

OWNER'S MANUAL

THE SONIC FRONTIERS SFP-1 & SFP-1 SIGNATURE PHONO STAGE

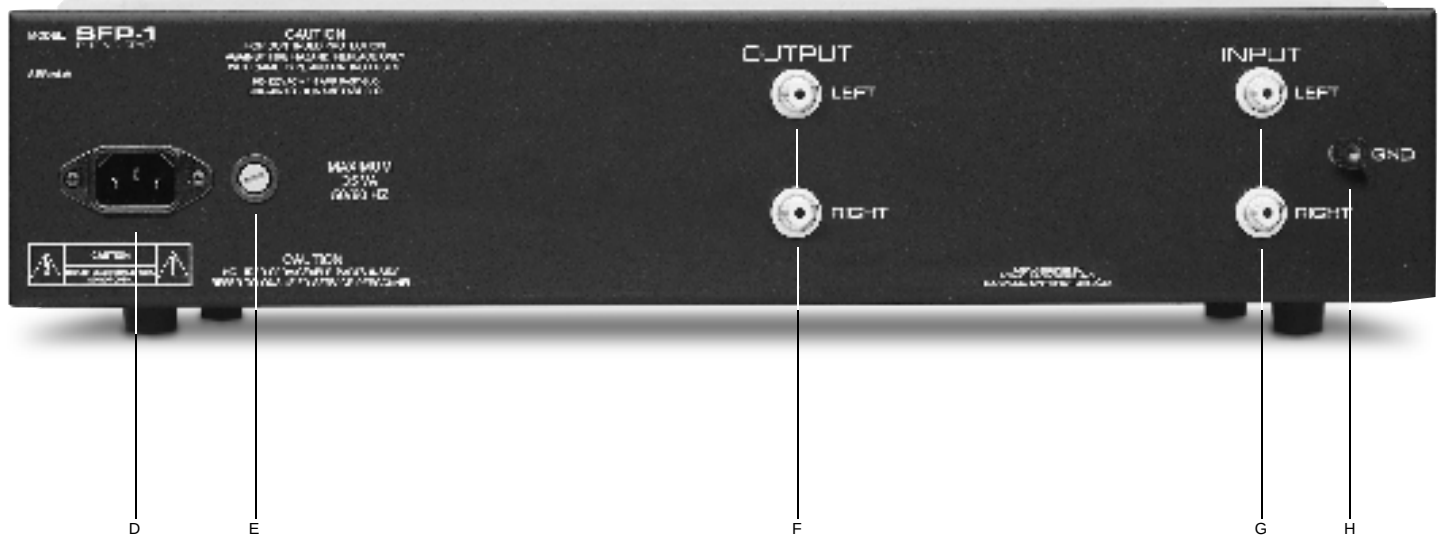




A - Mute / Operate Switch - In the mute position, this toggle switch cuts off the signal to the outputs (F) of the SFP-1 hence muting the unit; the LED (B) flashes as a reminder. In the operate mode, the outputs are connected and the SFP-1 operates normally.

B - Power Indicator LED - This LED lights when the SFP-1 is on and receiving power from the AC source. It will flash at one second intervals during warmup delay and muting.

C - Power Switch - This toggle switch, when in the ON position, allows the SFP-1 to receive power, rendering the SFP-1 operational as indicated by the Power Indicator LED (B). When the switch is in the OFF position the SFP-1 is not receiving power and is not operational.



D - Detachable Power Cord Socket - Plug the Detachable Power Cord into this socket (see Figure 1). The SFP-1 is factory set for the correct operating voltage for the area in which it is sold (see shipping box for voltage setting). If a different operating voltage is required, please contact an authorized Sonic Frontiers dealer, distributor or the factory directly.

E - AC Line Fuse - This is the AC fuse socket. It may be accessed with a small slot screwdriver by turning a 1/2 turn counterclockwise to unlock a spring that ejects the fuse holder out. The unit is factory installed with a "fast-blo" 1.5 Amp 250V (0.25" x 1.25") or 0.75 Amp 250V (0.25" x 1.25") for European and Asian versions.

F - Left and Right Channel RCA Single-Ended Audio Output Connectors - The SFP-1's RCA single-ended audio outputs are to be connected to the RCA single-ended audio inputs of a line level preamplifier, control amplifier, integrated amplifier or receiver. Left channel output of the SFP-1 connects to the left channel input of control unit and right channel output of the SFP-1 to the right channel input of control unit.

G - Left and Right Channel RCA Single-Ended Phono Stage Input Connectors - These inputs accept a single-ended input connection from a turntable's output connectors. The turntable equipped with a Moving Coil or Moving Magnet Cartridge (see operation section for proper setup) connects to the SFP-1. Left channel output to the left channel input of the SFP-1 and right channel output to the right channel input of the SFP-1.

H - Ground Post - All turntable ground wires should be connected to the SFP-1 ground post to prevent any "hum" from interfering with the music signal.

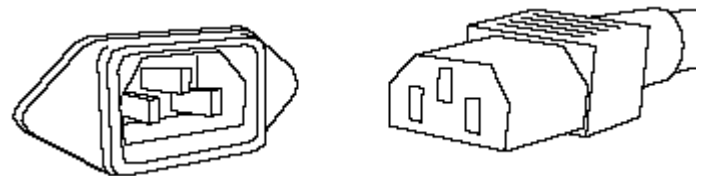


Figure 1 - Align socket pins to corresponding holes and push together firmly.

INSERTION OF THE TUBES AND GAIN SETTING

The SFP-1 comes with two Sovtek 6922 (6DJ8-type) and two 12AT7A tubes (the SFP-1 Signature comes with two Mullard 6DJ8 / 6922 and two Gold Aero12AT7A Gold Grade), individually boxed, marked and bagged along with a cotton glove, screwdriver, and screws for fastening the SFP-1 cover. The following tube types will work under the same technical parameters as the 6922 and require no circuitry modification to function:

• 7308 / E188CC • 6DJ8 / ECC88 • E88CC • 12AT7A / ECC81

Please read and follow these instructions carefully for initial tube insertion or tube replacement. Great care was taken in the testing, selection and matching of the supplied tubes in order to ensure proper operation of the unit. Casual replacement of tubes is NOT recommended.

1. Be sure that the AC DETACHABLE POWER CORD IS DISCONNECTED from the SFP-1 for 5 minutes prior to removing the chassis cover in order to allow internal voltages to drain.

2. Using the Phillips screwdriver, remove the cover of the SFP-1. For convenience, only two of the screws are fastened.

3. When handling the tubes, it is recommended that the cotton gloves provided be worn to prevent skin oils from depositing on the glass surface and possibly causing the tube to become prematurely "gassy", thereby shortening the tube's useful operating life.

4. Inspect the tubes for code markings. They will be coded individually, each with one of the following codes: LV1, LV2, V1 and V2.

5. Inspect the tube sockets in the SFP-1 Phono Stage for the codes matching the codes on the tubes. The coding is printed on the PCB circuit board beside the tube sockets. See Figure 2 for further clarification.

6. Take the tube marked LV1 and inspect the pins, noting the larger space between two of the pins. This space will align with the same larger space between two of the pin holes on the socket. Insert the LV1 tube into the LV1 tube socket, making sure all pins and pin holes are aligned (see Figure 3). Do not force the tube into the socket. "Rock" the tube gently while pushing slowly until the tube is firmly seated.

Repeat this step for the remaining tubes; LV2 tube to the LV2 tube socket, V1 tube to the V1 tube socket and V2 tube to the V2 tube socket.

7. Two slide switches for gain setting left and right channel are located beside the LV1 and V2 tube sockets. These switches are to be moved inward to the MM position if a Moving Magnet or high output cartridge of 1.0mv or greater is in use. If a Moving Coil or low to medium output cartridge of 0.2mv to 1.0mv is used, slide the switches outward to the MC position (see Figure 2).

NOTE: If insufficient gain is realized from the SFP-1 with a high output cartridge when in the Moving Magnet mode, an extra 20 dB of gain may be utilized by the Moving Coil mode. The SFP-1 has sufficient overload reserve to handle high signal input levels if this mode is chosen.

Also refer to the Operation section of this manual for turntable set up if a Moving Coil mode is chosen.

8. Replace the cover and fasten it with the screws provided. The SFP-1 Phono Stage is now ready for operation.

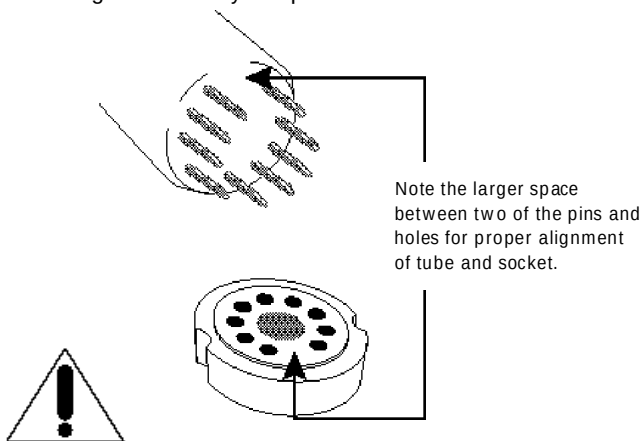
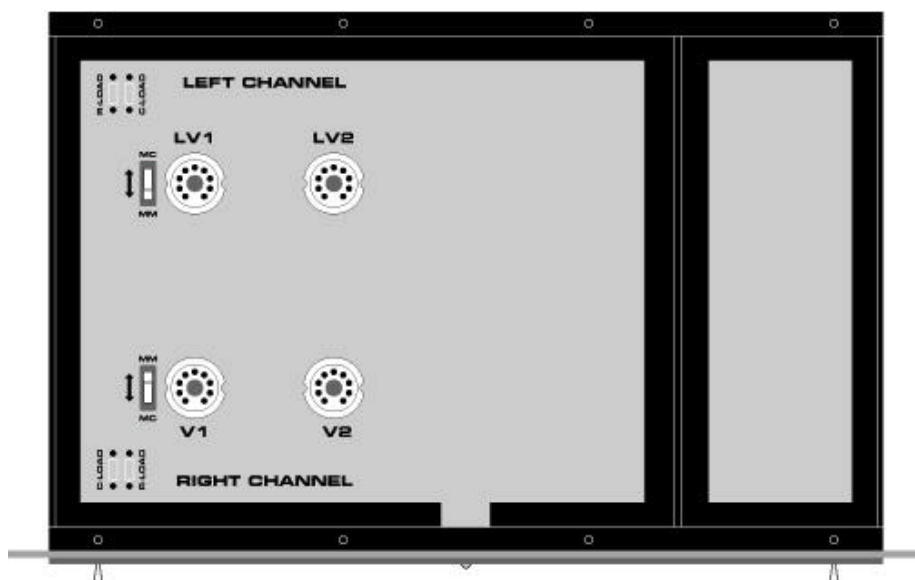


Figure 3 - Tube pin alignment with the socket.
WARNING - DISCONNECT the AC Detachable Power Cord from the SFP-1 and wait 5 minutes before removing the chassis cover.



Figure 2 - Overview of the SFP-1 Phono Stage showing tube placement, MM / MC slide switches, R-Load and C-Load locations.

WARNING - DISCONNECT the AC Detachable Power Cord from the SFP-1 and wait 5 minutes before removing the chassis cover.



OPERATION OF THE SFP-1 PHONO STAGE

Before plugging in the SFP-1, check to see that the unit is configured for the correct AC line voltage for country of use. The operating AC line voltage is indicated on the side of the shipping box. If the SFP-1 Phono Stage is set incorrectly for the country in which it is to be operated, contact the dealer or distributor in your area. If the unit is configured properly continue with operation.

Connect the detachable power cord to the SFP-1 chassis (see Figure 1) and plug your SFP-1 into the AC power source.

If the Moving Coil Mode is chosen for use, the SFP-1 Phono Stage inverts the signal's output polarity, putting the signal out of phase. To correct this and bring the signal back to absolute phase, switch the "+" and "-" leads at your cartridge pins. This is important for correct operation of the phono playback system. Typically, the red and green leads are reversed (right channel) and the blue and white (left channel) are also reversed.

Connect the turntable's left and right RCA outputs to the corresponding left and right RCA Inputs (G) on the SFP-1 using a suitable length of interconnect. Also connect the ground lead from the turntable to the Ground Post (H) on the SFP-1 (see Figure 4).

Using your favorite interconnect, connect the left and right channel RCA (Single-Ended) Outputs (F) of the SFP-1 to the corresponding left and right channel line level audio inputs of the system's preamplifier, control amplifier, integrated amplifier or receiver (see Figure 4). We recommend no more than 3' (1m) of interconnect for best results.

The SFP-1 Phono Stage is now ready for operation. Power the unit by placing the Power Switch (E) in the ON position (ensure the Mute / Operate Switch (A) is in the Operate position). As soon as the SFP-1 is plugged in and turned ON, the front panel Power Indicator LED (D) will flash on and off for approximately 45 seconds. During this time, the signal outputs are muted while the tubes are warming up and stabilizing. As soon as the Power Indicator LED (D) stops flashing and lights green, the SFP-1 is ready for use. Cue the LP you wish to play, and enjoy your new SFP-1.

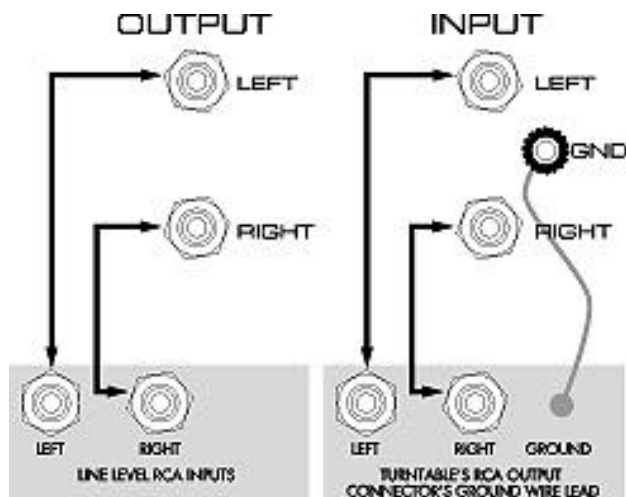


Figure 4 - Connections to the RCA Outputs and Inputs of the SFP-1 Phono Stage.

TROUBLESHOOTING

If at any time the SFP-1 Phono Stage fails to work properly, consult this checklist:

1. Check that the AC Detachable Power Cord is plugged into the SFP-1 Detachable Power Cord Socket (F) and is connected to a live source of AC power. For instance, if using a power bar, check that the bar is turned on.
 2. Ensure that the turntable is properly connected to the SFP-1 Inputs (G) and that the SFP-1 Outputs (F) are properly connected to the line level inputs of the system's preamplifier, control amplifier, integrated amplifier or receiver. A secure contact must be made.
 3. DISCONNECT THE AC POWER CORD from the SFP-1; check that:
 - A "fast-blo" fuse, with a rating of 1.5 Amp / 250 V (.075 Amp / 250 V for European and Asian versions), is installed in the AC power socket (E).
 - The AC power fuse is intact and has not blown. If the fuse has blown the thin metal conductor will have melted and the glass may appear "smoked". If the fuse has blown, replace with a fuse of the same rating (1.5 Amp / 250V fast-blo for 100 to 120 volt countries and 0.75 Amps / 250V fast-blo for 200 to 240 volt countries).
- NOTE: Under no circumstances should you replace the AC power fuse with one of a higher current rating! Doing so may cause further damage to the SFP-1 and will also void the warranty. In addition, your continued protection from risk of fire or shock would be seriously compromised.
4. DISCONNECT THE AC POWER CORD, remove cover and ensure the tubes are plugged firmly into their sockets as described in "INSERTION OF THE TUBES".
 5. Be sure the rest of the system is functioning properly (i.e. turntable, power amplifiers, cables and connections, etc.).
 6. Review Operation section of this manual. Check that the front panel Power Indicator LED (D) is lighted (glowing light green). If all of the above troubleshooting steps have been followed and the light is not lighted (dark green), contact your dealer or distributor for assistance.

CARTRIDGE LOADING OPTIONS - RESISTANCE

In either "MM" or "MC" cartridge operating modes, the input load resistance that the cartridge sees is factory set at 49K9 (or 49.9K) ohms. This may be easily altered by your dealer (or a competent technician) by soldering a new resistance value to the solder terminals labeled "R-Load" (one per channel). For your convenience, your SFP-1 comes packed with 4 different commonly used resistor values (1K, 100R, 30R and 10R) to allow you to adjust the nominal 49K9 load to the following values: a) 980 ohms (using the 1K resistors); b) 100 ohms (using the 100R resistors); c) 30 ohms (using the 30R resistors); and d) 10 ohms (using the 10R resistors). See Figure 3 for load resistor location.

CARTRIDGE LOADING OPTIONS - CAPACITANCE

With some phono cartridges (both moving magnet and moving coil), the addition of some capacitance loading to the cartridge may prove beneficial in "taming" any high frequency resonance or response peaks inherent in the design of the cartridge. Typical capacitance values for moving magnet cartridges are in the range of 100 to 250pf. We suggest that you discuss the possible loading requirements of your cartridge with your dealer, or with the cartridge manufacturer. The additional capacitance may be soldered to the "C-Load" solder terminals (of both channels). Loading capacitors can be obtained from The Parts Connection, a division of Sonic Frontiers. See Figure 3 for load capacitor location.

SFP-1 PLACEMENT FOR PROPER VENTILATION

Allow at least 6" (15 cm) of clear space above the SFP-1 chassis for proper ventilation, making sure the air vent slots in the chassis cover remain unobstructed.

SAFETY INSTRUCTIONS

1. Ventilation - Although your SFP-1 Phono Stage generates only nominal heat in use, be sure that the ventilation slots in the top cover have at least 6" of unobstructed air space above them.
2. Water and Moisture - This product should not be used near water. To prevent fire or shock hazard, do not expose this product to rain or moisture.
3. Heat - This product should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances which produce heat.
4. Power Sources - This product should be connected to an AC power source of the proper rated voltage. The original shipping containers will stipulate the AC voltage this unit can operate with correctly.
5. Cleaning - A regular dusting with a soft, non-abrasive cloth will generally keep the finish of the faceplate and chassis looking like new. At no time should you allow any liquid to come in contact with the SFP-1 Phono Stage; it may run into the electronic circuitry and cause damage which will not be covered under your warranty.
6. Servicing - Refer servicing to an authorized service technician.
7. Non-Use Periods - The power cord of this product should be unplugged from the outlet when left unused for an extended period of time.
8. Do not remove the SFP-1 chassis cover while the unit is "on", or connected to an AC power source. Cover screws could fall through the ventilation slots and cause electrical damage to the SFP-1.

PACKING MATERIALS

We recommend that you retain all of the packing material and shipping boxes for your SFP-1 Phono Stage. They are custom designed to prevent shipping damage from occurring. Sonic Frontiers, Inc. will accept no responsibility for any damage occurring to an SFP-1 Phono Stage that is shipped in packing material other than the original Sonic Frontiers packing material.

DISCLAIMER OF LIABILITY

Under no circumstances does Sonic Frontiers, Inc. assume liability or responsibility for injury or damages sustained in the use or operation of this equipment or for damages to any other equipment connected to it.

Sonic Frontiers, Inc. reserves the right to make design changes or improvements without the obligation to revise prior versions. All specifications are subject to change without notice.

LIMITED FIVE YEAR WARRANTY

Sonic Frontiers, Inc. warrants to the purchaser that each SFP-1 Phono Stage is free of manufacturing defects for a period of five (5) years from the date of purchase. This five (5) year limited non-transferable warranty excludes all vacuum tubes, which we warrant for a period of twelve (12) months. To receive this warranty, the original purchaser must complete and mail to Sonic Frontiers, within thirty (30) days from the date of purchase, the enclosed Warranty Registration Card. Sonic Frontiers, Inc. will then validate the warranty to the original purchaser. This warranty is subject to the following conditions and limitations:

1. Warranty applies only to the original purchaser from an authorized Sonic Frontiers reseller.
2. This warranty is void and inapplicable if the product has been handled other than in accordance with the instructions in this Owner's Manual, abused or misused, damaged by accident or neglect or in being transported, or the defect is due to the product being tampered with, modified or repaired by anyone other than Sonic Frontiers, Inc. or an authorized Sonic Frontiers repair depot.
3. Warranty does not cover normal maintenance.
4. Sonic Frontiers, Inc. shall not be responsible in any way for consequential or indirect damages or liabilities resulting from the use and operation of the product covered herein or resulting from any breach of this warranty or any implied warranty relating to said product.

During this period, Sonic Frontiers, Inc. will repair or replace any defective components free of charge. A Return Authorization Number (RA Number) is required before any product is returned to our factory for any reason. This number must be visible on the exterior of the shipping container(s) for Sonic Frontiers to accept the return.

Units shipped to us without a Return Authorization Number or without a visible RA Number on the exterior of the shipping container(s) will be returned to the sender, freight collect.

Units to be repaired by Sonic Frontiers, Inc. must be sent shipping and insurance prepaid by the original purchaser in the original packing material. A returned product should be accompanied by a written description of the defect. Repaired units will be returned by Sonic Frontiers, Inc. shipping and insurance prepaid.

All other warranties or conditions either written or implied are void.

Note: In foreign markets (anywhere outside of Canada and the USA), the warranty is supplied by the authorized International Distributor. Exact terms and conditions may vary.

SFP-1 & SFP-1 SIGNATURE TECHNICAL SPECIFICATIONS

Frequency Response 20 Hz to 20 kHz $\pm$ 0.3 dB (RIAA accuracy)

THD & Noise < 0.05% @ 1.0V output

Gain 37 dB Moving Magnet
(selected internally) 57 dB Moving Coil

Output Impedance 1K ohms @ 1 kHz

Input Impedance 47K ohms (adjusted internally)

Channel Separation > 40 dB (20 Hz to 20 kHz)

Power Requirements 35 VA 50 / 60 Hz (maximum)

Tube Complement 2 · Sovtek 6922

2 · 12AT7A

Signature Version 2 · Mullard 6DJ8 / 6922

2 · Gold Aero 12AT7A Gold Grade

Dimensions 19" Wide x 11" Deep x 4" High
(48 cm x 28 cm x 10 cm)

Weight 22 lbs (10 kg) · unpacked

Warranty 5 years parts and labor
1 year on the tubes



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

We at Sonic Frontiers are sure that you will derive many years of listening pleasure with your new SFP-1 or SFP-1 Signature Phono Stage. This Owner's Manual contains important information regarding the operation and care of the SFP-1. Be sure to read this manual carefully and follow these instructions in order to keep it looking, operating and sounding its best.



BREAKING THE SOUND BARRIER

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Sonic Frontiers can be reached from 9:00 a.m. to 6:00 p.m., Eastern Standard Time (E.S.T.), or 24 hours a day by facsimile.