Owner's Manual

N°32
Reference
Preamplifier

mark levinson®
MADRIGAL AUDIO LABORATORIES

Important Safety Instructions

1. Read these instructions
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or another apparatus that produces heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or third prong is provided for safety. If the provided plug does not fit into the outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, or the point where it exits from the apparatus.
11. Only use attachments and accessories specified by the manufacturer.

12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury or tip over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power cord or plug has been damaged; liquid has been spilled or objects have fallen into the apparatus; or the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Ventilation should not be impeded by covering the ventilation openings with items such as newspapers, table cloths, curtains, and so on.
16. No naked flame sources, such as candles, should be placed on the apparatus.
17. The power cord is intended to be the safety disconnect device for this apparatus. Ready access to the power cord should be maintained at all times.

18. Terminals marked with this symbol may be considered HAZARDOUS LIVE and the external wiring connected to these terminals requires installation by an INSTRUCTED PERSON or the use of ready-made leads or cords.

Warning!

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. Apparatus shall not be exposed to dripping or splashing. No objects filled with liquids, such as vases, shall be placed on the apparatus.

FCC Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an authorized Mark Levinson dealer or an experienced radio/TV technician for help.

Caution!

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Canada
This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

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1 Getting Started

Documentation Conventions

This document contains general safety and operation instructions for the Nº 32 Reference Preamplifier. It is important to read this document before attempting to use this product. Please pay particular attention to safety instructions.

Appears on the component to indicate the presence of non-insulated, dangerous voltages inside the enclosure – voltages that may be sufficient to constitute a risk of shock.

Appears on the component to indicate important operation and maintenance instructions included in the accompanying documentation.

Appears on the component to indicate compliance of with the EMC (Electromagnetic Compatibility) and LVD (Low-voltage Directive) standards of the European Community.

Warning! ***Calls attention to a procedure, practice, condition, or the like that, if not correctly performed or adhered to, could result in personal injuries or death.***

Caution! ***Calls attention to a procedure, practice, condition, or the like that, if not correctly performed or adhered to, could result in damage or destruction to part or all of the component.***

Note *Calls attention to information that is essential to highlight.*

Note

Within this owner's manual, the term "controller" is used to refer to the N°32 Controller chassis and the term "preamplifier" is used to refer to the N°32 Preamplifier chassis. These terms are consistent with the names engraved on the components themselves. The term "N°32" is used to refer to the dual-chassis combination.

Special Design Features

Thank you for purchasing the №32 Reference Preamplifier, featuring a unique dual-chassis design that allows the audio circuits to deliver unrivaled musical reproduction. The №32 preamplifier chassis isolates the audio circuits so that only audio signals and extremely pure DC power are present. The power supply and control circuits are combined in the other chassis, protecting the sensitive audio signals.

Like most high-performance audio components, the №32 relies on clean, noise-free power to deliver maximum performance. Unfortunately, most AC power does not meet these standards. Common household appliances such as refrigerators, TVs, and computers often contaminate AC power lines with line noise, spikes, and other irregularities that make it difficult for audio circuits to perform up to their full potential.

To protect audio circuits from contamination, the №32 generates its own "secondary" DC power. An independent, high-quality power supply is dedicated to each audio channel, generating DC power for a special power amplifier optimized to reproduce just one frequency: 400Hz. This 400Hz frequency is rectified, filtered, and regulated again to create extraordinarily clean DC power.

An advanced dual-mono design allows the №32 to achieve exceptional channel separation. Both audio channels use independent power supplies, communication circuits, and audio circuits. The preamplifier chassis provides complete isolation between the left and right channels, which are physically and electrically separated by a die-cast aluminum wall. This innovative approach isolates each channel, allowing the №32 to produce vividly detailed, three-dimensional sonic images.

For even greater isolation, the №32 effectively deactivates unused inputs to prevent interference from other components. Discrete "T-switch" input switching, special shielding, and optimal circuit board placement allow the №32 to "unplug" inputs not in use – achieving more than 120dB separation between even adjacent input connectors. As a result, input signals pass through the №32 with remarkable freedom from interference.

The №32 offers eight configurable inputs, each of which is assigned to one of its three balanced (XLR) or five unbalanced (RCA) stereo connectors. Unbalanced input signals are converted to balanced signals upon entering the preamplifier chassis, and processed as balanced signals thereafter. During this rigorous conversion process, meticulously balanced circuits preserve all input signal information, passing it to the associated power amplifier without the limitations of asymmetrical designs.

A Mark Levinson-designed discrete volume attenuator controls the master volume level with unprecedented accuracy and sonic neutrality. Constructed from Arlon® circuit boards with local power supply regulation and bypass capacitors, this volume attenuator generates optimal power and isolation for even the most sensitive adjustments. Sixty-six surface-mounted, precision resistors per channel provide more than 65,000 possible settings between 0dB and 80dB (maximum attenuation), accommodating adjustments in 1.0dB increments up to 23.0dB and in 0.1dB increments above 23.0dB.

Unlike most stereo preamplifiers, the Nº32 is designed to integrate with multi-channel surround sound processors without the complications associated with competing stereo and multi-channel volume controls. A unique surround sound processor (SSP) mode deactivates Nº32 volume controls and sends line-level input signals to the associated processor. With no interference from the Nº32, the processor controls the relative volume level of all channels, maintaining its carefully calibrated output levels.

To maximize channel separation, left-channel and right-channel connectors are located on opposite sides of the rear panel. The connector complement includes separate main and record stereo outputs, available on both balanced (XLR) and unbalanced (RCA) connectors. Balanced and unbalanced main output connectors are independently buffered, allowing them to be used simultaneously without performance degradation. In addition, balanced main output connectors are wired in-parallel with one another (as are unbalanced main output connectors) to accommodate bi-amplification and other applications.

The Nº32 represents the ultimate combination of compelling performance and limitless potential. Its unique dual-chassis structure shields audio circuits to create truly spectacular sound, while its advanced design – including eight configurable inputs, separate main and record outputs, complete surround sound processor integration, and extensive control possibilities – accommodates even the most demanding applications. All of this makes the Nº32 a reference-quality component befitting the most sophisticated music reproduction systems.

Highlights

- 8 configurable inputs
- Advanced dual-chassis design
- Maximum channel separation
- Multi-channel surround sound processor integration
- 8 stereo input connectors (3 balanced, 5 unbalanced)
- 4 main stereo output connectors (2 balanced, 2 unbalanced)
- 3 record stereo output connectors (1 balanced, 2 unbalanced)
- “Secondary” DC power generation
- Separate chassis for audio circuits
- Independent power supplies, communication circuits, and audio circuits for each channel
- Discrete volume attenuator
- Deactivation of unused inputs
- Balanced conversion for unbalanced input signals
- Mono or stereo playback
- Selectable output signal polarity
- Balance control
- Intuitive setup menu
- Standby sleep timer
- Large front panel display with selectable display intensity
- Link communication ports
- Trigger input connector
- Configurable trigger output connector (12V or 5V)
- IR input connector
- RS-232 port
- Optional phono module

Installation Considerations

The №32 requires special care during installation to ensure optimal performance. Pay particular attention to instructions included in this section and to precautions included throughout this owner’s manual.

Unpacking

When unpacking the N°32:

DO save all packing materials for possible future shipping needs.

DO inspect the Nº32 for signs of damage during shipment. If damage is discovered, contact an authorized Mark Levinson dealer for assistance making appropriate claims.

DO locate and remove the accessory box from the carton. Make sure it contains all of the items listed in the table below. If not, contact an authorized Mark Levinson dealer.

Item	Quantity
Detachable AC power cord	1
Multi-pin DC power cables	2
Nº32 remote control	1
5/64-inch Allen key	1
3/32-inch hex driver	1
AAA alkaline batteries*	2
White gloves**	1
Warranty & Product Registration Card	1

* The remote control comes with two AAA alkaline batteries that should be replaced as needed.

** One pair of white gloves is provided to assist with the initial unpacking and installation of the N°32.

Product Registration

Please register the Nº32 within 15 days of purchase. To do so, register online at www.marklevinson.com or complete and return the included product registration card. Retain the original, dated sales receipt as proof of warranty coverage.

Placement and Ventilation

DO install each Nº32 chassis on its own shelf for proper ventilation.

DO install each Nº32 chassis on a solid, flat, level surface.

DO install the preamplifier chassis close to associated components to keep interconnecting cables as short as possible.

Note

In some cases, it is better to use longer interconnecting cables between the preamplifier and the power amplifier to allow for shorter loudspeaker wires.

DO select a dry, well-ventilated location out of direct sunlight.

DO allow at least 3 to 4 inches (8 to 10cm) of clearance above each Nº32 chassis for proper heat dissipation.

DO see See "Care & Maintenance" on page 5-4 for information about routine care and maintenance.

DO see "Nº32 Controller Dimensions" on page A-4 and "Nº32 Preamplifier Dimensions" on page A-5 for assistance with custom installations.

DO NOT place either Nº32 chassis on a thick rug or carpet or cover either chassis with a cloth, as this might prevent proper cooling.

DO NOT expose either Nº32 chassis to high temperatures, humidity, steam, smoke, dampness, or excessive dust. Avoid installing either Nº32 chassis near radiators and other heat-producing appliances.

DO NOT install either Nº32 chassis near unshielded TV or FM antennas, cable TV decoders, and other RF-emitting devices that might cause interference.

DO NOT place either Nº32 chassis on a windowsill or in another location in which it will be exposed to direct sunlight.

DO NOT obstruct the IR receiver/transmitter located on the right side of the controller front panel display. When the Nº32 is not using the IR input connector, the remote control IR transmitter must be in line-of-sight with the front panel display IR receiver/transmitter for proper remote control operation. See "Remote Control" on page 2-10 for additional information.

Caution!

BEFORE moving the N°32, make sure it is powered off with the power button. Then, make sure the power cord is disconnected from the ~ac mains connector and the electrical outlet.

Warning!

MAKE SURE all components are properly grounded. Do not defeat the safety purpose of polarized or grounding-type plugs with "ground-lifter" or "cheater" adaptors. Doing so may cause dangerous voltages to build up between components. The presence of these voltages may result in personal injuries and/or product damage.

Remote Control Batteries

The remote control comes with two AAA alkaline batteries that should be replaced as needed. It is recommended to use alkaline batteries, which do not leak and last longer.

Note

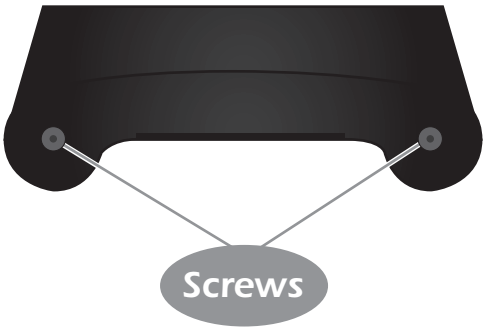
In some cases, the remote control IR transmitter LED will light more dimly (or not at all) if the remote control batteries need to be replaced.

To replace the remote control batteries:

1. Locate the battery compartment cover on the bottom of the remote control (the end opposite the IR transmitter).

2. Use the supplied 5/64-inch Allen key to remove the two screws identified in Figure 1-1.

Figure 1-1: Remove the two screws to open the battery cover.

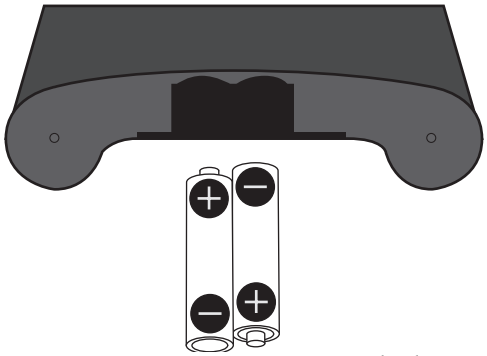


3. Remove the battery compartment cover.

4. Remove the old batteries in the battery compartment (if applicable).

5. Insert two AAA alkaline batteries as shown in Figure 1-2. Make sure the batteries are correctly inserted observing the proper polarity.

Figure 1-2: Insert the batteries, observing polarity.



6. Align the battery compartment cover with the guide on the bottom of the remote control.

7. Replace the two screws removed in step 2.

8. Properly dispose of the old batteries (if applicable).

Power Requirements

When shipped, the Nº32 is configured for 100, 120, 220, 230 or 240VAC power operation at 50 or 60Hz. Before operating the Nº32, make sure the ~ac mains connector label indicates the correct operating voltage for the current location.

Caution!

***DO NOT** attempt to adjust the operating voltage. Consult an authorized Mark Levinson dealer if the operating voltage is incorrect or must be changed for relocation purposes.*

Different operating voltages may require the use of different power cords and/or attachment plugs. Contact an authorized Mark Levinson dealer for additional assistance.

Warm-up & Break-in Period

Although the Nº32 delivers superior performance from the first time it is powered on, this performance will continue to improve as the Nº32 reaches its normal operating temperature and various components "break in." The greatest performance improvements will occur within the first 25 to 50 hours of use. Sound quality will continue to improve for about 300 hours.

After this initial period, performance will remain consistent unless power is disconnected from the Nº32. Power is disconnected when the Nº32 is powered off with the power button; the power cord is disconnected from the ~ac mains connector or the electrical outlet; or an extended power failure or power outage occurs. Power is not disconnected when the Nº32 is in standby.

When power returns, it is recommended to allow the Nº32 and other audio components to stabilize for about 2 minutes. The Nº32 will require a brief warm-up and break-in period (not the full 300 hours).

Note

When powered on with the power button, the main output connectors mute while the N°32 executes its initialization sequence. The N°32 automatically enters standby after completing its initialization sequence.

Continuous Operation

The Nº32 should be unplugged during lightning storms and extended periods of non-use. Otherwise, it is designed for continuous operation. For best performance, make sure power is connected to the Nº32 at all times. During normal operation, do not use the power button to power off the Nº32. Instead, use the standby button to place the Nº32 into standby, which allows the Nº32 to remain warmed-up to deliver optimal performance at all times.

Quick Setup and Listen

These instructions are intended to accommodate immediate use of the Nº32. However, it is important to read this owner's manual before attempting more extensive use. This owner's manual includes information about features that enhance operation and performance, as well as important safety, installation, and operation instructions designed to prevent personal injuries and product damage.

Caution!

Never make or break connections to the N°32 unless it and all associated components are powered off and disconnected from electrical outlets.

To begin using the N°32:

1. Make sure the Nº32 and all associated components are powered off and disconnected from electrical outlets.

2. Using one of the supplied DC power cables, connect the **Controller** left-channel DC power connector to the **preamplifier** left-channel DC power connector.

3. Using the other DC power cable, connect the **Controller** right-channel DC power connector to the **preamplifier** right-channel DC power connector.

Note

The N°32 offers balanced (XLR) and unbalanced (RCA) connectors. For best performance, use balanced connections whenever possible.

4. Connect the desired Nº32 input connectors to the source component (for example, a CD player) output connectors.

   - Use the Nº32 ***balanced*** input connectors numbered 1, 2, or 3 if the source component offers balanced output connectors.

   - Use the Nº32 ***unbalanced*** input connectors numbered 4, 5, 6, 7, or 8 if the source component does not offer balanced output connectors.

5. Connect the desired Nº32 main output connectors to the associated power amplifier input connectors.

   - Use the Nº32 ***balanced*** main output connectors if the associated power amplifier offers balanced input connectors.

   - Use the Nº32 ***unbalanced*** main output connectors if the associated power amplifier does not offer balanced input connectors.

6. Reconnect the №32 and all associated components to electrical outlets.

7. Power the №32 and all associated components ***on***. Power amplifiers should be powered on last.

8. Rotate the №32 ***select knob*** or press the ***select ▲/▼ buttons*** on the remote to select the №32 input that corresponds to the №32 input connectors that were selected in step 4 on page 1-9.

    - The №32 front panel display indicates the name and volume level of the selected input.

    - Factory-default input names correspond to their assigned stereo input connector. For instance, Input 1 is assigned to the input connectors numbered 1, Input 2 is assigned to the input connectors numbered 2, and so on.

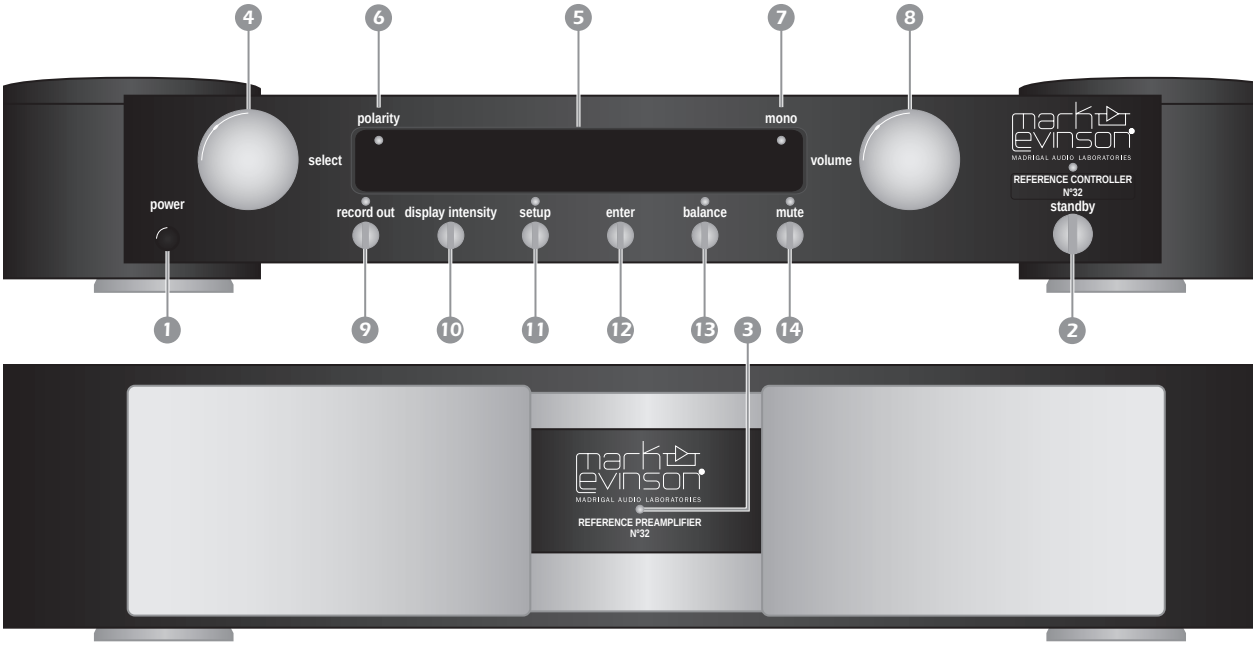
9. Make sure №32 master volume is set to a reasonable level. Then, begin playing the desired input source.

2 Basic Operation

Front Panel

The numbers in the front panel illustration shown in Figure 2-1 correspond with the summary list items below.

Figure 2-1: N°32 Preamplifier and Controller front panels.



1. **power** button
2. ***standby*** button
3. preamplifier LED
4. **select** knob
5. front panel display
6. ***polarity*** LED
7. **mono** LED
8. **volume** knob
9. ***record out*** button & LED

10. ***display intensity*** button
11. ***setup button*** & LED
12. ***enter*** button
13. ***balance*** button & LED
14. ***mute*** button & LED

Below is a description of each item listed above. Unless otherwise specified, the following descriptions are of commands accessed from the front panel during normal operation. See Section 3, "Setup Menu" and Section 4, "Controls and Modes" for information about other commands accessed from the front panel.

Power button

Powers the №32 on and off when the supplied power cord is connected to the ~ac mains connector and an electrical outlet.

- When the №32 is powered on, pressing the power button powers the №32 off and disconnects power from the component.
- When the №32 is powered off, pressing the power button powers the №32 on and connects power to the component. The №32 automatically enters standby after completing its initialization sequence.

Note

Before operating the N°32, make sure the ~ac mains connector label indicates the correct operating voltage for the current location.

Standby button

Places the №32 into standby and takes the №32 out of standby, which allows the №32 to remain warmed-up to deliver optimal performance at all times. The standby LED lights when the №32 is not in standby and blinks in unison with the preamplifier LED when the №32 is in standby. See "Standby" on page 4-1 for additional information. Note that power is still connected to the №32 when it is in standby.

Preamplifier LED

Lights when the preamplifier is receiving DC power from the controller and blinks in unison with the standby LED when the №32 is in standby.

Select knob

Selects the desired input to send to the main output connectors. Rotating the select knob scrolls through all inputs for which the Name parameter has not been set to unused. The front panel display indicates the name and volume level of the selected input. Select knob scrolling does not include inputs for which the Name parameter has been set to unused.

Note

When record mode is activated, the select knob selects the desired input to send to the record output connectors. See "Record Mode" on page 4-7 for additional information.

Front panel display

Includes 12 alphanumeric characters that provide one-line viewing of status information. During normal operation, the front panel display indicates the name and volume level of the selected input.

The right side of the front panel display includes an IR receiver/transmitter that receives infrared commands from the remote control IR transmitter when the Nº32 is not using the IR input connector. The IR receiver/transmitter also sends Nº32 IR commands to a learning remote control during IR learning. See "Teach IR" on page 3-8 for additional information.

Polarity LED

Lights when main output signal polarity has been inverted with the remote control polarity button. See "Polarity" on page 4-2 for additional information.

Mono LED

Lights when mono playback has been activated with the remote control mono button. See "Mono Playback Mode" on page 4-4 for additional information.

Volume knob

Adjusts master volume level. Rotating the volume knob increases and decreases master volume in 1.0 increments up to 23.0dB and in 0.1dB increments above 23.0dB. The minimum master volume level is OFF. The MaxVol parameter determines the maximum master volume level in 0.1dB increments between OFF and 80dB. The factory-default maximum master volume level is 80dB.

The Offset parameter determines individual input volume level offsets in 0.1dB increments between –20.0dB and +20.0dB. The factory-default input volume level offset is 0.0dB. Whenever an input is selected, the Nº32 automatically applies the Offset parameter setting to master volume level.

Note the following about using the volume knob:

- Rotating the volume knob quickly accelerates the rate of change to accommodate large adjustments. Rotating the volume knob too quickly decelerates the rate of change to prevent accidental adjustments that could send dangerous signal levels to the loudspeakers.
- Rotating the volume knob slowly decelerates the rate of change to accommodate fine, precise adjustments.

Note

Nº32 volume controls do not affect record output levels.
Nº32 volume controls are deactivated when SSP mode is activated.

Record out button & LED

Activates and deactivates record mode, which allows the select knob and select ▲/▼ buttons to select the input to send to the record output connectors. The selected input is sent to all record output connectors that have not been deactivated with the Rec.Out parameter. The record out LED lights when record mode is activated. See "Record Mode" on page 4-7 for additional information.

Display intensity button

Controls the illumination level of front panel display characters as well as the front panel standby and preamplifier LEDs. See "Display Intensity" on page 4-2 for additional information.

Setup button & LED

Opens and closes the setup menu, which can be used to customize the №32 to suit individual preferences and listening spaces. The setup LED lights when the setup menu is open. See "Setup Menu" on page 3-1 for additional information.

Enter button

Selects and deselects menu items when the setup menu is open. The enter button performs no function during normal operation.

Balance button & LED

Opens and closes the balance control, which adjusts the left-to-right channel balance of the main output connectors. The balance LED lights when the balance control is open. See "Balance" on page 4-3 for additional information.

Note

When the balance control is closed, the balance LED remains lit if the left-to-right channel balance of the main output connectors is offset.

Mute button & LED

Mutes and unmutes master volume level. Pressing the mute button attenuates master volume by the selected mute level. The mute LED lights when master volume level is muted. Pressing the mute button again restores master volume to its original level.

The Mute parameter determines the amount of master volume level attenuation that occurs when master volume level is muted. The mute level can be set in 0.1dB increments between –10.0 and –80.0dB. The factory-default mute level is –20.0dB.

Note

Rotating the volume knob or pressing the volume ± buttons unmutes master volume level, adjusting master volume from the muted volume level.

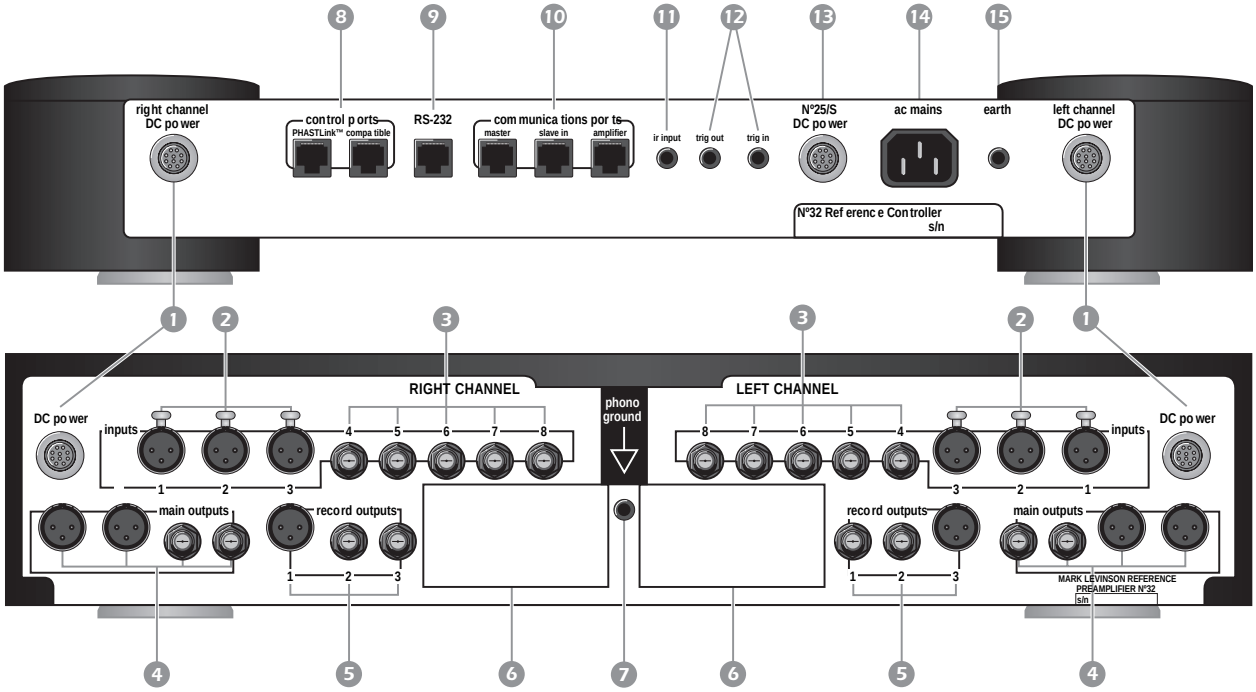
Rear Panel

The numbers in the rear panel illustration shown in Figure 2-2 correspond with the summary list items below.

Note

For maximum channel separation, all left and right-channel connectors are located on opposite sides of the rear panel.

Figure 2-2: N°32 Preamplifier and Controller rear panels.



1. **DC power** connectors
2. **balanced input** connectors
3. **unbalanced input** connectors
4. **main output** connectors
5. **record output** connectors
6. phono module access panels
7. **phono ground** connector
8. **control ports**
9. **RS-232 port**

10. ***communication ports***
11. ***IR input*** connector
12. ***trigger input*** / ***trigger output*** connectors
13. ***N°25/S DC power*** connector
14. ***ac mains*** connector
15. ***earth ground*** connector

Below are descriptions of the connectors and ports listed above.

DC power connectors

Allow the Controller to provide DC power to the preamplifier using the supplied DC power connectors. Two DC power connectors labeled left-channel and right-channel DC power are available on the Controller, and two DC power connectors labeled DC power are available on the preamplifier.

1. Using one of the supplied DC power cables, connect the ***Controller*** left-channel DC power connector to the ***preamplifier*** left-channel DC power connector.

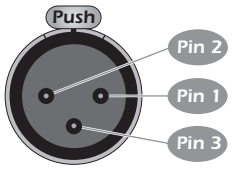
Note

DC power cables are not directional.

2. Using the other DC power cable, connect the ***Controller*** right-channel DC power connector to the ***preamplifier*** right-channel DC power connector.

Balanced input connectors

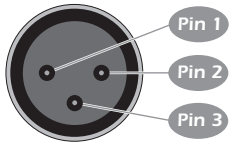
Figure 2-3: Nº32 Balanced Connector Pin Assignments.



Balanced (female XLR) Input Connector

Pin Assignments

- Pin 1: Signal Ground
- Pin 2: Signal + (Non-Inverting)
- Pin 3: Signal – (Inverting)
- Connector Ground Lug: Chassis Ground



Balanced (male XLR) Main Output Connector

Accept left-channel and right-channel balanced input signals from associated components with balanced (male XLR) output connectors. Three balanced (female XLR) stereo connectors numbered 1, 2, and 3 are available.

For best performance, use balanced connections whenever possible. Refer to Figure 2-3 to ensure that Nº32 balanced input connector pin assignments correspond to associated component balanced output connector pin assignments. If not, wire the cable so that the appropriate input pin connects to the appropriate output pin.

Unbalanced input connectors

Accept left-channel and right-channel unbalanced input signals from associated components without balanced output connectors. Five unbalanced (RCA) stereo connectors numbered 4, 5, 6, 7, and 8 are available.

Main output connectors

Provide left-channel and right-channel output to associated components. Two balanced (male XLR) and two unbalanced (RCA) stereo output connectors are available.

For best performance, use balanced connections whenever possible. Refer to Figure 2-3 (above) to ensure that associated component balanced input connector pin assignments correspond to Nº32 balanced main output connector pin assignments. If not, wire the cable so that the appropriate input pin connects to the appropriate output pin.

Record output connectors

Provides left-channel and right-channel output at fixed volume levels to associated recording components such as CD recorders and tape decks. One balanced (male XLR) stereo output connector numbered 1 and two unbalanced (RCA) stereo output connectors numbered 2 and 3 are available.

For best performance, use balanced connections whenever possible. Refer to the illustration shown on the previous page and to the associated component documentation to ensure that recording component balanced input connector pin assignments correspond to Nº32 balanced record output connector pin assignments. If not,

wire the cable so that the appropriate input pin connects to the appropriate output pin.

The front panel record out button activates and deactivates record mode, which allows the select knob and select ▲/▼ buttons to select the input to send to the record output connectors. The selected input is sent to all record output connectors that have not been deactivated with the Rec.Out parameter. The record out LED lights when record mode is activated. See "Record Mode" on page 4-7 for additional information.

Note

N°32 volume controls do not affect record output levels.

Phono Module access panels

Accommodate the optional Nº32 Phono Module, which adds two balanced (female XLR) OR two unbalanced (RCA) phono input connectors to the rear panel. No matter which connectors are selected, all phono input signals are converted to balanced signals upon entering the chassis and processed as balanced signals. Contact an authorized Mark Levinson dealer for additional information about the Nº32 Phono Module.

Phono ground connector

Provides an earth-reference ground connection for the associated phono cartridge. Connecting the associated phono cartridge grounding wire to the phono ground connector grounds the associated phono cartridge to the preamplifier chassis, which sometimes reduces audible hum and other noise that results from multiple grounding paths. Otherwise, the ground connection between the associated phono cartridge and the preamplifier chassis is isolated.

Note

Listen to the associated phono cartridge both with and without the phono ground connection. Then, select the connection that results in the best performance.

Control ports

Provided for possible future expansion.

RS-232 port

Provides serial control, performing flash memory software upgrades and facilitating external control in AMX™ and Crestron™ systems. One 6-pin modular RJ-11 jack labeled RS-232 is available.

Communication ports

Provide "links" to compatible Mark Levinson components, allowing the Nº32 and other linked components to share Link controls such as display intensity, standby, playback, input selection, and record mode. Three 8-pin modular RJ-45 jacks labeled master, slave in, and amplifier are available.

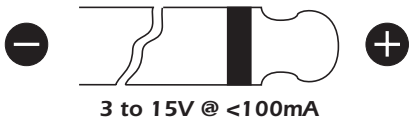
Note

The master port is provided for possible future expansion and SHOULD NOT be used when making Link connections. See "Linking" on page 4-13 BEFORE attempting to link the N°32 to other Mark Levinson components.

IR input connector

Accepts 5V infrared input signals with no more than 100mA of current from standard infrared distribution equipment such as IR repeaters. One 1/8-inch (3.5mm) mini-jack labeled IR input is available. The mini-jack requires a mini-plug (Tip/ Sleeve) connection in which the tip of the mini-plug has positive polarity as shown below in Figure 2-4.

Figure 2-4: Mini-plug tip polarity for the IR input connector.



Trigger input / trigger output connectors

Provide trigger control. One 1/8-inch (3.5mm) mini-jack labeled trigger input is available to accept 3-12V DC trigger signals from associated components, and one 1/8-inch (3.5mm) mini-jack labeled trigger output is available to pass these trigger signals to associated components OR to send Nº32-generated 12 or 5V DC trigger signals to associated components. Both mini-jacks require mini-plug (Tip/Sleeve) connections.

If a component is connected to the trigger input connector, the Nº32 passes the incoming trigger signal to the component connected to the trigger output connector, creating a "daisy chain" of trigger control. If no component is connected to the trigger input connector, the Nº32 sends its own trigger signals to the component connected to the trigger output connector. The Trig. parameter configures the Nº32 to generate 12V level or 5V pulse trigger signals.

N°25/S DC power connector

Provide DC power to the Nº25 or Nº25S Phono Preamplifiers. One DC power connector labeled Nº25/S DC power is available. Use the DC power cable supplied with the Nº25/S to connect the power supply input on the Nº25/S to the Nº25/S DC power connector on the Nº32.

ac mains connector

Provides power to the Nº32 when the supplied power cord is connected to the ac mains connector and an electrical outlet. One IEC-standard AC mains receptacle labeled ac mains is available.

Note

Before operating the N°32, make sure the ~ac mains connector label indicates the correct operating voltage for the current location.

Earth ground connector

Provides an earth-reference ground connection in countries where the AC mains does not establish its own earth ground connection. In these countries, use a grounding wire to connect the Nº32 to a known earth ground such as a water pipe running through the ground or a copper spike driven into the ground. Contact an authorized Mark Levinson dealer for additional assistance.

Remote Control

The Nº32 remote control provides full operation of the Nº32. It requires special consideration during operation to ensure optimal performance. Pay particular attention to instructions included in this section and to precautions included throughout this owner's manual.

The right side of the front panel display includes an IR receiver/transmitter that receives infrared commands from the remote control IR transmitter when the Nº32 is not using the IR input connector. The IR receiver/transmitter also sends Nº32 IR commands to a learning remote control during IR learning. See "Teach IR" on page 3-8 for additional information.

Note

The items below are not applicable when the Nº32 is using the IR input connector.

When operating the remote control:

DO eliminate obstructions between the remote control IR transmitter and the front panel display IR receiver/transmitter.

DO position the remote control within ±45° of a line that is perpendicular to the front panel display IR receiver/transmitter. At more severe angles, attempt to "bounce" the remote control signal off a wall or another surface so the signal is received at the IR receiver/transmitter at a reasonable angle.

DO position the remote control within 17 feet (5m) of the front panel display IR receiver/transmitter. If the Nº32 is placed inside a glass cabinet, tinted glass will reduce the remote control range.

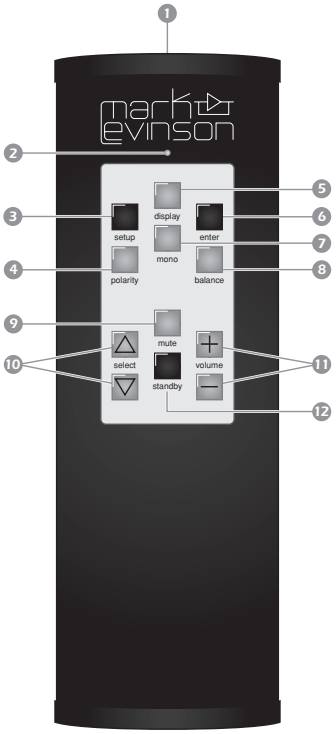
DO replace the remote control batteries as needed. In some cases, the remote control IR transmitter LED will light more dimly (or not at all) if the remote control batteries need to be replaced. See "Remote Control Batteries" on page 1-6 for instructions.

DO NOT obstruct the front panel display IR receiver/transmitter, which must be in line-of-sight with the remote control IR transmitter for proper remote control operation.

DO NOT expose the front panel display IR receiver/transmitter to strong sunlight, halogen light, or fluorescent light. This can cause IR reception to become unreliable.

DO NOT use remote controls for different components at the same time. Remote controls for different components can interfere with one another.

Figure 2-5: Remote Control.



The numbered items in the Nº32 remote control illustration (Figure 2-5) correspond with the numbered items listed below.

1. ***IR transmitter***
2. IR transmitter LED
3. ***setup*** button
4. ***polarity*** button
5. ***display*** button
6. ***enter*** button
7. ***mono*** button
8. ***balance*** button
9. ***mute*** button
10. ***select*** ▲/▼ buttons
11. ***volume*** ± buttons
12. ***standby*** button

Below is a description of each item listed above. Unless otherwise specified, the following descriptions are of commands accessed from the remote control during normal operation. See Section 3, "Setup Menu" and Section 4, "Controls and Modes" for information about other commands the remote control executes.

IR transmitter

Sends infrared signals to the front panel display IR receiver/ transmitter when the Nº32 is not using the IR input connector. See "Remote Control" on page 2-10 for additional information.

IR transmitter LED

Lights when IR signals are transmitted. In some cases, the IR transmitter LED will light more dimly (or not at all) if the remote control batteries need to be replaced. See "Remote Control Batteries" on page 1-6 for instructions.

Setup button

Opens and closes the setup menu, which can be used to customize the Nº32 to suit individual preferences and listening spaces. The

front panel setup LED lights when the setup menu is open. See Section 3, “Setup Menu” for additional information.

Polarity button

Controls the polarity of the main output signal. The front panel polarity LED lights when main output signal polarity is inverted. See “Polarity” on page 4-2 for additional information.

Display button

Controls the illumination level of front panel display characters as well as the front panel standby and preamplifier LEDs. See “Display Intensity” on page 4-2 for additional information.

Enter button

Selects and deselects menu items when the setup menu is open. The enter button performs no function during normal operation.

Mono button

Activates and deactivates mono playback. The front panel mono LED lights when mono playback is activated. See “Mono Playback Mode” on page 4-4 for additional information.

Balance button

Opens and closes the balance control, which adjusts the left-to-right channel balance of the main output connectors. The front panel balance LED lights when the balance control is open. See “Balance” on page 4-3 for additional information.

Note

When the balance control is closed, the balance LED remains lit if the left-to-right channel balance of the main output connectors is offset.

Mute button

Mutes and unmutes the master volume level. Pressing the mute button attenuates master volume by the selected mute level. The front panel mute LED lights when master volume level is muted. Pressing the mute button again restores master volume to its original level.

The Mute parameter determines the amount of master volume level attenuation that occurs when master volume level is muted. The mute level can be set in 0.1dB increments between –10.0dB and –80dB. The factory-default mute level is –20.0dB.

Note

Rotating the volume knob or pressing the volume ± buttons unmutes the master volume level, adjusting master volume from the muted volume level.

Select ▲/▼ buttons

Select the desired input to send to the main output connectors. Pressing the select ▲/▼ buttons scrolls through all inputs for which the Name parameter has not been set to unused. The front panel display indicates the name and volume level of the selected input. Select ▲/▼ button scrolling does not include inputs for which the Name parameter has been set to unused.

Note

When record mode is activated, the select knob and select ▲/▼ buttons select the desired input to send to the record output connectors. See "Record Mode" on page 4-7 for additional information.

Volume ± buttons

Adjust master volume level. Pressing the volume ± buttons increases and decreases master volume in 1.0 increments up to 23.0dB and in 0.1dB increments above 23.0dB. The minimum master volume level is OFF. The MaxVol parameter determines the maximum master volume level in 0.1dB increments between OFF and 80dB. The factory-default maximum master volume level is 80dB.

The Offset parameter determines individual input volume level offsets in 0.1dB increments between –20.0dB and +20.0dB. The factory-default input volume level offset is 0.0dB. Whenever an input is selected, the Nº32 automatically applies the Offset parameter setting to master volume level.

Pressing and holding the volume ± buttons for longer than 1.5 seconds accelerates the rate of change to accommodate large adjustments. Pressing and quickly releasing the volume ± buttons accommodates fine, precise adjustments.

Note

Nº32 volume controls do not affect record output levels. When SSP mode is activated, volume controls are deactivated.

Standby button

Places the Nº32 into standby and takes the Nº32 out of standby, which allows the Nº32 to remain warmed-up to deliver optimal performance at all times. The front panel standby LED lights when the Nº32 is not in standby and blinks in unison with the preamplifier LED when the Nº32 is in standby. See "Standby" on page 4-1 for additional information.

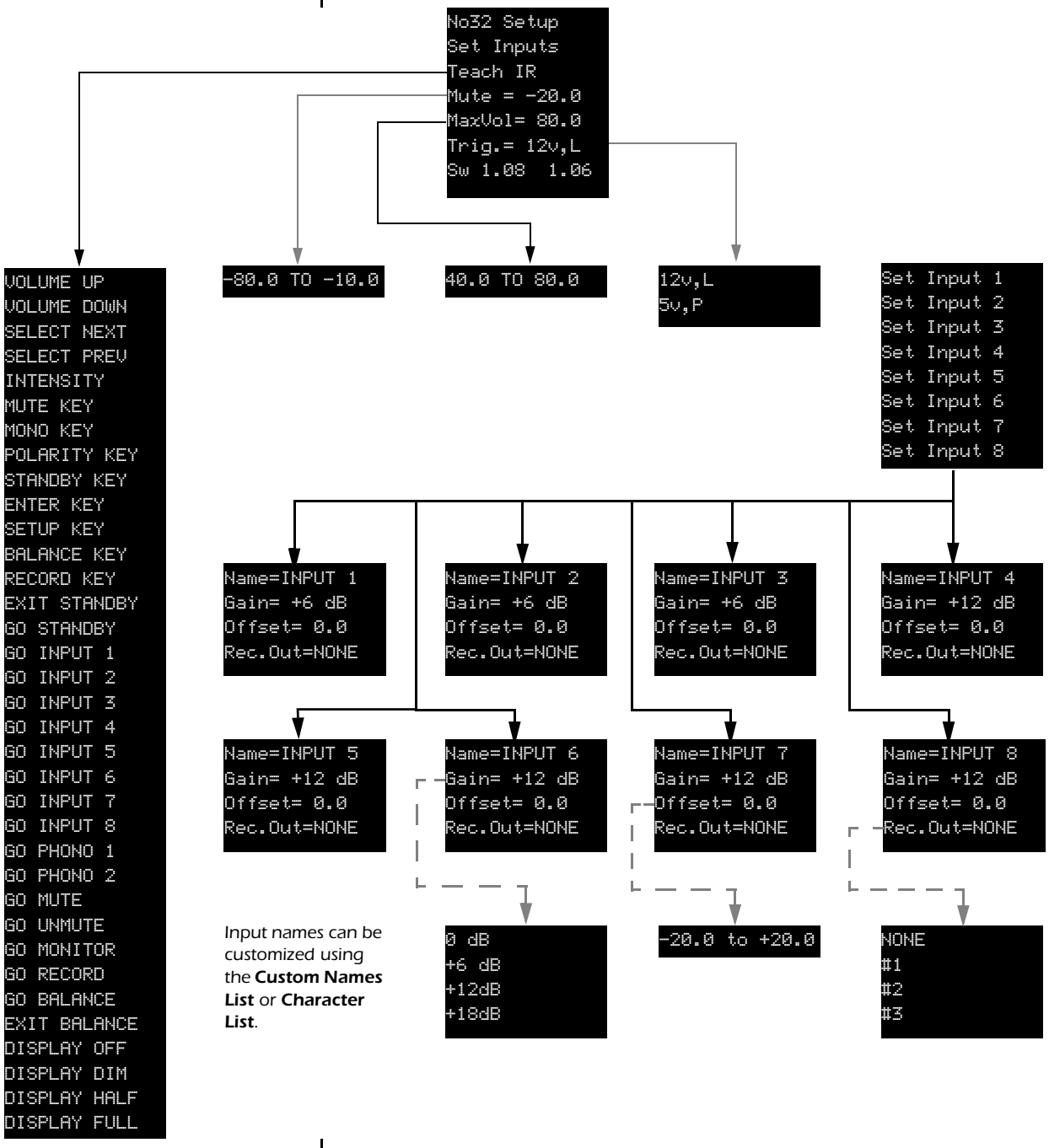
Note

Power is still connected to the Nº32 when the Nº32 is in standby.

3 Setup Menu

Setup Menu Navigation

Figure 3-1: Mapping of the one-line front panel Setup Menu displays



Input names can be customized using the **Custom Names List** *or* **Character List**.

The setup button provides convenient access to the setup menu shown in Figure 3-1, which can be used to customize the №32 to suit individual preferences and listening spaces. The front panel display provides one-line viewing of setup menu items.

To open the setup menu:

Press the **setup** button.

When the setup menu is closed, pressing the setup button opens the setup menu on the front panel display. The front panel setup LED lights when the setup menu is open.

Both the front panel and remote control can be used to navigate the setup menu. Unless otherwise specified, the items below describe commands executed from the front panel and remote control when the setup menu is open. See "Front Panel" on page 2-1 and "Remote Control" on page 2-10 for information about commands executed from the front panel and remote control during normal operation.

setup button

The setup button:

- Returns to the previous menu, eventually closing the setup menu.
- Deselects the selected parameter without saving setting adjustments that have not been previously stored. The RESTORING message appears on the front panel display to indicate that new adjustments are not being stored.

enter button

The enter button:

- Advances to the next menu.
- Selects the current parameter. When a parameter is selected, the equal sign (=) between the parameter label and the parameter setting will blink to indicate that setting adjustments can be made with the volume knob or volume ± buttons.
- Deselects the selected parameter, saving setting adjustments that have not been previously stored. The SAVING DATA message appears on the front panel display to indicate that new adjustments are being stored.

Note

When a parameter is deselected, the message NO CHANGE will appear on the front panel display if no changes have been made to the parameter's last stored setting.

Select knob & select ▲/▼ buttons

Scroll through menu items. Rotating the select knob or pressing the select ▲/▼ buttons scrolls upward and downward through all

menu items available on the open menu. The front panel display indicates the current menu item.

Volume knob & volume ± buttons

Adjusts the selected parameter setting. Rotating the volume knob or pressing the volume ± buttons increases and decreases the selected parameter setting in the designated increment. The front panel display indicates the current setting. (If the current parameter has not been selected with the enter button, rotating the volume knob or pressing the volume ± buttons automatically selects the current parameter before making adjustments.)

Set Inputs

Selecting Set Inputs prompts the selection of the desired input (e.g., Input 1). Selecting an input opens the corresponding set inputs menu (Figure 3-1 on page 3-1), which can be used to change input names, optimize input gain levels, offset input volume levels, and deactivate record output connectors.

Parameter	*Default Setting*	*Possible Settings*
Name	INPUT	Factory-default, Custom
Gain	+6dB or +12dB*	0dB, +6dB, +12dB, +18dB
Offset	0.0dB	–20.0dB to +20.0dB
Rec.Out	NONE	NONE, #1, #2, #3

* The factory-default Gain parameter setting is +6dB for balanced inputs (1-3) and +12dB for unbalanced inputs (4-8).

Set Inputs Menu shortcut

The Set Inputs menu "shortcut" provides convenient access to the Set Inputs menu for the selected input. When this shortcut is used, the four Set Inputs menu parameters for the selected input – Name, Gain, Offset, and Rec.Out – are available. No other setup menu items are available.

To shortcut to the Set Inputs Menu for the selected input:

1. Rotate the ***select knob*** or press the ***select ▲/▼ buttons*** to select the desired input.

   The front panel display indicates the name and volume level of the selected input.

2. Press and hold the ***setup button*** until the **Name** parameter for the selected input appears on the front panel display.

   The front panel setup LED lights when the setup menu is open.

Name Factory-default, Custom

Determines the name of the selected input. Factory-default input names correspond to their assigned stereo input connector. For example, Input 1 is assigned to the input connectors labeled 1, Input 2 is assigned to the input connectors labeled 2, and so on.

Custom input names should be based on the component with which the input is associated. For example, DVD is a suitable custom name for an input associated with a DVD player. Two methods are available for customizing input names: the custom names list and the character list.

Note

Linked Mark Levinson components must have recognizable input names to share Link controls. For example, an input associated with a N°360S Digital Audio Processor should be named No360S. In some cases, linked components will assign correct input names for other linked associated components. Otherwise, use the custom names list to enter the correct input name.

Custom Names List

The custom names list shown in Table 3-1 provides convenient access to 26 custom input names that can be used for the most common associated components, including other Mark Levinson components. It also includes custom input names that deactivate unused inputs, activate SSP mode, or activate EQ mode.

Table 3-1: Custom Names List.

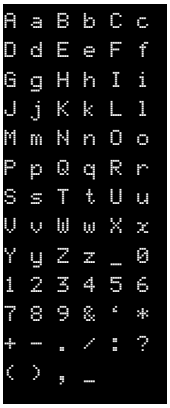
Custom Name	Description
Input 1-8	Identifies the factory-default input name. This name can be customized one character at a time using the character list.
unused	Removes the selected input from select knob and select ▲/▼ button scrolling.
SSP	Activates SSP (surround sound processor) mode, which configures the selected input for complete integration with a multi-channel surround sound processor. ***Caution!*** ***Before activating SSP mode, set the associated surround sound processor volume to a low level to prevent dangerous signal levels from reaching the loudspeakers.***
EQ	Activates EQ (equalizer) mode, which configures the selected input to route an input signal through a dedicated equalizer using the record output connectors.

Table 3-1 : Custom Names List.

Custom Name	Description
DAT	Identifies an input associated with a digital audio tape transport.
VCR	Identifies an input associated with a video cassette recorder.
CASS	Identifies an input associated with a cassette deck.
RtoR	Identifies an input associated with a reel-to-reel player.
MD	Identifies an input associated with a mini-disc player.
CD-R	Identifies an input associated with a compact disc recorder.
SAT	Identifies an input associated with a satellite receiver.
LD	Identifies an input associated with a laser disc player.
CD	Identifies an input associated with a compact disc player.
TUNER	Identifies an input associated with a tuner.
AUX	Identifies an input associated with an auxiliary component.
DAC	Identifies an input associated with a digital-to-analog converter.
TAPE	Identifies an input associated with a tape deck.
DVD	Identifies an input associated with a digital versatile disc player.
N°30 **N°30.5** **N°30.6** **N°35** **N°36** **N°36S** **N°360** **N°360S** **N°39** **N°40**	Identifies an input associated with the corresponding Mark Levinson component. Linked Mark Levinson components must have recognizable input names to share Link controls. For instance, an input associated with a Nº360S Digital Audio Processor should be named No360S. In some cases, linked components will assign correct input names for other linked, associated components. Otherwise, use the custom names list to enter the correct input name.

Character list

Figure 3-2: Character list.



The character list (left) provides access to 76 characters that can be used to enter custom input names one character at a time. Custom input names can consist of up to 7 characters, including letters, numbers, punctuation marks, symbols, and blank spaces. A custom input name entered with the character list replaces the factory-default name (INPUT) on the custom names list.

To customize the name of the selected input:

1. Rotate the ***select knob*** or press the ***select ▲/▼ buttons*** to select the desired input.

   The front panel display indicates the name and volume level of the selected input.

2. Press and hold the ***setup button*** until the **Name** parameter for the selected input appears on the front panel display.

   The front panel setup LED lights when the setup menu is open.

3. Select one of the following options:

   - To use the ***custom names list***, press the ***enter button*** *once*. The current input name blinks to indicate that a new input name can be selected from the custom names list.
   - To use the ***character list***, press the ***enter button*** *twice* in succession. The first character in the current input name blinks to indicate that a new character can be selected from the character list.

4. Rotate the ***volume knob*** or press the ***volume ± buttons*** to scroll through all custom input names included on the custom names list or all characters included on the character list.

5. When the desired custom input name or character is selected, press the ***enter button***.

   - If you selected the ***custom names list*** option in step 3, press the ***enter button*** to assign the selected custom input name. The SAVING DATA message appears on the front panel display as the new input name is saved.
   - If you selected the ***character list*** option in step 3, press the ***enter button*** to assign the selected character. The blinking cursor automatically advances to the next character space. Repeat step 4 and step 5 until all desired characters have been entered. When the seventh character is selected, the

SAVING DATA message appears on the front panel display as the new input name is saved.

Note

The factory-default input name must be restored one character at a time using the character list (unless factory-default settings are restored).

Gain 0dB, +6dB, +12dB, +18dB

Optimizes gain levels for the input source using the stereo input connector for which the selected input is assigned. Increasing the Gain parameter setting increases gain levels for the selected input, which sometimes prevents input sources with low gain levels from producing low signal-to-noise ratios. Decreasing the Gain parameter setting decreases gain levels for the selected input, which sometimes prevents input sources with high gain levels from producing distortion.

Note

The Gain parameter should be set before the Offset parameter.

Offset –20.0dB to +20.0dB

Determines individual input volume level offsets in 0.1dB increments between –20.0dB and +20.0dB. The factory-default input volume level offset is 0.0dB. Whenever an input is selected, the Nº32 automatically applies the Offset parameter setting to the master volume level.

In some cases, input sources sound softer or louder than others. If this occurs, select the Offset parameter setting that compensates for the volume level difference, allowing all associated components to output at a comparable volume level.

Rec.Out NONE, #1, #2, #3

Sends the input to all three record output connectors during record mode, or deactivates the selected record output connectors. The front panel record out button activates and deactivates record mode. This allows the select knob and select ▲/▼ buttons to select the input to send to the record output connectors.

Selecting a setting deactivates the corresponding record output connectors when the input is selected during record mode.

See “Record Mode” on page 4-7 for additional information.

Caution!

If the recording component offers both record input and output connectors, set the Rec.Out parameter to NONE to prevent

record feedback loops in which the associated component attempts to record its own output signal. Such feedback loops produce high-level noise that may damage the associated loudspeakers and other components.

Note

If the associated recording component connected to a record output connector is also connected to a separate ground (such as a VCR with a cable TV connection), set the Rec.Out parameter to NONE for all inputs (unless a recording session is in progress). This helps prevent low-level electrical noise from degrading performance.

Teach IR

Selecting Teach IR opens the Teach IR menu, which prompts the selection of the desired IR command. Selecting an IR command sends the associated infrared signal from the left side of the front panel display to a learning remote control, allowing Nº32 IR commands to be sent from a learning remote control even if the Nº32 remote control is not present.

The Nº32 sends infrared signals at 40kHz, the most common carrier frequency used in learning remote controls. However, if the learning remote control seems unable to learn IR commands:

- Eliminate obstructions between the learning remote control and the front panel display IR receiver/transmitter.
- Adjust the distance between the learning remote control and the front panel display IR receiver/transmitter.
- Make sure the learning remote control and the front panel display IR receiver/transmitter are not exposed to strong sunlight, halogen light, or fluorescent light. This can cause IR reception to become unreliable.
- Replace the learning remote control batteries.

If problems persist, contact an authorized Mark Levinson dealer.

Table 3-2 indicates all available IR commands. For toggle commands, the Nº32 provides one IR command for the toggle command as well as separate IR commands for the positive and negative forms of the toggle command. For instance, the MUTE KEY IR command teaches the learning remote control to perform mute button commands, while the GO MUTE IR command teaches the learning remote control to mute master volume level and the GO UNMUTE IR command teaches the learning remote control to unmute the master volume level.

Table 3-2: IR Command List.

Custom Name	Description
VOLUME UP	Executes volume + button commands.
VOLUME DOWN	Executes volume – button commands.
SELECT NEXT	Executes select ▲ button commands.
SELECT PREV	Executes select ▼ button commands.
INTENSITY	Executes display intensity/display button commands.
MUTE KEY	Executes mute button commands.
MONO KEY	Executes mono button commands.
POLARITY KEY	Executes polarity button commands.
STANDBY KEY	Executes standby button commands.
ENTER KEY	Executes enter button commands.
SETUP KEY	Executes setup button commands.
BALANCE KEY	Executes balance button commands.
RECORD KEY	Executes record out button commands.
EXIT STANDBY	Takes the Nº32 out of standby.
GO STANDBY	Places the Nº32 into standby.
GO INPUT 1-8	Selects the corresponding input.
GO PHONO 1	Selects (the optional) phono module 1.
GO PHONO 2	Selects (the optional) phono module 2.
GO MUTE	Attenuates master volume by the selected mute level.
GO UNMUTE	Restores master volume to its original level.
GO MONITOR	Deactivates record mode.
GO RECORD	Activates record mode.
GO BALANCE	Opens the balance control.
EXIT BALANCE	Closes the balance control.
DISPLAY OFF	Sets display intensity to 0%, deactivating the front panel display.
DISPLAY DIM	Sets display intensity to 25%.
DISPLAY HALF	Sets display intensity to 50%.
DISPLAY FULL	Sets display intensity to 100% (full brightness).

To teach N°32 IR commands to a learning remote control:

1. Press the Nº32 **setup button**.

   The setup button opens the setup menu. The front panel setup LED lights red when the setup menu is open.

2. Rotate the **select knob** or press the select ▲/▼ buttons until Teach IR appears on the front panel display.

3. Press the **enter button** to open the Teach IR menu.

   The VOLUME UP IR command will appear on the front panel display.

4. Rotate the **volume knob** or press the **volume ± buttons** to scroll through all available IR commands.

5. When the desired IR command is selected, press the **enter button** to teach this command to the learning remote control.

   The <- SENDING message will appear on the front panel display to indicate that the associated infrared signal is being sent to the learning remote control.

6. Repeat step 4 and step 5 until all desired IR commands have been sent.

Note

The N°31, N°31.5, N°37, N°39, and N°390S remote controls can control N°32 master volume level. This command is available over IR (not Link connections). Before using one of these remote controls to adjust N°32 master volume level, make sure the digital transport setup menu volume control parameter is set to fixed.

Setup Parameters

Mute –10.0dB to –80.0dB

Determines the amount of master volume level attenuation that occurs when the mute button is pressed. The mute level can be set in 0.1dB increments between –10.0dB and –80.0dB. The factory-default mute level is –20.0dB.

MaxVol 40.0dB to 80.0dB

Determines the maximum master volume level setting in 0.1dB increments between 40.0dB and 80.0dB. The factory-default maximum master volume level is 80.0dB.

Trig 12v,L; 5v,P

Configures the trigger output signal when the trigger input connector is not in use. Selecting the 12v,L setting configures the trigger output connector to send a 12V, level (constant) signal to the connected component whenever the Nº32 is taken out of standby. This signal is not present when the Nº32 is placed into standby.

Selecting the 5v,P signal configures the trigger output connector to send a 5V pulse signal, similar to that of a momentary contact switch, to the connected component whenever the standby button is pressed. This signal is only present when the standby button is pressed.

Note

The Trig. parameter has no effect when a component is connected to the trigger input connector. Instead, the N°32 passes incoming trigger signals to the component connected to the trigger output connector.

Sw Indicates the current software version operating in the Nº32. Software upgrades can be performed with the RS-232 port, allowing software to be upgraded without disassembling the Nº32 or disconnecting it from other components.

4 Controls and Modes

Standby

Standby mode allows the Nº32 to remain warmed-up to deliver optimal performance at all times. The Nº32 cannot be placed into standby unless it is powered on with the power button. See "Continuous Operation" on page 1-8 for additional information.

To place the N°32 into or take the N°32 out of standby:

When the Nº32 is powered, press and release the ***standby button***.

- When the Nº32 is not in standby, pressing and releasing the standby button places the Nº32 into standby. The standby LED on the controller front panel and the preamplifier front panel LED both blink in unison when the Nº32 is in standby.
- When the Nº32 is in standby, pressing and releasing the standby button takes the Nº32 out of standby. The controller front panel standby LED remains steadily lit when the Nº32 is not in standby.

Note

When powered on with the power button, the N°32 automatically enters standby after completing its initialization sequence. Power is still connected to the N°32 when the N°32 is in standby.

Sleep

-OFF-, 0h 30m to 4h 0m

Controls the sleep timer, which configures the Nº32 to automatically enter standby after a designated amount of time has passed. The SLEEP parameter can be set to –OFF– or in 30-minute increments between 30 minutes and 4 hours. The factory-default SLEEP parameter setting is –OFF–.

When –OFF– is selected, the Nº32 does not automatically enter standby. When a time increment setting is selected, the Nº32 automatically enters standby after the designated amount of time has passed. For example, if the 2h 30m setting is selected, the Nº32 automatically enters standby after 2 hours and 30 minutes have passed.

To set the sleep timer:

1. With the Nº32 out of standby, press and hold the ***standby button*** until the SLEEP parameter opens on the front panel display.

2. Press and release the ***standby button*** to cycle through all available SLEEP parameter settings.

3. When the desired setting is selected, press the ***enter button*** to close the SLEEP parameter.

   Otherwise, the SLEEP parameter automatically closes a few seconds after the last command is received. If this occurs, the selected setting is automatically applied.

Note

The SLEEP parameter is automatically set to –OFF– whenever the N°32 is placed into standby.

Display Intensity

Display intensity controls the illumination of front panel display characters as well as the front panel standby and preamplifier LEDs. Four illumination levels are available, including FULL (100%), HALF (50%), DIM (25%), and OFF (0%). The factory-default illumination level is FULL (100%).

When the OFF (0%) illumination level is selected:

- The front panel display automatically activates whenever a change in status is detected.
- The front panel standby and preamplifier LEDs light at the FULL (100%) illumination level.

To adjust display intensity:

Press the ***display intensity button*** to cycle through the four available illumination levels.

Front panel display characters, the front panel standby LED, and the front panel preamplifier LED automatically adjust to the selected illumination level.

Polarity

The polarity control sets the polarity of the main output signal. The polarity control has no affect on the record output signal.

To adjust main output signal polarity:

Press the ***polarity button*** on the remote control.

- When main output signal polarity is non-inverted, pressing the polarity button inverts main output signal polarity. The front panel polarity LED lights when main output signal polarity is inverted.
- When main output signal polarity is inverted, pressing the polarity button restores main output signal polarity to its non-inverted state.

Note

Experiment with main output signal polarity to determine the best sound for individual recordings. The sound difference between an inverted and non-inverted output signal ranges from subtle to inaudible, depending on microphone technique and other recording factors. In some cases, individual recordings will just sound better one way than the other.

Balance

The balance control adjusts the left-to-right channel balance of the main output connectors. The balance control has no affect on the record output connectors.

The balance control facilitates precise adjustments in 0.1dB increments between 0.1dB and 20.0dB. When the balance offset exceeds 20.0dB, the Nº32 mutes the channel outputting the lower signal level.

To adjust the main output left-to-right channel balance:

1. Press the ***balance button*** to open the balance front panel display.

   The front panel balance LED lights when the balance display is active.

2. Rotate the ***volume knob*** or press the ***volume ± buttons*** to make the desired adjustments.

   - Rotate the ***volume knob*** clockwise or press the ***volume + button*** to decrease the output level of the left channel.
   - Rotate the ***volume knob*** counterclockwise or press the ***volume – button*** to decrease the output level of the right channel.
   - Select **0.0** to balance the output levels of the left and right channels, allowing both channels to output at the same level.

3. When the desired adjustments have been made, press the ***balance button*** to close the balance control.

- Otherwise, the balance control automatically closes a few seconds after the last command is received. If this occurs, the selected setting is automatically applied.

The front panel balance LED remains lit if the left-to-right channel balance of the main output connectors is offset.

Note

All N°32 balance controls are deactivated when SSP mode is activated.

Mono Playback Mode

Mono playback mode sends mono (rather than stereo) signals to the main output connectors, whether those signals are using the balanced or unbalanced connectors. The mono playback control has no affect on the record output connectors.

To toggle (switch) between mono and stereo playback:

On the remote control, press and release the ***mono button***.

Mode L + R, L ONLY, R ONLY, L – R

Determines the mode of mono playback that is activated when the remote control mono button is pressed. The factory-default MODE parameter setting is L + R. Table 4-1 describes all mono playback modes.

Table 4-1: Mono playback modes.

Mono Mode	Description
L + R	Sends an equal combination of left-channel and right-channel input signals to the left-channel and right-channel main output connectors. See “Using the L + R Balance Control during mono playback” on page 4-5 for additional information.

Table 4-1: Mono playback modes.

Mono Mode	Description
L Only	Sends the left-channel input signal to the left-channel and right-channel main output connectors. The right-channel input signal is ignored.
R Only	Sends the right-channel input signal to the left-channel and right-channel main output connectors. The left-channel input signal is ignored.
L - R	Sends the difference between the left-channel and right-channel input signals to the left-channel and right-channel main output connectors. See "Using L – R mono mode to align phono cartridge azimuth" on page 4-6 for additional information.

To select the desired mono mode:

1. On the remote control, press and hold the ***mono button*** until the MODE parameter is displayed on the front panel.

   Press and release the ***mono button*** to cycle through all available mono playback modes.

2. When the desired mono playback mode is selected, press the ***enter button*** to close the MODE parameter display.

   If you do not press the enter button within a few seconds of selecting the mode, the display automatically closes. If this happens, the selected mono mode remains selected.

Using the L + R Balance Control during mono playback

Precise left-to-right channel balance is critical to achieving an accurate soundstage. When L + R mono playback is activated, the balance control can be used to compensate for output level imbalances that occur after the Nº32 in the signal chain, including those that result from asymmetrical loudspeaker placement and slight mismatches in loudspeaker sensitivity.

To use the L + R balance control:

1. On the remote control, press and hold the ***mono button*** until the MODE parameter is displayed on the front panel.

   Press and release the ***mono button*** to cycle through all available mono playback modes until the L + R mono mode is selected.

2. Press and release the ***enter button*** to close the MODE parameter display.

If you do not press the enter button within a few seconds of selecting the mode, the display automatically closes. If this occurs, the selected mono mode remains selected.

3. With the MODE parameter display closed, press and release the **mono button** to activate L + R mono playback.

4. Play the desired recording.

5. Press and release the **balance button** to display the balance control on the front panel.

   The front panel balance LED lights when the balance control is displayed.

6. Rotate the **volume knob** or press the **volume ± buttons** to center the image between the front left and right loudspeakers.

7. When you are finished making adjustments, press and release the **balance button** to close the balance control display.

   If you do not press the enter button within a few seconds of setting the balance, the display automatically closes. If this occurs, the selected setting is automatically applied.

8. Press and release the **mono button** to cancel L + R mono playback and return to stereo playback.

Using L – R mono mode to align phono cartridge azimuth

L – R mono playback simplifies the process of aligning phono cartridge azimuth.

To use L – R mono playback to align phono cartridge azimuth:

1. On the remote control, press and hold the **mono button** until the MODE parameter is displayed on the front panel.

   Press and release the **mono button** to cycle through all available mono playback modes until the L – R mono mode is selected.

2. Press and release the **enter button** to close the MODE parameter display.

   If you do not press the enter button within a few seconds of selecting the mode, the display automatically closes. If this occurs, the selected mono mode remains selected.

3. With the MODE parameter display closed, press and release the **mono button** to activate L – R mono playback.

4. Play the desired mono recording.

5. Using the L – R output signal, adjust the associated phono cartridge azimuth to achieve a minimal output signal.

   Playing a mono recording when L – R mono playback is activated should result in silence (no output signal). Because phono cartridges differ, it is recommended that you adjust azimuth to achieve a minimal output signal.

6. Press and release the ***mono button*** to cancel L – R mono playback and return to stereo playback.

Record Mode

Record mode allows the select knob and select ▲/▼ buttons to select the input to send to the record output connectors. The selected input is sent to all record output connectors that have not been deactivated with the Rec.Out parameter.

Activating Record Mode

To activate record mode:

1. Press the front panel ***record out*** button.

   The front panel record out LED lights when record mode is activated.

2. Rotate the ***select knob*** or press the ***select ▲/▼ buttons*** to select the input to send to the record output connectors.

3. Select **NONE** to send no input to the record output connectors.

   The selected input is sent to all record output connectors that have not been deactivated with the Rec.Out parameter. See "Rec.Out" on page 3-7 for additional information.

4. When the desired input is selected, press the ***record out button*** to deactivate record mode.

EQ (Equalizer) Mode

Configures the selected input to route an input signal through a dedicated equalizer using the record output connectors.

Making EQ Mode Connections

To make EQ mode connections:

1. Make sure the Nº32 and all associated components are powered off and disconnected from electrical outlets.

Note

The N°32 offers balanced (XLR) and unbalanced (RCA) connectors. For best performance, use balanced connections whenever possible.

2. Connect the desired **N°32 input connectors** to the **equalizer output connectors**. This will be referred to as the EQ input.

3. Connect the desired **N°32 record output connectors** to the **equalizer input connectors**.

4. Connect the desired **N°32 input connectors** to the **source component output connectors**. This will be referred to as the source input.

Note

***DO NOT** use the same N°32 input connectors selected in step 2.*

5. Reconnect the Nº32 and all associated components to electrical outlets. Then, power the Nº32 and all associated components **on**.

Configuring the EQ Input

To configure the EQ input

1. Rotate the **select knob** or press the **select ▲ / ▼ buttons** to select the EQ input (the input assigned to the Nº32 input connectors selected in step 2 of "Making EQ Mode Connections" above).

2. Press and hold the **setup button** until the Name parameter appears on the front panel display.

   The front panel setup LED lights when the setup menu is displayed.

3. Press the **enter button** once to select the Name parameter and access the custom names list.

   The current input name blinks to indicate that a new input name can be selected from the custom names list.

4. Rotate the **volume knob** or press the **volume ± buttons** to scroll through all custom input names included on the custom names list until the EQ name is displayed on the front panel.

5. When the EQ name appears, press the **enter button** to select this name and activate EQ mode.

   The SAVING DATA message will appear on the front panel display to indicate that the EQ name is being saved.

Note

When the Name parameter is set to EQ, the Gain and Offset parameters are not available for the selected input.

6. Rotate the ***select knob*** or press the ***select ▲/▼ buttons*** until the Rec.Out parameter displays on the front panel. Then, press the enter button to select this parameter.

7. Rotate the ***volume knob*** or press the ***volume ± buttons*** to scroll through all available settings until the NONE (default) setting displays on the front panel.

8. When the NONE setting appears, press the ***enter button*** to select this setting.

   The SAVING DATA message will appear on the front panel display to indicate that the new setting is being saved.

9. Press and release the setup button until the setup menu is closed.

Configuring the Source Input

To configure the source input:

1. Rotate the ***select knob*** or press the ***select ▲/▼ buttons*** to select the source input (the input assigned to the Nº32 input connectors selected in step 4 of "Making EQ Mode Connections" on page 4-7).

2. Press and hold the ***setup button*** until the Name parameter appears on the front panel display.

   The front panel setup LED lights when the setup menu is open.

3. Rotate the ***select knob*** or press the ***select ▲/▼ buttons*** until the Rec.Out parameter appears on the front panel display. Then, press the ***enter button*** to select this parameter.

4. Rotate the ***volume knob*** or press the ***volume ± buttons*** to scroll through all available settings until the NONE setting displays on the front panel.

5. When NONE appears, press the ***enter button***.

   The SAVING DATA message will appear on the front panel display to indicate that the new setting is being saved.

6. Press and release the ***setup button*** until the setup menu is closed.

Using EQ Mode

To record and playback with EQ mode:

1. Rotate the ***select knob*** or press the ***select ▲/▼ buttons*** to select the input named EQ.

   Selecting the source input could cause a feedback loop.

2. Press the front panel ***record out button*** to activate record mode.

   The record out LED lights when record mode is activated.

3. Rotate the ***select knob*** or press the ***select ▲/▼ buttons*** to select the source input (the input assigned to the №32 input connectors selected in step 4 of "Making EQ Mode Connections" on page 4-7).

   The front panel display indicates the name and volume level of the selected input.

4. Press the ***record out button*** to deactivate record mode.

5. Rotate the ***select knob*** or press the ***select ▲/▼ buttons*** to select the EQ input.

6. Play the ***source input***.

   - The source input is routed through the EQ input using the record output connectors, allowing the source input to pass through a dedicated equalizer.
   - The volume control now controls the output of the source and EQ signal.
   - The source input is monitored on the record output signal path.
   - The Gain and Offset parameters are NOT available for the EQ input. However, the record output connectors pass the source input at variable levels. The volume knob and volume ± buttons can be used to adjust master volume level.

SSP (Surround Sound Processor) Mode

The SSP mode configures the selected input for complete integration with a multi-channel surround sound processor.

In the past, the difference between the number of channels in each component made integration difficult.

Sending multi-channel processor output signals to a stereo preamplifier distorts calibrated processor output levels. Multi-channel processor volume controls adjust the relative volume level of all channels in unison. But, stereo preamplifier volume controls adjust the relative volume level of just the front left

and right channels, leaving the center, surround, and subwoofer channels unaffected.

Different techniques have been used to compensate for this, including marking a calibrated point on the preamplifier volume control or using Dolby Pro Logic for volume level adjustments. But these techniques are crude, time consuming, and imprecise, resulting in an inconsistent performance at best.

Sending stereo preamplifier output signals to a multi-channel processor interferes with some Dolby noise reduction processing. Processors that feature Dolby Pro Logic decoding sometimes also feature a form of Dolby noise reduction similar to the Dolby B noise reduction found in cassette decks. Designed to respond to input sources based on their strength, Dolby noise reduction requires input sources to be calibrated to Dolby standards. Variable preamplifier output signals cause Dolby noise reduction to mis-track and, in extreme cases, Dolby circuits to overload.

To avoid these problems, SSP mode allows input sources to pass through the N°32 without interference. When SSP mode is activated:

The front panel display indicates that the Nº32 is sending line-level input signals to the associated processor.

The Gain parameter for the selected input is set to a fixed level of +0dB for inputs using balanced connectors and +6dB for inputs using unbalanced connectors.

All Nº32 volume controls are deactivated to prevent the Nº32 from distorting channel balance. As a result, the processor controls the relative volume level of all channels while maintaining its calibrated output levels.

To setup and select SSP mode:

1. Make sure the Nº32 and all associated components are powered off and disconnected from electrical outlets.

2. Connect the ***output connectors*** on the surround sound ***source component*** to the ***input connectors*** on the surround sound ***processor***.

   For example, if the source component is a DVD player, connect the output connectors on the DVD player to the input connectors on the surround sound processor.

3. Connect the center, surround, and sub woofer ***output connectors*** on the ***processor*** to the appropriate ***input connectors*** on the ***power amplifier(s)***.

4. Connect the front left and right ***output connectors*** on the ***processor*** to the desired ***stereo input connector*** on the **N°32**.

   For best performance, use balanced connections whenever possible.

5. Connect the desired ***main output connectors*** on the **N°32** to the appropriate ***input connectors*** on the ***power amplifier***.

Caution!

Before activating SSP mode, set the associated surround sound processor volume control to a reasonable level to prevent sending dangerous signal levels to the associated loudspeakers.

6. Rotate the ***select knob*** or press the ***select ▲/▼ buttons*** to select the ***N°32 input*** for which the stereo input connector selected in step 4 is assigned.

   The front panel display indicates the name and volume level of the selected input.

7. Press and hold the ***setup button*** until the Name parameter for the selected input displays on the front panel.

   The front panel setup LED lights when the setup menu is displayed.

8. Press the ***enter button*** to select the Name parameter and access the custom names list.

   The current input name blinks to indicate that a new input name can be selected from the custom names list.

9. Rotate the ***volume knob*** or press the ***volume ± buttons*** to scroll through all custom input names included on the custom names list until the SSP name displays on the front panel.

10. When the SSP name appears, press the ***enter button*** to select this name and activate SSP mode.

    The following two events happen:

    a. The SAVING DATA message displays on the front panel to indicate that the SSP name is being saved.

    b. Then the SSP ____OFF message displays, indicating that the SSP mode has been selected, but is disabled.

    This is by design, so that no potentially damaging signals pass through unintentionally. Before activating SSP mode, check the surround sound processor volume control mode and reduce the level if necessary.

To activate and use SSP mode:

1. Place the Nº32 into ***standby***, then take it out of ***standby***.

   The SSP ____LINE message displays, indicating that the SSP mode has been activated, and the surround sound processor is in control.

Linking

Linking is available for all Mark Levinson components with Link communication ports, including slave in, slave out, and amplifier communication ports. These communication ports "link" compatible Mark Levinson components in a slave chain, allowing them to share Link controls such as display intensity, standby, playback, input selection, and record mode.

The Nº32 offers three Link communication ports labeled master, slave in, and amplifier.

- The master port is provided for possible future expansion and SHOULD NOT be used when making Link connections.
- The slave in port can be connected to a compatible Mark Levinson digital audio processor or digital transport.
- The amplifier port can be connected to a compatible Mark Levinson power amplifier.

The N°32 is compatible with:

- All power amplifiers that offer Link communication ports.
- Nº30, Nº30.5, and Nº30.6 Reference Digital Audio Processors
- Nº31 and Nº31.5 Reference CD Transports
- Nº36, Nº36S, Nº360, and Nº360S Digital Audio Processors
- Nº39 and Nº390S CD Processors (can be used as either digital audio processors or digital transports in a slave chain)
- Nº37 CD Transport

Refer to the appropriate owner's manual for Link compatibility information about other Mark Levinson components.

Note

Linking is not available for Mark Levinson digital transports unless a Mark Levinson digital audio processor is included in the slave chain. Certain digital transport and digital audio processor combinations are not Link compatible. Refer to the appropriate owner's manual for additional information.

Link Connections

DO use Link communication ports, such as slave in, slave out, and amplifier ports. DO NOT use RS-232 ports or other rear panel connectors.

DO use Link cables, which are available at authorized Mark Levinson dealers.

DO use constructed Link cables. "Constructing Link Cables" below for additional information.

Caution!

Link connections must be made using Link communication ports and Link cables. Connections made using other connectors or cables may damage the N°32 and other linked components, possibly voiding the manufacturer's warranty and/or standard repair policies.

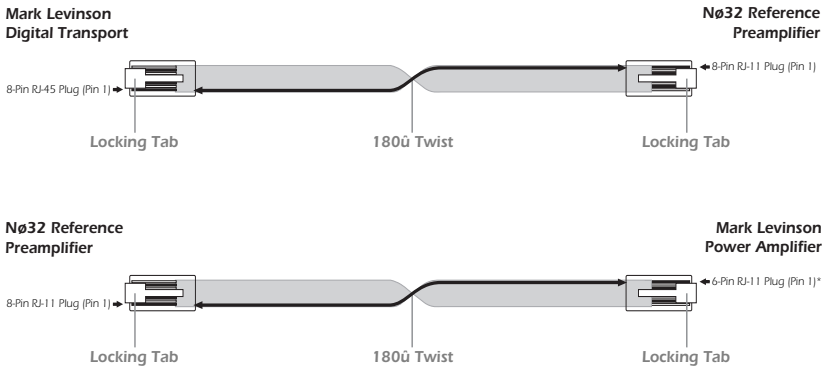
Constructing Link Cables

Link cables can be constructed using an 8-conductor modular telephone cable with the appropriate plug crimped on each end.

- Use an 8-pin RJ-45 plug to connect digital audio processors, digital transports, and the Nº32.
- Use a 6-pin RJ-11 plug to connect to power amplifiers. If the plug on the other end is an RJ-45, do not use the wires from pins 7 and 8.

When linking components with constructed Link cables, twist the cable 180° as shown in Figure 4-1 for a straight-through (pin 1-to-pin 1) connection.

Figure 4-1: Constructed link cables.



Creating a Slave Chain

Making Link connections creates a slave chain that facilitates communication among linked components, allowing them to share Link controls. Table 4-2 on page 4-16 indicates slave chain requirements for each component.

Slave chains that include the N°32:

- Must include compatible Mark Levinson components. The Nº32 is compatible with the components listed on the previous page. Refer to the appropriate owner's manual for Link compatibility information about other Mark Levinson components.
- Must connect components in the following order to prevent communication from terminating: digital audio processor, to digital transport(s), to Nº32, to power amplifier(s).

Note

Link communication port names differ among Mark Levinson components. The Link communication port names used in Table 4-2 on page 4-16 correspond with the component listed in the Component column.

Table 4-2: Slave chain requirements for components.

Component	Slave Chain Requirements
Digital Audio Processor	• Serves as the master component in the slave chain. • Maximum of one per slave chain. • Connect the master port on the digital audio processor to the slave in port on the first digital transport. If no digital transports are included in the slave chain, connect the master port on the digital audio processor to the slave in port on the Nº32.
Digital Transport(s)	• No maximum number per slave chain. • Must be positioned after the digital audio processor and before the Nº32. • Connect the slave in port on the first digital transport to the master port on the digital audio processor. Digital transports CANNOT be included in a slave chain that does not include a compatible Mark Levinson digital audio processor. • Connect multiple digital transports in a "daisy chain" using slave out-to-slave in port connections. Connect the slave out port on the last digital transport to the slave in port on the Nº32.
N°32	• No maximum number per slave chain. • Connect the slave in port on the Nº32 to the slave out port on the last digital transport. If no digital transports are included in the slave chain, connect slave in port on the Nº32 to the master port on the digital audio processor. • Connect the amplifier communication port on the Nº32 to the Link2™ input port on the first power amplifier.
Power Amplifier	• Maximum of six per slave chain. • Connect the Link2™ input port on the first power amplifier to the amplifier port on the Nº32. • Connect up to six power amplifiers in a "daisy chain" using Link2™ control port connections. The Link2™ control port on the last power amplifier is not connected.

The Nº39 and Nº390S CD Processors can serve as either a digital audio processor or a digital transport in a slave chain.

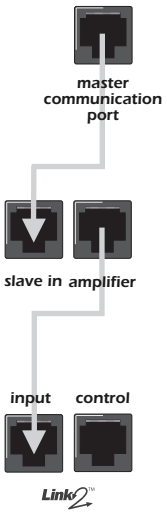
To create a slave chain that includes the N°32:

1. Load a disc in a digital transport that will be included in the slave chain (if applicable).

2. Make sure the Nº32 and all associated components are powered off.

3. Make Link connections while referring to Table 4-2 on page 4-16 and Figure 4-2. In general, components must be linked as follows: digital audio processor, to digital transport(s), to Nº32, to power amplifier(s).

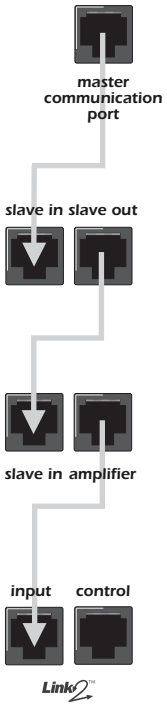
Figure 4-2: Sample slave chains.



N°360S
Digital Audio Processor
Step A:
Connect the digital audio processor **master** port to the digital transport **slave in** port.

N°32
Reference Preamplifier
Step B:
Connect the Nø32 **amplifier** communication port to the first power amplifier Link2™ **input** port.

N°436
Power Amplifier
Step C:
Connect the first power amplifier Link2™ **control** port to the second power amplifier Link2™ **input** port. If no additional power amplifiers are included in the **slave chain**, the last power amplifier Link2™ **control** port is not connected.



N°360S
Digital Audio Processor
Step A:
Connect the digital audio processor **master** port to the digital transport **slave in** port.

N°37
Digital Transport
Step B:
Connect the digital transport **slave out** port to the Nø32 **slave in** port.

N°32
Reference Preamplifier
Step C:
Connect the Nø32 **amplifier** communication port to the first power amplifier Link2™ **input** port.

N°436
Power Amplifier
Step D:
Connect the first power amplifier Link2™ **control** port to the second power amplifier Link2™ **input** port. If no additional power amplifiers are included in the **slave chain**, the last power amplifier Link2™ **control** port is not connected.

4. When Link connections have been made, power on linked components ONE AT A TIME in the order specified below. Allow each component to complete its initialization sequence before proceeding to the next component.

   A. Digital Audio Processor

   B. Digital Transport(s)

   C. Nº32

   D. Power Amplifier(s)

   At this point, the front panel standby LEDs on all linked components should be blinking in unison.

   Note that linked components must be powered on ONE AT A TIME in the order specified above to ensure proper functioning

of Link controls. Do not use a power strip switch to power on several components at once. When power is supplied to a power strip, connected components that do not include a power button will automatically power on.

5. Play the input source on the digital transport selected in step 1 (if applicable).

   - All linked components should automatically come out of standby.
   - The linked digital audio processor and Nº32 will automatically select the appropriate input.

     Note that an input must have a name before it can be automatically selected by the Nº32.

Link Controls

Linking Mark Levinson components allows them to share Link controls such as display intensity, standby, playback, input selection, and record mode.

Note the following:

- Linked components must be powered on ONE AT A TIME in the order specified in step 4 on page 4-17 to ensure proper functioning of Link controls.
- Link controls must be enabled on the linked digital transport(s) linking menu, which allows activation and deactivation of individual Link controls. Refer to the appropriate digital transport owner's manual for additional information.
- Some Mark Levinson digital transports accommodate a maximum of four front panel display characters. In these cases, certain input names appear abbreviated on the front panel display. For example, an input named No320S will appear as No32 on the digital transport front panel display even though the input is assigned for the Nº320S.

Note

The N°31, N°31.5, N°37, N°39, and N°390S remote controls can control N°32 master volume level. This capability is available over IR (not Link connections). Before using one of these remote controls to adjust N°32 master volume level, make sure the digital transport setup menu volume control parameter is set to fixed.

Table 4-3 on page 4-19 provides a general description of Link controls the Nº32 shares with linked components. Some controls may not be available for certain component combinations. Other Mark Levinson components may share additional controls. Refer to the appropriate owner's manual for additional information.

Table 4-3: N°32 shared link controls.

Link Control	Component			
	Digital Audio Processors	Digital Transports	N°32 (preamplifier)	Power Amplifiers
Display Intensity Link	Maintains consistent front panel display character illumination among all linked components. Adjusting display intensity for one linked component simultaneously adjusts display intensity for all other linked components.			
Standby Link	• Placing the linked digital audio processor into standby also places all linked digital transports into standby. • Taking the linked digital audio processor out of standby also takes the linked Nº32 out of standby.	• Placing a linked digital transport into standby has no affect on other linked components. • Taking a linked digital transport out of standby also takes the linked Nº32 out of standby.	• Placing the linked Nº32 into standby also places all other linked components into standby (if those components are not involved in recording). • Taking the linked Nº32 out of standby also takes all linked power amplifiers out of standby.	• Placing a linked power amplifier into standby also places all other linked power amplifiers into standby. • Taking a linked power amplifier out of standby also takes all other linked power amplifiers out of standby.
Playback Link	Pressing the play button on a linked digital transport automatically takes all other linked components out of standby and selects the associated input on the linked digital audio processor and Nº32.			
Input Selection Link	Press and hold the digital transport remote control **select** button to toggle between selecting digital inputs on the linked digital audio processor and selecting analog inputs on the linked Nº32. Press and release the digital transport remote control **select** button to scroll through all available digital or analog inputs (depending on whether the digital audio processor or Nº32 is selected). The digital transport front panel displays the name and volume level of the selected input.			N/A
Record Mode Link	Placing the linked Nº32 into standby will not place the linked Nº 30, Nº 30.5, Nº 30.6, Nº 31, or Nº 31.5 into standby if the linked digital audio processor is in record mode OR if the linked digital transport is in record link mode. A message will display on the linked digital audio processor and digital transport indicating that these components are involved in recording.			N/A
HDCD™ Link	Configuring the linked digital audio processor for an HDCD recording session automatically attenuates the linked Nº32 master volume level the required –6dB.	N/A	Configuring the linked digital audio processor for an HDCD recording session automatically attenuates the linked Nº32 master volume level the required –6dB.	N/A

5 Troubleshooting & Maintaining

Troubleshooting

Incorrect operation is sometimes mistaken for malfunction. If problems occur, see this section for troubleshooting information. If problems persist, contact your Mark Levinson dealer.

No Power

1. Examine the **power cord** to ensure that it is connected to both the **~ac mains connector** and an **electrical outlet**.
2. Make sure the Nº32 is powered on with the **power button**.
3. Make sure the Nº32 is *not* in standby. The controller front panel standby and preamplifier LEDs blink in unison when the Nº32 is in standby. The standby LED lights red when the Nº32 is not in standby.
4. Make sure display intensity has not been set to **off** (0%), deactivating the front panel display.
5. Examine the electrical circuit breaker to ensure that power is being supplied to the electrical outlet to which the Nº32 is connected.

No Remote Control Operation

1. Eliminate obstructions between the remote control IR transmitter and the front panel display IR receiver/transmitter.
2. Make sure the IR input connector is *not* being used.
3. Make sure the remote control IR transmitter LED lights when remote control buttons are pressed, indicating that IR signals are being transmitted.
4. Make sure the remote control is positioned within 17 feet (5m) of the front panel display IR receiver/transmitter. If the Nº32 is placed inside a glass cabinet, tinted glass will reduce the remote control range.
5. Make sure the remote control signal is being received at the front panel display IR receiver/transmitter at a reasonable angle.
6. Make sure the front panel display IR receiver/transmitter is not exposed to strong sunlight, halogen light, or fluorescent light. This can cause IR reception to become unreliable.
7. Replace the remote control batteries.

No IR Learning

1. Eliminate obstructions between the learning remote control and the front panel display IR receiver/transmitter.
2. Adjust the distance between the learning remote control and the front panel display IR receiver/transmitter.
3. Make sure the learning remote control and the front panel display IR receiver/transmitter are not exposed to strong sunlight, halogen light, or fluorescent light. This can cause IR reception to become unreliable.
4. Make sure the learning remote control is configured to learn commands.
5. Replace the learning remote control batteries.

No Main Output

1. Examine audio cables to ensure a solid connection between the Nº32 and associated components.
2. Make sure master volume is set to an audible level.
3. Make sure mute is deactivated.
4. Make sure the Offset parameter for the selected input is not reducing master volume to an inaudible level.
5. Make sure the Nº32 main output connectors are connected to an operational power amplifier, and that the associated power amplifier is connected to operational loudspeakers.
6. Make sure all associated components are powered on and connected to electrical outlets.
7. Make sure the associated component connected to the selected input is producing an input signal.

No Record Output

1. Activate ***record mode*** to make sure the selected input is being sent to the record output connectors.
2. Make sure the record output connectors have not been deactivated with the Rec.Out parameter.
3. Make sure the **Name parameter** for the selected input is not set to **EQ** or **SSP**.
4. Make sure the associated component connected to the selected input is producing an input signal.

"Missing" Input

Make sure the **Name parameter** for the selected input has not been set to unused.

No Link Controls

1. Make sure the slave chain includes Mark Levinson digital audio processors and digital transports that are compatible with the Nº32.
2. Make sure Link connections have been made using Link communication ports and Link cables.
3. Examine Link connections to ensure a solid connection between linked components. Constructed Link cables must be twisted 180° for a straight-through (pin 1-to-pin 1) connection.
4. Examine the slave chain to ensure that linked components are connected in the proper sequence.
5. Make sure Link controls have been enabled on the linked digital transport(s) linking menu, which allows activation and deactivation of individual Link controls. Refer to the appropriate digital transport owner's manual for additional information.
6. Make sure linked components have been powered on in the proper order – digital transport(s), then digital audio processor, then Nº32, then power amplifier(s). Linked components must be powered on ONE AT A TIME in this order to ensure proper functioning of Link controls.

Audible Hum

1. If a cable TV connection is present, disconnect the cable from the electrical outlet. If this eliminates the humming sound, a ground loop isolation device is required. Contact an authorized Mark Levinson dealer for assistance.
2. Disconnect components one at a time to isolate the problem. Once the problem is identified, make sure the problematic component is properly grounded and connected to the same electrical circuit as the Nº32.

Erratic Behavior

1. Power cycle the Nº32, waiting at least 10 seconds between powering the Nº32 off and on.
2. Restore factory-default settings (See "Restoring Factory-default Settings" on page 5-4).

If All Else Fails...

1. Power cycle the Nº32, waiting at least 10 seconds between powering the Nº32 off and on.
2. Restore factory-default settings (See "Restoring Factory-default Settings" on page 5-4).
3. Contact an authorized Mark Levinson dealer.
4. Contact Mark Levinson Customer Service at 781-280-0300 or www.marklevinson.com.

Restoring Factory-default Settings

Performing this procedure restores all parameters and user-defined controls to their factory-default settings. Before performing this procedure, it is recommended to record all custom settings on the "Installation Worksheet" on page A-6.

To restore factory-default settings:

1. Make sure the №32 and all associated components are powered off.

2. Press and hold the *front panel* **record out** and **setup** buttons.

   Remote control buttons cannot be used to restore factory-default settings.

3. Still holding the ***record out*** and ***setup*** buttons, press and release the ***power button*** to power on the №32.

   The CLEAR SETUP? message displays on the front panel.

4. To restore factory-default settings, continue holding the ***record out*** and ***setup*** buttons for about 10 seconds. The FACTORY SETUP RESTORED message blinks on the front panel display The current software version number will appear on the front panel display, and the №32 will enter standby.

   To cancel restoration of factory-default settings, release the record out and setup buttons before the FACTORY SETUP RESTORED message appears on the front panel display. The CLEAR and CANCELLED messages will blink on the front panel display as shown below to indicate that restoration of factory-default settings has been cancelled.

5. Power on all associated components that were powered off in step 1.

Care & Maintenance

The №32 requires routine care and maintenance to ensure optimal performance. The bulleted items in this section indicate maintenance procedures that should be performed on a regular basis.

Note

Failure to perform the maintenance procedures included in this section may void the manufacturer's warranty and/or standard repair policies.

- To remove dust from the Nº32 exterior surface, use a feather duster or a low-pressure blower.
- To remove dirt and fingerprints from the Nº32 exterior surface, use a soft, lint-free cloth. DO NOT use metal polish or a cloth made with steel wool.

  If needed, this cloth can be dampened with isopropyl alcohol. DO NOT dampen the cloth with Benzene, acetone-based cleaners, and other commercial cleaners.

  Wipe the Nº32 exterior surface in the same direction as the grain of the brushed aluminum.

Caution!

DO NOT apply liquid directly to the N°32 exterior surface. Doing so may damage electrical components.

- Replace the remote control batteries as needed. See “Remote Control Batteries” on page 1-6 for additional information.
- See “Installation Considerations” on page 1-4 for information about preventative maintenance.

Appendix

Specifications

Power Consumption	65W maximum
Operating Voltage	100V, 120V, 220V, 230V, or 240VAC @ 50 or 60Hz (preset)
Preamplifier Connectors	3 balanced stereo inputs (female XLR)
	5 unbalanced stereo inputs (RCA)
	2 balanced main stereo outputs (male XLR)
	2 unbalanced main stereo outputs (RCA)
	1 balanced record stereo output (male XLR)
	2 unbalanced record stereo outputs (RCA)
	1 phono ground terminal
	2 DC power connectors
Controller Connectors	1 IEC-standard AC mains receptacle
	1 ir input (1/8-inch/3.5mm mini-jack)
	1 trigger input (1/8-inch/3.5mm mini-jack)
	1 trigger output (1/8-inch/3.5mm mini-jack)
	3 Link communication ports (RJ-45)
	1 RS-232 port (RJ-11)
	2 control ports (RJ-45)
	1 earth-reference ground terminal
	2 DC power connectors
Gain	0, +6, +12, or +18dB (line-level stage)
Volume Control Range	80.0dB

Gain Resolution

1.0dB increments up to 23.0dB in display (-57dB to -80dB)

0.1dB increments above 23.0dB in display (0dB to -57dB)

Input Overload

Gain	XLR Inputs	RCA Inputs
+18dB	2V	1V
+12dB	4V	2V
+6dB	8V	4V
0dB	16V	8V

Input Impedance

100kΩ

Output Impedance

<10Ω on balanced (XLR)

<20Ω on unbalanced (RCA)

Maximum Main Output

16V on balanced (XLR)

8V on unbalanced (RCA)

THD + N

<0.001% balanced

Crosstalk

<120dB (any input to any output, input unterminated)

<140dB (any input to any output, input terminated)

Residual Noise

<120dB (20Hz to 20kHz, input terminated) balanced

Frequency Response

10Hz to 40kHz (±0.2dB)

Overall Dimensions

See “Nº32 Controller Dimensions” on page A-4 and “Nº32 Preamplifier Dimensions” on page A-5

Shipping Weight

Controller: 60 pounds (27kg)

Preamplifier: 46 pounds (21kg)

All specifications are subject to change without notice.

Declaration of Conformity

Application of Council Directive(s):

89/336/EEC and 73/23/EEC, as amended

Standard(s) to which Conformity is Declared:

- EN 55013 : 2003
- EN 55020 : 2002
- EN 55022 : 1998
- EN 61000-3-2 : 2000
- EN 61000-3-3 : 2002
- EN 60065 : 1998

Manufacturer:

Harman Specialty Group
3 Oak Park
Bedford, MA 01730-1413 USA

The equipment identified here conforms to the Directive(s) and Standard(s) specified above.

Type of Equipment:

Preamplifier

Model(s):

Mark Levinson Nº32

Date:

July 2004

Harman Specialty Group
Vice President of Engineering
3 Oak Park
Bedford, MA 01730-1413 USA
Telephone: 781-280-0300
Fax: 781-280-0490
www.harmanspecialtygroup.com

N°32 Controller Dimensions

Figure A-1: Controller front view.

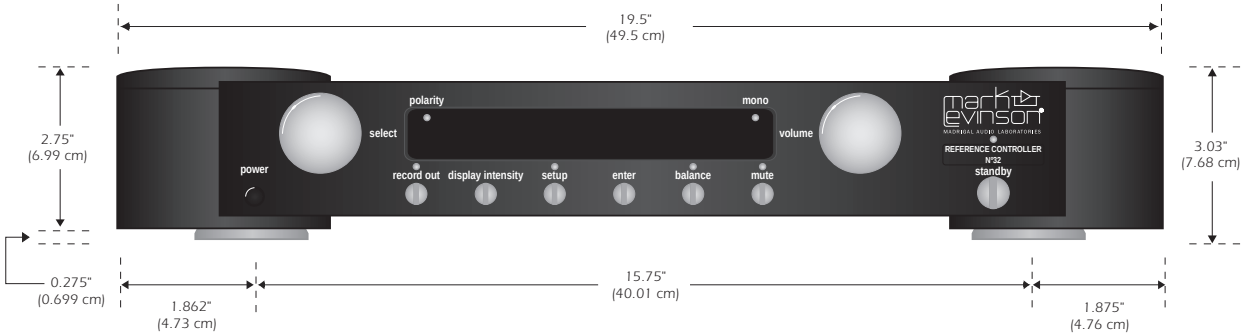
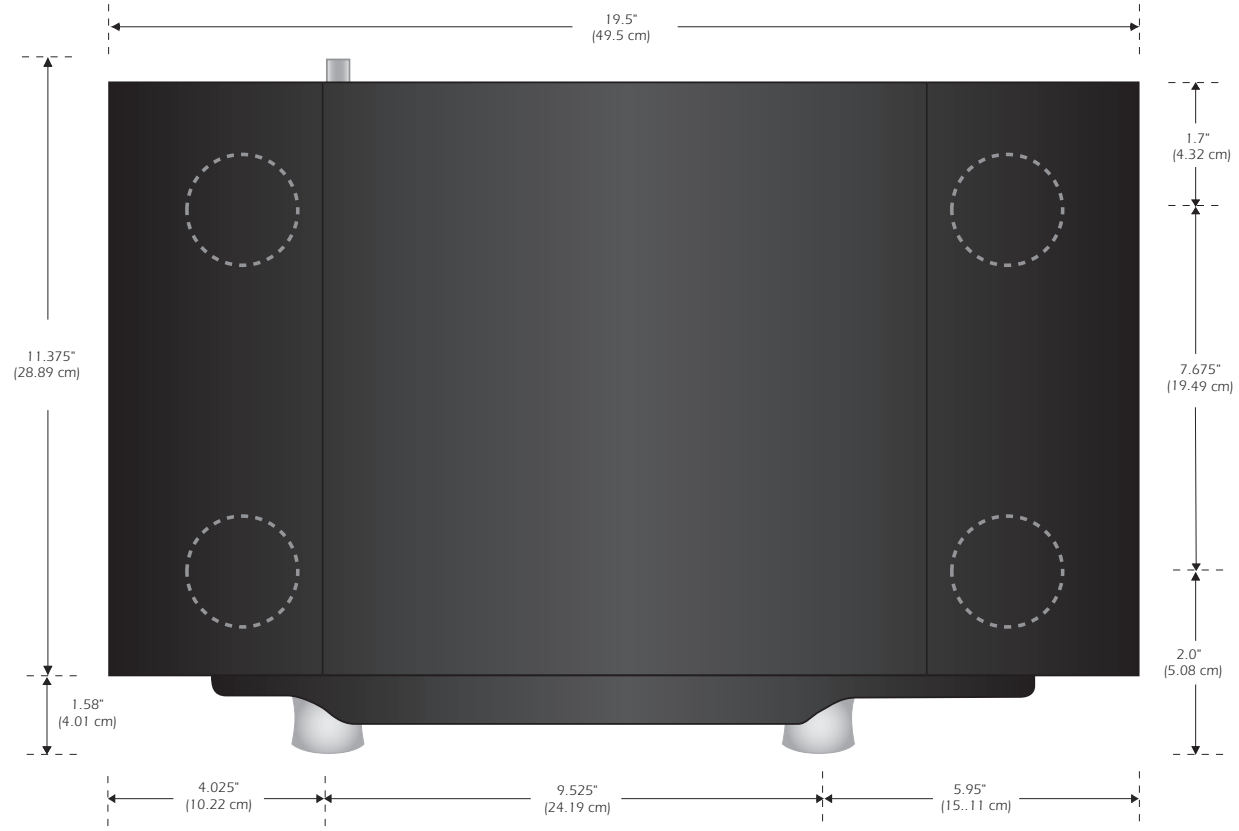


Figure A-2: Controller top view.



N°32 Preamplifier Dimensions

Figure A-3: Preamplifier front view.

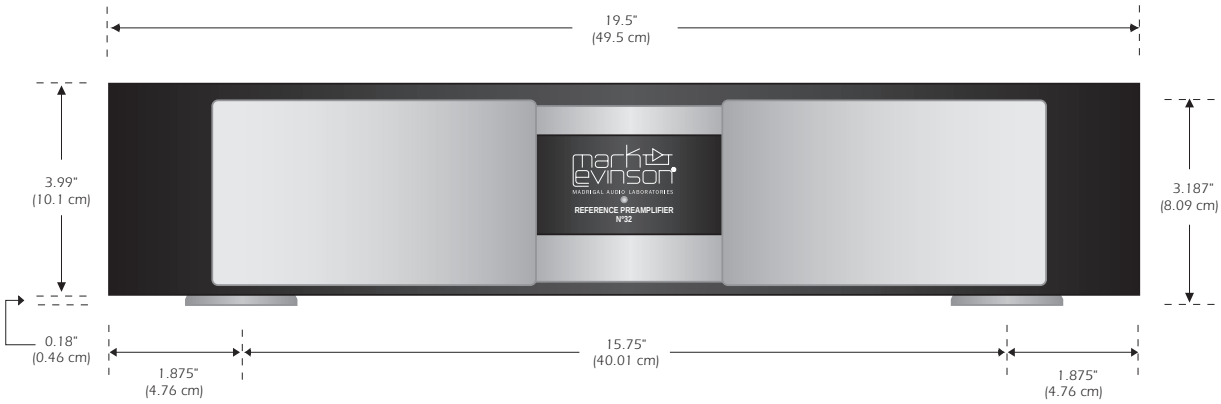
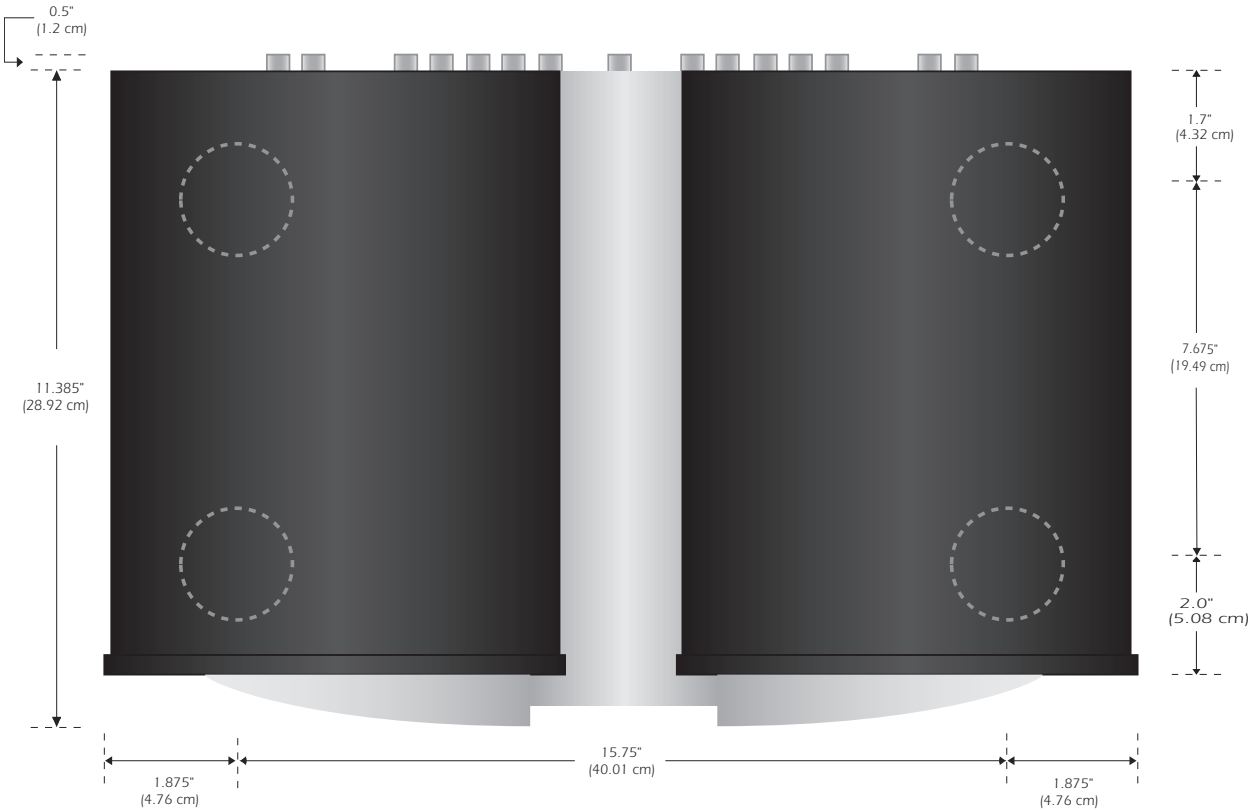


Figure A-4: Preamplifier top view.



Installation Worksheet

Table A-1: Table for recording your controller settings.

Set Inputs	Name	Gain	Offset	Rec. Out
Input 1				
Input 2				
Input 3				
Input 4				
Input 5				
Input 6				
Input 7				
Input 8				
Setup Menu Parameters		Control/Mode Settings		
Mute		Polarity		
Max Vol		Intensity		
Trig.		Balance		
Sw				

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