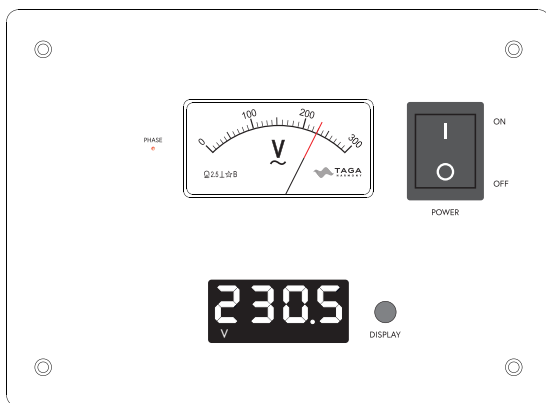




PC-DC Series [230V]

POWER LINE CONDITIONERS with DC BLOCKER
FOR USE WITH AUDIO-VIDEO EQUIPMENT



Instruction Manual

Introduction

Thank you for purchasing this TAGA Harmony power line conditioner.

PC-DC power conditioners combine 4 functions in one device: power noise filtering; DC component blocking; linear power supply for USB ports; and surge and overload protection (for all powered outputs and USB ports).

POWER NOISE FILTERING

The electricity network in our homes or workplaces is exposed to different interferences for instance electromagnetic interference (EMI) generated by appliances connected to the same network (refrigerators, air conditioners, computers etc.).

These interferences are not only produced inside your house or office but by all appliances in your building or even outside it and can differ on the time of day or week when the traffic on the electrical network changes.

All these interferences which we call noises can get into your AC power and interfere with your system.

This “dirty” electricity can have a negative effect on performance of your audio-video system.

TAGA Harmony power line conditioner is a great way to limit the negative noises from your electricity and to isolate your system from the contaminated power.

The contaminated electricity has also a negative impact on internal circuits and power supplies of your equipment and because the PC-DC conditioner works as a buffer between the wall socket and your gear helping to increase the longevity of the connected components.

- **Independent groups of switched and unswitched 230V - 240V power sockets** (Schuko type) adopting 4 independent non-interference filters, each specifically designed for the given group and for use with specific audio and video equipment.
- **Separate SQ common mode inductor used for each sockets groups.**
 - High purity oxygen-free copper flat enameled wire winding.
 - Low DC resistance, uniformly dispersed electric field and extremely small distributed capacitance, for improved high frequency EMI filtering.
 - Good heat dissipation for higher efficiency.
 - Large current passing, density is more than 1.3 times of round copper wire allowing for better filtering while utilizing similar size.
 - Additional benefits for improved filtering: closed magnetic circuit, small magnetic leakage, good conduction and radiation effect, stable consistency and improved high frequency skin effect.
- **High-quality Class-X capacitors for improved filtering.**
- **High power 200W toroidal transformer to isolate equipment from the line noise (for source devices).**
 - Aluminum metal film shielding cover effectively protects the transformer from the electromagnetic interference, improving its efficiency and performance.

DC BLOCKER

Built-in DC blocker removes or at least lowers the unwanted DC component of the supply voltage in the selected output power sockets, responsible for noises (buzzing) and higher operational temperature of transformers, which deteriorate the sound quality.

Introduction

In the result, the connected audio-video devices work more quietly and efficiently as well as mains hum in speakers is significantly being reduced.

- **Real-time switched DC Blocker for selected 230V – 240V power sockets groups.**

You can switch the DC Blocker ON and OFF on the fly for the best sound experience.

- **Powerful blocking of the incoming DC up to 12000mV (12V).**
- **10 x high-current, high-frequency bridges and 2 x 47000uF capacitors**
 - extremely efficient DC blocking and at the same time avoiding negative impact on sound performance.

LINEAR POWER SUPPLY FOR USB OUTPUTS

Most DC-powered electronic devices use simple, low-cost external power adapters with switch-mode power supplies.

Such adapters operate at high switching frequencies to supply power, which may cause various electrical noises getting to the connected devices, and even inject these noises into your electricity network affecting other equipment.

Such noises dramatically deteriorate the sound performance and efficiency of audio-video devices.

The solution is to use a high-quality linear power supply, such as the one in the PC-DC conditioners.

The PC-DC linear power supply offers a very significant and immediate upgrade to the sound performance of your DC-powered devices.

- **The built-in isolating toroidal power transformer for sources** is also used to provide stable power supply to the USB ports.
- **3-tier filtering network:**

I & II tier for 230 – 240 Voltage : the initial filtering by the device's power noise filtering system, and the second by the built-in isolating power transformer.

III tier for the DC Voltage : specially-design filtering (incl. high frequency EMI filtering for 5V output) at the end stage separately for the USB ports.

SURGE AND OVERLOAD PROTECTION

The PC-DC conditioner provides surge and overload protection for all outputs.

I tier protection : the filtering and protection system with a push-to-reset circuit breaker.

II tier, 4-level additional protection for the USB ports :

the system using the built-in isolating power transformer → step-down switching regulator → High frequency EMI filtering for 5V output → short-circuit and thermal overload circuit specially designed for the USB ports.

OTHER FEATURES

- **Analog Voltage indicator** to control stability of the power voltage in the wall outlet. Selected models also provide the switchable backlight of the Analog Voltage indicator.
- **Digital Voltage (V) / Current (in mA or A) / Power (W) indicator** to show data in real time, and which can be turned off.
- **Phase detection and the polarity selector switch** indicates the incorrect power phase and allows to easily correct it.
- **IEC C14 power inlet and a removable Schuko-IEC C13 power cord** give an option to upgrade to a premium audiophile power cable at any time.

Introduction

Thanks to the PC-DC power conditioners you will be able to enjoy a better quality of your audio and video equipment.

Cleaning

Do not use strong or abrasive cleaners. Use a damp, soft cloth for cleaning.

Specifications and the latest instruction manual edition

Full technical specifications and the latest edition of the instruction manual are available on **www.TagHarmony.com**

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Safety Instructions

IMPORTANT READ THIS SECTION CAREFULLY BEFORE PROCEEDING!



CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**



WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The triangle containing a lightning symbol is intended to alert the user to the presence of uninsulated dangerous voltages within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



An exclamation mark in a triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE, AND OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHOULD NOT BE PLACED ON THIS APPARATUS.

CAUTION: TO PREVENT ELECTRIC SHOCK, FULLY AND SECURELY INSERT THE POWER CABLE PLUG INTO THE POWER OUTLET, AND POWER CABLE CONNECTOR INTO THE UNIT SOCKET (IF THIS UNIT IS NOT EQUIPPED WITH AN INTEGRATED [ATTACHED] POWER CORD).

CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE THE FUSE (IF THE UNIT IS EQUIPPED WITH A USER REPLACEABLE FUSE) ONLY WITH THE SAME AMPERAGE AND VOLTAGE TYPE. IN CASE WHEN THE UNIT IS NOT EQUIPPED WITH A USER REPLACEABLE FUSE - REFER REPLACEMENT TO QUALIFIED SERVICE PERSONNEL.

WARNING: THE UNIT MAY BECOME HOT. ALWAYS PROVIDE ADEQUATE VENTILATION TO ALLOW FOR COOLING. DO NOT PLACE THE UNIT NEAR A HEAT SOURCE, OR IN SPACES THAT CAN RESTRICT VENTILATION.

Safety Instructions

1. Read Instructions - All the safety and operating instructions should be read before the product is operated.
2. Retain Instructions - The safety and operating instructions should be retained for future reference.
3. Heed Warnings - All warnings on the product and in the operating instructions should be adhered to.
4. Follow Instructions - All operating and use instructions should be followed.
5. Cleaning - Unplug this product from the power outlet before cleaning. Do not use liquid cleaners or aerosol cleaners.
6. Water and Moisture - Do not use this product near water - for example, near a bath tub, wash bowl, kitchen sink or laundry tub; in a wet basement; or near a swimming pool; and the like. These precautions also apply to the power cord.
7. Accessories - Do not place this product on an unstable cart, stand, tripod, bracket or table. The product may fall, causing serious injury to a child or adult and serious damage to the product. Use only with a cart, stand, tripod, bracket or table recommended by the manufacturer or sold with the product. Any mounting of the product should follow manufacturer's instructions and should use a mounting accessory recommended by the manufacturer.
8. Ventilation - This unit may be equipped with slots and openings in the cabinet (housing) which are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug or other similar surface. This product should be not placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to. For products equipped with a separate power supply unit, leave at least 5cm (2in.) of free space on all sides and the top of the power supply.
9. Power Sources - This product should be operated only from the type of power source indicated on the marking label (placed on the product and/or, if applicable, on a separate power supply unit). If you are not sure of the type of power supply in your home, consult your product dealer or local power company. For products intended to operate from battery power or other sources, refer to the operating instructions.
10. Grounding and Polarity - some units for proper operation or to take full advantage of their capabilities may require to be connected to a grounded power outlet - refer to the user manual for more information.
Some units may have markings for the live (L) and neutral (N) conductors for power - in order to take full advantage of capabilities of such products, it is recommended to properly connect the polarity according to the markings on the unit - refer to the user manual for more information. Connecting the polarity not in accordance with the markings will not affect the durability and reliability of the device.
11. Power-cord Protection - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles and the point where they exit from the product.
12. Lighting - For added protection for this product during a lighting storm or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or system cables. This will prevent damage to the product due to lighting and power-line surges.
13. Overloading - Do not overload wall outlets, extension cords or integral convenience receptacles as this can result in a risk of fire or electric shock.
14. Object and Liquid Entry - Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Do not expose this apparatus to dripping or splashing and ensure that no objects filled with water, such as vases are placed on the apparatus.
15. Servicing - Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
16. Damage Requiring Service - Unplug this product from wall outlet and refer servicing to qualified personnel under the following conditions:
 - when power supply cord or plug is damaged;
 - if liquid has been spilled or objects have fallen into the product;
 - if the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will require extensive work by a qualified technician to restore the product to its normal operation;
 - if the product has been dropped or damaged in any way;
 - if the product exhibits a distinct change in performance - this indicates a need for a service.
17. Replacement Parts - when replacement parts are required, be sure the technician has used replacement parts specified by the manufacturer or with the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
18. Safety Check - Upon completion of any service or repairs to this product, ask the service technician to perform safety check to determine that the products is in proper operating condition.
19. Wall of ceiling mounting - The product should be mounted to a wall or ceiling only as recommended by the manufacturer.
20. Heat - The product should be situated away from heat sources such as radiators, heat registers, stoves or other products (including amplifiers) that produce heat.
21. [Refers to products equipped with vacuum tubes] Tube Cage or cover - For your safety and to protect the vacuum tubes this product may be equipped with the factory installed vacuum tube cage or cover.
It is not recommended to remove the cage or cover unless it is required to change the vacuum tubes.
When the cage or cover is removed - do not touch the vacuum tubes - they may be hot and burn the skin!
22. Operating Environment - Operating environment temperature and humidity of the unit: +5°C to +35°C (+41°F to +95°F); less than 85% RH (cooling slots not blocked).

PACKAGING WARNING

The packaging may contain elements such as plastic, that **should be kept away from small children**.

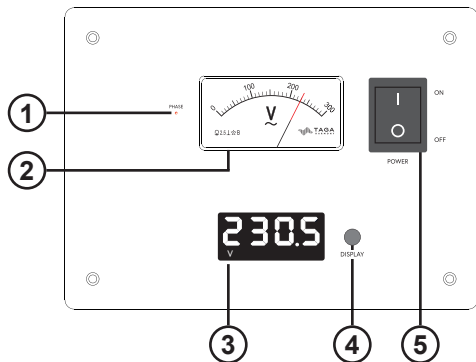
The thin foil or small elements can stick to the nose and mouth, or may be swallowed and prevent breathing.



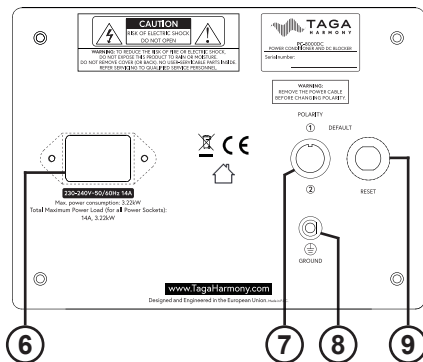
Controls and Displays

Note! Placement of Controls and Displays may vary on the model.

FRONT



REAR



1. Phase LED Indicator
2. Voltage Indicator - Analog Display
3. Voltage (V) / Current (A) / Watts (W) Indicator - Digital Display
4. Digital Display Button
5. Power Switch of the Switched Power Sockets [ON (I) and OFF (O)]
6. Power Cable Input

Selected models may be equipped with a Power Cable input and Fuse Box incorporating a Mains Fuse.



Models equipped with a Power Cable input and Fuse Box incorporating a Mains Fuse:

The blown fuse should be only exchanged for the same types as indicated on the rear conditioner panel. The Power Cable should be disconnected!

7. Polarity Switch
8. Ground Screw
9. Reset Button (selected models)

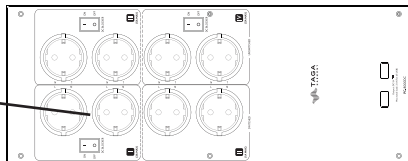
10. DC Blocker Switch [ON (I) and OFF (O)]
11. Unswitched Power Sockets
Group III recommended for preamplifiers / accessories.
Group IV recommended for amplifiers.
12. Switched Power Sockets
Group I recommended for digital equipment.
Group II recommended for sound sources.
13. USB-A Ports

Hooking Up the Conditioner and Operation

Group I

Digital devices
e.g. DAC, Music Streamer,
Media Player,
BT receiver etc.

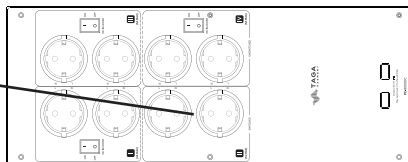
Power cable



Group II

Sound sources
e.g. CD / DVD / Blu-ray Player,
Turntable, Radio Tuner.

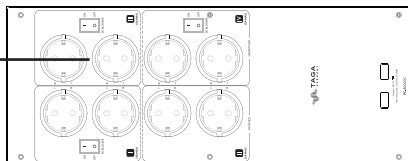
Power cable



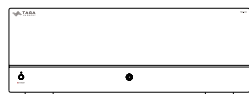
Group III

Preamplifiers/accessories
e.g. Turntable / AV /
Stereo preamplifier,
Headphone amplifier etc.

Power cable

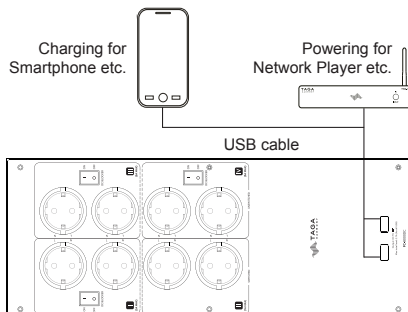
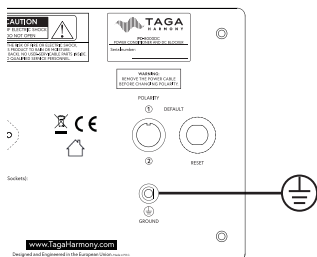
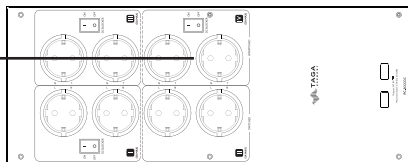


Group IV



Amplifiers
e.g. Power amplifier, Solid state /
Hybrid / Tube integrated amplifiers,
AV Receiver etc.

Power cable



Charging for
Smartphone etc.

Powering for
Network Player etc.

USB cable

Hooking Up the Conditioner and Operation



The user is fully responsible for checking specifications of external devices and using equipment compatible with the voltage supported by the conditioner.

TAGA Harmony is not liable for damage to the conditioner and external devices in case of using devices with incompatible voltage.



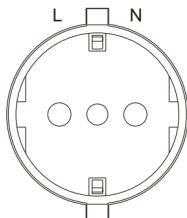
TAGA Harmony is not liable for misuse of the conditioner.

Phase Detection

A. Make sure that the Polarity Switch is set on 1 (default).

It determines the polarity in the female contacts in the Power Sockets:

- floor-standing models - according to the L and N marking on the top panel.
- shelf models - if the L and N marking is not provided, as shown in the figure below (view on the rear panel from the back).



B. Without connecting any external equipment plug the Power Cable to the conditioner and into the electrical outlet.



The **Phase Detection** is not related to the Power Switch and is always active when the conditioner is connected to the powered electrical outlet.

C. The **Phase LED Indicator** WILL ILLUMINATE when the phase is INCORRECT.

If the phase is incorrect then:

c1- Remove the Power Cable from the electrical outlet;

c2- Set the Polarity Switch to 2;

Setting the Polarity Switch to 2 will exchange the polarity in the Power Sockets of the conditioner (L → N and N → L).

Make sure to consider this when connecting the external equipment.

c3- Connect the Power Cable to the electrical outlet;

c4- The Phase LED Indicator should not be illuminated - the phase is CORRECT.



Never operate this switch when the conditioner is connected to the electrical outlet – this may damage the conditioner and/or connected devices – this may void your warranty.

Make sure to disconnect the Power Cable before operating the Polarity Switch!

Hooking Up the Conditioner and Operation

- D. If your 230V - 240V audio-video equipment has the polarity marking (L/N) make sure to connect correctly the equipment power cable plug to the power conditioner according to the polarity marking.



INCORRECT PHASE

At the date of this instruction manual, there is no unified standard in most European Union countries determining the position of the Live (L) and Neutral (N) wires in an electrical outlet.

The term „incorrect phase“ is an expression used in this manual only in relation to this device to determine the L and N positions in the output power sockets of the power conditioner.



POWER CABLES AND PHASE

The Live (L) and Neutral (N) wires in various power cables may be internally connected between the cable plug and the connector in a different way.

If the Phase LED Indicator changes its status after the factory provided Power Cable is swapped for another one, it is not a malfunction but a symptom that the new power cable has a different internal connection as above-mentioned.

Connecting 230V - 240V Audio-Video Equipment



IMPORTANT SAFETY REMARKS!

- This unit requires a single-phase 3-conductor electrical outlet.
- We recommend to use Schuko plugs in all power cables.
- Make sure not to overload the power conditioner and individual groups of Power Sockets.

Power load for each group of Power Sockets: the total maximum power consumption for all connected devices to a given group should not exceed the maximum power load for this group.

The maximum load for each group is given in Amperes (A) in a bracket following the group number printed on the conditioner: it is also available in the specifications on www.Tagaharmony.com

Total maximum power load: the total maximum power consumption for all connected devices to the conditioner should not exceed the maximum power load for this conditioner.

The total maximum power load for this conditioner is given in Kilowatts (kW) or Watts (W) on the rear panel of the conditioner : it is also available in the specifications on www.Tagaharmony.com

1. Make sure the conditioner is turned off (the Power Switch is in the O (OFF) position and the Power Cable is removed).
2. Using power cables connect your audio-video equipment to the Power Sockets following the Phase Detection recommendations.
Follow the below recommendations for connections:

Hooking Up the Conditioner and Operation

Recommendations for Connecting Equipment to the Power Sockets

	SWITCHED POWER SOCKETS active with the Power Switch in position 1 (ON)		UNSWITCHED POWER SOCKETS always active when connected to an electrical outlet	
Power socket group	GROUP I low-power inductance filtering	GROUP II low-power inductance filtering, isolated by the power transformer	GROUP III high-power inductance filtering	GROUP IV high-power inductance filtering
Recommended devices for the group	<u>Digital devices</u> e.g. DAC, Music Streamer, Media Player, BT receiver etc.	<u>Sound sources</u> e.g. CD / DVD / Blu-ray Player, Turntable, Radio Tuner.	<u>Preamplifiers/ accessories</u> e.g. Turntable / AV / Stereo preamplifier, Headphone amplifier etc.	<u>Amplifiers</u> e.g. Power amplifier, Solid state / Hybrid / Tube integrated amplifiers, AV Receiver etc.



Group II is specially designed for sound sources.
Do not connect other equipment to the Power Sockets in this group.

- Grounding is recommended for this conditioner. Using a solid, insulated cable (not supplied with this product) connect the Ground Screw with the ground source in a room.



The recommendations for connecting audio-video equipment to the indicated power sockets may not be the optimal solution for all devices.
To determine the power supply option for a given device that will provide the best quality of its operation, we suggest empirical tests by connecting the device to the different Power Socket groups, minding the restriction for group II sockets.

DC Blocker

- If you are experiencing problems with a noisy (buzzing) transformer of your audio-video equipment and/or mains hum audible in speakers, we recommend using the DC BLOCKER to power such equipment.
Using the DC Blocker Switch, turn on and off the DC BLOCKER if available for the given group of Power Sockets.
ON (I) - DC BLOCKER is active for the given group.
OFF (O) - DC BLOCKER is inactive for the given group.
Note! You may use the DC Blocker Switch when the conditioner is operating.

Hooking Up the Conditioner and Operation

Connecting Devices to USB Ports

5. Using USB cables connect compatible equipment to the USB-A Ports.



The USB-A Ports are only intended for powering or charging devices which are compatible with the USB-A Charging Ports technical data printed on the conditioner:

Output: DC - direct current and voltage provided in Volts.

Max total load: - maximum total load when all USB-A Charging Ports are used simultaneously.

[Maximum load for a single USB-A Port = the Max total load divided by a number of devices being powered/charged].

The total load generated by all devices connected to the charger must not exceed the Maximum total load.

- The number of devices which may be powered/charged simultaneously is limited to a number of USB-A Ports this conditioner is equipped with.

Never connect more than 1 device to a single USB-A Port.

- Use only a recommended USB cable for your device and replace faulty cables immediately.



The user is fully responsible for checking specifications of external devices and using compatible with this conditioner.

TAGA Harmony is not liable for damage to the conditioner and external devices in case of connecting incompatible devices.

Note! Charging may lower the efficiency of the power noise filtering - we recommend not charging any devices during critical listening.

6. Your conditioner is ready for operation.

7. Plug the Power Cable to the conditioner and into the electrical outlet.

Analog and Digital Displays

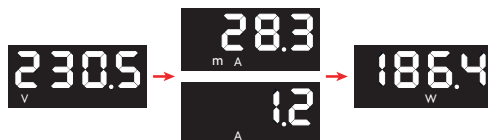
8. Whenever the power conditioner is connected to the powered electrical outlet, the Analog and Digital Displays will be displaying approximate Voltage in Volts.

Analog Display Backlight Button - is used to turn on and off the backlight of the Analog Display.

Note! After disconnecting the power supply from the conditioner and restoring it, the Analog Display backlight will engage in the state selected before the power supply was disconnected.

Hooking Up the Conditioner and Operation

Digital Display Button - is used to select one of the below data to be displayed on the Digital Display - current status of: Voltage (in Volts), Current (depending on the measurement: in Milliampere or Amperes), Power (in Watts); or turn off the Digital Display.



Note! After disconnecting the power supply from the conditioner and restoring it, the Digital Display will show the current voltage.

Note! Indications of the Displays are highly approximate and should not be taken into account for the professional assessment of the power line quality. There may be difference in measurements of both Displays.

9. Turn on the conditioner (the Power Switch should be in the I (ON) position). It is not required if you want to use audio-video equipment connected to the Unswitched Power Sockets.



At the initial stage (approx. a few seconds), after connecting the Conditioner to the electrical outlet and after switching on the power supply to the Switched Power Sockets, noises may be heard from the built-in power transformer - this is normal and is related to the initialization of the device (charging the capacitors).

Turn on your audio-video equipment and enjoy your system.

Surge and Overload Protection System

The conditioner is equipped with a surge and overload protection system for all outputs.

If the protection system is activated (no power in all or part of Power Sockets):

- Disconnect the conditioner from the power.
- Disconnect all external devices from the conditioner.
- Wait at least 15 minutes until the conditioner's internal systems cool down.

- No power in all Power Sockets:

Reset : if the conditioner is equipped with the Reset button.

- Power on the conditioner.
- Press the Reset button to restore conditioner operation.

Hooking Up the Conditioner and Operation

No Reset : if the conditioner is not equipped with the Reset button.

- check the Mains Fuse on the rear of the conditioner. If it is blown then replace it.



The blown fuse should be only exchanged for the same types as indicated on the rear conditioner panel. The Power Cable should be disconnected!

- Power on the conditioner.

- No power in some groups of Power Sockets:

Individual groups are protected by fuses inside the conditioner, which should only be replaced by the TAGA Harmony service center.

Note! If the conditioner operation cannot be restored, contact the TAGA Harmony service center.



The surge and overload protection system operates within the parameters provided in the conditioner's specifications. However, it does not provide 100% protection against all types of surges and overloads. TAGA Harmony is not liable for any damage to external devices caused by surges and overloads.

We strongly advise to contact a professional installer or dealer in order to install TAGA Harmony products.

We recommend using high quality TAGA Harmony cables and other installation accessories.


Kit Content:

Power Line Conditioner	1EA
Power Cable	1EA
Instruction Manual	1EA

EU declaration of conformity

	<p>Your product is marked with the symbol shown on the left. As its manufacturer, hereby we declare that the product is in compliance with the following EU directives and regulations: 2014/30/EU (EMC) & 2014/35/EU (LVD) & 2011/65/EU (RoHS)</p> <p>The full text of the EU declaration of conformity is available from the manufacturer.</p>
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Disposal of the product

	<p>Disposal of old electrical & electronic equipment (applicable in the European Union and other countries with separate collection systems)</p> <p>This symbol on the product or on its literature and packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the appropriate collection point for the recycling of electrical and electronic equipment. By ensuring that this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and human health, which could be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local government office, your household waste disposal service or the shop where you purchased the product.</p>
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