



Owner's Reference

Stellar™ M700 Mono Amplifier





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Safety Information

Stellar™ M700 Mono Amplifier

Important Safety Instructions



READ AND FOLLOW ALL INSTRUCTIONS
HEED ALL WARNINGS



WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRICAL SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE. OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHOULD NOT BE PLACED ON THE APPARATUS. THIS APPARATUS MUST BE CONNECTED TO A MAINS SOCKET OUTLET WITH A PROTECTIVE EARTH CONNECTION.

Clean only with a dry cloth. Do not place flammable material on top of or beneath the unit.

All PS Audio components require adequate ventilation at all times during operation. Rack mounting is acceptable where appropriate.

Do not remove or bypass the ground pin on the end of the AC cord. All PS Audio® products ship with a grounding-type plug. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus. Unplug this apparatus during lightning storms.

When making connections to this or any other component, make sure all components are powered off. Turn off all systems' power before connecting the PS Audio® component to any other component. Make sure all cable terminations are of the highest quality.

THERE ARE NO USER-SERVICEABLE PARTS INSIDE THIS PS AUDIO PRODUCT. REFER ALL SERVICE NEEDS TO QUALIFIED SERVICE PERSONNEL.

Please contact your authorized dealer, distributor, or PS Audio® directly if you have any questions or concerns that are not addressed in this reference manual.

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This product was designed and assembled in Boulder, Colorado with globally sourced components.

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Introduction

Stellar™ M700 Mono Amplifier

Welcome

Congratulations on your purchase of the Stellar M700 Mono Amplifier. Stellar proudly represents our company's commitment to honoring music and preserving its magic. Every effort to put musical performance above any other consideration has been lavished upon this product. It is personal. PS Engineer Darren Myers put his heart and soul into its design and he's rightly proud of the results.

Stellar's design imperative was to produce a truly musical sounding power amplifier that proudly competed with any amplifier under \$5,000. Myers took the challenge and set to work on a new concept—a hybrid that would combine the best of today's technology with time-honored techniques leveraging PS Audio's forty plus years of experience.

The results are extraordinarily musical. Even from the earliest prototype we knew the Stellar power amplifier series was going to be something special. Stellar amplifiers never draw attention to themselves, a rare quality in amplifiers of any price.






Combine the Stellar power amplifier with its mate, the extraordinary Stellar Gain Cell DAC for a complete system. The synergy between these two units is remarkable.

Each Stellar product is hand-built in our Colorado facility. We take great pride in what we build, how it sounds, and how the end user is treated. We're PS Audio, and making music and keeping our customers happy and thrilled is what we're all about.

Contact Information

PS Audio, Inc.
4865 Sterling Drive
Boulder, CO 80301
1 (800) PSAUDIO
service@psaudio.com
www.psaudio.com

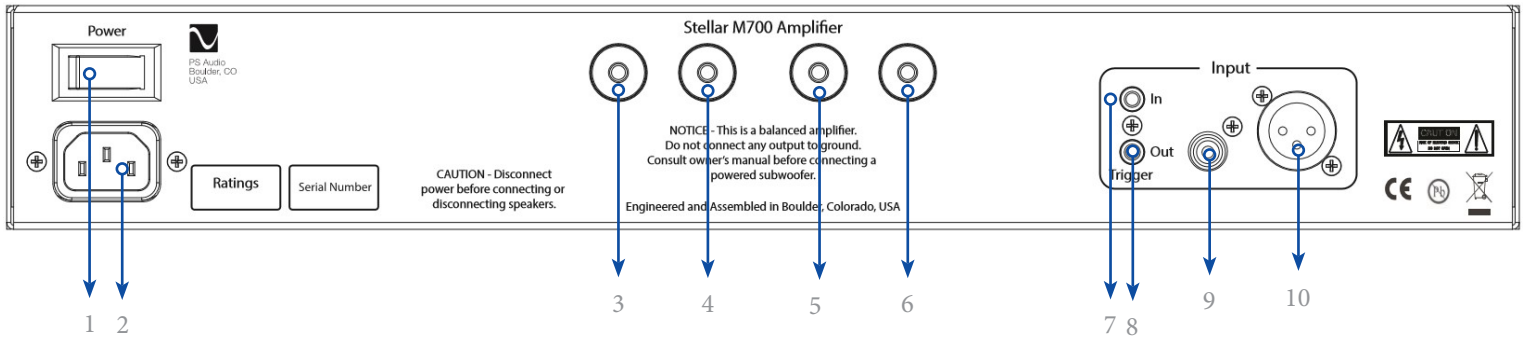
Symbols Found On The M700

-  Indicates compliance with European Union Legislation for relevant safety (Low Voltage Directive 2006/95/EC) and EMC (EMC Directive 2004/108/EC) requirements.
-  Is intended to tell the user that parts inside the product are a risk of electric shock to persons.
-  Is intended to tell the user that important operating and servicing instructions are in the papers with the appliance.
-  Signifies that the instrument complies with European Union Waste Electrical and Electronic Equipment Directive.
-  Indicates that the unit is in compliance with the European Union Reduction of Hazardous Substances Directive.



Getting Started

Stellar™ M700 Mono Amplifier



Rear Panel View

1	Master Power Switch	6	Positive Speaker Output
2	IEC AC Power Inlet	7	5 Volt - 12 Volt Trigger Input
3	Negative Speaker Output	8	5 Volt - 12 Volt Trigger Output
4	Positive Speaker Output	9	Single-Ended Input
5	Negative Speaker Output	10	Balanced Input

Installation Considerations

Once your Stellar M700 amplifier is unpacked, you'll need to find a convenient place to set it. We recommend floor mounting on a platform or shelf mounting as close to the speakers as possible. If the source equipment (preamp or DAC) is far away from the M700, it is recommended to use balanced interconnects if possible. Placement of the Stellar M700 is important from several aspects: proper cooling and best audio practices. Make certain wherever you place the M700 there is adequate ventilation space above and below the unit.

Power Cables

Once you have chosen the location for the Stellar M700, you may use either the provided power cable or an aftermarket power cable to connect your unit to AC power. For best results, we strongly recommend the use of a PS Audio PerfectWave® Power AC cable, or any high-quality aftermarket power cable. It is always preferable to feed your equipment using an excellent power cable, as there will be a significant performance improvement over the stock power cable.

Connecting Cables

Connecting cables matter. Carefully choose your speaker cables and connecting cables to the equipment. Our preference for input cables is balanced, XLR type, but well built single ended RCA cables are fine as well. Speaker cables can make or break the performance of an amplifier and great care should be taken in using only the best match for your loudspeakers and Stellar amplifier.



Getting Started

Stellar™ M700 Mono Amplifier

Country Specific AC Voltages

The Stellar M700, as with all PS Audio products, is country specific to its incoming AC voltage. This means the unit can only be operated at its preset voltage, such as 230 volts for most of Europe and Asia, 100 volts for Japan, and 120 volts for the US and other similar countries. Immediate damage can occur if you try and power the Stellar with a voltage it was not designed to operate on.

Connecting the Speaker Cables

With the amplifier firmly seated where you have selected, it is time to connect the speaker cables. The Stellar M700 uses custom machined connectors. These connectors were specially engineered to match the performance specifications of the Stellar Amp.

The connectors can accept spade, banana, or wire connections. There are two sets for each channel on the M700. Most systems will use only one set of the binding posts to connect the speaker cable. Use only the finest speaker cables and connectors.

WARNING! Never connect speaker cables while the amp is on. If one speaker lead is connected (+ or -) and the other lead brushes up against the chassis, there is the potential to present the speaker with 25VDC. This voltage has the potential to damage a driver (usually the woofer) in a speaker.

Black Terminal is not Ground

Its important to note that the Stellar Amplifier is a fully balanced BTL amplifier. As such the Black terminal is not ground. If connecting the Stellar M700 to a REL Acoustics subwoofer, its important to consult the manufacturer's service documentation to ensure the M700 is appropriate for the subwoofer.

Biwire

Some may wish to biwire their speakers to the M700. This practice involves using one shotgun configured cable or two separate cables. In either case, connect one cable to one set of binding posts, the other to the second set. On the loudspeaker side, one pair of cables goes to the tweeter binding posts, the remaining set to the woofer section.





Getting Started

Stellar™ M700 Mono Amplifier

Plugging in the Connecting Cables

The Stellar M700 amplifier accepts either single-ended RCA or balanced XLR connections to the preamplifier or DAC feeding it. Regardless of the cable chosen, the Stellar will treat the incoming signal in such a way that it becomes balanced throughout the amplifier's circuitry.

Our preference for connection to the preamplifier is balanced XLR cables. Balanced signals are lower in noise and take advantage of common mode rejection. Single-ended RCA cables can also be good, but we shy away from their use at lengths exceeding two meters.

Plugging in the Power Cable

Once connections have been made to both the loudspeakers and the preamplifier, it is time to plug the AC power source in.

The M700 is voltage specific. It ONLY operates at the voltage set at the factory. Do NOT plug the M700 into a voltage other than what it is set for. Failure to observe this rule may damage the Stellar.

You are now ready to enjoy your first listen to the Stellar M700 Mono Amplifier. Making sure the preamplifier and the system is on, push the standby button on the top left corner of the M700 front panel. When the blinking stops and the PS logo turns steady on, the amplifier is ready to play music.

WARNING! DO NOT MAKE CONNECTIONS OR PLUG THE UNIT INTO AC POWER WITH THE REAR POWER SWITCH IN THE ON POSITION. THIS CAN HARM THE DEVICE AND CAUSE DAMAGE THAT WILL VOID THE WARRANTY.





Operation Guide

Stellar™ M700 Mono Amplifier

Power Up

Upon startup, it's common to hear a small sound from the connected speakers. This is normal and is not harmful to the loudspeakers.

Output Disabled Mode

We recommend leaving the rear panel power switch active at all times, and placing the unit in Output Disabled Mode when finished listening. Output Disabled Mode can be activated by pressing the front panel PS Audio logo button, located on the upper left hand corner of the Stellar M700's front panel. When the logo button is not lit, the amplifier is in Output Disabled Mode. This mode keeps the amplifier in a reduced power mode, maintaining excellent performance benefits while consuming little power.

Trigger Input/Output

The Stellar M700 amplifier has a 5V-12V trigger for remotely powering the unit on and off. It is important to note that the trigger "out" is intended to loop through to a second power amplifier. The Stellar amplifier does not generate a trigger signal. An input trigger DC voltage is required.

Logo Button Indicators

There are four conditions for the Stellar M700 Amplifier:

Off - The Logo Button is not illuminated and the unit is in Output Disabled Mode.

On - The Logo Button is fully illuminated. The M700 is powered on and ready.

Flashing Slow - When the Logo Button is flashing slowly, it is in the boot sequence. The Logo Button will flash slowly for 10 seconds during power up, then the Logo Button will become steady.

Flashing Fast - When the Logo Button is flashing quickly and then powers off, the unit is in Fault Protection Mode. The Logo Button will flash quickly for 5 seconds and then the unit will power down. Read more about Fault Protection Mode in the troubleshooting section.





Troubleshooting

Stellar™ M700 Mono Amplifier

Fault Protect Mode

The Stellar M700 is designed to protect itself if it detects a dangerous signal surge or transient that could damage the circuit. In these instances, the M700 amplifier goes into Fault Protection Mode. If you see the blue logo button flashing quickly and the Stellar turns itself off, then it has entered this mode. This can happen if the M700 is heavily overdriven.

If this occurs, remove power from the amplifier and disconnect all inputs and outputs. Then, power the M700 back on and verify that it powers on normally. If this is the case, then power off the amplifier and re-connect the speakers and sources. Try playing music back at a low level at first.

If after removing all connected equipment the M700 continues to enter Fault Protection Mode, please contact PS Audio.

No Sound Comes From the M700

Check to make sure power is going into the M700 and that it is connected to a live source. Make sure the rear panel master power switch is in the on position. Push the front panel logo light. Check the speaker cable connections to the speakers.

Hum

If there is hum coming from your loudspeakers it may be coming from your preamplifier, or it may come from an interaction between components in your system and the M700 amplifier. This type of interaction is known as a ground loop.

The first step to determine where the hum is coming from is to place the Stellar M700 in Output Disabled Mode and remove the input connection from the preamplifier. Turn the amp back on and see if there is hum. Chances are good that there will not be. If the hum is a low frequency soft sound, see if its level goes up and down with the preamp volume control. If it does, the problem is in the preamplifier. If not, it may be in your connecting cables. Try a different set. If the hum is a sharper buzz it is most likely a ground loop.

Ground Loops

The easiest way to figure out where ground loop problems lie is by the process of elimination. You need to determine where the hum or buzz is coming from within your system. If the hum/buzz goes away when you remove the inputs to the power amp, your next step will be to reconnect the amp and move further down the chain. It is important to do this in the correct order and take the time to perform the test in a methodical step-by-step manner. If you have a preamp, or processor that is feeding the power amp, your next step would be to disconnect all inputs to the preamplifier or processor. Once these are disconnected, and the preamp or processor is connected only to the power amplifier, turn the system on and listen for hum. Should the hum now appear, it is a problem with your preamp or processor, or their interaction with the power amp. Before returning the preamp or processor to the manufacturer, try a cheater plug to break the ground loop.



Troubleshooting

Stellar™ M700 Mono Amplifier

Ground Loops (Continued)

Cheater plugs are simple devices that convert a three prong AC plug into a two prong AC plug. In the act of converting three prongs to two prongs, they disconnect the ground from the wall socket. Try one of these on the preamp. If you determine that there is still no hum present when the preamp, processor, or receiver is connected with no inputs, then selectively begin plugging in your various inputs one at a time. After each connection, check for hum until you discover the culprit. Use the same method described above to remove the ground on the offending piece of equipment. As with all products using switched-mode power supply, proper grounding is important for both safety and performance. You should not remove or defeat the ground pin of your M700 for any reason.

Surround processors and any device that is connected to a television cable or satellite dish can cause a loud buzz and should always be suspect. If, by the process of elimination described above, you determine it is a component like a cable TV box that is causing the hum/buzz to occur, and using a cheater plug doesn't help matters, it may be necessary to isolate the cable connection (CATV) with an isolation transformer. This inexpensive device is available at most department store type outlets and is sometimes called a 'matching transformer'. If you have problems finding one, call your local cable TV company for advice. The matching transformer will be placed between the cable TV cord and the cable box, TV, or processor.

Something Unrelated Causing Hum

Just remember, take the system down to its simplest level of connection. Find a way to hook the system up with as many pieces of the system not connected as possible. Keep it simple and get it to the point where the hum's gone. Then, start adding back components one at a time until the hum returns. Finding the problem is 9/10th of the work in finding a solution.

No Bass

It may be that you have the polarity of the amplifier loudspeaker connection wrong on one channel. When out of phase, polarity will cause bass cancellation and should be avoided. Check to make sure the red terminal on the M700 goes to the red terminal on your loudspeaker.

Fuses

There are no user serviceable fuses in the Stellar M700 Mono Amplifier.



Specifications

Stellar™ M700 Mono Amplifier

M700 Specifications

Stellar M700 Mono Amplifier	
Unit Weight	13 lbs [5.9 kg] (each)
Unit Dimensions	17"W x 3"H x 12"D (13"D w/connectors) 17"W x 6"H x 12"D (Stacked)
Shipping Weight	16.5 lbs [7.5 kg] (each)
Shipping Dimensions	22"W x 8"H x 17"D (each)
Color Options	Black Silver
Voltage Options (Factory set only)	Japan 100V North America 120V Europe/Asia/Australia/New Zealand 230V
Mains Power Inputs	IEC C14
Idle Power Consumption	23W
Accessories Included	US (NEMA 5-15P) (all versions) Schuko (CEE7/7) (230V version) UK (BS 1363) (230V version)
Audio Inputs	RCA (Unbalanced) XLR (Balanced)
Speaker Outputs	Copper base nickel plated binding posts (2 pair)
Other	DC Trigger Input 3.5mm 5-15VDC
Warranty	3 years parts and labor



Specifications

Stellar™ M700 Mono Amplifier

M700 Specifications
(Continued)

Signal	
Gain	30.5dB +/-0.5dB
Sensitivity for rated output power	1.6V
Noise	1kHz@700 Watts < -105dB
Input impedance	Unbalanced 50KΩ Balanced 100KΩ
Output Impedance	50Hz, 2.8VRMS <0.007Ω
Damping factor	50Hz. 2.8VRMS 8Ω >1100 4Ω >550
Frequency Response	2.8VRMS into 4Ω 10Hz – 20KHz +/- 0.5dB 10Hz – 50KHz +0.1/-3.0dB
THD&IM	
1KHz, 1W/4Ω	<0.02%
10-20KHz, 1W/4Ω	<0.02%
10-50KHz, 1W/4Ω	< 0.05% (90kHz BW)
1KHz, 87.5W/4Ω	< 0.015%
Output Power	
	120vac mains, 1kHz, 1% THD
8Ω	350W minimum
4Ω	700W minimum
2Ω	Stable for musical transients



Warranty Information

Stellar™ M700 Mono Amplifier

Registering Your Product

By registering your product, you are validating the start date of your limited warranty. This limited warranty is in effect for 3 years from the date the unit was first purchased from PS Audio or its dealers and agents. If you do not register your product within 30 days of service, a copy of your purchase receipt from an authorized PS Audio dealer may be used as proof of purchase to establish the warranty start date. If no proof of purchase from an authorized PS audio dealer or registration is provided, the production date of the product will be used to determine the warranty start date. You can register your product online, by phone, by mail, or by email.

What This Warranty Covers

This warranty covers defects in material and workmanship for products purchased from PS Audio or its authorized dealers and agents. In the event your product fails, your sole remedy under this limited warranty shall be to return the product to PS Audio or an authorized PS Audio repair center. At the option of PS Audio, the product will be repaired without charge for parts or labor, replaced, or the purchase price refunded through the original point of purchase.

Shipping

You are responsible to pay for the safe and proper shipment of the warranted product to PS Audio or its authorized repair center. Under this limited warranty, PS Audio or its authorized repair center will pay the cost of returning the repaired or replacement product to you.

What This Warranty Does Not Cover

This warranty does not cover damage due to:

- Accidents, carelessness, improper transportation, misuse, neglect, or abuse
- Failure to follow the operating instructions that are provided by PS Audio in the Owner's Reference Manual (available for download at www.psaudio.com)
- Use in any manner inconsistent with PS Audio's operating instructions (available for download at www.psaudio.com)
- Lack of routine maintenance
- Connection to an improper voltage supply
- Alterations or modifications to the unit
- Improper or unauthorized repair, including repairs not authorized by PS Audio or a PS Audio authorized repair center
- Fire, lightning, flood, "Acts of God," or other contingencies beyond the control of PS Audio
- Products purchased through an unauthorized source (if you have questions as to whether or not a dealer is authorized, please contact customer support at www.psaudio.com)
- Products with a factory-applied serial number that has in any way been altered, defaced, or removed



Warranty Information

Stellar™ M700 Mono Amplifier

Limitations Under This Warranty

In no event will PS Audio's liability to you exceed the original purchase price of your unit. This warranty does not cover the cost of custom installation, customer instruction, setup adjustments, or signal reception problems. Consequential and incidental damages are not covered under this warranty. However, some states do not allow the exclusion or limitation of incidental or consequential damages, so this limitation or exclusion may not apply to you. In the event that your warranted product cannot be repaired, PS Audio will either replace or refund the cost of the unit. We reserve the right to replace any out-of-stock, discontinued, or limited edition products with a comparable product. Discontinued products may not be available for warranty replacement.

Warranty Transfer

This warranty is for the benefit of the original purchaser of the product. The warranty may be transferred to a subsequent purchaser during the 3 year warranty period. To do this, you must contact PS Audio directly to set up a transfer of warranty registration.

Your Serial Number

Your Purchase Information

Date of Purchase



Service Information

Stellar™ M700 Mono Amplifier

Warranty Service Within North America

Please contact PS Audio customer support for service assistance, help with locating an authorized PS Audio repair center, help with the operation of a product, or for more information.

Obtaining An RMA#

In order to receive warranty service, you must first obtain a Return Merchandise Authorization Number (RMA#) prior to returning any item. Please contact PS Audio or an authorized PS Audio repair center to receive an RMA#. The RMA# must be on all returned items. If it is not clearly marked, PS Audio will return the package back to you, freight collect.

Packaging and Shipping

Original packaging should be used for the safe transit of your PS Audio unit to the repair center. If you do not have the original packaging, PS Audio can sell and ship replacement packaging to you. You are responsible for the cost of shipping the product to a PS Audio authorized repair center. You should insure the product for its full retail cost, in the event it gets lost or damaged in transit. PS Audio is not responsible for damage incurred during the transit of products sent to us. Shipping your product in non-PS Audio packaging may void this warranty. PS Audio reserves the right to charge you for new factory packaging to return your product after a repair.

State Law

This warranty gives you specific legal rights. You may also have other rights, which vary from state to state.

International Warranty Service

PS Audio has authorized distribution in many countries of the world. In each country, the authorized importing distributor has accepted the responsibility for warranty of the products sold by that distributor. Warranty service should be obtained where the product was purchased.

Changes To Our Products

PS Audio reserves the right to modify the design of any product without obligation to purchasers of previously manufactured products, and to change the prices or specifications of any products without notice or obligation to any person.

 P S A U D I O

