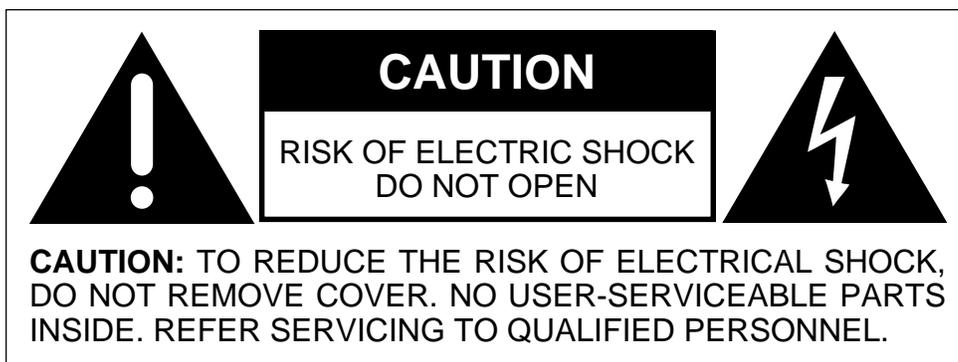


# Operating Manual

Mark Levinson®  
N°25  
Dual Monaural  
Phono Preamplifier

**Madrigal Audio Laboratories, Inc.**

**WARNING:** TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK,  
DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

# Important safety instructions

Please read all instructions and precautions carefully and completely before operating your N° 25 Dual Monaural Phono Preamplifier.

1. **ALWAYS** disconnect your entire system from the AC mains before connecting or disconnecting any cables, or when cleaning any component.
2. This product is equipped with a three-conductor AC mains power cord which includes an earth ground connection. To prevent shock hazard, all three connections must **ALWAYS** be used. If your electrical outlets will not accept this type of plug, an adapter may be purchased. If an adapter is necessary, be sure it is an approved type and is used properly, supplying an earth ground. If you are not sure of the integrity of your home electrical system, contact a licensed electrician for assistance.
3. AC extension cords are not recommended for use with this product. If an extension cord must be used, be sure it is an approved type and has sufficient current-carrying capacity to power this product.
4. **NEVER** use flammable or combustible chemicals for cleaning audio components.
5. **NEVER** operate this product with any covers removed.
6. **NEVER** wet the inside of this product with any liquid.
7. **NEVER** pour or spill liquids directly onto this unit.
8. **NEVER** block air flow through ventilation slots or heatsinks.
9. **NEVER** bypass any fuse.
10. **NEVER** replace any fuse with a value or type other than those specified.
11. **NEVER** attempt to repair this product. If a problem occurs, contact your Mark Levinson® retailer.
12. **NEVER** expose this product to extremely high or low temperatures.
13. **NEVER** operate this product in an explosive atmosphere.
14. **ALWAYS** keep electrical equipment out of the reach of children.

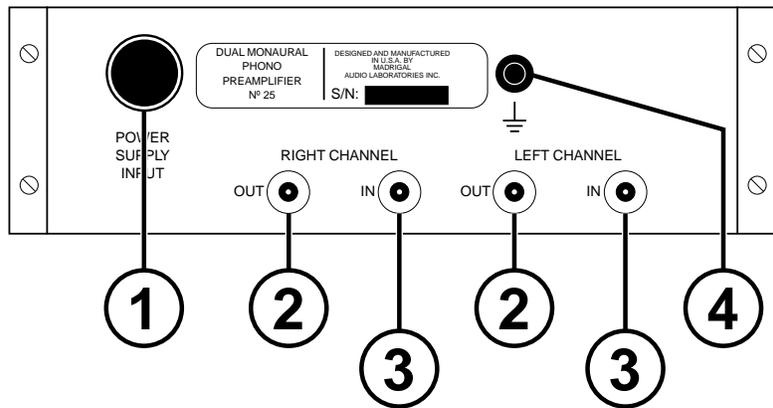
*From all of us at Madrigal Audio Laboratories, thank you for choosing the Mark Levinson® N°25 Dual Monaural Phono Preamplifier.*

*A great deal of effort went into the design and construction of this precision device. Used properly, it will give you many years of enjoyment.*

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## Rear panel

### PRECAUTION

Disconnect all associated equipment from the AC mains **BEFORE** making signal connections and applying power to the N°25/PLS-226.

#### 1 POWER SUPPLY INPUT

This nine-pin connector accepts one end of the DC cable that connects the N°25 to the PLS-226 Power Supply.

#### 2 OUT

Connect these outputs to any of your preamplifier's *line-level* inputs.

### PRECAUTION

**NEVER connect the N°25's outputs to your preamplifier's PHONO inputs. The output of the N°25 is at line level, and is equalized per the RIAA standard.**

#### 3 IN

Connect your turntable's right-channel and left-channel signal leads to these inputs.

#### 4 Ground binding post

Connect your turntable's tonearm ground lead to this binding post.

# Unpacking and placement

**Unpacking** Unpack your N°25 Dual Monaural Phono Preamplifier and PLS-226 Power Supply, and remove all accessories from the cartons. Keep all packing materials for future transport.

Carefully inspect the product for damage and flaws. If you find any, see your Mark Levinson retailer immediately.

**Placement** To keep the cable between the tonearm and the N°25 as short as possible, place your N°25 as close to the turntable as practical. This is particularly important considering the extremely low signal levels produced by a phono cartridge.

A two-meter-long DC cable is provided to connect the PLS-226 to the N°25. This allows you to place the PLS-226 so that it won't induce hum in the N°25 and other sensitive components. You should also place other associated equipment so that it doesn't induce hum in the N°25 and other components.

**Ventilation** You may place the N°25 on a shelf or in a cabinet where it's convenient to operate. Be sure to allow 3 to 4 inches of clearance above the unit to allow heat dissipation through air circulation.

Drawings are included in this manual to facilitate special installations and custom cabinetry (see "Dimensions").

## PRECAUTION

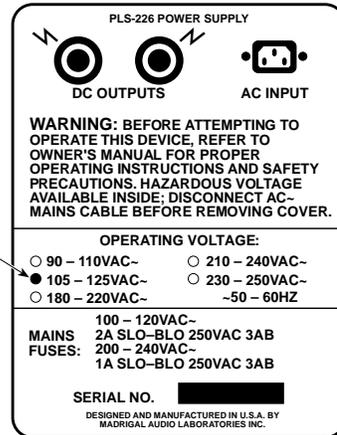
*For your protection, review "Important safety instructions" before you install your N°25.*

# Voltage selection

The PLS-226 is factory-set (internally) for 100V, 120V, 200V, 220V or 240V AC mains operation @ 50 or 60Hz. Make sure that the label on the bottom of the PLS-226 indicates the correct AC operating voltage for your location.

*PLS-226 bottom-panel label*

*Voltage indication*



If the voltage indicated is incorrect, see your Mark Levinson dealer.

If you wish to change the AC operating voltage of the N°25/PLS-226, see your Mark Levinson dealer.

The N°25/PLS-226 can be powered by a normal 15-ampere AC mains line. If other devices are also powered from the same AC line, their additional power consumption must be taken into account.

# Set-up and installation

## Connectors and cables

The N°25 incorporates RCA-type connectors for audio signal input and output.

The Madrigal-designed RCA-type connectors used for single-ended audio interconnection are a great improvement over ordinary RCA-type connectors.

When connecting the N°25 to your turntable and preamplifier, we recommend Madrigal Audio Laboratories HPC Interconnect Cable. HPC is available in various lengths, terminated with RCA, XLR, and Camac connectors. See your Mark Levinson dealer for more information.

## Internal adjustments: phono gain

The N°25 is available with either a high-gain or low-gain phono option. Each option offers two internally adjustable gain settings via two two-pole miniature rocker switches, one for each channel. The high-gain and low-gain phono options have been factory-adjusted at the lowest gain settings (58dB and 38dB, respectively).

If you wish to increase the gain, see "Making the internal adjustments;" refer to the tables below for the proper switch positions for each gain setting.

### Phono gain settings (high-gain option)

---

| Switch |     | Gain | Nominal Cartridge Output (3.54 cm/sec) |
|--------|-----|------|--|
| #1     | #2  |      |  |
| On     | Off | 58dB | .2mV - .6mV                            |
| Off    | On  | 64dB | .2mV and Lower                         |

---

### Phono gain settings (low-gain option)

---

| Switch |     | Gain | Nominal Cartridge Output (3.54 cm/sec) |
|--------|-----|------|--|
| #1     | #2  |      |  |
| On     | Off | 38dB | Greater than 2.0mV                     |
| Off    | On  | 44dB | 2.0mV and Lower                        |

---

**Internal adjustments:  
cartridge loading**

The high-gain and low-gain phono options offer internally selectable cartridge loading via two four-pole miniature rocker switches, one for each channel. The high-gain and low-gain options have been factory-adjusted at 825Ω and 47KΩ, respectively.

If you wish to change the factory-adjusted cartridge loading, see "Making the internal adjustments;" refer to the table below for the proper switch positions for each load setting.

*Cartridge loading settings  
(high-gain option)*

| Switch | 30Ω | 100Ω | 825Ω | 10KΩ | Optional |
|--------|-----|------|------|------|----------|
| #1     | Off | Off  | On   | Off  | Off      |
| #2     | Off | On   | Off  | Off  | Off      |
| #3     | On  | Off  | Off  | Off  | Off      |
| #4     | Off | Off  | Off  | Off  | On       |

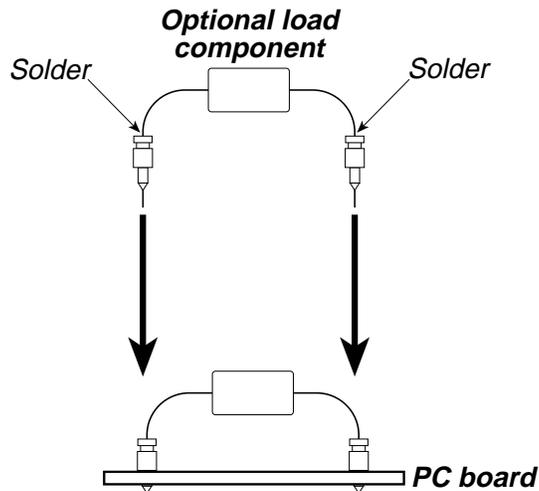
*Cartridge loading settings  
(low-gain option)*

| Switch | 825Ω | 10KΩ | 22KΩ | 47KΩ | Optional |
|--------|------|------|------|------|----------|
| #1     | Off  | Off  | On   | Off  | Off      |
| #2     | Off  | On   | Off  | Off  | Off      |
| #3     | On   | Off  | Off  | Off  | Off      |
| #4     | Off  | Off  | Off  | Off  | On       |

**Internal adjustments:  
optional load terminals**

Resistance values other than those listed above can be accommodated via the optional load terminals. Load resistors can be inserted into these terminals, allowing virtually any load desired.

*Terminating the  
optional load*



See "Making the internal adjustments;" refer to the "Cartridge loading settings" tables for the proper switch positions for the optional load.

Because the inherent input resistance (all switches off) is in parallel with the optional load terminals, use this formula to calculate the actual resistor needed:

$$R = 1 / (1/RD - X)$$

**RD** = Desired resistance in ohms

**X** = 0.00002 for Low-gain Phono Option,

0.0001 for High-gain Phono Option

**Note:** We recommend precision metal-film resistors; see your Mark Levinson dealer.

**Internal adjustments:  
varying the input  
capacitance**

If you wish to vary the input capacitance of the phono option to obtain the optimal value for a particular cartridge, a capacitor may also be inserted into the optional load terminals (see "Terminating the optional load" and "Making the internal adjustments").

Because the inherent input capacitance (all switches off) is in parallel with the optional load terminals, use the following formula to calculate the actual capacitor needed.

$$C = C_R - C_T - C_P$$

**C** = The capacitor value

**C<sub>R</sub>** = Recommended capacitance value

**C<sub>T</sub>** = Tonearm capacitance including leads

**C<sub>P</sub>** = Preamplifier inherent shunt capacitance

(Low-gain phono option - 100pf; high-gain phono option - 1000pf)

**Note:** We recommend high-quality polypropylene, polystyrene or Teflon capacitors; see your Mark Levinson dealer.

**Internal adjustments:  
varying the ground  
impedance**

The N°25 offers internally selectable ground impedance via two two-pole miniature rocker switches, one for each channel. These switches have been factory-adjusted to 0Ω.

If you encounter a phono hum problem caused by a ground loop when connecting the N°25 to your preamplifier, changing the factory-set output ground impedance may alleviate the problem. see "Making the internal adjustments;" refer to the table below for the proper switch positions for each impedance setting.

*Output ground  
impedance settings*

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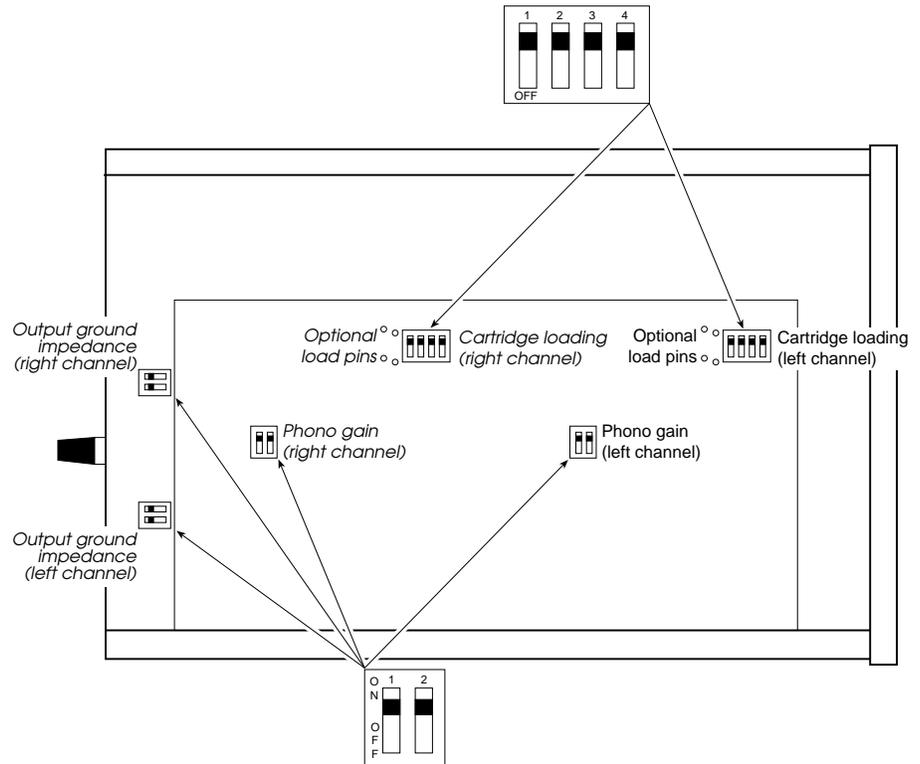
| Switch |     | Output Ground Impedance |
|--------|-----|-------------------------|
| #1     | #2  |                         |
| Off    | Off | 1Ω                      |
| On     | On  | 0Ω                      |

---

## Making the internal adjustments

1. Make sure all associated equipment is disconnected from the AC mains, and that the PLS-226 is disconnected from the AC mains.
2. Using a 3/32" Allen key, remove the eight 4-40 socket-head cap screws securing the end caps on the rear of the N°25's chassis.
3. Using a Phillips screwdriver, remove the four 4-40 screws securing the N°25's top plate. Carefully slide the top plate to the rear and remove it.

N°25, internal adjustments



4. Adjust the gain switches (using a ballpoint pen or similar instrument) and install optional loads as desired.
5. Reassemble the N°25.

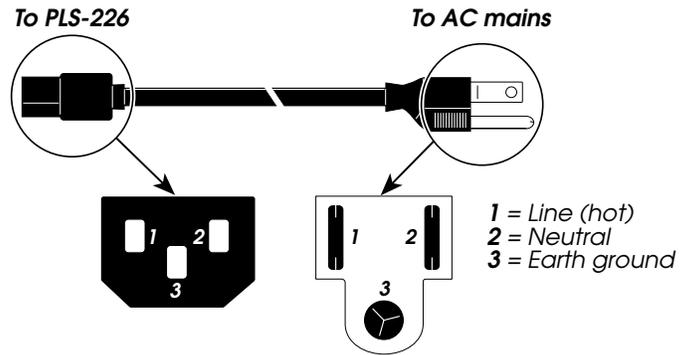
**Power connection and system activation**

Be sure all associated equipment is disconnected from the AC mains.

After making all signal connections and internal adjustments, connect the DC cable to either of the nine-pin female connectors on the rear panel of the PLS-226. Connect the other end of the DC cable to the nine-pin connector on the rear panel of the N°25.

Connect the AC cord to the male IEC connector on the rear panel of the PLS-226, then connect the AC cord to the AC mains.

*AC power cord polarity*



The LEDs on the PLS-226 and N°25 will light. Allow the preamplifier circuitry to stabilize for 1 to 2 minutes, then connect all associated equipment to the AC mains and activate it.

For optimal sonic performance and longevity, the N°25/PLS-226 is designed to remain powered at all times (a power-on/power-off switch is not provided).

# Care and maintenance

To remove dust from the cabinet of the N°25, use a feather duster. To remove dirt and fingerprints, we recommend isopropyl alcohol and a soft cloth.

# Specifications

---

*The correlation between published specifications and sonic quality is unreliable. A list of numbers reveals virtually nothing. All technical measurements must be subject to qualitative as well as quantitative interpretation.*

*Measurements of the N°25 yield excellent results by any standards. However, only those specifications that apply to its actual operation are included here.*

---

- **Power consumption:** 20W maximum, depending on options
- **Mains voltage:** 100V, 120V, 200V, 220V, 240V AC @ 50-60Hz
- **Overall dimensions:** See "Dimensions"
- **Shipping weight:** N°25: 10 lbs. (4.6kg)  
PLS-226: 12 lbs. (5.5kg)
- **Connector complement:** 4 RCA-type connectors  
1 nine-pin connector  
1 binding post (turntable ground)
- **Gain:** Selectable (see "Set-up and installation")
  - **Low-gain phono option:** 38dB, 44dB
  - **High-gain phono option:** 58dB, 64dB
- **Input impedance:** Selectable (see "Set-up and installation")
- **Maximum output:** 6V
- **Recommended load:** 10K $\Omega$  or greater

For more information, see your Mark Levinson dealer, or contact:

**Madrigal Audio Laboratories, Inc.**  
2081 South Main Street (Route 17), P.O. Box 781  
Middletown, Connecticut 06457 USA

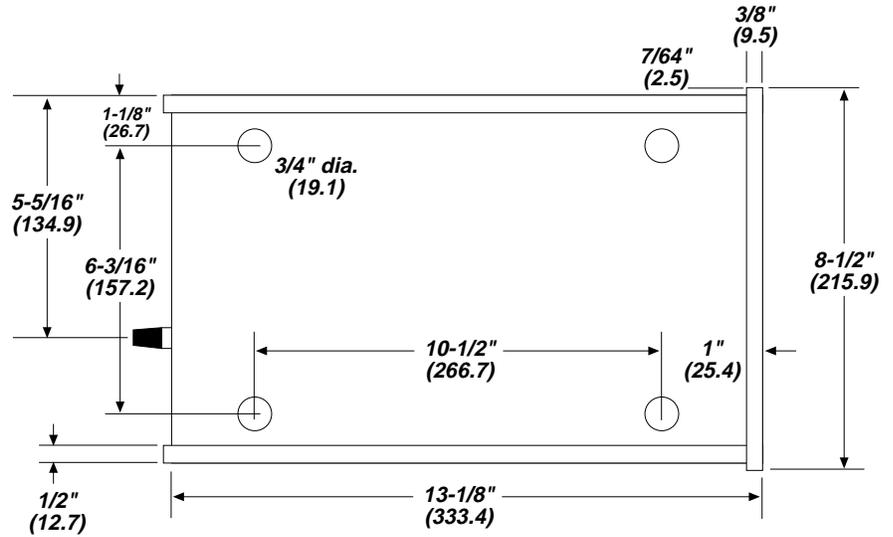
Telephone (203) 346-0896  
(FAX (203) 346-1540

If purchased in North America, this Mark Levinson product's warranty is owner-transferable. Warranty conditions are valid only in the country where the product was originally purchased.

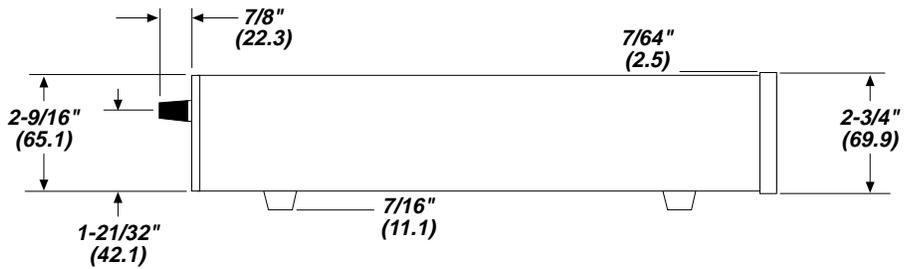
For warranty information and conditions on products purchased outside of North America, contact your local dealer or regional distributor.

# Dimensions

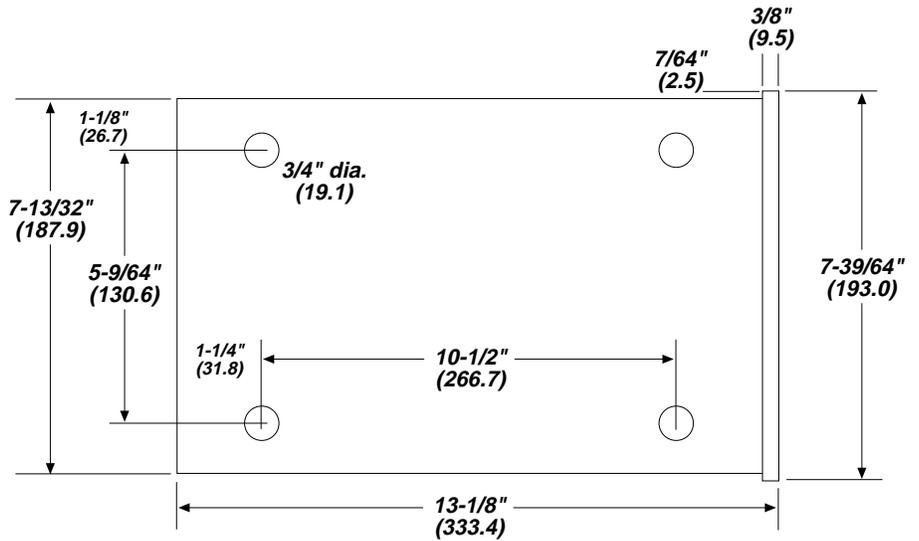
Dimensions, N°25, top view



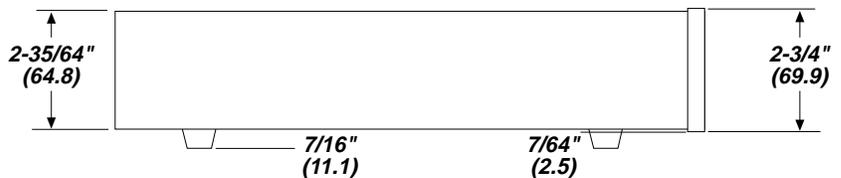
Dimensions, N°25, side view



Dimensions, PLS-226, top view



Dimensions, PLS-226, side view



# MADRIGAL

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