

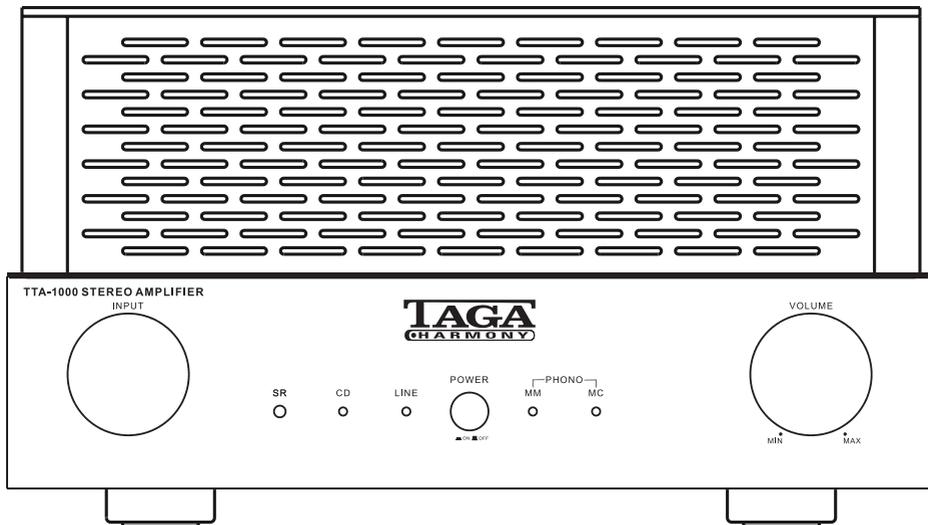
# TAGA<sup>®</sup>

## CHARMONY

To Achieve Glorious Acoustics

# TTA-1000

HIGH-END VACUUM TUBE INTEGRATED AMPLIFIER



Instruction Manual

# Introduction

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Thank you for purchasing this TAGA Harmony amplifier.

TTA-1000 is a 60W / 8ohm Pure Class A high-end vacuum tube integrated amplifier utilizing KT88 tubes in the output stage (with the fixed grid load) and a 12AX7 tube preamp section, composed of 6SN7 long-tail phase inversion drive circuit.

TTA-1000 uses audiophile-grade coupling capacitors: Evox for input tubes and Wima for connecting driver tubes with the output amp, and Rubycon capacitors in the amp section.

The amplifier sounds in a very warm, lifelike way and high dynamics.

The sound is very linear with almost no negative feedback.

High-quality toroidal EI broadband sound output transformer provides voltage stability and constant and immediately-available energy at any volume level.

The both channels use independent rectifier and filter circuits in the supply power.

The sound is natural and fresh with deep multidimensional soundstage.

The audiophile grade ALPS volume potentiometer ensures minimal noises and channels crosstalk and has excellent operational feel and limits errors between the two channels.

The high-end class, gold-plated speaker terminals and gold-plated ceramic tube sockets offer almost lossless audio signal transmission to speakers.

Analog inputs with high-end solid machined brass RCA sockets can accommodate up to 3 stereo devices including a turntable (both MM and MC cartridges) so you can enjoy music from your favorite vinyl records.

A preamplifier output is dedicated for an optional external power amplifier or powered subwoofer and speakers.

The removable IEC power cable gives you an option to upgrade your system with a premium audiophile power cable in any time.

Enjoy the analog sound at its best – Enjoy the TTA-1000!

## Cleaning

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

## Specifications

Full technical specifications are available on the [www.TagHarmony.com](http://www.TagHarmony.com) website.

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# Safety Instructions

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## IMPORTANT

READ THIS SECTION CAREFULLY BEFORE PROCEEDING!

	<b>CAUTION</b> <b>RISK OF ELECTRIC SHOCK</b> <b>DO NOT OPEN</b>	
<p><b>WARNING:</b> TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT REMOVE CHASSIS (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>		

	<p>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.</p>
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	<p>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.</p>
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**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, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

**CAUTION:** FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE THE FUSE ONLY WITH THE SAME AMPERAGE AND VOLTAGE TYPE. REFER REPLACEMENT TO QUALIFIED SERVICE PERSONNEL.

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

# Important Safety Instructions

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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 wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp, soft cloth for cleaning.
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.
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 manufacture, or sold with the product. Any mounting of the product should follow manufacture's instructions and should use a mounting accessory recommended by the manufacture.
8. Ventilation - Slots and openings in the cabinet 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 not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacture's instructions have been adhered to.
9. Power Sources - This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to 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 Polarization - This product may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
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. Lightning - For added protection for this product during a lightning 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 cable systems. This will prevent damage to the product due to lightning and power-line surges.
13. Overloading - Do not overload wall outlets, extensions 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 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 service.
17. Replacement Parts - When replacement parts are required, be sure the technician has used replacement parts specified by the manufacturer or have 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 checks to determine that the product is in proper operating condition.
19. Wall or 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 - For your safety and to protect the vacuum tubes this product may be equipped with the factory installed vacuum tube cage.

It is not recommended to remove the cage unless it is required to change the vacuum tubes.  
When the cage is removed - do not touch the vacuum tubes - they may be hot and burn the skin!

# Remote Controller

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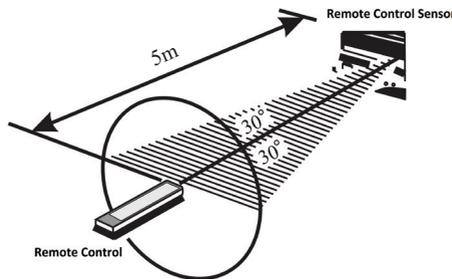
**Note! Batteries are not supplied with this product.**

1. Prepare two AAA batteries.
2. Unscrew the screws on the rear of the remote controller.
3. Remove the rear cover.
4. Insert the batteries into the battery compartment. Carefully follow the polarity diagram inside the battery compartment ( positive + and negative - symbols).
5. Reinstall the rear cover and screw in the screws.

## **Note:**

- Always use AAA batteries and do not use the rechargeable batteries.
- Do not mix new batteries with old batteries or different kinds of batteries.
- If the batteries run out, remove the old batteries and replace them with new ones within several minutes.
- If the batteries are placed incorrectly, they can cause explosion.
- Remove the batteries if the remote control is not used for a long period of time.
- Do not handle and store the batteries together with metallic tools.

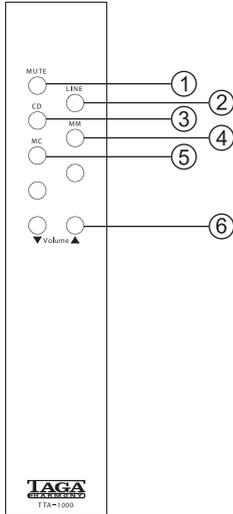
## Operating Range



Use the remote control within a range of 5 meters from the amplifier and angles of up to 30 degrees aiming at the remote control sensor.

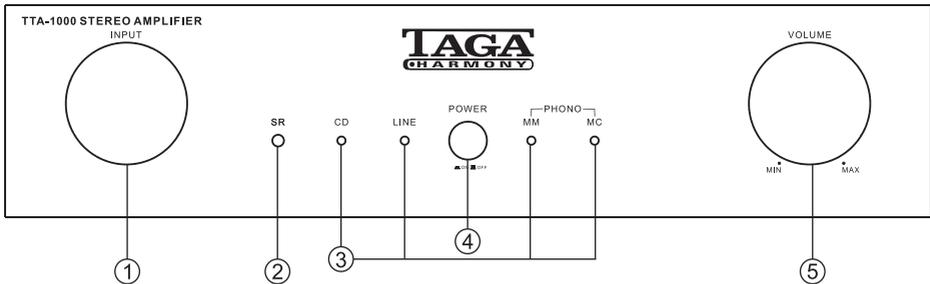
**Note:** Exposing the remote control sensor to direct sunlight or strong light may cause faulty operation.

# Remote Controller



1. Mute Button
2. Line Input Selector Button
3. CD Input Selector Button
4. Phono MM Input Selector Button
5. Phono MC Input Selector Button
6. Volume Buttons (▼/▲)

# Front and Rear Panel

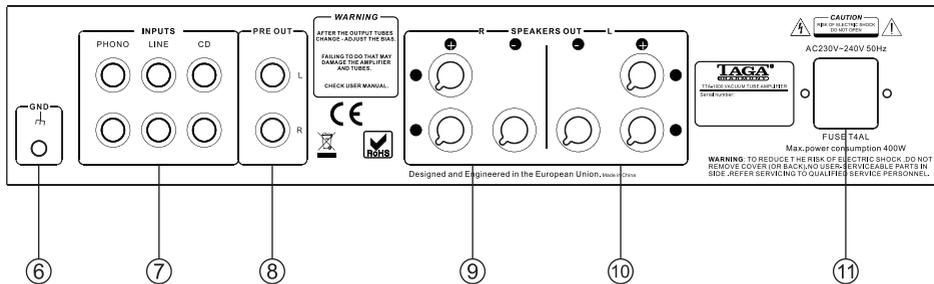


## Front Panel:

1. Input Selector
2. Remote Controller Sensor
3. CD / LINE / Phono MM / Phono MC Inputs Led Indicators
4. Power Switch (ON and OFF)
5. Volume Regulator with Power-Volume Change Led Indicator

# Front and Rear Panel

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## Rear Panel:

6. Phono Ground Screw
7. Analog Stereo RCA Inputs PHONO / LINE / CD
8. Preamplifier Stereo RCA Output
9. Speaker Right Channel Output (Speaker Connectors)
10. Speaker Left Channel Output (Speaker Connectors)
11. Power Cable Input and Fuse Box

**Note!** A blown fuse should be only exchanged for exactly the same type as indicated on the rear amplifier panel. The Power Cable should be disconnected!

# Hooking Up Speaker Cables

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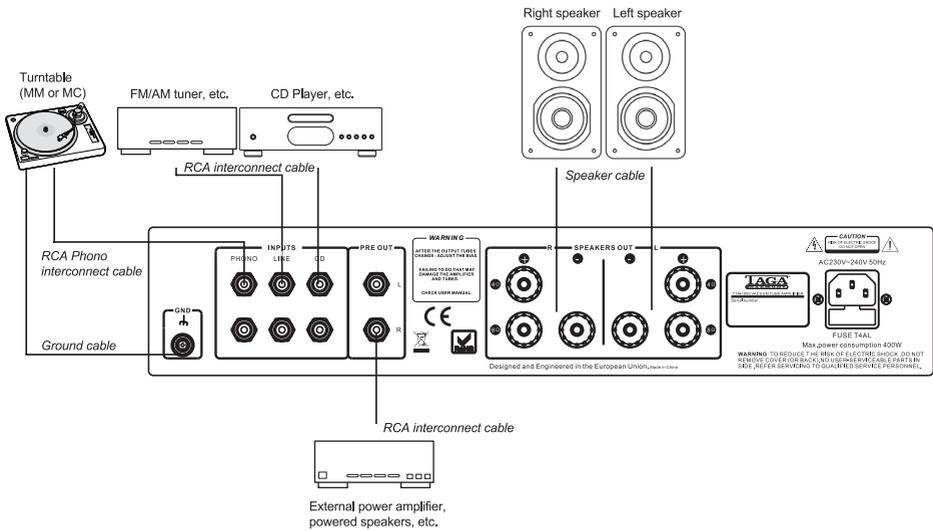
The Speaker Connectors can accommodate up to 10AWG speaker cables as well as most of popular plugs (banana etc.). A 10AWG cable is recommended for longer connections (longer than 20 meters / 66 feet). For shorter lengths you can use 12/14 or 18 AWG cables. It is recommended to leave about 150 cm (5 feet) of extra cable at the amplifier end to facilitate positioning and installation of the amplifier. Do not use staples, nails or other metal objects to secure the cables. You will get the best sound quality and least amount of hum by keeping the cables away from other electrical wires and cables.

Pay attention to connecting the polarity of the amplifier correctly with the speakers in each speaker group (speakers should be connected RED + with RED + amplifier connector, BLACK – with BLACK – amplifier connector).

- 8Ω** For **8 ohm speakers** connect RED+ to the Speaker Connectors marked with the "8Ω" mark. For **6 ohm speakers** connect RED+ to the Speaker Connectors marked with the "8Ω" mark.
- 4Ω** For **4 ohm speakers** connect RED+ to the Speaker Connectors marked with the "4Ω" mark.

Before connecting make sure that your amplifier is turned off.  
Please refer to your speaker instruction manual for more information.

# Hooking up the Amplifier



## Important Note!

**This amplifier requires the speakers to be connected before powering on.  
Never turn the amplifier on without the speakers being connected!  
This can damage the tubes and may void your warranty.**

1. Make sure the amplifier is turned off (the Power Switch **OFF** and the Power Cable is removed).
2. Turn the Volume Regulator to MIN (max counter clockwise).
3. Using speaker cables (not supplied with this product) connect your speakers to the SPEAKERS OUT connectors located on the rear of the amplifier (check "Hooking Up Speaker Cables" for more details).
4. If you want to play music from analog audio source devices (CD player, FM tuner etc.) : using RCA interconnect cables (not supplied with this product) connect them to the analog inputs (CD, LINE).
5. If you want to play music from a turntable: using an RCA Phono interconnect cable (not supplied with this product) connect the turntable to the PHONO input. Screw in a ground cable of the turntable to the Phono Ground Screw.
6. Pre-amplifier Output (PRE OUT) : this amplifier is equipped with the pre-amplifier output. Using an RCA interconnect cable (not supplied with this product) you can connect to it external equipment (power amplifier, powered speakers, active subwoofer etc.).  
The PRE OUT level is variable controlled according to the Volume Regulator.
7. Your amplifier is ready for operation.  
**Note!** Avoid to short-circuit of cables – it can damage this amplifier or speakers. This may void your warranty.

# Hooking up the Amplifier

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Use only 4~8 ohms impedance speakers

**Note!** Only speakers within range of impedance 4 - 8ohm can be connected. Connecting speakers outside this range can damage this amplifier and/or speakers. This may void your warranty.

## Operation

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1. Plug the Power Cable to the amplifier and into the electrical outlet.
2. Turn on the amplifier – press the Power Switch (the Power Switch **■** ON ). The status LED located on the Volume Regulator should turn red in approximately 30 seconds. The amplifier is in the tube warm up mode and is muted. After blinking, the status LED will go off. The CD input LED indicator will lit. If the CD input LED indicator is not lit, it means that the amplifier is working in abnormal condition (a protection mode) – turn off the power, unplug the Power Cable and check whether some of the cables are not short circuited. After fixing the cables turn the amplifier on.
3. By rotating the Input Selector knob on the front panel or pressing one of input selector buttons on the remote controller, select which audio source you want to play. Make sure the audio source is properly connected to the rear panel inputs. The selected source is indicated by one of the LED indicators on the front panel.  
**Note!** Depending on the type of phono cartridge your turntable is equipped with, choose the MM or MC input.
4. Turn on your audio source and start playback.
5. Regulate volume on the amplifier to adjust the level of sound.

**Note!** Check “Additional Information” for other useful operating instructions.

**Note!** High volume levels can damage this amplifier and/or speakers. This may void your warranty.

### **Volume Regulator (front panel and remote controller):**

Using the Volume Regulator on the front panel or down *s* and up *w* buttons on the remote controller, you can adjust the sound volume from minimum (the knob – max counterclockwise) to maximum (the knob – max clockwise). Distortion and sound quality worsening may occur when the knob is in the maximum position. It may damage the amplifier or speakers. This may void your warranty.

### **MUTE (remote controller):**

During playback press this button to stop amplifier audio output (no sound will be audible in speakers or through the PRE OUT).

Press it again to recover the audio signal output back.

# Additional Information

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## Break-In

Your TAGA Harmony amplifier sounds great immediately after it is taken out of the carton but as all vacuum tube amplifiers, this amplifier requires a “break-in” period to reach its full sonic capabilities.

During the “break-in” period it is recommended to operate the amplifier at moderate volume levels.

The first level of the “break-in” is reached after approximately 10 hours of play.

The optimal level of the “break-in” is reached after approximately 40 to 60 hours of play.

It is recommended to avoid one-time short periods of operation unless the amplifier reaches the first “break-in” level. When the amplifier is turned on, it should operate for around 4-6 hours.

## Turn off procedure

Make sure to turn off the amplifier first when powering down your system.

**Note!** If the amplifier was turned off even for a short period of time, you should wait at least 2 minutes before turning it back on. Do not turn it ON then OFF and then ON again in quick succession.

Follow this procedure each time you turn your amplifier OFF / ON. This precaution will minimize the stress (high voltages) on internal components.

## Tube Cage

For your safety and to protect the vacuum tubes this amplifier is equipped with the vacuum tube cage which is factory installed.

It is not recommended to remove the cage unless it is required to change the vacuum tubes.

When the cage is removed - do not touch the vacuum tubes - they may be hot and burn the skin!

To remove the cage:

1. Turn off the amplifier.
2. Unplug the Power Cable from the electrical outlet.
3. Wait for approximately 30 minutes to cool down vacuum tubes.
4. Remove the cage by pulling it in upward.

Make sure to reinstall the cage for the regular operation.

## Vacuum Tube Replacement

The lifetime of vacuum tubes may vary and depends on their operation time and ambient temperature, playback volume levels and the number of on and off cycles.

**Note!** The warranty time for vacuum tubes is shorter than for other components of this device - for more details check your warranty terms or contact a local dealer.

Replacement vacuum tubes are not supplied with this product.

To replace the vacuum tube:

1. Remove the tube cage – check “Tube Cage” for more details.
2. Make sure that the vacuum tubes are cool.

## Additional Information

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3. To protect the vacuum tubes during this operation, please put on the cotton gloves which are supplied with this product.
4. The vacuum tubes are installed in sockets. Remove the vacuum tube you want to replace by gently pulling it in the tube sockets.
5. Make sure to replace the vacuum tube with the same type or with another type which is a direct equivalent of the factory installed one.  
Gently but firmly place the new vacuum tube in the socket.  
**Note!** Make sure that pins of each tube are firmly and fully inserted into tube socket holes otherwise it may result in damaging this amplifier and/or tubes. This may void your warranty.
6. If you change the output power vacuum tubes (KT88) make sure to “bias” your amplifier – check “Vacuum Tube Biasing” for more details.
7. Make sure to reinstall the cage for the regular operation.

### **Vacuum Tube Biasing (KT88)**

Only the output power tubes (KT88) need to be biased manually. This procedure requires to open the amplifier and we recommend to contact TAGA Harmony authorized service center to perform it.

### **Note! The bias procedure has to be always performed in case:**

- If any output power tube (KT88) is changed for another one (e.g. for a new tube).
- If the power tubes (KT88) are removed and installed back in different tube sockets than those before the removal.

Not performing the bias procedure or performing it improperly can damage this amplifier and/or tubes. This may void your warranty.

# Specifications

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Power Output:	2 x 60W Class A
Output impedance:	4ohm, 8ohm
Vacuum Tubes:	4 x KT88, 2 x 6SN7, 1 x 12AX7 Triode operation mode
THD:	≤0.35%(1KHz/2V)
Signal/Noise ratio:	≥89db
Frequency Response:	10Hz – 30kHz (+/- 1dB)
Inputs:	Analog: RCA Stereo: CD, Line, Phono (MM/MC)
Outputs:	RCA Pre-Out
Line inputs:	Sensitivity: 450mV Impedance: RCA 50K ohm
Phono input (MM   MC):	Input impedance 47Kohms   47ohms Gain 40dB   60dB Output voltage 400mV   400mV THD ≤ 1%
AC Power, Power Consumption:	230-240V 50Hz, 400W
Dimensions (H x W x D):	22.5 x 45 x 37.5 cm
Weight (net):	24 kg / pc.

We reserve the right to change the technical data and the design of the product without notice as a result of further development.

# Notes

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# Notes

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**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.**

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## **Kit Content:**

Amplifier	1EA
Remote Controller	1EA
Power Cable	1EA
Cotton Gloves	1PAIR
Instruction Manual	1EA

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Your product is marked with the symbol as showed on the left.  
For EU (European Union) member users:  
This product has been tested and found in compliance with requirements of the European Community 2014/30/EU (EMC) & 2014/35/EU (LVD) directives.



### **IMPORTANT!**

Your product is marked with the symbol as showed on the left.  
For EU (European Union) member users:

According to the WEEE (Waste electrical and electronic equipment) Directive, do not dispose of this product as household waste or commercial waste. Waste electrical and electronic equipment should be appropriately collected and recycled as required by practices established for your country. For information on recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product.

#### **TAGA EUROPE**

POLPAK POLAND Sp. z o.o.  
AL.JEROZOLIMSKIE 333A  
05-816 REGULY k/WARSZAWY, POLAND  
Email: sales@TagaHarmony.com

**[www.TagaHarmony.com](http://www.TagaHarmony.com)**