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Simran AR-2000

Simran AR-2000 Voltage Regulator Stabilizer and Converter User Manual

Model: AR-2000 | 2000 Watt

1. INTRODUCTION

This manual provides essential instructions for the safe and efficient operation of your Simran AR-2000 Automatic Voltage Regulator, Stabilizer, and Step Up/Down Voltage Converter Transformer. Please read this manual thoroughly before use and retain it for future reference.

The Simran AR-2000 is designed to convert voltage between 110/120V and 220/240V, and to stabilize fluctuating input voltages, ensuring a consistent output for your connected devices. It has a maximum capacity of 2000 Watts, including power surges.

2. IMPORTANT SAFETY INSTRUCTIONS

- Always ensure the unit is placed on a stable, flat surface with adequate ventilation.
- Do not expose the unit to moisture, rain, or extreme temperatures.
- Do not overload the unit. The maximum capacity is 2000 Watts. For appliances with motors (e.g., refrigerators, power tools) or heating elements (e.g., heaters, laser printers), it is recommended to use a converter with a capacity 3-4 times higher than the appliance's rated wattage due to surge requirements.
- Before connecting any appliance, verify that the voltage selector switch on the back of the unit is set correctly for your desired operation (Step Up or Step Down).
- Ensure the power switch is in the "OFF" position before plugging in or unplugging any devices.
- If the unit emits smoke, unusual odors, or excessive heat, immediately disconnect it from the power source.
- Do not attempt to open or repair the unit yourself. Refer all servicing to qualified personnel.
- Keep out of reach of children.

3. PRODUCT FEATURES

- **Voltage Conversion:** Converts 110/120V to 220/240V (Step Up) or 220/240V to 110/120V (Step Down).
- **Voltage Stabilization:** Regulates fluctuating input voltages (AC 75V-130V or 180V-260V) to a stable output (AC 110V \pm 4% or AC 220V \pm 4%).
- **Capacity:** 2000 Watt maximum, compatible with 50Hz/60Hz.

- **Output Meter:** Analog meter on the front panel displays the exact output voltage.
- **Multiple Outlets:** Two universal 220V outlets and two 110V outlets (US 3-prong/2-prong, Euro/Asian 2-prong compatible).
- **Safety:** On/off switch with indicator lamp, fuse protected with built-in circuit breaker.
- **Construction:** Heavy-duty metal casing for durability.
- **Accessories:** Includes round and flat pin plugs for various regions, and two extra fuses.
- **Certification:** CE Certified.

4. PACKAGE CONTENTS

- Simran AR-2000 Voltage Regulator Stabilizer and Converter Unit
- Hard-wired power cord with European Shucko plug
- US/Canada/Mexico compatible flat pin plug adapter
- Two (2) spare fuses
- User Manual (this document)

5. UNIT OVERVIEW

Familiarize yourself with the components of your Simran AR-2000 unit.



Figure 1: Front Panel of Simran AR-2000

This image displays the front panel of the Simran AR-2000 unit, featuring the analog output meter, two 110V AC outlets, two 220V AC universal outlets, the 'POWER ON' indicator light, and the circuit breaker switch. The main power cord with a European Shucko plug and a US flat pin adapter are also visible, along with two spare fuses.

1. **Output Meter:** Displays the current output voltage.

2. **AC 110V Outlets:** For connecting 110V/120V appliances.
3. **AC 220V Universal Outlets:** For connecting 220V/240V appliances, compatible with various international plug types.
4. **Power On Indicator:** Illuminates when the unit is powered on.
5. **Circuit Breaker/Power Switch:** Controls the main power to the unit and provides overload protection.

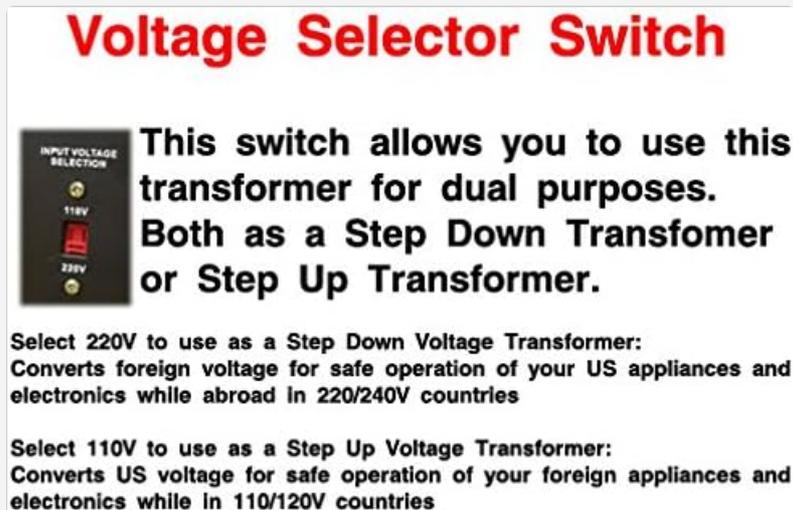


Figure 2: Rear Panel Voltage Selector Switch

This image shows the voltage selector switch located on the rear panel of the Simran AR-2000. This switch allows users to select between 110V and 220V input voltage, determining whether the unit operates as a step-up or step-down transformer.

1. **Voltage Selector Switch (Rear Panel):** This switch determines the input voltage the unit expects.
 - Set to **220V** for Step Down operation (Input 220V/240V, Output 110V/120V).
 - Set to **110V** for Step Up operation (Input 110V/120V, Output 220V/240V).

6. SETUP

1. **Unpack the Unit:** Carefully remove the Simran AR-2000 from its packaging. Inspect for any signs of damage.
2. **Placement:** Place the unit on a dry, stable, and well-ventilated surface. Ensure there is sufficient space around the unit for heat dissipation.
3. **Verify Power Switch:** Ensure the circuit breaker/power switch on the front panel is in the "OFF" position.
4. **Select Input Voltage:** Locate the voltage selector switch on the rear panel of the unit (refer to Figure 2).
 - If your wall outlet provides **110V/120V** (e.g., USA, Canada), set the switch to **110V** for Step Up operation.
 - If your wall outlet provides **220V/240V** (e.g., Europe, Asia), set the switch to **220V** for Step Down operation.

CAUTION: Incorrect selection of the input voltage can damage the unit and connected appliances. Always confirm your local voltage before setting this switch.

5. **Connect to Wall Outlet:** Plug the unit's power cord into a suitable wall outlet. If necessary, use the provided flat pin adapter for US/Canada outlets.

7. OPERATING INSTRUCTIONS

1. **Connect Appliance:** With the Simran AR-2000 still in the "OFF" position, plug your appliance into the appropriate output socket on the front panel.
 - For 110V/120V appliances, use the "AC 110V" outlets.
 - For 220V/240V appliances, use the "AC 220V" universal outlets.

WARNING: Do not connect appliances that exceed the unit's 2000 Watt capacity. Refer to the safety instructions regarding motor-driven and heating appliances.

2. **Power On:** Flip the circuit breaker/power switch on the front panel to the "ON" position. The "POWER ON" indicator light will illuminate.
3. **Monitor Output:** Observe the analog output meter on the front panel to confirm the stable output voltage.
4. **Use Appliance:** You can now turn on and use your connected appliance.
5. **Power Off:** When finished, first turn off your appliance, then flip the circuit breaker/power switch on the Simran AR-2000 to the "OFF" position. Unplug the appliance from the unit.



Figure 3: Step Up and Step Down Voltage Conversion Diagram

This diagram visually explains the concepts of Step Up and Step Down voltage conversion. "Step Up" indicates converting 110 volts to 220 volts, while "Step Down" indicates converting 220 volts to 110 volts. This illustrates the dual functionality of the Simran AR-2000.

8. MAINTENANCE

- **Cleaning:** Disconnect the unit from the power source before cleaning. Use a soft, dry cloth to wipe the exterior. Do not use liquid cleaners or solvents.
- **Ventilation:** Ensure ventilation openings are clear of dust and debris to prevent overheating.
- **Fuse Replacement:** If the unit stops functioning and the circuit breaker does not trip, the internal fuse may need replacement.
 - Unplug the unit from the wall outlet.
 - Locate the fuse holder (typically on the rear or side panel).
 - Twist or pry open the fuse holder.
 - Replace the blown fuse with a new fuse of the exact same type and rating (two spare fuses are included).
 - Close the fuse holder securely.

WARNING: Always replace fuses with the correct type and rating to prevent damage or fire hazard.

- **Storage:** Store the unit in a cool, dry place when not in use for extended periods.

9. TROUBLESHOOTING

Problem	Possible Cause	Solution
Unit does not power on.	Power switch is OFF. Unit not plugged in. Wall outlet has no power. Internal fuse blown. Circuit breaker tripped.	Flip power switch to ON. Ensure power cord is securely plugged in. Test wall outlet with another device. Replace fuse (refer to Maintenance section). Reset circuit breaker by flipping it OFF then ON.

Problem	Possible Cause	Solution
Connected appliance does not work.	Appliance not plugged into correct outlet. Appliance is faulty. Unit is overloaded. Incorrect voltage selector setting.	Ensure appliance is plugged into the correct 110V or 220V output. Test appliance directly in a compatible wall outlet (if possible). Reduce total wattage of connected appliances. Verify voltage selector switch is set correctly for your input voltage.
Output voltage is unstable or incorrect.	Incorrect voltage selector setting. Unit is overloaded.	Verify voltage selector switch is set correctly for your input voltage. Reduce total wattage of connected appliances.
Unit is making unusual noises or smells.	Overload. Internal fault.	Immediately disconnect from power. Reduce load. Immediately disconnect from power. Do not use. Contact customer support.

10. SPECIFICATIONS

Model	AR-2000
Capacity	2000 Watts (Max, including surge)
Input Voltage Range	AC 75V-130V or 180V-260V
Output Voltage	AC 110V \pm 4% or AC 220V \pm 4%
Frequency	50Hz / 60Hz compatible
Dimensions (L x W x H)	14 x 13 x 8 inches (35.56 x 33.02 x 20.32 cm)
Weight	27 pounds (12.25 kg)
Certification	CE Certified
UPC	810128010979

11. WARRANTY AND SUPPORT

For warranty information and customer support, please refer to the documentation provided with your purchase or visit the official Simran website. Keep your purchase receipt as proof of purchase for warranty claims.

For technical assistance or inquiries, please contact Simran customer service.

