



High  
performance  
products.

# INSTRUCTION MANUAL

## MOD. H 3.1



### **POWERLINE HARMONIZER**

*POWER FOR YOUR MUSIC EMOTION*

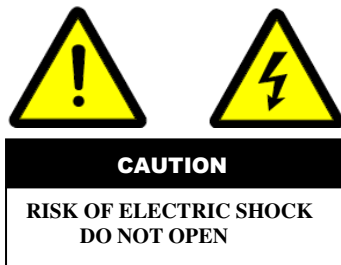
Electricity is the key and the harmonizer prepares it to be transformed by  
Your Hi-Fi chain into music and emotion.

## INSTRUCTION MANUAL **Powerline Harmonizer H 3.1**

THANK YOU FOR PURCHASING A CAMMINO PRODUCT. PLEASE READ CAREFULLY THIS USER'S MANUAL BEFORE CONNECTING THE HARMONIZER TO THE POWERLINE.

### CAUTION

TO AVOID FIRE OR ELECTROCUTION DO NOT EXPOSE THE APPLIANCE TO RAIN OR HUMIDITY



For indoor use only.



Printed documentation for setting up the appliance.

THE APPLIANCE IS SUBJECT TO HIGH VOLTAGE. DO NOT TRY TO OPEN AND IN THE EVENT OF A MALFUNCTION OR FAILURE ASK A LICENSED DEALER. ANY UNAUTHORIZED SERVICING VOIDS THE WARRANTY.

Place the harmonizer on a levelled and steady surface in a way to allow the container to swing horizontally while the feet do not move from the chosen position.

Avoid positioning the harmonizer close to any source of heat or close to any other electrical or electronic appliance which may cause an audible humming in the loudspeakers.

For proper operation, the harmonizer should be put in phase according to the following procedure :

Connect the harmonizer to the power grid and with the POWER SWITCH TURNED OFF push the PHASE button and check if the green light turns on. Should this not happen, unplug the power cord from the wall socket, turn it 180° and re-plug it in and check again. In some places the green light might turn on in both positions, this is because the powerline uses two phases to get the 220V instead of phase and neutral. In this case the harmonizer will work properly regardless of the position of the plug.

The connected devices should be put in phase as well. For this reason the red dot on the power socket, shows the fase.

Should the phase not be marked on your devices, you can ask a specialist for the related electrical measurements.

## **CONNECT THE HI-FI EQUIPMENTS YOU NEED TO FILTER AS FOLLOWS:**

### **DIGITAL OUTLET**

Connect this outlet to digital devices like CD and DVD players, A/D or D/A converters, media servers, equipment with switching power supply, LCD or plasma television sets etc. with a maximum 450 Watt power consumption. If you plug two devices in the digital outlet, the one not in use should be switched off.

### **ANALOG OUTLETS**

Analogical equipments, like phono or line preamplifiers, record players, headphone amplifier, multi-channel or stereo integrated amplifiers, power amplifiers, can be connected to these outlets. Be careful that the total amount of power consumption of the appliances connected does not exceed 1.750 Watt, whether one or all three analog outlets are used.

**PE SWITCHES**      **off PE off**



Caution! For each one of the the two analog outlets to the left of the rear panel it is possible to disconnect the ground through the respective PE switch, this in order to remove a possible audible humming generated by a ground loop, or to shape the acoustic scene of the system. In this case, the Cammino company denies any liability for electrical security for the connected devices and possible electric shock. Actually, the equipments connected to the harmonizer are grounded through the signal cables connecting the devices one to the other, but this connection cannot guarantee the same security level as a correct ground connection. It is therefore of utmost importance that at least one of the equipments be steadily and properly connected to ground! At this stage it is possible to evaluate how to get the best sound, whether un-grounding the power amp, the pre amp or both. Should the CD player not have a grounded plug, keep the pre or the power amp grounded.

### **POWER SWITCH**

The power switch on the right of the rear panel is not intended to turn on or off all the devices contemporaneously, it should be used for example in case of a thunderstorm or when the house is left for the holidays, in order to improve the protection of the audio or video system from possible stroke of lightning. We suggest to turn on the system in a sequence, starting from the sources to the amplifiers. To turn off the system proceed the opposite way, from the amplifier to the sources. At this time you can set OFF the power switch, if needed.

By keeping the harmonizer turned on, some of the filtering components will be in parallel with the AC powerline. This should deliver a sensible reduction of the electrical noises on all electric and electronic appliances connected to the same powerline. Obviously only the devices connected to the schuko outlets of the harmonizer will benefit completely of the filtering effect.

## **USEFUL SUGGESTIONS**

The Powerline Harmonizer H 3.1 is a very versatile device. It is dedicated to audiophiles who, through their feedback and suggestions, contributed to make it ever more efficient and apt to satisfy the most demanding clientele.

Some consideration regarding this:

Connecting pre-amplifier and power amp to the outlets with PE switch, check which switch-position gives the better acoustic scene and timbric sound suitable to your requirements.

Remember that the DIGITAL outlet has a faster, more dynamic and dry sound than the analogic one. If, for example, you have a CD transport and its converter, start connecting the CD in the DIGITAL outlet and the converter in an ANALOG one, then try the opposite and choose the position you like most. Switching power supplies should always be connected through the DIGITAL outlet.

## **IN SUMMARY**

The PE switches open or close the acoustic scene similarly as when in a concert hall you seat at the back or at the front rows, whereas the DIGITAL and ANALOG outlets are used to modify the timbric balance of the system thanks to their particular conduct. The correct combination of these settings allows you to optimize the interaction between the system and the listening environment, often getting greater advantages than changing one of the Hi-Fi system components with a more expensive one.

The fine tuning with the right choice of outlets and PE switches should be performed after the essential optimisation of the loudspeaker position and subsequently slightly adjusted, if needed.

## **TROUBLE SHOOTING**

The digital section uses filters with a very high attenuation of the interferences and it may happen, although rarely, that an equipment connected to those outlet would not turn on. This may happen because the equipment contains probably a RF filter and the sequential effect of the two filters might not allow the passage of enough power to turn the equipment on. In this case connect the equipment to an analog outlet. Should the device still not turn on, try and connect it through a standard power cord. Some special Hi-Fi cables have high impedance or built-in powerline filters that may not be visible. Cammino power cords do not have these issues and can be used to significantly improve the performance of the harmonizer or of the Hi-Fi system connected to it.

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## **CLEANING**

Disconnect the product from the wall outlet before cleaning. The external finish is done through six layers of laquering and it only needs a light damp cloth to be cleaned. Avoid solvent cleaners which might ruin it. Small scratches can be removed with a car polish.

All Cammino products are handmade and individually tested. Smaller imperfections of the finishing are part of the manufacturing process and make each piece unique.

## **WARRANTY**

The manufacturer warrants this product to be free of defects for a period of two years, provided that operating instruction are strictly observed.

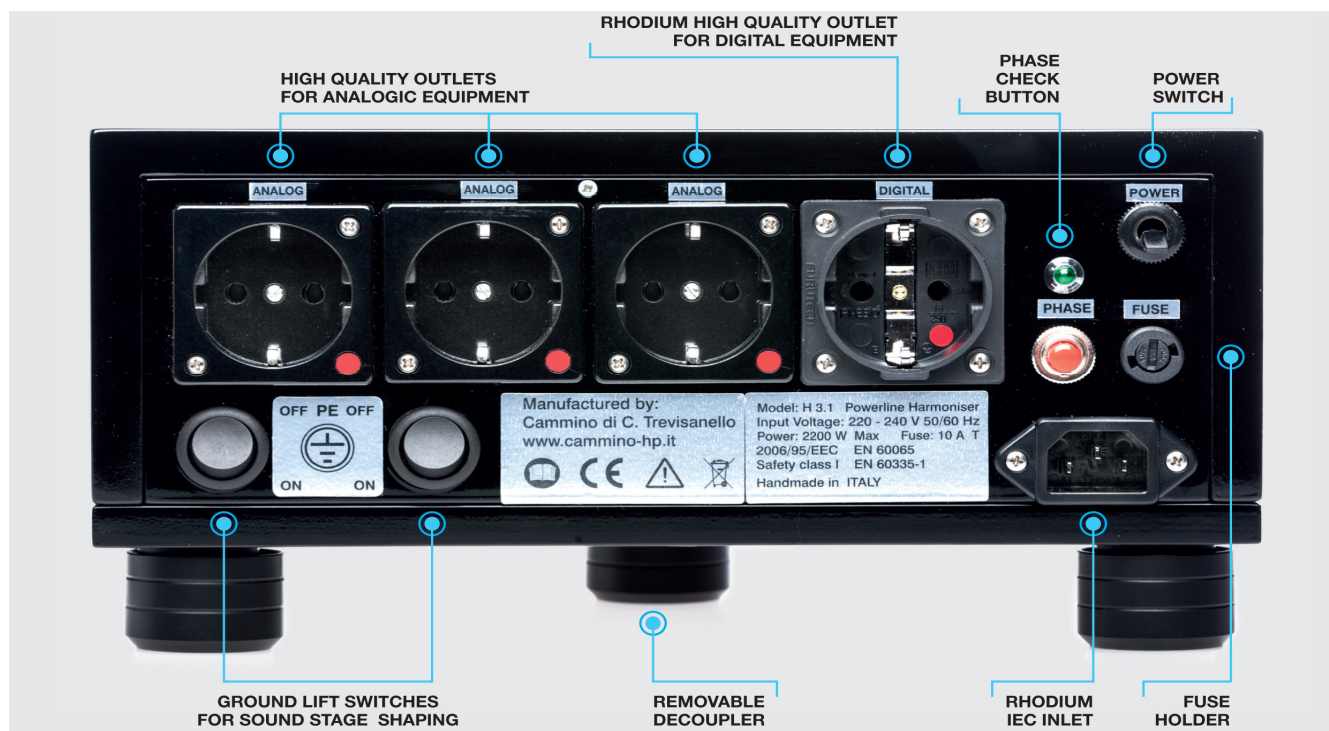
The warranty starts from the date of purchasing and it is limited to defects in materials and workmanship.

This excludes:

- Damages caused by accidents, negligence, modifications, improper use.
- Insufficient or missing earthing.
- Acts of God.

# BACK PANEL VIEW

## MOD. H 3.1 STANDARD CONFIGURATION



*Ask for Your specific configuration*

CONFIGURATIONS	ANALOG SOCKETS	DIGITAL SOCKETS
H 3.1	3	1
2.2	2	2
1.3	1	3

### TECHNICAL DATA (standard configuration)

Mains Voltage: **220 - 240V AC / 50 - 60 Hz**

Total available power: **(220V) 2.200 W**

Double pole 15 A power switch with low resistance contacts

Double pole ground lift switches with low resistance contacts

Phase-check button (to ensure the harmonizer is correctly connected to the wall socket)

Silver plated fuse holder (10 A fuse T)

Common mode noise attenuation for frequencies over 100Khz - 65dB (Max)

Differential mode noise attenuation for frequencies over 100Khz - 90dB (Max)

Proprietary completely passive design with Power Factor Correction and Total Harmonic Distorsion (THD) virtually absent

Exclusive cast made of non-conductive, anti resonant, non-magnetic, antistatic material

Size: (LxHxD) mm 290 x 145 x 215 (removable decoupler included)

Weight: Kg 5,2

**We reserve the right to change the specification without notice**

## CE CONFORMITY

Il filtro di rete H 3.1 risulta in conformità a quanto previsto dalla seguente direttiva comunitaria  
*The powerline harmonizer is in conformity with the provisions of the following EC directive*

**2006/95/CEE** (Direttiva Bassa Tensione) Materiale elettrico destinato ad essere adoperato entro taluni ambiti di tensione  
*2006/95/EEC (Low Voltage Directive) Electrical Equipment Designed For Use Within Certain Voltage Limit*

modificata dalla direttiva 93/68/CEE e che sono state applicate le norme armonizzate seguenti:  
*as amended by the 93/68/EEC directive and that the following harmonized standard have been applied:*



Sicurezza elettrica <i>Electrical Safety</i>	EN 60335-1: 2002 +A1, +A11: 2004 +A2, +A12: 2006	Sicurezza degli apparecchi elettrici d'uso domestico e similare - Sicurezza. Parte 1: Norme generali. <i>Household and similar electrical appliances - Safety. Part 1: General requirements.</i>
	EN 50366: 2003  +A1: 2006	Apparecchi per uso domestico e similare - Campi elettromagnetici - Metodi per la valutazione e le misure. <i>Household and similar electrical appliances - Electromagnetic fields-Methods for evaluation and measurement.</i>

## INFORMAZIONI SUPPLEMENTARI

*Supplementary information:*

Il prodotto e' destinato all' impiego in ambienti interni protetti in accordo con le leggi europee e le indicazioni in materia di sicurezza contenute nel manuale del prodotto; i sistemi di cablaggio destinati all' installazione del prodotto devono rispondere ai requisiti propri di sicurezza.

*The product is intended for use in internal environments. according to the European safety laws and the instructions in its manual product; the cabling systems that will be installed for the product, should be conform to their own safety requirements.*



This symbol present on the appliance, indicates that the product must be collected separately from other refuse after his lifetime is expired.  
The customer must hand over the appliance to an authorized collection center or take the appliance to a dealer when he purchases an equivalent product.

**CAMMINO**

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