



SF220-20th Audio preamplifier



IMPORTANT SAFETY INSTRUCTIONS

CAUTION: To reduce the risk of electric shock, do not remove the cover. There are no user-serviceable parts inside; it is recommended that only qualified personnel service this component.



1. **OWNER'S MANUAL:** Before powering up the equipment, read all safety and operating instructions and follow them as instructed. Retain the safety and operating instructions for future reference.

2. **ATTACHMENTS:** Use only those attachments recommended by the unit manufacturer, as others may cause hazards.

3. **ACCESSORIES:** Do not place the unit on an unstable cart, stand, tripod, bracket, or table. The unit may fall, causing injury to a person or damage to the unit. Mount the unit according to the manufacturer's instructions with the suggested mounting accessory.

4. **WALL OR CEILING MOUNTING:** Mount the unit to a wall or ceiling only in the manner recommended by the manufacturer.

5. **WATER AND MOISTURE:** Do not use the unit near water (for example, near a swimming pool, bath tub, wash bowl, kitchen sink, or laundry tub) or in a damp environment (like a basement or outside in the rain).

6. **OBJECT AND LIQUID ENTRY:** Do not push objects of any kind into the unit through openings as they could touch dangerous voltage points and short-out parts, possibly resulting in a fire or electric shock. Avoid spilling liquid of any kind on the unit. If water or any metal object (such as a paper clip, coin, or staple) accidentally falls inside the unit, disconnect it from the AC power source immediately and contact Margules Audio for further instructions.

7. **HEAT:** Position the unit away from heat sources such as radiators, heat registers, stoves, or other units (including amplifiers) that produce heat.

8. **VENTILATION:** Slots and openings in the cabinet create ventilation to protect the component from overheating. Allow at least 6 inches (16cm) of clearance above the unit and an opening behind the unit for airflow. Do not place the unit on a bed, sofa, rug, built-in bookcase, or rack without adequate ventilation.

9. GROUNDING OR POLARIZATION: As a safety feature, the unit may be equipped with a polarized alternating current line plug in which one blade is wider than the other. This plug will fit into the power outlet only one way. If you cannot insert the plug fully into the outlet, try reversing the plug. If the plug still will not fit, contact a licensed electrician to update your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

10. POWER SOURCES: Operate the unit only from the power source indicated on the marking label. If you are unsure of the type of power supplied to your home, consult your unit dealer or local power company.

11. POWER CORD PROTECTION: Arrange power supply cords so that they do not suffer from foot traffic or pinching by items placed on or against them. Pay close attention to cords where plug enter the AC outlet and where they exit from the unit.

12. LIGHTNING: For added protection during a lightning storm or when the component is idle for long periods of time, unplug the unit from the wall outlet and disconnect the antenna or cable system. This will help protect the unit from lightning and power line surge damage.

13. POWER LINES: Do not locate an outside antenna system in the vicinity of overhead power lines or other electric light or power circuits. When installing an outside

antenna system, take extreme care to avoid touching the power lines or circuits; contact with them could be fatal.

14. OVERLOADING: Do not overload wall outlets, extension cords, or integral convenience receptacles as this increases the risk of fire or electric shock

15. REPLACEMENT PARTS: When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or those having the same characteristics as the original parts. Unauthorized substitutions may result in fire, electric shock or other hazards.

16. SAFETY CHECK: Upon completion of any service or repairs to the unit, ask the service technician to perform safety checks to ensure the unit is in proper operating condition.

17. IMPORTANT SAFETY NOTE:

- Before connecting a new product such as the SF220 to your audio or home theater system, turn off all other equipment (preferably unplugging them from the AC power source). Many audio components feature automatic turn-on circuits that may activate during an installation, potentially causing damage to electronic components and/or speakers. This type of damage is not

covered by product warranties, and Margules Audio specifically disclaims responsibility for any such damage.

- **Power Cord:** The removable power cord provided with your player was specifically designed for use with this product, but other AC cords may be used. Consult your dealer for advice on AC power cords and high quality wire in your system.

- **AC Fuse:** The fuse is located inside the chassis and is not user serviceable. If the unit does not power up, contact an authorized service representative



- **Wiring:** Cables running inside walls should have the appropriate markings to indicate compliance and listing by the UL, CSA or other standards required by the UL, CSA, NEC or your local building code. Questions about cables inside of walls should be referred to a qualified custom installer, a licensed electrician, or low-voltage contractor.

18. **RECORDING COPYRIGHT:** Recording of copyrighted material for other than personal use is illegal without permission of the copyright holder.

19. **NOTE TO CATV SYSTEM INSTALLER:** This reminder is provided to call the CATV system installer's attention to article 820-40 of the NEC, ANSI/NFPA 70,

which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

20. FCC INFORMATION FOR USER:

- **CAUTION:** Any changes or modifications not expressly approved by Margules Audio could void the user's authority to operate the equipment.



- **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 and can radiate radio frequency energy, and if not installed and used in accordance with the instructions it 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:

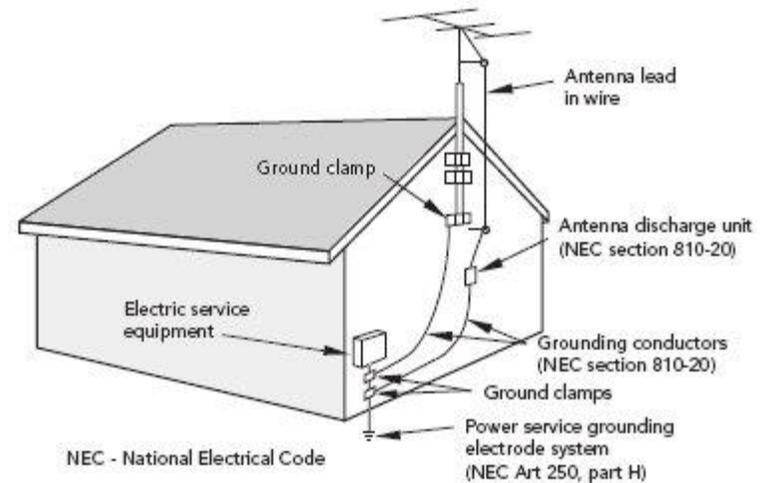
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from where the receiver is connected.

21. OUTDOOR ANTENNA INSTALLATION/SAFE ANTENNA AND CABLE CONNECTION:

- If an outside antenna or cable system is connected to the equipment, be sure the antenna or cable system is grounded in order to provide protection against built-up static charges and voltage surges. Article 810 of the National Electrical Code, ANSI/NFPA 70 (in Canada, Part 1 of the Canadian Electrical Code) provides information regarding proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes and requirements for the grounding electrode.

- Outside antenna system should be located well away from power lines, electric light or power circuits and where it will never come into contact with these power sources if it should happen to fall. When installing an outside antenna, extreme care should be taken to avoid touching power lines, circuits or other power sources as

this could be fatal. Because of the hazards involved, antenna installation should be left to a professional.



INTRODUCTION

Congratulations!

You have purchased a legendary audio product that brings you both the superior sound of vacuum tubes and state of the art technology; learned over the past 20+ years of product development. The SF220 will bring you long hours of listening enjoyment. A truly *TANGIBLE MUSICAL EXPERIENCE*.

Vacuum tube preamplifier SF220

The Margules SF220 series combines the superior sound of vacuum tubes with innovative circuitry that pushes design boundaries. The result is exceptionally good sound and unusual versatility.

Low impedance

The SF220's output stage is a very-low-impedance design that can drive virtually any cable or power amplifier without audible interaction or loss of sound quality. The SF220's wide frequency response is maintained even with long cable runs, so there is no softening or loss of detail.

The SF220's advanced design is complemented by the use of premium components. The PC board is silver-plated for maximum conductivity.

The SF220 is clean and effortless-sounding that it brings out the best in any power amplifier, even solid-state models that sound constricted or edgy with other preamplifiers.

Shunt Regulated Power Supply

The power supply is located in a separate chamber within the chassis of the preamplifier to avoid noise induction.

On board the SF220 there is SHUNT power supply for its high voltage circuits. Shunt technology provides a dramatic improvement in Q damping, the key factor in regulating voltage for those stages. Good regulation reduces the loss of signal integrity that occurs when the signal itself shifts the amplifier's operating point. Damping is critical to overall performance including smoother transient response and overall staging. Further improvements in quickness, dynamics and the overall life-like listening experience result.

Our new Power Supply is virtually indestructible due to specially designed regulation technology that protects the amp from major tube failures.

The filament supply is DC (not AC) for minimum hum. It is fully regulated as well.

Active filament damping

To minimize the microphonics effect produced by the tubes, the SF220 has a circuit that actively damps the filament.



Remote control

The SF220 has a microprocessor controlled remote control that with RS232 connection can be controlled by any automation system. This connection is an optional feature.

All the functions of the SF220 on the RS232 port are discreet, including the ON and OFF.

The supplied IR remote control has discrete functions except the ON/OFF, which is toggle.

Connections

IMPORTANT: The AC Power supply should be the last connection made.

The SF220 is a preamplifier with unbalanced inputs and outputs. All its inputs have the same impedance and gain, and any line level signal (.6 to 5 Volts) can be connected into as required (4). For the interconnections between your audio inputs, the preamplifier and the amplifier see the figure 2.

The SF220 has a direct input. This connection bypasses the volume control, so the SF220 can be controlled by an external processor or preamplifier. The SF220 along with a 5 channel system then integrates a High End two channel preamplifier with a surround system (3).

The two outputs of the SF220 are in parallel so any set can be used. For example, they can be used by the main amplifier and the subwoofer (1).

The direct output is not “pre-amplified”; it does not go through the SF220. The output is set by the input selection made in the preamplifier. Therefore its volume is not controlled, if a low impedance device is connected into it.

Be advised, the level and sound characteristics of the SF220 can change if a low input impedance device is connected to it.

The AC outlet is a high current output (600 Watts) and is energized when the preamplifier is ON. This outlet is designed so the remote control can turn the unit ON and OFF. In addition, a line noises suppressor (like the Magenta QR1 or QR2) or any device that wants to be switched ON and OFF with the remote control, can utilize this function. This is ideal for integrated systems (6). If you have a line noise suppressor and you want to do this configuration, go to figure 3.

When the SF220 is connected to AC supply the filaments will light on and will remain lighted until is disconnected.

This is to extend the tube life expectancy avoiding applying the high voltage to the tube while the cathode is cold.

Having the filaments on is the standby mode.

Controls

The SF220 is designed to be easy to navigate; all the main functions can be activated by the remote control or the buttons and knob in the unit.

All the main discreet functionality is accessible from the remote control unit.

On the front panel the SF220 has a big volume knob and the IR sensor (8). On the rear panel there are two

buttons; one is a toggle ON/OFF switch and the other is a sequential input selector (5).

Connecting the SF220 to an automation system

In the rear part there is a serial RS232 connection port with 2 way communication. This feature is for integrating the SF220 to an automation system.

If you want to control it by itself it, can be connected to a web server (not included).

The RS232 Code are:

Selection: !1ENT01 !1ENT02 !1ENT03 !1ENT04

Direct input: !1ENT05

Mute: !1ENT06

Volume change

UP !1VOL99

Down ! 1VOL55

Power OFF ! 1PWR0

Power ON !1PWR1

Toggle ! 1POW2

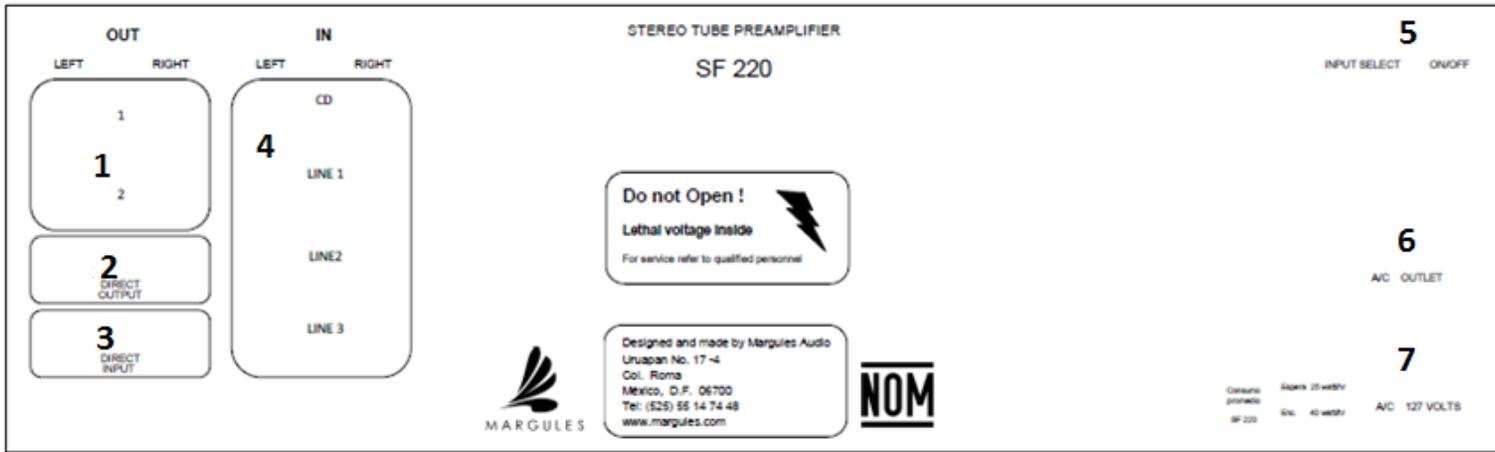


Figure 1. Front and back of the SF220

WARNING

- **Electrical hazard! Misuse or failure to follow instructions properly may result in personal injury or death!**

CAUTION

- **No risk or personal injury; however, misuse or failure to follow instructions may result in damage to equipment.**

NOTE

- **No risk or personal injury or equipment damage; however, misuse or failure to follow instructions may prevent proper performance of the equipment.**

Characteristics:

Frequency response: 5-400 khz

Total harmonic distortion: <0.014% max

Maximum output level: 30 V

Signal to noise ration: >80db

Gain: 6 dB

Raise time: 6 micro sec.

Fall time: 6 micro sec.

Power consumption (max): 55 w

Weight: 14kg

Dimensions (height, width, depth):

13.6 cm x 44cm x 3 cm

LIMITED WARRANTY

What is covered and what is Not Covered

Except as specified below, this warranty covers parts and labor to correct all defects in materials and workmanship. The following are not covered by the warranty:

1. Damage, deterioration, malfunction or failure to meet performance specifications resulting from:
 - a. Accident, acts of nature, misuse, abuse, neglect or unauthorized product modifications
 - b. Improper installation, removal or maintenance, or failure to follow instructions supplied with the product.
 - c. Repair or attempted repair by anyone not authorized by Margules Audio to repair the product.
 - d. Any shipment of the product (claims must be presented to the carrier).
 - e. Any cause other than a product defect.
2. Cleaning, initial set-up, check-ups with no defects found, or charges incurred for installation, removal or reinstallation of the product.

3. Any product, on which the serial number has been defaced, modified or removed.

4. Accessories, including but not limited to, batteries, cables, mounting hardware and brackets, cleaning accessories, antenna and detachable power cords.

5. Warranty is void if purchase was made from anyone other than an authorized Margules Audio dealer.

Who May Enforce the Warranty?

This warranty extends to products purchased directly from Margules Audio or an authorized Margules Audio dealer. Purchasers should inquire of the dealer regarding the nature and extent of the dealer's warranty, if any.

What Will We Pay For?

We will pay for all labor and material expenses for items covered by the warranty. Payment of shipping charges is discussed in the next section of this warranty

How You Can Get Service?

In the event that the owner needs to return the unit to Margules Audio for service or repair of a possible defect, he must do the following:

Contact Margules Audio at (525) 514 7448 in Mexico or at 707-5811830 in USA and ask for technical support.

- Or visit Margules Audio at the address in the end of this manual with your product. If you want to send it the cost is on your account.

Limitation of Implied Warranties

All implied warranties, including warranties of merchantability and fitness for particular purchase, are limited in duration to the length of this warranty.

Exclusion of Damages

Margules Audio's liability for any defective product is limited to repair or replacement of the product at Margules Audio's option. Margules Audio shall not be liable for damage to other products caused by any defects in Margules Audio products, damages based upon inconvenience or loss of use of the product, or any other damages, whether incidental, consequential, or otherwise.

How State Law Relates to the Warranty

Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.



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