

**SYNERGY®**

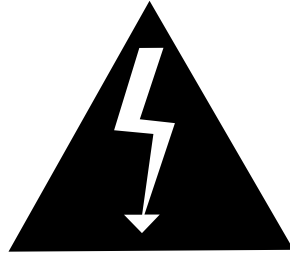
**SYN-50**

**DUAL MODULE  
50W ALL TUBE HEAD**

**INSTRUCTION MANUAL**

*Congratulations on your purchase of the Synergy SYN-50 amplifier. The SYN-50 is the culmination of years of refining and fine tuning our innovative modular concept. It is loaded with lots of cool, useable features and is easy to operate. Please read the entire manual to familiarize yourself with this amp.*

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**IMPORTANT  
SAFETY WARNING  
DANGEROUS VOLTAGE PRESENT**

1. The Synergy modular products must never be operated without modules installed in all slots without covering the unused slots.
2. Slots without modules must be covered with a blank cover panel, available from Synergy Amps.
3. Never place your hand or any other object inside an open module slot for any reason!
4. If a foreign object does accidentally fall inside an open slot, immediately turn the main power off and UNPLUG THE AC POWER CORD. Tip the unit forward to get the object to fall forward and out of the slot. Do not stick your fingers into the slot to reach it.
5. If the foreign object has fallen inside and you cannot see the object, do not stick your hand into the slot to search for it. Take the unit to a qualified service technician to safely remove it.

**Failure to heed the above warnings can result in personal injury or death. We want you to enjoy your Synergy Modular gear and not get hurt being foolish and failing to adhere to the warnings.**

# **INSTRUCTIONS**

Please keep this instruction manual for future reference and for the duration of owning this SYNERGY Amplifier. Please carefully read and understand the instructions inside this user's manual before attempting to operate your new amp. This instruction manual includes essential safety information regarding the use and maintenance of the amplifier. Take special care to heed all warning symbols and signs inside this manual and those printed on the amplifier itself.



## **WARNING!**

**TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THE AMPLIFIER TO WATER OR MOISTURE. DO NOT OPERATE NEAR ANY WATER SOURCE.**



## **WHAT'S THE MEANING OF THIS?**

The lightning flash with an arrow triangular symbol is intended to alert the user to the presence of non-insulated "dangerous voltage" within the products enclosure, and may be of sufficient magnitude to constitute a risk of electric shock



## **WHAT'S THE MEANING OF THIS?**

The exclamation point triangular symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the user manual accompanying this amplifier!

1. Read Instructions – All the safety and operating instructions should be read before this product is operated.
2. Retain Instructions – The safety and operating instructions should be retained for future reference.
3. Heed Warnings – All warnings on the PREAMP and in the operating instructions should be adhered to.

4. Follow Instructions – All operating and use instructions should be followed.
5. Water and Moisture – The PREAMP should not be used near water – for example, a bathtub, washbowl, kitchen sink, laundry tub, wet basement, or near a swimming pool, and the like.
6. Heat – PREAMP should be situated away from heat sources such as radiators, heat registers, stoves, or other PREAMP (including PREAMPs) that produce heat.
7. Power Sources – This product should be operated only from the type of power source indicated on the rating label.

If you are not sure of the type of power supply to your home, consult your product dealer or local power company.

## **8. Grounding or Polarization**

– This product may be equipped with a polarized alternation-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

## **9. Power-Cord Protection**

– Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to the cord in correspondence of plugs, convenience receptacles, and the point where they exit from the PREAMP.

10. Cleaning – The PREAMP should be cleaned only as recommended by the manufacturer. Clean by wiping with a cloth slightly damp with water. Avoid getting water inside the PREAMP.

11. Non-use Periods – The power cord of the PREAMP should be unplugged from the outlet when left unused for a long period of time.

## **12. Object and Liquid Entry**

– Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

## **13. Damage Requiring Service**

– The PREAMP should be serviced by qualified service personnel when:

- A. The power-supply cord or the plug has been damaged; or
  - B. Objects have fallen, or liquid has been spilled into the PREAMP; or
  - C. The PREAMP has been exposed to rain; or
  - D. The PREAMP does not appear to operate normally or exhibits a marked change in performance; or
  - E. The PREAMP has been dropped, or the enclosure damaged.
  - F. The PREAMP needs tube replacement or biasing
14. Servicing – The user should not attempt any service to the PREAMP beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.
15. Ventilation – Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack.
16. Attachments – do not use attachments not recommended by the product manufacturer as they may cause hazards.
17. Lightning – For added protection for this product before a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the product due to lightning and power line surges.
18. Replacement Parts – When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
19. Safety Check – Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
20. FUSES – Always use the correct rating and type of fuse as indicated on the rear panel. Note the

proper rating fuse is determined by the AC line voltage in the country this unit is being operated.

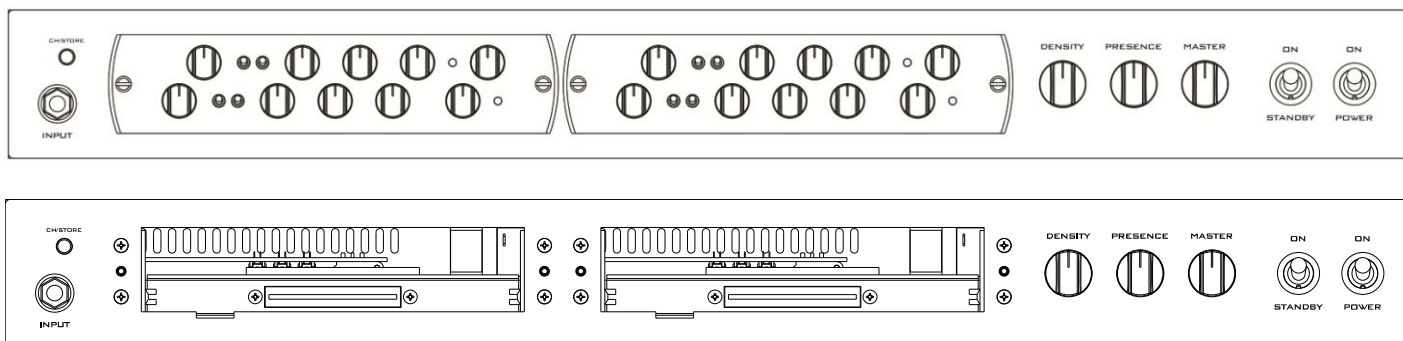
NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: - Reorient or relocate the receiving antenna. - Increase the separation between the equipment and receiver. - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. - Consult the dealer or an experienced radio/ TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

of the following measures: - Reorient or relocate the receiving antenna. - Increase the separation between the equipment and receiver. - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. - Consult the dealer or an experienced radio/ TV technician for help.

# FRONT PANEL

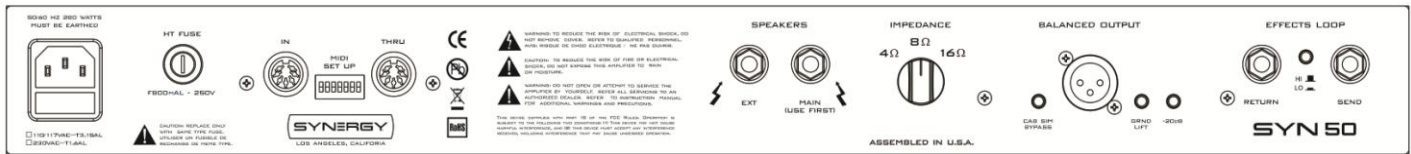


**REPLACING MODULES:** When inserting or removing modules, simply turn both thumbscrews to the left until they fill loose. Do not remove the screw completely. Remove the module by pulling out on the thumbscrews. Slide in a new module, and push in on the center knobs until flush with the front panel. Tighten the thumbscrews, by turning to the right until snug.

Always place the amp in the STANDBY (down position) mode before swapping modules. If you do "hot swap" a module you may experience an unpleasant "pop" noise. Hot swapping while in PLAY may also cause the processor to "lock up" or confuse the channel switching. If this happens, turn the power off for a few seconds and back on to reset the switching circuit.

1. **INPUT**- Plug your guitar in here using a high quality shielded cable.
2. **CH/STORE** - Channel switch: Push and release the button to step through the channels. This button is also used to program the channels when the footswitch or midi controller is used. Please read the MIDI/CHANNEL SWITCHING section later in this manual.
3. **TWO MODULE SLOTS:** You have choice of installing two of the new Synergy modules or any of the previous versions. All are compatible and will perform perfectly in your new SYN-50.
4. **DENSITY** – Add low end "girth" globally to all channels.
5. **PRESENCE** – This is a global control which adds brightness to all the channels.
6. **MASTER** – Controls the overall volume of all channels. This control is after the effects return so it will not affect the level of the effects loop. It should be set to achieve a reasonable balance between the individual module volume controls and this master. In other words, don't crank the channel volumes and have the main MASTER just cracked open. Typically you may try to keep the channel volume knobs and the MASTER at the same approximate settings.
7. **STANDBY/ON** – A traditional standby switch that keeps the tubes warmed and ready for use when in the STANDBY position. Switch to PLAY when you are ready to perform. You should have the STANDBY switch in the STANDBY (down) position when powering the amp on. Allow about 30 seconds before switching to play to allow the circuits to stabilize.
8. **POWER/ON** – Main AC power switch.

# REAR PANEL



1. **AC MAINS INPUT** – Connect to a grounded outlet in accordance with the voltage and frequency specified on the rear panel of your amplifier.



**Use only the factory supplied cord or a UL approved equivalent type.**

2. **MAINS FUSE** – The Mains fuse is located in the pull out tray at the bottom of the AC jack. This fuse protects the unit from serious damage in case of electrical faults
3. **HT FUSE**—HT is **the high voltage** fuse that protects the amp in case of a power tube failure. If this fuse blows, most likely a power tube has failed.



**Warning! Replace only with same fuse type and rating.**

4. **MIDI THRU** - MIDI messages/data that is received at the MIDI IN connector is passed through to the MIDI THRU jack for “looping” to other MIDI controlled units
5. **MIDI SET UP** – Used to set up communications with external controllers. See the MIDI section later in this manual for details
6. **MIDI THRU** - If you have additional MIDI devices in your system, you can connect them here. Commands from your MIDI controller will be passed through this port to the next device, allowing your controller to control multiple devices simultaneously. See the MIDI/CHANNEL SWITCHING section later in this manual for programming details.
7. **SPEAKERS** – Two parallel speaker jacks. Always use the “**MAIN (USE FIRST)**” jack first. The **EXT** output is to add a second speaker.
8. **IMPEDANCE**– Set this switch to match the total impedance of you speaker(s).
9. **BALANCED OUTPUT** - XLR output used to send your SYN-50 tone straight to the mixing board or active cabinet
  - 20dB** - A level pad for the XLR output. Set this switch to send the proper signal level to the mixer.
  - GRND LIFT** - Lifts the pin 1 ground to prevent ground loops. Choose the setting that causes the least amount of hum.
  - CAB SIM BYPASS** - Removes the cabinet simulation circuitry and changes the XLR output to a full range signal using it with a dedicated speaker simulation system such as IRs or others.
10. **EFFECTS LOOP SEND** - Use a high quality shielded guitar cable from here to the input of your effects unit.
11. **LEVEL SWITCH** – Sets the loop to pedal or line level. The actual level at the loop is dependent on the channel volume knobs settings. Set this switch for the lowest noise and distortion or signal loss when switching effects on.

**EFFECTS LOOP RETURN**- Use a high quality shielded guitar cable to go from the output of your effects unit back into the amp return.

# MIDI/CHANNEL SWITCHING

The SYN50 is compatible with most MIDI controllers on the market. You can set up 128 different presets, each of which can recall a different channel on the amp. You can also use the SYNERGY 4F pedal.

## CONNECTIONS

**MIDI IN** – This is where you connect the output from your MIDI controller. The connector is 7 pin, but it can also accept a standard 5 pin MIDI cable. 7 pin cables are only used with MIDI devices that accept phantom power over pins 6 and 7. If your MIDI device has a 5-pin MIDI connector, it doesn't accept phantom power and must be powered with its own power supply. The MIDI IN port can provide 12VDC at up to 300mA.

**MIDI THRU** – If you have additional MIDI devices in your system, you can connect them here. Commands from your MIDI controller will be passed through this port to the next device, allowing your controller to control multiple devices simultaneously.

## SETUP

Out of the box, the SYN50 is set up to receive MIDI program changes on MIDI channel 1. You can change the MIDI channel and other settings using the DIP switches on the back of the unit:

<b>MIDI Channel</b>	<b>Switch 1</b>	<b>Switch 2</b>	<b>Switch 3</b>	<b>Switch 4</b>
1	off	off	off	off
2	<b>ON</b>	off	off	off
3	off	<b>ON</b>	off	off
4	<b>ON</b>	<b>ON</b>	off	off
5	off	off	<b>ON</b>	off
6	<b>ON</b>	off	<b>ON</b>	off
7	off	<b>ON</b>	<b>ON</b>	off
8	<b>ON</b>	<b>ON</b>	<b>ON</b>	off
9	off	off	off	<b>ON</b>
10	<b>ON</b>	off	off	<b>ON</b>
11	off	<b>ON</b>	off	<b>ON</b>
12	<b>ON</b>	<b>ON</b>	off	<b>ON</b>
13	off	off	<b>ON</b>	<b>ON</b>
14	<b>ON</b>	off	<b>ON</b>	<b>ON</b>
15	off	<b>ON</b>	<b>ON</b>	<b>ON</b>
16	<b>ON</b>	<b>ON</b>	<b>ON</b>	<b>ON</b>

The other switches perform these functions:

**Switch 5:** When turned on, enables Omni mode. This means that the SYN50 responds to all MIDI channels. This switch is normally kept in the off position, but is useful to turn on when debugging.

**Switch 6:** When turned on, the SYN50 will respond to MIDI program change messages. This switch is normally kept in the on position.

**Switch 7:** When turned on, the SYN50 will respond to MIDI continuous control messages. This switch is normally kept in the off position.

**Note:** If a change is made to any of the DIP switch settings, you must power the amp OFF and back on to “read” the changes. The DIP switches should all be in the 'up' position.

## Programming

To program the SYN50 to respond to your MIDI controller, follow the procedure below:

1. Make sure your MIDI controller is connected to the SYN50 MIDI input jack
2. Select a preset on the MIDI controller
3. Using the channel select button on the SYN50, using the SYN50 front panel pushbutton, select the module channel that should be activated when that preset is selected.
4. Hold the channel select button down until the module LED flashes. This should take about 3 seconds.

Repeat steps 2 through 4 for each preset you wish to store. Once programmed, each time you select one of the programmed presets, the amp will automatically switch the desired channel.

**Please note:** If the module LED doesn't flash after holding the channel select button for a few seconds, the amp is likely not receiving MIDI commands. Check your MIDI controller and its connection to your amp. Also, make sure that the MIDI controller is set to the same MIDI channel as the amp.

## Continuous Controllers

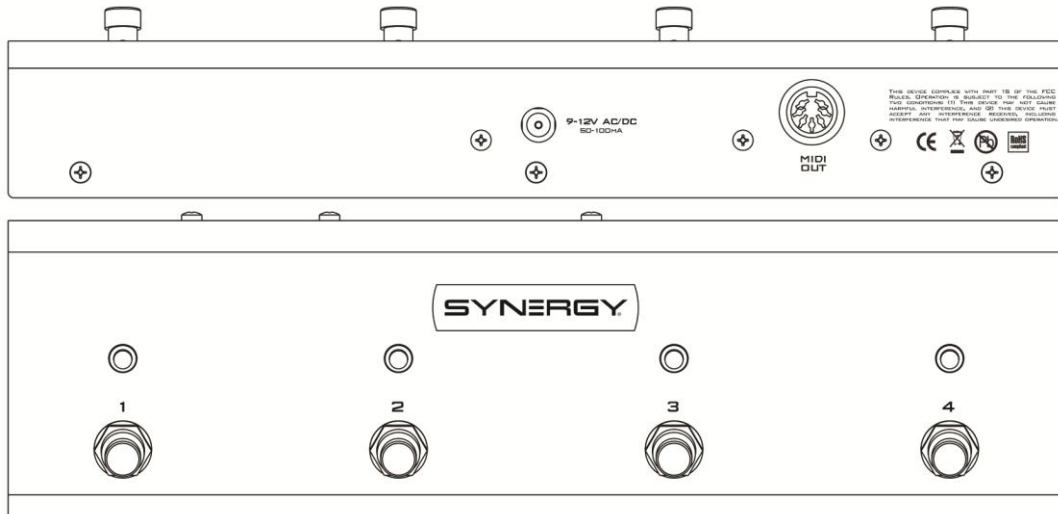
The SYN50 also responds to MIDI continuous controller (CC) messages. These MIDI messages are typically used for “instant access” buttons on more advanced MIDI controllers – buttons that can be set up to directly select amp channels. When using CC messages, you don't need to go through the programming process described above.

CC Number	Function
56	Select channel 1A
57	Select channel 1B
58	Select channel 2A
59	Select channel 2B
64	Mute

When selecting a channel using CC messages, only a message with a CC value of 64 or higher will have any effect. Messages with a CC value of 63 or lower is ignored. The Mute CC (#64) will mute the amp if a value of 64 or higher is received, and will un-mute the amp if a value of 63 or lower is received.



The SYNERGY 4F pedal is essentially a 4 button MIDI pedal that is preset to send program change commands 1 through 4 on MIDI channel 1. Your SYN50 will come preprogrammed to respond to channels 1 through 4 on buttons 1 through 4. You can change/assign any module or channel to be on any buttons you wish by following the steps under PROGRAMMING above. The 4F pedal can operate from any power supply that puts out 9 to 12 volts AC or DC and has a current rating of at least 50 milliamps.



## **SYNERGY LIMITED THREE (3) YEAR WARRANTY**

**Thank you for choosing SYNERGY. SYNERGY takes great pride in an extremely thorough testing procedure which is implemented on each product prior to shipment. In the unlikely event that you have a problem with your Synergy product, please refer to warranty below.**

**PREAMP:** SYNERGY offers a limited Three (3) Year warranty to the original purchaser that this SYNERGY product will be free from defects in material and workmanship. A dated sales receipt will establish coverage under this warranty, PLEASE KEEP YOUR PROOF OF PURCHASE TO USE YOUR WARRANTY. This warranty does not cover service or parts to repair damage caused by accident, neglect, abuse, normal & wear, disaster, misuse, abuse, over-powering, negligence, inadequate packing or shipping procedures and service, repair or any modifications to the product which have not been authorized or approved by SYNERGY in writing. **ANY MODIFICATION TO THE AMPLIFIER WILL VOID YOUR WARRANTY.** If this product is defective in materials or workmanship as warranted above, your sole remedy shall be repair or replacement by SYNERGY as provided below.

**CAUTION: Do NOT attempt to repair, modify or service this Synergy product by yourself!!! Please read the instruction manual for all safety notifications, warnings and instructions.** SYNERGY utilizes tubes with extremely high voltages that can cause serious injury or death. Do not remove the chassis cover from the amplifier. All repair and service work must be performed by SYNERGY or an authorized service center of SYNERGY. ANY UNAUTHORIZED REPAIRS WILL VOID YOUR WARRANTY.

**TUBES:** SYNERGY warrants the original purchaser that the specific tubes used in this SYNERGY product will be free from defects in material and workmanship for a period of 90 days from the original date of purchase. A dated sales receipt will establish coverage under this warranty. This tube warranty will automatically terminate 90 days after the original retail sales date. This tube warranty is in lieu of all other expressed warranties. If tubes fail within the 90 day warranty period your sole remedy shall be replacement of tubes as provided below.

**RETURN PROCEDURES:** In the unlikely event that a defect occurs please email support@SynergyAmps.com. A member of our staff will email you a response in a timely manner. Please include your phone number in case our customer service department needs to reach you. In most cases we can help you diagnose the problem over the phone. If a product must be sent to us, please follow the procedure outlined below.

- Defective products must be shipped, together with proof of purchase, freight pre-paid and insured to the Authorized SYNERGY Service Center or directly to SYNERGY.
- If a product must be returned to SYNERGY for warranty replacement/repair, a Return Authorization Number must be obtained from our Customer Service Department prior to shipping the product.
- Please contact SYNERGY Customer Service Department for the Authorized SYNERGY Service Center nearest you.
- Products must be shipped in their original packaging or its equivalent; in any case, the risk of loss or damage in transit is to be borne by the purchaser.

- Please send to:  
SYNERGY  
3383 Gage Ave.,  
Huntington Park, CA 90255
- The Return Authorization Number must appear in large print directly below the shipping address.
- Always include a brief description of the defect, along with your correct return address and telephone number.
- When emailing to inquire about a returned product, always refer to the Return Authorization Number.

If SYNERGY determines that the unit was defective in materials or workmanship at any time during the warranty period, SYNERGY has the option of repairing or replacing the product at no additional charge, except as set forth below.

- All replaced parts become a property of SYNERGY. Products replaced or repaired under this warranty will be returned via ground shipping within the United States or Canada - freight prepaid.
- SYNERGY is not responsible for costs associated with expedited shipping, either to SYNERGY or the return of the product to the customer.

All warranty repairs outside the United States and Canada must be directed to the dealer or distributor from which you purchased the product.

**INCIDENTAL OR CONSEQUENTIAL DAMAGE:** In no event will SYNERGY be liable for any incidental or consequential damages arising out of the use or inability to use of any SYNERGY product, even if a SYNERGY dealer has been advised of the possibility of such damages, or any other claim by any other party. Some states do not allow the

exclusion or limitation of consequential damages, so the above limitation and exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.

**FOR YOUR PROTECTION:** Please complete the warranty registration card within (10) ten days of the date of purchase so that we may contact you directly in the event a safety notification issued in accordance with the 1972 Consumer Product Safety Act.

**CUSTOMER SUPPORT:** Our dedicated and friendly staff is ready to help you with any warranty or product questions you may have. Please email us at [Support@SynergyAmps.com](mailto:Support@SynergyAmps.com)

Thank you again for choosing SYNERGY and we look forward to a long relationship!

