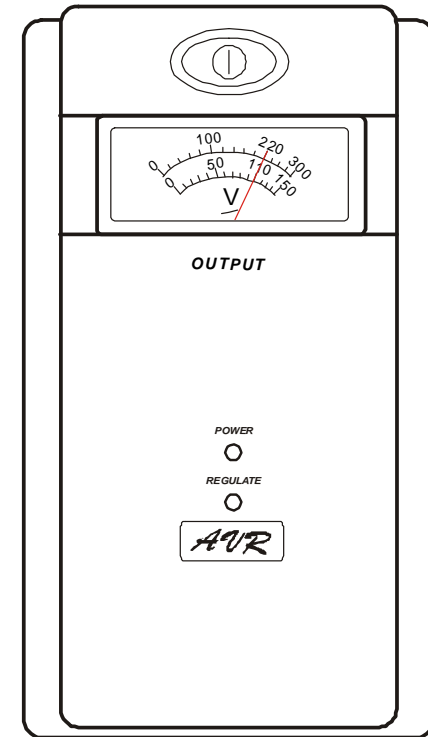


Important Message

Microprocessor Control AVR

User`s Manual



Automatic Voltage Regulation

INSTALLATION & OPERATION

⊗ Unpack Package & Inspection

Unpack package to check if there is any damage on AVR outer looking. If any damage is found, please contact supplier right away and also keep the package in good condition.

⊗ Installation & Operation

1. Checking the voltage specification which is printed on the label in the back panel of AVR to see if it is the same as city voltage or not.
2. Connect input power cable to outlet with Ground.
3. Press on the start switch of AVR front panel to start the unit. LED light of "POWER" will be lighted afterwards, it means AVR unit is in normal function. Please check if the needle of voltage meter point right voltage. When "REGULATE" LED light is lighted, please refer to instruction of front panel lights.
4. Please connect power cable of load equipment to AVR's output socket. Then, press on start switch of equipment. Does buzzer of AVR beep continuously? If yes, it means the unit is overloaded. Please decrease numbers of load.
5. If any abnormal situation is happened among above mentioned operations, please contact with agent or service representatives.

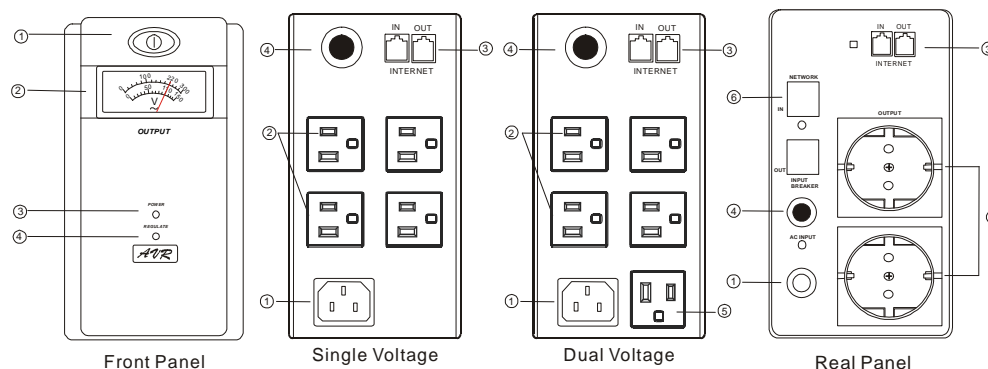
⊗ Front Panel Instruction

1. Power Main Switch: The switch to turn on or turn off AVR unit.
2. Output Voltage Meter: To display AVR's output voltage value.
3. Power Indicator LED: When the power is ON, the LED light will be lighted.
4. AVR Indicator LED:
 - LED light is not lighted at all: It means that AC utility is under normal situation.
 - Orange light lights once every second: AVR is under first Boost step.
 - Orange light lights twice every second: AVR is under second Boost step.
 - Orange light lights three times every second: AVR is under third Boost step.

- Orange light lights without stopping and buzzer beeps three times per second: AVR's output voltage in too low.
- Red Light lights once per second: AVR is under first Buck step.
- Red Light lights twice per second: AVR is under second Buck step.
- Red Light lights three times per second: AVR is under third Buck step.
- Red Light lights continuously and buzzer beeps three times per second: AVR's output voltage is too high.
- Red or Orange Light lights continuously and buzzer beeps once a second: AVR's used load quantity is to big.

⊗ Real Panel Instruction

1. Input Outlet: AC utility input outlet.
2. Output Outlet: AVR output power outlet.
3. RJ-11 Port: Internet, Telephone or Fax Machine Surge Protection.
4. Overload Protection: When overload is happened, the fuse will be crossed over.
5. Dual Voltage Outlet(Optional): When input voltage is 110VAC, the output voltage of this outlet is 220VAC. When input voltage is 220VAC, output voltage of this outlet is 110VAC. Please pay attention to outlet's load value.
6. RJ-45 port: Network Protection



SYSTEM INSTRUCTION

This AVR is a CPU controlled automatic voltage regulation unit. This product can offer your accurate equipments with reliable and qualified AC power supply accurately and steadily. It can be widely applied to computers, communication systems and industrial automatic controlled equipments. This unit is designed with various advantages to make load equipments and AVR itself run steadily.

☒ Function

Digital Control: Inner design of this unit uses microprocessor control to ensure the safety and protect your equipments.

Output Overload Protection: When output load is over 120%, buzzer will beep continuously to tell users stop overload operating to affect AVR's lifetime.

Output Over and Under Voltage Protection: When output voltage is too high or too low, AVR buzzer will beep continuously. Within safe time, AVR will cut off output voltage automatically to protect load equipments from being damaged.

Unique Near Zero-Crossing Design: This AVR will accurately make relay shift upon Zero-crossing point to increase switch's lifetime.

Output Voltage Value Display: The needle type voltage meter in the front panel of AVR can clearly display output voltage value and let users understand AVR's output voltage status.

Multi-LED Indicator: The LED in the front panel of AVR can display the unit's operation status.(Please refer to display light instruction of front panel)

WARRANTY

We do appreciate with your support to choose our company products. We believe your job will be done smoothly in the future. According to our Letter of Warranty, we will offer one year term free service.

- Please make sure to get Letter of Warranty and fill in purchasing date and then have store sales person to stamp on it when purchase in order to enjoy our company after sale service.
- If damage is caused by below-mentioned situation, our company will charge material expense even within Warranty period:
 1. Transportation, Moving improperly or Falling after purchased.
 2. Irresistible natural force or Human disaster.
 3. Using by mistakes or excessively / Breaking on purpose / Environment is not in good condition / Do not follow power voltage specification / Wrong power supply.
 4. Products are taken apart, fixed, converted or equipped with extra parts by others who are not our company service representatives.
- Our company will provide completed and good after sale service even if Warranty Term is expired. However, certain materials expense and cost will be charged.
- Please keep the Letter of Warranty in good condition. If the Letter of Warranty is missing by mistake, purchasing date will be same as unit out of factory date.

Model Number: _____ Capacity: _____

Serial Number: _____ Bill/D.O.No.: _____

Purchaser's Name & Address: _____

Telephone: _____

Date of Purchase / Delivery: _____

Dealer's Stamp: _____

TROUBLESHOOTING

Table of Abnormal Situation: Possible problems which may happen upon daily operation are included. After following the instruction of this Abnormal Situation Table to solve problems, please contact maintenance representative and provide below-mentioned information if the unit cannot run normally still.

- Product Model Number/Machine Reference Number
- Problem Happened Date
- Describe happened problem in detailed completely.

TROUBLESHOOTING CHART		
PROBLEM	POSSIBLE CAUSE	ACTION TO TAKE
Voltage Meter Needle is unmoved; Output Voltage Normal	Voltage Meter Broken	Replace Voltage Meter
Voltage Indicator can not be lighted; Output Voltage Normal	Power Indicator Broken	Replace Power Indicator
Voltage Meter Needle is unmoved; No Output Voltage	Fuse cross over or broken	If output is overloaded, please re-start Fuse and decrease load, then re-start unit. If Fuse is broken, then replace it.
	No Input Voltage	Check if power is black out or power cable is disconnected.
Voltage shows voltage is too high or too low.	Voltage Meter is broken.	Replace Voltage Meter
	Input Power Over Regulation Limitation	Please check if input power is too low.
Buzzer Beeping	Output load is overloaded	Please decrease load

Attention: It is normal situation if temperature of outer cover is higher under heavy load operation and voltage with big changes. Please do not worry!

CAUTION

Please strictly follow all safety instructions which are stipulated in this Users Manual during installation and maintenance.

- Please do not open AVR's outer case.
- Please avoid to place AVR under over humid environment.
- Please do not pour any liquid or put anything inside AVR.
- Keep away from sun radiation and radiator.
- Please keep exhaust hole cleared.
- Power socket should be installed close to AVR.
- It will be better to use outlet with Ground to connect with AVR, and also have Ground done.

SPECIFICATIONS

MODEL	AVR	1000VA	2000VA	3000VA
Input	Voltage	110Vac or 220Vac ±20%		
	Frequency	47Hz~63Hz		
	Power Factor	0.95~1		
Output	Voltage Regulation	110Vac or 220Vac ±5%		
	Response Time	< 3 Cycle		
	THD	No Distortion: Depends on input wave		
	Efficiency	> 97%		
Protection	Overload Protection	Buzzer Alarm		
	Surge	Surge Control 2ms, 4500A(8/20us)		
Output Socket	Type / Quantity	NEMA5-15R*4pcs		
Environment	Operation Humidity	0% ~ 95% (Non-Condensing)		
	Operation Temperature	0°C ~ 40°C		
Dimension	W*H*D	90*170*270 mm		