



UNINTERRUPTIBLE POWER SUPPLY

MAGIC 600/800/1000 SERIES

Operating Instructions



2

YEAR WARRANTY

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Safety instructions

The instruction manual contains basic instructions, which should be observed when installing and servicing the source uninterruptible power supply (UPS) and rechargeable batteries (AB).

- The UPS is intended for installation in enclosed areas with room temperature (controlled) temperature and absence of conductive contamination;
- servicing of the UPS and battery must be carried out specifically trained and qualified personnel in compliance with the rules safety when working with UPS and batteries or under their supervision.

Do not allow unauthorized personnel to work with the UPS and battery;

- when replacing a battery, use a battery of the same type;
- in case of an emergency, press the "OFF" button and turn off

AC power cord.

WARNING

At the end of its service life, do not throw away the product with other household waste, dispose of it in accordance with the procedure established by law.

When disposing of batteries, do not burn them - this may cause the battery to explode. Dispose of defective batteries at recycling facilities.

Do not open or damage the battery. Leaked electrolyte is toxic and dangerous to the skin and eyes.

Batteries may present a risk of electric shock. When working with batteries, the following precautions must be observed:

- remove watches, rings and other metal objects;
- use a tool with insulated handles;
- use rubber gloves and shoes;
- do not place tools or metal objects on top of the battery;
- turn off the device before connecting or disconnecting the battery terminals.

To reduce the risk of fire, connect the device to an outlet with a current limit of no more than 20 A in accordance with GOST R 50345.

Do not connect the UPS input to its own output.

Do not connect a power strip or surge suppressor to the UPS.

Do not connect items other than computer peripherals such as medical equipment, life support equipment, or microwave ovens.

To reduce the risk of UPS overheating, do not block the UPS cooling vents, expose the UPS to direct sunlight or install the UPS near radiating heat from appliances such as air heaters or radiators.

Unplug the UPS before cleaning and do not use liquids or aerosols

WARNING

For the safety of users, the UPS must be operated performed when connecting the UPS to a grounded power supply.

Carrying out any work with the UPS turned on and the plug disconnected is not allowed.

During equipment installation, you must ensure that the sum of the leakage currents of the UPS and connected loads does not exceed 3.5 mA.

The recommended service life of the UPS is 10 years. At the end of its service life, do not throw away the product with other household waste, dispose of it in accordance with the procedure established by law.

Electrical equipment is transported from the place of manufacture in transport packaging made taking into account the characteristics of the product, the method of transportation and storage in order to protect it en route from mechanical damage and exposure to climatic factors (direct exposure to precipitation, solar radiation and dust). Coordination of the delivery method (except for rail, which can transport any products) is separately negotiated when ordering. Transportation conditions must comply with the requirements of GOST 15150.

Introduction

Thank you for choosing this uninterruptible power supply (UPS). It will provide reliable protection for your equipment, as it is specially designed for a personal computer and its peripherals. Its light weight and compact design are ideal for confined work environments. This line of interactive UPSs features a built-in automatic regulator (AVR) to stabilize the output voltage. This manual contains instructions for installing and operating the UPS, including important safety precautions. If problems arise during operation of the UPS, please read this manual before contacting technical support.v

1 Device Description

The appearance of the front and side panels of the UPS is shown in Figure 1.

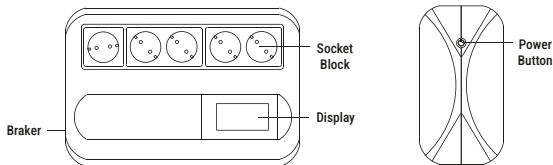


Figure 1 – Front and side panels of the UPS

Power button (off, mute). Regardless of the presence of power in the mains, when you press the power button, the UPS starts and supplies power to the output sockets. To turn off the UPS, press and hold the power button until the beep stops.

If the UPS is operating on mains power, briefly pressing the power button (approximately 1 second) starts the UPS self-test mode. During the self-test, the UPS briefly switches to battery mode.

In battery mode, briefly pressing this button (about 1 second) turns off the UPS beep.

The mains indicator (green) lights up when the mains voltage is normal.

The battery operation indicator (yellow) lights up when operating on battery power.

The overload and battery failure indicator (red) lights up continuously during an overload when the total power consumed by the connected equipment exceeds the maximum power of the UPS. When it is necessary to replace the battery, the indicator flashes.

Output sockets powered by batteries and protected against impulse noise. When mains power is present, the output sockets provide power to the connected equipment through a voltage regulator (AVR). An increase or decrease in mains voltage is corrected by an automatic voltage stabilizer. If the mains voltage disappears or goes beyond the limits of the voltage stabilizer, the connected equipment is powered by the UPS battery. Output sockets are protected against impulse noise.

Side panel. The input circuit breaker trips if the total power consumed by the connected equipment exceeds the maximum power of the UPS.

Power input cable. Before connecting, please make sure that the mains voltage matches the rated voltage of the UPS. For example, if the rated operating voltage of the UPS is 230 V, then the mains voltage should be 230 V.

A description of all UPS parameters is given in Appendix B.

2 UPS Display

The appearance of the display and displayed icons is shown in Figure 2

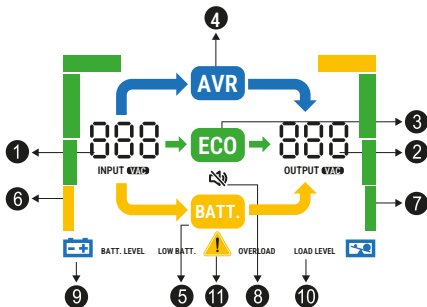


Figure 2 – UPS display

Description of LCD display elements:

- 1 – display of input voltage;
- 2 – display of output voltage;
- 3 – ECO mode (in normal mode the symbol lights up on the LCD display);
- 4 – AVR mode (increasing and decreasing voltage, lights up symbol on the LCD display);
- 5 – battery operation mode (the symbol lights up on the LCD display);
- 6 – battery charge level (battery capacity);
- 7 – load level (percentage of load);
- 8 – mute (mute mode, the symbol on the LCD display. Press the power button to select this mode);
- 9 – battery is discharged (when the battery voltage is low, the symbol on the vLCD flashes display);
- 10 – overload (if there is an overload at the output on the LCD display this symbol is displayed);
- 11 – fault mode (LCD symbol lights up when the UPS is in fault mode. For example, the output is shorted, overload, recharge).

WARNING

Do not plug the input cable into output sockets, as this may damage the UPS.

3 Installation

Checkup

Remove the UPS from its packaging and check for any damage that may have occurred during shipping. If damage is found, take photos and videos. Contact supplier to arrange replacement or return.

Charger. This device is supplied with a fully charged battery, however, the battery's energy capacity may be reduced during transportation and storage. This requires a battery before use by connecting the UPS to AC power for at least 6 hours without load (without connected devices such as monitors, computers, etc.).

Connection to the electrical network and its placement

Connect the UPS cable to a two-pole, three-wire, grounded electrical outlet. Before connection, please make sure that the mains voltage matches the rated voltage of the UPS. For example, if the rated operating voltage of the UPS is 230 V, then the mains voltage should be 230 V.

The UPS should be located in any protected environment that allows air flow around the unit and is free of excessive dust, corrosive fumes and conductive contamination. Do not use the UPS in an environment with high temperature and high humidity.

Connecting equipment. Connect the power cable of the connected equipment to the output sockets of the UPS.

4 Exploitation

Enabling the «Green Power» function when operating on mains power

After connecting to the mains, press the power button and hold it for about 5 seconds until the UPS beeps twice and turns on. After this, connect the protected equipment (for example, a computer and monitor) to the UPS outlets. To save energy, the «Green Power» mode will be activated - automatic shutdown (after about 4 minutes by default) in the absence of power consumption by the connected equipment (or low consumption) in battery mode. To disable the «Green mode», turn off the UPS and turn it on again, holding the power button for about 5 s until a triple beep sounds.

WARNING

If the «Green Power» mode is activated, the UPS can automatically turn off when running on battery power and there is no power consumption from the connected equipment. When power is restored, it will turn on again.

WARNING

Do not connect laser printers, plotters, or household heating appliances to the UPS. They can periodically consume significantly more power than the maximum power of the UPS, so the UPS may overload or even fail.

Switching on without «Green Power» mode when operating from the mains

After connecting to the power supply, press the power button and hold it for about 5 seconds until the sound signal sounds three times. After this, connect the protected equipment (for example, a computer and monitor) to the UPS outlets. When connecting equipment with low power consumption, it is recommended to turn on the UPS without activating the «Green Power» mode avoiding spontaneous shutdown.

WARNING

If you want to turn on the UPS in «Green Power» mode, turn it off and on again, holding the button for about 5 s until the beep sounds twice. To turn on the UPS without changing the «Green Power» mode status, when turning on the device, hold the button for about 3 s until a single beep sounds.

Switching on in «Green Power» mode when there is no power supply

To turn on the UPS when there is no power from the mains with the «Green Power» mode enabled, press the power button and hold it for about 5 s until a double beep sounds. To disable the «Green mode», turn off the UPS and turn it on again, holding the power button for about 5 s until a triple beep sounds.

Switching on without «Green Power» mode when there is no power supply

To turn on the UPS when there is no mains power, press the power button and hold it for about 5 s until the beep sounds three times. To enable «Green Power» mode, turn off the UPS and turn it on again, holding the power button for about 5 seconds until the sound signal doubles.

Shutdown. Press and hold the power button for more than 3 seconds until the beep stops and the UPS turns off.

Mute the sound. The UPS sound signal in battery mode can be turned off by briefly pressing the power button (except for modes 9 "low battery charge", "overload" and

“fault”). To completely turn off all sound signals, press the power button three times in a row for 1 second in battery mode.

5 Sound Alarm

Battery operation mode (rare beep), when the UPS is operating on battery power, a beep sounds. The sound signal stops when switching to normal operation from the mains.

WARNING

The sound signal from the battery is emitted every 10 seconds. It can be turned off by briefly pressing the power button once. Low battery charge (frequent beep), in battery mode, when the charge drops to a low level (less than 30%), a rapid beep is emitted until the UPS shuts down due to the battery being completely discharged or returns to normal operation from the mains.

WARNING

The low battery signal sounds once every 1 second. To completely turn off all sound signals, press the power button three times in a row for 1 second in battery mode. To turn on all sound signals again, press the power button three times in a row within 1 second in battery mode.

Overload (frequent signal). When an overload occurs (the total power of the connected equipment exceeds the maximum power of the UPS), a rapid beep sounds. To protect the device and connected equipment, the UPS will automatically shut down. Please disconnect less important equipment from the UPS to eliminate the cause of the overload.

WARNING

The overload sound signal is emitted once every 0.5 s. This signal cannot be turned off.

Fault (continuous signal). When a fault occurs, a continuous beep sounds. To protect the device and connected equipment, the UPS will automatically shut down. Please check externally for possible connection failure or contact a service center.

A list of possible malfunctions and methods for eliminating them are given in Appendix A.

Appendix A (mandatory) troubleshooting

Table A.1 – Troubleshooting

Problem	Possible cause	Fixing method
No LED indication (for LED model) or no LCD backlight (for model with LCD display) on the front panel	The power button is not pressed long enough	Press the power button again
	Low battery level	Charge the battery for at least 8 hours
	Battery is faulty	Replace the battery
Alarm sounds continuously when AC power is normal	UPS overload	Disconnect less critical equipment from the UPS
	Power button not pressed	Press the power button again
In case of power failure, battery life is short	Battery malfunction	Replace the battery with similar one
	Low battery voltage	Charge the battery for at least 8 hours
	UPS malfunction	Contact an authorized service center
The network is ok, but the indication (for a model with an LCD display) shows that the UPS is operating in battery mode or the yellow LED is blinking (for an LED model)	The UPS power cord is not connected properly	Connect the power cord correctly

Appendix B (mandatory) Technical data

Table B.1 – Technical data

Indicator name	Article value		
	PM-600-01-07-05	PM-800-01-08-05	PM-1000-01-09-05
Input parameters			
AC voltage, V	220 / 230 (default 220)		
Voltage range, V	170 ~ 280		
Frequency, Hz	50 / 60 ± 5 % (auto-regulation)		
Overload capacity	In bypass mode: at 110 % shutdown for 5 minutes.		In bypass mode: at 110% shutdown within 5 seconds.
Input parameters			
Voltage, V	220 / 230 (default 220)		
Frequency, Hz	50 or 60±1 (battery mode)		
Power, VA / W	600 / 360	800 / 480	1000 / 600
Switching time to battery, ms	From 2 to 6		
Socket type	C2a according to GOST 7396.1 (IEC 83)		
Number of sockets, pcs.	5		
AC Waveform	Modified sine wave		
Battery Waveform	Sine wave imitation		
Battery			
Voltage, V	12		
Maximum charge current, A	1,0		
Number of batteries, pcs.	1		1
Capacity, Ah	7	9	9
Battery life, min	4	4	2
Battery type	Sealed, lead-acid maintenance free		
Battery charging time, h	8		
Protection			
Types of protection	From overload, short circuit, battery discharge,		

Table B.1 continuation

Indicator name	Article value		
	PM-600-01-07-05	PM-800-01-08-05	PM-1000-01-09-05
Alarm			
Battery operation mode	Sound signal every 10 seconds		
Low battery charge	Sound signal every second		
Overload	Sound signal every 0,5 seconds		
Malfunction	Continuous sound signal		
Indicators			
Weight and dimensions*			
Width, mm	284,5		
Depth, mm	193		
Height, mm	103		
Mass, kg	3,5	4,6	5,8
Noise level, dB	Under 40 in a 1 meter radius		
Other parameters			
Display	LCD		
Operating conditions: room temperature from 0 °C to plus 40 °C with humidity less than 95%. Storage conditions: room temperature from minus 15 °C to plus 50 °C. Transportation conditions: air temperature from minus 25 °C to plus 55 °C.			
* Deviation of overall dimensions is allowed ±5 mm.			