



OWNER'S MANUAL

STAGE MONITOR



PM-200A

Powered Personal Stage Monitor

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NADY AUDIO™



Congratulations—you have purchased one of the finest personal stage monitors on the market today. This unit was developed using the expertise of professional sound engineers and working musicians.

You will find that your new NADY AUDIO Powered Personal Stage Monitor has superior performance and greater flexibility than any other monitors in its price range.

The PM-200A Powered Personal Stage Monitor is the perfect tool for monitoring audio on stage or in rehearsal. This unit puts the controls at your fingertips so you'll never have to scream for "More Monitors!" again. The speaker system is tailor-made to reduce feedback while allowing vocals and instruments to stand out in the mix. Simply input a line level feed from the main or monitor mixer and adjust the EQ's and Volume to your personal liking. Or, you can input your instrument/vocal signal directly, before outputting to the main PA, to hear yourself solo. With added features like Headphone outputs, Line outputs, and External Speaker outputs, there are any number of PM-200A configurations to suit your special needs. You'll hear yourself loud and clear and never miss the bridge again with the PM-200A by your side!

Please read this manual carefully to get the most out of your new unit. Thanks for selecting Nady Audio as your choice in personal stage monitors.

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FEATURES

- Designed to reduce stage clutter and volume by putting the sound where you can most use it—the compact, rugged, lightweight PM-200A can be mounted on a mic stand (with optional mic stand mount adapter if needed), set on a keyboard, amp, or table for effective up-close monitoring, or as a stage monitor with 4 different angled positions for optimum placement and versatility.
- Powerful internal 150W RMS amp can power internal speakers plus up to four PM-100 Personal Stage Monitors using the two External Speaker outputs.
- Specially designed dual ferro-fluid 5" drivers offer superior gain and optimum intelligibility at key vocal/instrument frequencies with ultimate feedback rejection. Maximum 125dB maximum SPL cuts through even the loudest ambient noise clutter.
- Balanced 1/4" TRS and XLR input jacks (can be used simultaneously if desired), Volume control, 3-band EQ controls (High, Mid, Bass), front baffle Power On and Clipping LED indicators.
- High powered Headphone Output and convenient 1/4" balanced Line Output for daisy chaining with other PM-200A, or connecting to mixers and PA's.
- Amplifier's integrated low-noise/distortion Mosfet outputs offer thermal, short circuit, and antithump on/off protection. Externally selectable 115VAC or 230VAC operation.

WARNING



An equilateral triangle enclosing a lightning flash/arrowhead symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure which may be of sufficient magnitude to constitute a risk of electric shock.



An equilateral triangle enclosing an exclamation point is intended to alert the user to the presence of important operating and service instructions in the literature enclosed with this unit.

IMPORTANT SAFETY INSTRUCTIONS

When using this electronic device, basic precautions should always be taken, including the following:

1. Read all instructions before using the product.
2. Do not use this product near water (e.g., near a bathtub, washbowl, kitchen sink, in a wet basement, or near a swimming pool, etc.).
3. This product should be used only with a cart or stand that will keep it level and stable and prevent wobbling.
4. This product, in combination with headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
5. The product should be positioned so that proper ventilation is maintained.
6. The product should be located away from heat sources such as radiators, heat vents, or other devices (including amplifiers) that produce heat.
7. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product. Replace the fuse only with one of the specified type, size, and correct rating.
8. The power supply cord should: (1) be undamaged, (2) never share an outlet or extension cord with other devices so that the outlet's or extension cord's power rating is exceeded, and (3) never be left plugged into the outlet when not being used for a long period of time.
9. Care should be taken so that objects do not fall into, and liquids are not spilled through, the enclosure's openings.
10. The product should be serviced by qualified service personnel if:
 - A. The power supply cord or the plug has been damaged.
 - B. Objects have fallen into, or liquid has been spilled onto the product.
 - C. The product has been exposed to rain.
 - D. The product does not appear to operate normally or exhibits a marked change in performance.
 - E. The product has been dropped, or the enclosure damaged.
11. Do not attempt to service the product beyond what is described in the user maintenance instructions. All other servicing should be referred to qualified service personnel.

PANEL CONTROLS AND CONNECTIONS

1. INPUTS

The electronically balanced XLR MIC input is designed to accept signals from any balanced or unbalanced low impedance (Low Z) microphone. This input can also be used for low line level signals. Make sure to turn down the preceding unit to avoid distortion. The XLR jack is configured for: Pin 1 = ground, Pin 2 = positive (+), Pin 3 = negative (-). Note, the Mic input is more sensitive than the Line input.

The 1/4" TRS LINE input is designed to accept balanced or unbalanced line level signals such as those from keyboards, drum machines, or samplers. If a balanced signal is to be connected to the line input, then a 1/4" TRS (stereo) phone plug should be wired for: Tip = positive (+), Ring = negative (-), Sleeve = ground.

Note: Both Mic input and Line input can be used simultaneously if desired, however audio levels cannot be adjusted separately.



2. LINE OUT

This 1/4" unbalanced output can be used to daisy-chain multiple PM-200A or send the input signal directly to a mixer, PA system, or recording device. The Line Output is not affected by the Volume controls or EQ.



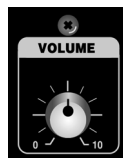
3. VOLUME

This adjusts the signal level sent to the internal speakers, external speaker, and headphone outputs.

MAKE SURE TO AVOID EXCESSIVE CLIPPING OF THE POWER AMPLIFIER!!!

The Volume should be adjusted to be comfortably audible without excessive clipping. The red clipping LED indicator, located on the front baffle, will light when the amplifier is within 3dB of clipping. It is acceptable if the red LED lights occasionally. If the red LED lights more than occasionally, you should turn down the volume to avoid audible distortion and possible damage to the speakers or amplifier. The PM-200A uses a high power amplifier in a small enclosure for maximum power and portability combined. Care should be taken to avoid overheating and possibly damaging the power amp or speakers with excessive clipping.

Note: Speakers and amplifiers damaged due to hard clipping are not covered under warranty.



4. EQ

The three-band equalizer section utilizes a HIGH, MID, and BASS EQ control, each of which has 12dB of cut and boost, with a center detent for off indication. The frequency response is flat when all three EQ knobs are in the center detent position. The HIGH and BASS shelving controls have their frequencies fixed at 10 KHz and 120Hz respectively. The MID control has a peaking response at 2.5KHz. The EQ is a valuable feature of the PM-200A as it allows the user to control the tonal characteristics of their monitor mix. For example, boosting the BASS can fatten the sound, add warmth to vocals, or extra punch to bass, drums and synths; the MID control can be used to define the midrange or bring out the vocals; and adjusting the HIGH control can provide a crisp sounding high end for high hat and vocal clarity.

Another very important, yet often overlooked technique is to use the EQ to subtract from the mix. Cutting the HIGH control can reduce unwanted sibilance, hiss, cymbals, or high frequency feedback, while attenuating the MID or BASS can also eliminate feedback or clear up a muddy sounding mix. Cutting the HIGH and BASS, then pushing up the Volume control is equivalent to a mid range boost!



PANEL CONTROLS AND CONNECTIONS

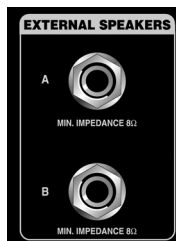
Note, the PM-200A internal speaker has been specially designed to reduce feedback frequencies while allowing maximum punch from center vocal and instrument tones. This allows clear and comprehensive monitoring with the speaker in close proximity with maximum feedback rejection. The speakers are not meant to be flat in audio quality or used for music reproduction. But when the band or DJ is pumping, they kick out exactly what you need...and then some!

5. EXTERNAL SPEAKERS

The PM-200A can also be used to power external speakers for additional monitoring or added volume. Each External Speaker jack can power any number of speakers with a total impedance not being less than 8Ω.

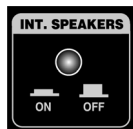
The PM-200A actually uses a dual power amp, each side of which is used to power the internal 8Ω speakers. The power amp is capable of delivering up to 50W RMS of clean power to EACH SPEAKER.

When additional speakers are connected to the two External Speaker outputs, they are automatically wired in parallel with each internal speaker, reducing the total impedance of each channel. If an 8Ω speaker is connected to each output, the power amp can deliver up to 75W RMS to each channel – that means 37.5W per speaker. If the internal speakers are turned off in this configuration, each 8Ω external speaker can receive up to 50W RMS of power.



6. INTERNAL SPEAKERS ENABLE

When external speakers, or headphones, are being used, it may be desirable to turn off the internal speakers to decrease noise, or, to increase the power somewhat to the external speakers. When the External Speakers push-button switch is depressed, the internal speakers are enabled. When it is out, the internal speakers are disconnected.



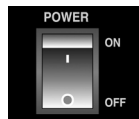
7. HEADPHONES

The Headphone 1/4" stereo output can be used to monitor the signal post Volume and EQ. It is capable of powering headphones with impedances of 8Ω or greater. The internal speakers can be used simultaneously or turned off using the Internal Speakers Enable switch.



8. POWER

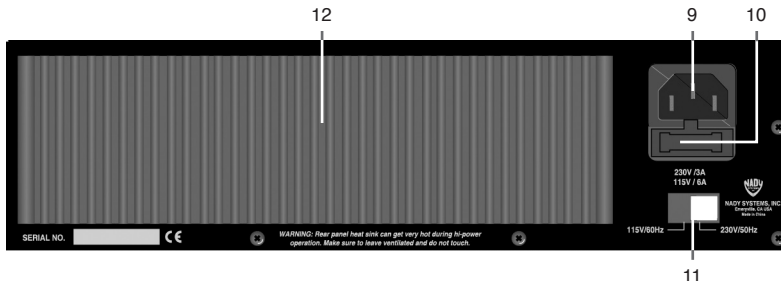
This switch turns the AC power on and off as indicated by the front baffle green Power Led.



9. POWER CONNECTOR

The IEC jack is used to connect the power cord to the AC Power Source.

[Caution: Never remove the center grounding pin as this can cause a serious safety hazard and will immediately void your warranty.]



PANEL CONTROLS AND CONNECTIONS

10. FUSE COMPARTMENT

Replace with only the same type fuse. If the fuse blows continuously, have the unit serviced by qualified personnel. The PM-200A powered mixer uses 20mm glass tube Fast Blow fuses: 6A 250V for 115VAC, 3A 250V for 230VAC.

11. AC VOLTAGE SELECTOR SWITCH

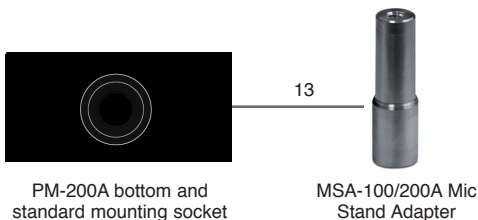
Before plugging in the power cord, check to see that the unit is set for the proper voltage for your area: ~115V (60Hz) or ~230V (50Hz).

12. HEAT SINK

The heat sink can get very hot during high power operation. Make sure to leave properly ventilated and avoid touching.

13. MOUNTING SOCKET

On the bottom panel of the PM-200A is a 5/8" dia. socket for mounting the PM-200A on a mic stand. Depending on your mic stand, you may require the optional MSA-100/200A Mic Stand Adapter for most secure mounting. For ordering, see PM-100/200A Optional Accessories Ordering Form included.



PM-200A bottom and standard mounting socket

MSA-100/200A Mic Stand Adapter

SPECIFICATIONS

| | | | |
|---|--|---------------------------|---|
| Mic Input | balanced XLR | Frequency Response | 20Hz – 50KHz |
| Input Impedance | 2K Ω | THD | 0.055% |
| Maximum Input | -10.2dBm (235mV) | S/N | -81dB |
| Sensitivity (for max output w/Volume max) | -40dBm (7.5mV) | Noise Floor | .200uV |
| | | Amplifier protection | clipping LEDs, thermal runaway, short circuit, anti-thump on/off protection |
| Line Input | balanced/unbalanced TRS 1/4" | Internal Speakers | 5" full-range |
| Input Impedance | 20K Ω | Impedance | 8 Ω |
| | (10K Ω unbalanced) | Voice Coil diameter | 1" |
| Maximum Input | +22dBm (10V) | Power Requirements | Selectable, 115VAC/60Hz or 230VAC/50Hz |
| Sensitivity (for max output w/Volume max) | -10dBm (230mV) | Fuse Requirements | 5x20mm glass tube F.B. 6A 250V @ 115VAC 3A 250V @ 230VAC |
| Line Output | balanced XLR | Weight | 9.6 lbs. (4.4 Kg) |
| Output Impedance | 1.4K Ω | Dimensions (HWD) | 11.1" x 7" x 6.1" (28 x 18 x 15.5 cm) |
| Maximum Output (w/10K load) | 15.5dBm (4.3V) | | |
| EQ and Volume | rotary knobs | | |
| High | +/-12dB @ 10K Hz | | |
| Mid | +/-12dB @ 2.5K Hz | | |
| Bass | +/-12dB @ 120 Hz | | |
| Headphone Output | 1/4" TRS Stereo | | |
| Power | 2 x 80mW @ 32 Ω | | |
| Power Amp Output | 2 internal speakers, 2 external 1/4" outputs | | |
| Power | 2 x 50W RMS @ 8 Ω (Total 100W RMS) 2 x 75W RMS @ 4 Ω (Total 150W RMS) | | |

Specifications subject to change at any time without prior notice for purposes of product improvement

ONE-YEAR LIMITED WARRANTY

Nady Systems, Inc. warrants to the original consumer purchaser that the unit is free from any defects in material or workmanship for a period of one year from the date of original retail purchase. If any such defect is discovered within the warranty period, Nady Systems, Inc. will repair or replace the unit free of charge, subject to verification of the defect or malfunction upon return to Nady Systems. Please do not return your Nady product to the store where it was purchased as Nady Systems handles your warranty service directly. Communication with our Service Department is the most efficient means of servicing your unit and we are dedicated to keeping you a satisfied customer.

To the extent permitted by law, any applicable implied warranties, including warranties of merchantability and fitness are hereby limited to one year from the date of purchase. Consequential or incidental damages resulting from a breach of any applicable express or implied warranties are hereby excluded. This warranty is in lieu of all other agreements and warranties, general or special, express or implied and no representative or person including a Nady dealer, agent, or employee is authorized to assume for us any other liability in connection with the sale or use of this Nady Systems' product.

Whereas some states do not allow limitations on how long implied warranties last, and do not allow exclusion of incidental or consequential damages, the above limitations and exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.

This warranty is subject to the following conditions:

- 1) This system must have been purchased from an authorized Nady dealer and all warranty service must be performed by Nady's service department. Any service not performed by Nady will automatically void this warranty.
- 2) Items not covered: physical damage resulting from improper handling of the unit in transit from the factory by the shipper (Nady Systems is not responsible for such damage and all such claims must be made against the shipping company by the consignee); defects caused by normal wear of the product (expendable parts are typically connectors, cables, potentiometers, switches and similar components); damage or defects caused by abuse, neglect, accident, failure to connect or operate the unit in any way that does not comply with applicable technical or safety regulations, or improper repair, excessive heat or humidity, alteration or unreasonable use of the unit, causing cracks, broken cases/housings or parts; damage caused by leaking batteries; finish or appearance items; items damaged in shipment en route to Nady Systems, Inc. for repair. The warranty is null and void if any Nady serial number has been removed or defaced.

How To Obtain Service:

- 1) If factory service is required, you must contact our Service Department at (510) 652-2411 for a return authorization (RA) number. Make sure the RA number is clearly marked on the outside of your package. (Please note: if an RA number is not included, our shipping department cannot accept your package.)
- 2) Send the unit back to Nady Systems, 6701 Shellmound Street, Emeryville, CA, 94608, freight pre-paid. You must include proof of date and place of purchase (i.e., photocopy of your bill of sale) or Nady cannot be responsible for repair or replacement. Nady Systems, Inc. will not repair, nor be held responsible, for any units returned without proper identification, return address, and RA number clearly marked on the package.
- 3) Per the above, Nady will perform all warranty service and return the unit to you at no charge. Nady Systems will inform the buyer if product sent in does not meet the terms of this warranty and will provide a quote for fixing the unit and/or shipping it back exclusively at the buyer's expense.

SERVICE FOR YOUR NADY AUDIO PRODUCT

In the U.S. If you are experiencing operational problems with your system, please refer to the Support page at www.nady.com for assistance. Should your wireless system require service, please contact the Nady Service Department at (510) 652-2411 for a Return Authorization (R/A) Number and service quote (if out of warranty). Make sure the R/A Number is clearly marked on the outside of the package that you are returning.

If your unit is out of warranty, please enclose a cashier's check or money order (or pay by credit card) per instructions by the Nady Service Department. Ship your unit prepaid to: Nady Systems, Service Department, 6701 Shellmound Street, Emeryville, CA 94608. Include a brief description of the problem you are experiencing. For service of a unit under warranty, please follow the instructions in the following section.

Outside the U.S. For service or warranty matters please contact the Nady distributor in your country through the dealer/store from which you purchased this product.

Do not attempt to service this unit yourself as it can be dangerous and will also void the warranty.



NADY SYSTEMS, INC. • 6701 SHELLMOUND STREET, EMERYVILLE, CA 94608
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