile channel that allows you to make completely different types of High Gain: as quite traditional and as ultra-modern.
- 


Channel **"Lead 2"** - is distinguished by a large margin of gain for fans of "heavier". It allows you to configure the extra heavy sound and it perfectly complements the channel "Lead 1"


8. MASTER-SECTION DESCRIPTION

- 

Potentiometers "**Master A**" and "**Master B**" adjust the volumes of the amplifier. Using them, you can preset common volumes of AMT SH50-4, that allows you to quickly change the volume with a help of a foot controller.
- 


In the same way the increase of the parameter "**Presence**" emphasizes the high frequency dynamics, and gives an improved response at high frequencies, which adds the effect of "presence" to the sound.
- 


The potentiometers "**Presence**" and "**Resonance**" control the section of the power amplifier and affect the sound of the amplifier when playing through the cabinets, as well as affect on the degree of control of the amplifier over them. The increase of the parameter "**Resonance**" emphasizes the natural resonance of the speaker and improves bass performance.
- 


The effect of the use of these knobs is rather dependent on the type of connected cabinets.
- 


You need to be careful with their settings, in order to prevent excessive oscillation amplitudes of speakers' diffusers at high quality factor settings.


9. SERIAL / PARALLEL EFFECT LOOP

- 

The amplifier is equipped with a serial/parallel effects loop (the loop is placed after preamplifier).
- 

When "**MIX**" is set in position "**SER**", the entire signal passes through the external loop (serial loop), the transition of the potentiometer to the position "**PRL**" gives to the output sound more direct (unprocessed) signal (parallel connection).
- 

Connect the external effect device (e.g. **Reverberry**) to the output "**SEND**", and the device's output to the amplifier's input "**RETURN**".
- 

With this potentiometer you can mix any amount of external effects' signal without losing the quality of the direct signal.
- 

Effects loop can be switched on/off by the button on the front panel or by using a Footswitch controller. The effect's level can be adjusted by means of the potentiometer "**MIX**".

10.SPECIFICATIONS

1.	Load impedance	8 Ohm*
2.	Main AC power	85~265 VAC
3.	Weight	3,7 kg
4.	Dimensions	260x160x170 mm
5.	Output power	50 Watt

*** Note:** It is allowed to use 16 Ohm cabinet and even to turn on the amplifier without a load.

11.COMPLETE SET

1.	Amplifier SH-50-4	1 pc
2.	Main AC Power cable	1 pc
3.	User's manual	1 pc
4.	Warranty card	1 pc
5.	Package box	1 pc