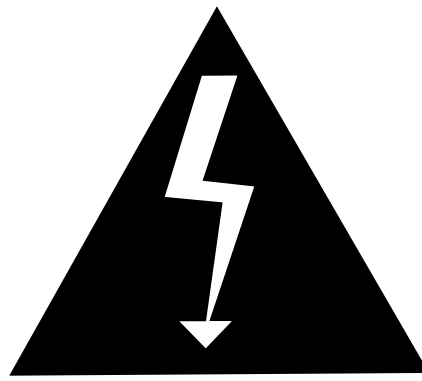


SYNERGY®

SYN-2

**DUAL MODULE
TUBE PREAMP**

INSTRUCTION MANUAL



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 warning.

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.

Congratulations on your purchase of the SYN-2 preamp. The SYN-2 is the culmination of many years refining and fine tuning our modular preamp concept. Please familiarize yourself with the many possibilities to get the best performance out of your preamp.

The SYN-2 can be used in three primary applications:

1) The SYN-2 can be used to add channels to an existing head or combo

- Your amp **MUST** have a series effects loop
- It will **NOT** work with certain loops. See details later in this manual.

2) Straight to front of house or monitor

- In a live setting you can use the cab simulated DI output to go straight to your board or active monitor.

3) Recording

- Use the DI output to connect to an external mic preamp and then directly to your software.
- The cabinet simulation can be bypassed if you wish to use your own IRs.

Quick connection guide:

Option 1) To use the SYN-2 as a standalone preamp to record directly into your computer or direct to a PA live, simply use the balanced XLR DI output to send the signal to the desired location.

Option 2) To use the SYN-2 in a “normal” live rig using guitar type speakers, connect the MAIN out to the input of your power amp/speaker combination or into a powered speaker specifically voiced for guitar. Alternately, you can connect the MAIN out into the effects return of most amps and use the head or combo as just a power amp and the SYN-2 becomes the preamp.

Option 3) This is the coolest thing the SYN-2 can do. With this setup, you can actually use the SYN-2 to add the module as another channel to your amp and footswitch between the channels in your amp and the SYN2.

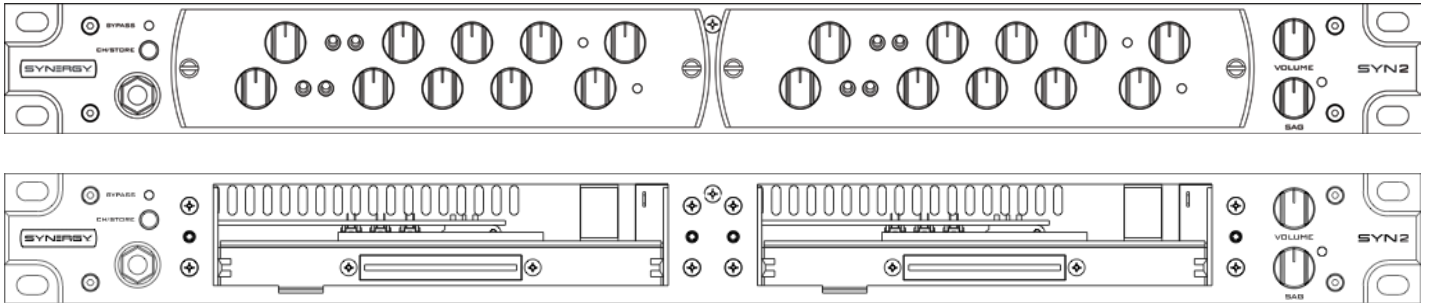
These different methods will be explained in detail later in this manual. Please read the entire manual to get a true understanding of all the possibilities.

SPECIFICATIONS: POWER CONSUMPTION: 40 WATTS 50/60Hz

FUSE: T500mA/250V @ 110-118VAC 50/60Hz - NORTH AMERICA
T250mA/250V @ 220-240VAC 50/60Hz - EUROPE

TUBES: ONE 12AX7

FRONT PANEL



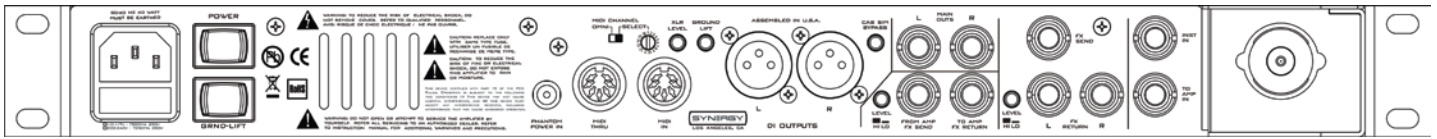
REPLACING MODULES: When inserting or removing modules, simply turn both thumbscrews to the left until they fall loose. Do not remove the screw completely. Remove the module by pulling out on the thumbscrews. Slide in a new module, and push in on the center knobs until flush with the front panel. Tighten the thumbscrews, by turning to the right until snug. The thumbscrews must be snug for proper module grounding. You don't need to "crank" them down but do not leave them loose.

It is **HIGHLY** recommended that you turn the SYN-2 OFF before swapping modules. If however you "hot swap" a module, you may find that at times the switching logic may not work correctly. To re-set this, simply turn the SYN-2 OFF and then back ON after one second.

1. **INPUT JACK** - Connects directly to your instrument
2. **CH./STORE** - Selects the desired channel on your module. This momentary push button will sequentially step through the module channels. Each time the button is pressed and released, the SYN-2 will step to the next channel. This is also used in MIDI programming - described later in the manual.
3. **SAG** - Under license from Steven Fryette Designs, the SAG knob mimics the voltage sag of a tube amplifier. This effect is subtle and is really a "feel" thing. It is recommended that you adjust the knob to level where the LED just comes on with heavy guitar pick attack.
4. **VOLUME** - Depending on how the SYN-2 is connected, this knob either controls the overall volume of the SYN-2 or the level of the main output.

IMPORTANT - When using the SYN-2 to add channels to your head or combo, the **VOLUME** control will not be active. In this scheme, the **VOLUME** on the SYN-2 will adjust the level of your **MAIN 1/4" OUTPUT ONLY**. If you use the **DI (XLR) OUT**, only the volume controls on the module will work.

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

4. AC power switch turns the SYN-2 on or off.
5. **GROUND LIFT SWITCH** - This switch is used to eliminate ground loops that can occur when different earth grounded pieces of audio equipment are interconnected. Simply set the switch for the least amount of hum. If you do not hear any difference, leave the switch in the left position.
6. **PHANTOM POWER IN** - Used to power a foot controller that is connected to the MIDI IN jack. Connecting an external power supply (or wall wart) to this input will automatically send the power back out to pins 6 & 7 of the MIDI IN jack. Use a 7 pin MIDI cable to send the power through the MIDI cable alleviating the need to remotely power your pedal.
7. **DI OUTPUTS** - Balanced XLR outputs used to send your SYN-2 tone straight to the mixing board or active cabinet
 - XLR LEVEL** - A level switch for the XLR outputs. Use the setting that best matches your mixer.
 - GROUND LIFT** - Lifts ground to prevent ground loops. Set for the lowest hum level.
 - CAB SIM BYPASS** - Removes the cabinet simulation circuitry to become a balanced, full range output. The cab sim is bypassed when the button is depressed (pushed in).
8. **MAIN OUTS** - Left and right full range outputs to connect to external devices such as power amps, FX, etc. Note: These are not speaker emulated outputs.
9. **FX SEND JACK**- This output connects to the input of your effects unit. Use a shielded cable.
10. **FX RETURN JACKS** - Connect the output(s) of your effects unit using shielded cables.
11. **EFFECTS LOOP LEVEL SWITCH** - Selects between line level and pedal level of the effects loop. Use the setting that sounds best and does not cause excessive noise or distortion/loss of volume.
12. **FROM AMP EFFECTS SEND** and **TO EFFECTS RETURN** jacks - Used when using the SYN-2 to add channels to an existing amp. This is explained later in the manual.
13. **MIDI IN** - Input from the SYNERGY 5F foot controller (sold separately), or any external MIDI switching system.
14. **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 (such as additional SYN-2 units)
15. **MIDI CHANNEL-OMNI/SELECT** – Used to set up communications with external controllers. See the MIDI section later in this manual for details.
16. **INST IN** - Same as the input on your front panel and usually used in a rack set up.

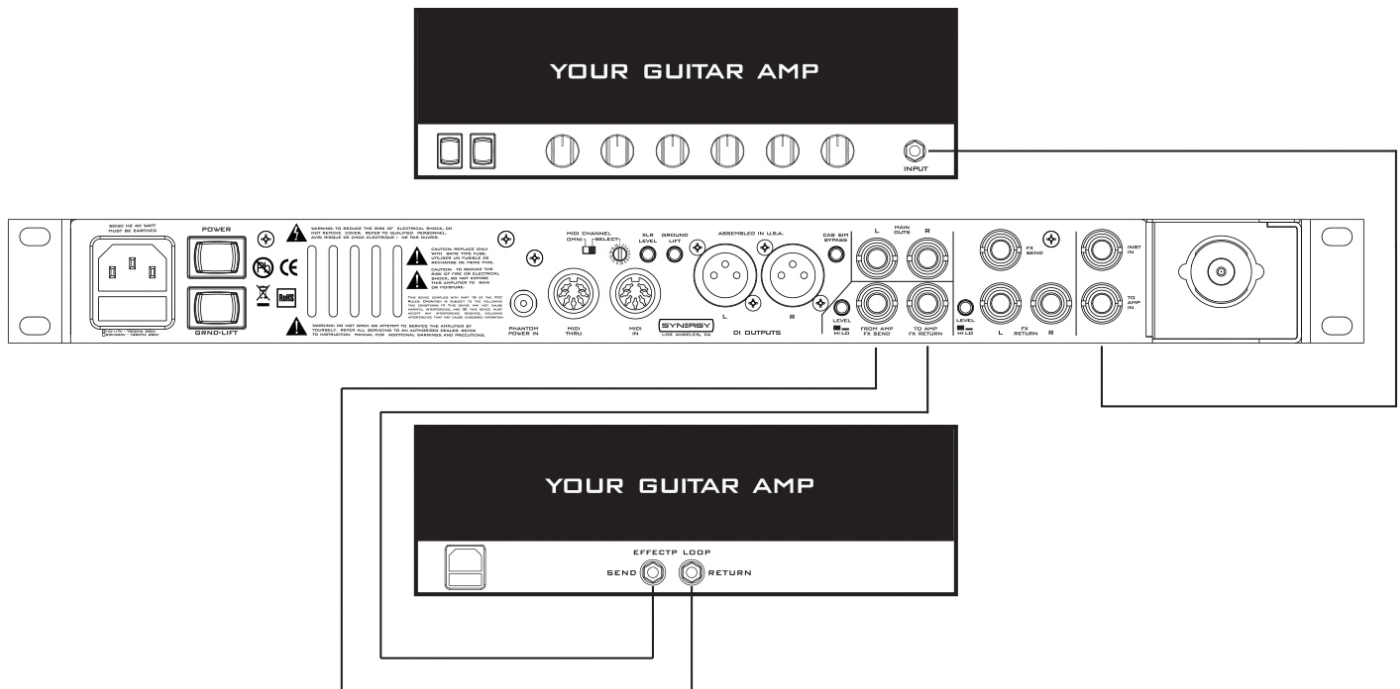
Note - When using the input on the front panel, the "INST IN" is disengaged.

CONNECTING SYN-2 TO YOUR HEAD OR COMBO

The SYN-2 can be used to ADD channels to your existing head or combo. You will need three high quality, shielded instrument cables in addition to your guitar cable.

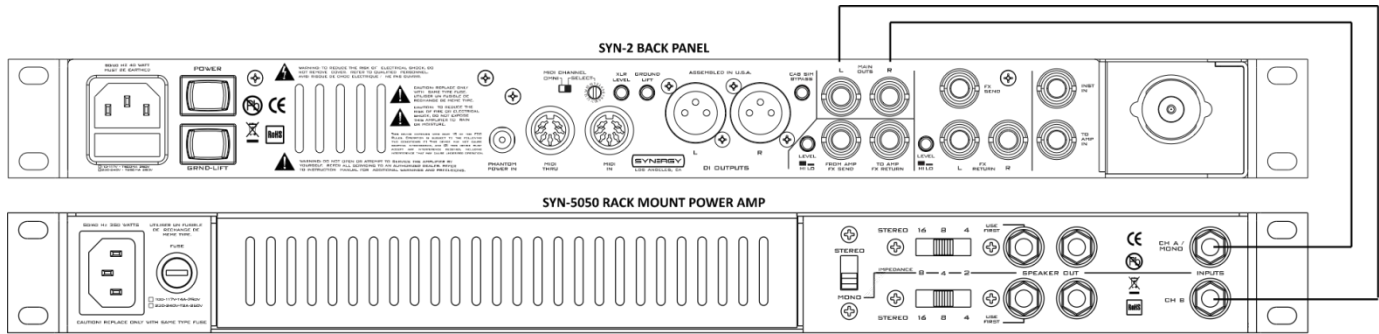
- 1) Connect your guitar to the front or rear INPUT of the SYN-2. These inputs are functionally the same except the front input overrides the rear.
- 2) Connect an instrument cable from "TO AMP IN" on the rear of the SYN-2 to the INPUT of your amplifier.
- 3) Connect an instrument cable from "FROM AMP FX SEND" to the FX LOOP SEND of your amplifier
- 4) Connect an instrument cable from "TO AMP FX RETURN" to the FX LOOP RETURN of your amplifier
- 5) The LEVEL switch between the "FROM AMP FX SEND" and "TO AMP FX RETURN" jacks is used to set the level of the SYN-2 to help match your effects loop. Because there can widely varying levels between different effects loops, a little bit of experimentation may be needed to find the optimum setting for this switch.

There are some special requirements and/or caveats when using the SYN to add channels to your amp. The loop on your amp **MUST** be a 100% series loop. The SYN2 will not work in a parallel loop. If in doubt, consult the manufacturer of your amp to determine this. One known issue is with the Mesa Dual and Triple Rectifier, Road King and Roadster amps that prevents the SYN2 from working properly in the loop. By design, the Boogie loops always have a small amount of dry signal mixed in with the loop which will wreak havoc with many effects and also the SYN2. There may be other amps that we are not aware of with loops that are not compatible. We will make this information available as we discover these issues.



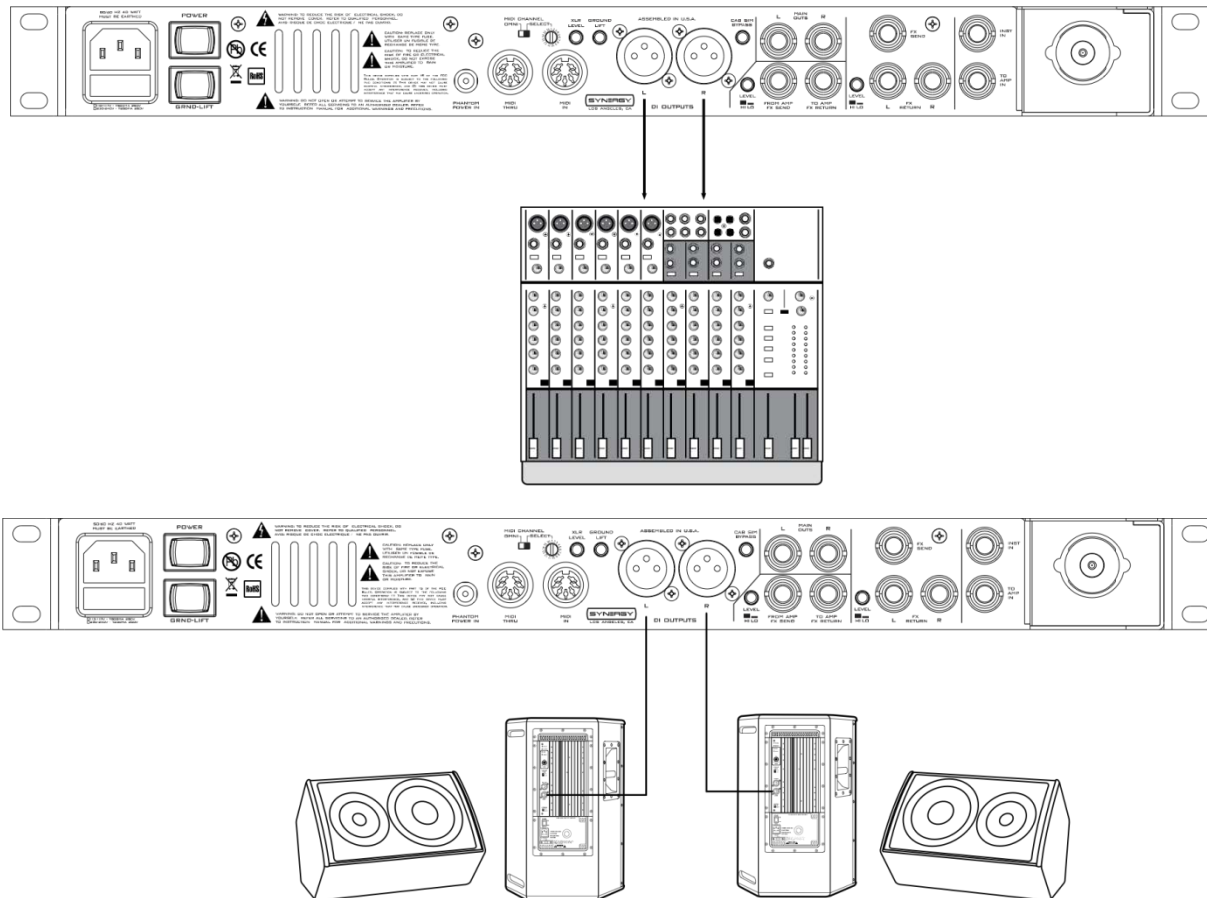
CONNECTING SYN-2 TO RACK MOUNT POWER AMP

- Use the MAIN L (left) and R (right) outputs to connect to rack mount power amps



CONNECTING SYN-2 TO ACTIVE MONITORS/MAIN PA

- Use the MAIN L (left) and R (right) DI outputs to connect to your mixer or active monitors. When using external cab simulation devices (think IR loaders), you can defeat the cabinet simulation circuitry using the BYPASS switch.



MIDI

The SYN2 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 preamp.

Connections

MIDI IN – This is where you connect your MIDI controller or Synergy 5 button pedal. 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.

PHANTOM POWER IN - Used to power a foot controller that is connected to the MIDI IN jack. Connecting an external power supply (or wall wart) to this input will automatically send the power back out to pins 6 & 7 of the MIDI IN jack. Use a 7 pin MIDI cable to send the power through the MIDI cable alleviating the need to remotely power your pedal.

MIDI THRU – If you have additional MIDI devices (such as additional SYN-2 units) 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 – The 16 position rotary miniature rotary switch selects the MIDI channel to communicate with your controller. Use a small screwdriver to set to the desired channel. The slide switch selects OMNI or SELECT modes. Set the slide switch to SELECT to activate the rotary MIDI CHANNEL switch. OMNI is an alternate mode that allows the SYN-2 to receive commands on all 16 channels simultaneously.

Programming

To program the SYN2 to respond to your MIDI controller, do the following:

1. Make sure your MIDI controller is connected to the SYN2's MIDI input jack
2. Select a preset on the MIDI controller
3. Using the channel select button on the SYN2, select the module channel (or bypass) you wish to have come on when the preset is selected using the SYN-2 front panel SELECT pushbutton.
4. Hold the channel select button until the bypass LED flashes. This should take about 3 seconds.

Repeat steps 2 through 4 above for each controller preset you wish to store. The next time you select one of the programmed presets, the SYN_2 will automatically switch to the desired channel.

Please note: If the bypass LED doesn't flash after holding the channel select button for a few seconds, the amp is likely not receiving MIDI commands and the setting will not be stored. 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 SYN-2.

Continuous Controllers

The SYN2 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
60	Bypass
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 all channels of the SYN-2 if a value of 64 or higher is received, and will unmute the amp if a value of 63 or lower is received.

Connecting Multiple SYN2s

Follow the steps below to combine 2 or more SYN2 units. In this connection scheme the first SYN2 in the signal chain is called the “Master” and the second SYN2 is the called the “Slave”.

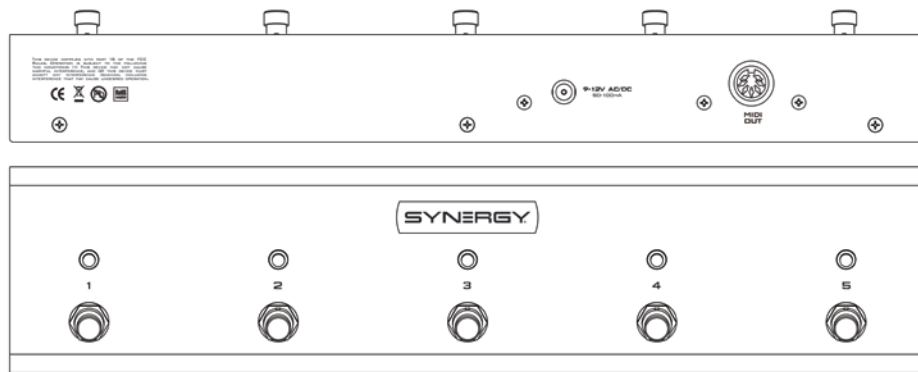
- Connect your instrument to the Input of the Master unit.
- Run a cable from the "TO AMP IN" of the Master unit to the "INST. IN" on the rear panel of the Slave unit.
- Connect the main output L/MONO of the Slave unit to the "FROM AMP FX SEND" of the Master unit.
- Use the MAIN OUT(s) or the DI output(s) of the MASTER unit to connect to your power amp / monitors.
- Program the Slave with the Master in Bypass Mode.

Note - When using the input on the front panel, the "INST IN" on the back panel is disengaged.

The same procedure is recommended for adding a third, fourth etc. unit to the system

For most systems, it’s recommended that you set your SYN2s to the same MIDI channel. You can follow the programming instructions above, repeating the steps for each SYN2. When you want to access the second SYN2, make sure that the first SYN2 is set to bypass.

USING THE SYNERGY 5F PEDAL



The pedal is essentially a 5 button MIDI pedal that is preset to send program change commands 1 through 5 on MIDI channel 1. Your SYN2 will come preprogrammed to respond to modules channels 1 through 4 on buttons 1 through 4. Button 5 will be assigned to BYPASS. You can change/assign any module channel to bypass to be on any buttons you wish by following the steps under PROGRAMMING above. The 5F 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 online at www.SynergyAmps.com 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

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

