

Nº52

REFERENCE PREAMPLIFIER QUICK START GUIDE

TABLE OF CONTENTS

About This Document	1
Installation Considerations Unpacking, Placement and Ventilation, Power Requirements, Operating States	2
Getting Started Front-Panel Overview, Rear-Panel Overview, Remote Control Overview	4
Quick Setup and Listen Remote Control, Initial Connections	11
Factory-Default Settings Inputs, Aux Output, Volume Control, Power Management, Advanced	16
Specifications	17

ABOUT THIS DOCUMENT

This quick-start guide contains all the information you will need to unpack and place your N^o52, connect it to the rest of your audio system, turn it on and have a first listen. Before you attempt more extensive use of this sophisticated preamplifier, you must read the full *N^o52 User Guide*, which is contained in the supplied USB memory stick. The User Guide contains information about features, operations, adjustments, alternate connections and networking that will enhance your N^o52's operation and performance.

NOTE: Within this quick-start guide, the term "Controller" is used to refer to the N^o52 Controller chassis and the term "Preamplifier" is used to refer to the N^o52 Preamplifier chassis. The term "N^o52" is used to refer to the dual-chassis combination.

INSTALLATION CONSIDERATIONS

UNPACKING

When unpacking your N°52:

- Save all packing materials in case you need to ship your N°52 in the future.
- Inspect your N°52 for signs of damage during shipment. If you discover damage, contact your authorized Mark Levinson® dealer for assistance in making appropriate claims.
- Locate and remove the accessory box from the shipping carton. Make sure that all of the items listed below are included. If any are missing, contact your authorized Mark Levinson dealer.

2 x IEC power cords (units sold in USA/EU/Korea);
1 IEC power cord (units sold in China)

2 x Multi-pin N°52 DC power cables

1 x Multi-pin N°52 control cable

1 x N°52 remote control (2 x AAA alkaline batteries installed in the factory)

1 x Phillips screwdriver

1 x Pair white gloves (for use during unpacking and initial setup)

1 x USB memory stick containing the *N°52 User Guide*

1 x Warranty/product registration card

Please register your N°52 within 15 days of your purchase. Register online at www.marklevinson.com or complete the included product registration card. Retain your original, dated sales receipt as proof of warranty coverage.

PLACEMENT AND VENTILATION

- Install the Controller and the Preamplifier each on its own shelf to ensure proper ventilation.
- Ensure that you install the Controller and Preamplifier on solid, flat and level surfaces.
- Install the Preamplifier chassis as close as possible to associated audio 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 power amplifier(s) to allow the use of shorter speaker wires. Contact your authorized Mark Levinson dealer for advice.

- Select a dry, well-ventilated location that is out of direct sunlight.
- Allow at least 1/2 inch to 1 inch (13mm – 25mm) of clearance above each chassis for proper heat dissipation.
- DO NOT place either chassis on a thick rug or carpet or cover either chassis with a cloth, as this might prevent proper cooling.
- DO NOT expose the N°52 to high temperatures, humidity, steam, smoke, dampness, or excessive dust. Avoid installing the N°52 near radiators and other heat-producing appliances.

POWER REQUIREMENTS

The N^o52 has been designed for use with 100 – 240-volt, 50Hz/60Hz AC (alternating current), with a maximum current draw of 65W. It includes a detachable IEC power cable intended for use in the region where the N^o52 is sold.

Connection to an AC voltage other than that for which the N^o52 is intended can create a safety and fire hazard and may damage the unit. If you have any questions about the voltage requirements for your N^o52 or about the line voltage in your area, contact your authorized Mark Levinson dealer before plugging the N^o52 into an AC power outlet.

CAUTION: Although your N^o52 will operate from 100V – 240V, 50Hz/60Hz AC, operating it from a voltage that is different from that where the unit was originally shipped and sold may require the use of a power cord that is different from the one supplied with your N^o52. Contact your authorized Mark Levinson dealer for additional assistance.

WARNING! MAKE SURE all components in the audio system are properly grounded. Do not defeat the safety purpose of polarized or grounding-type plugs with “ground-lifter” or “cheater” adapters. Doing so may cause dangerous voltage to build up between components, which may result in personal injuries and/or product damage.

OPERATING STATES

The N^o52 has three operating states:

Off: The AC mains power is disconnected using the Controller’s rear-panel Power switch or by removing the power cord from the Controller’s rear panel.

Standby: The N^o52 Standby mode has three settings that can be selected via the Setup menu: Green, Power Save, and Normal.

Green: This mode removes power from almost all of the N^o52’s circuits, allowing the unit to be activated only via an IR control signal, a 5V – 12V trigger or a press of the Standby button. This mode provides maximum power conservation and is the factory-default Standby mode.

Power Save: This mode removes power from the N^o52’s audio circuits, but keeps the control circuitry powered and ready to receive commands from either the front panel controls or the remote control. This mode provides moderate power conservation.

Normal: This mode shuts off the N^o52’s display and mutes its audio outputs, but keeps all of its control and audio circuits powered. This mode provides the least amount of power conservation but allows the N^o52’s audio circuits to remain warmed up to deliver optimal performance at all times.

On: The entire N^o52 is powered up and all configured outputs are active.

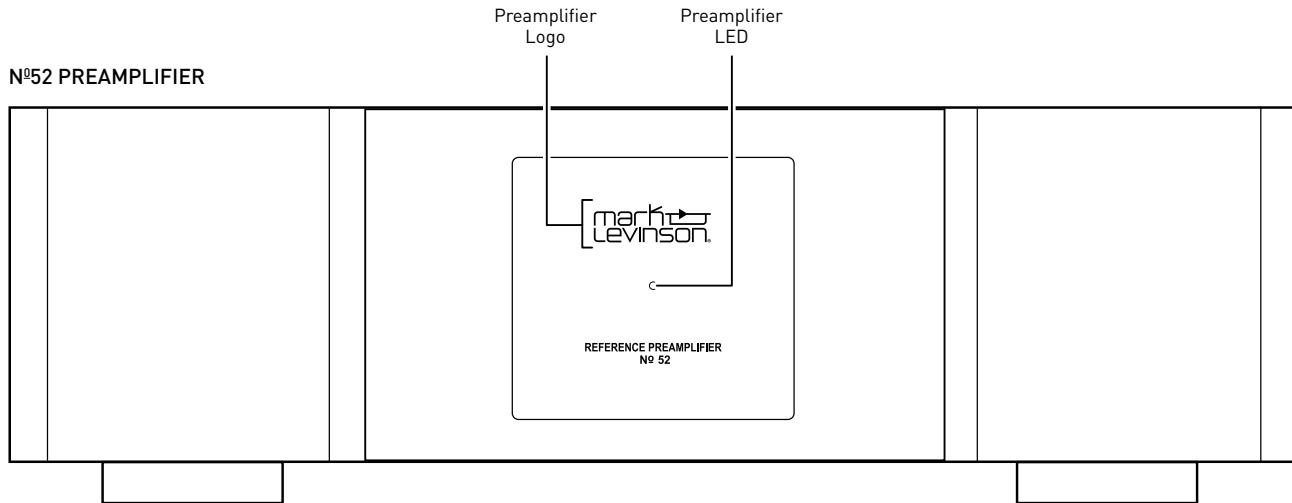
The N^o52 has an Auto Off feature that automatically places it into the Standby mode after 20 minutes of no user control input or audio signal passing through the unit. The factory-default setting for the Auto Off feature is on (engaged). You can turn the Auto Off feature off (disengaged) in the Setup menu. See the *N^o52 User Guide* for details.

You should unplug the N^o52 from the AC wall outlet during lightning storms and extended periods of non-use.

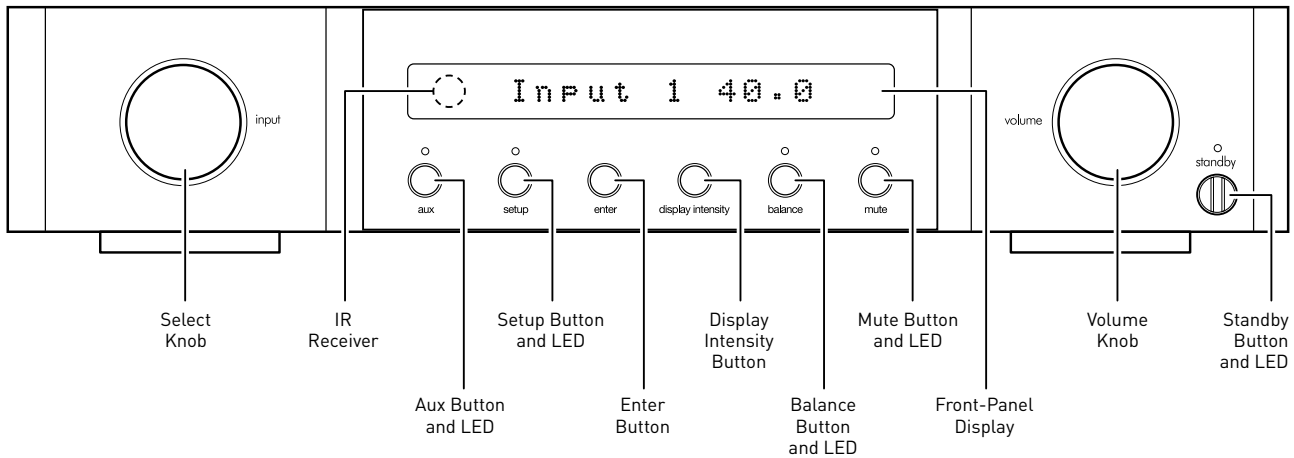
CAUTION: BEFORE moving the N^o52, make sure it is powered off with the Controller’s rear-panel Power switch. Then make sure the power cord is disconnected from the Controller’s rear-panel connector and the AC power outlet.

GETTING STARTED

FRONT-PANEL OVERVIEW



N°52 CONTROLLER



Preamplifier chassis controls/indicators

Preamplifier LED: illuminates fully when the N°52 is On, illuminates dimly when the N°52 is in either the Green or Power Save Standby mode, and flashes slowly in unison with the Standby LED when the N°52 is in the Normal Standby mode.

Preamplifier Logo: The Mark Levinson logo lights when the N°52 is On, and turns off when the N°52 is in Standby or is Off.

NOTE: For complete information about the functions of the front-panel controls and their settings parameters, see the *N°52 User Guide*.

Controller chassis controls/indicators

Select knob: Rotate this knob to select the desired input to send to the Main output connectors. The name and volume level of the selected input are indicated on the Front-Panel display. (Note: The Select knob will bypass any input for which the Input Name Setup menu parameter has been set to “Unused.”)

IR receiver: The IR receiver receives commands from the included remote control when the N°52 is not being controlled via its rear-panel IR Input connector (see *Rear-Panel Overview*, page 7, for more information).

Aux button and LED: Pressing this button activates the Aux mode, allowing you to use the front-panel controls to send a specific input to the Auxiliary outputs, to feed the Auxiliary outputs the source that is sent to the Main outputs (at a fixed output level or at an output level set by the Volume control) or to turn the Auxiliary outputs off. The Aux LED lights when the Aux mode is activated. See *Preamplifier chassis connectors/Auxiliary output connectors*, on page 9, for further information.

Setup button and LED: Press this button to display the Setup menu, which you can use to customize the N°52 to suit your other system components, individual preferences and listening space. The Setup LED lights when the Setup menu is active. For complete information about the settings parameters that are available in the Setup menu, see the *N°52 User Guide*.

Enter button: Press this button to select or deselect a menu item when the Setup menu is displayed. The Enter button does not function during normal operation.

Display Intensity button: Press this button to change the intensity of the N°52's Front-Panel Display characters and its front-panel LEDs. Multiple presses of the Display Intensity button cycle through the available brightness levels: High, Medium, Low, and Off.

Balance button and LED: Press this button to set the left-to-right channel balance of the Main output connectors. The Balance LED lights when the balance function is active.

NOTE: When the balance function is inactive, the Balance LED remains lit if the left-to-right channel balance of the Main output connectors is offset.

Mute button and LED: Press this button to mute and unmute the level of the Main outputs by the amount determined in the Setup menu. The LED lights when the mute function is active.

Front-Panel display: This 16-character alphanumeric display provides information about the N°52's operating status. During normal operation it indicates the name and volume level of the selected input.

Volume knob: Turn this knob to adjust the volume level of the Main outputs (and of the Aux outputs if you have set them to Main Var[iable] in the Aux mode). The volume changes in 1.0dB increments up to 23.0dB and in 0.1dB increments above 23.0dB. The minimum volume level is OFF; the maximum volume level is determined in the Setup menu.

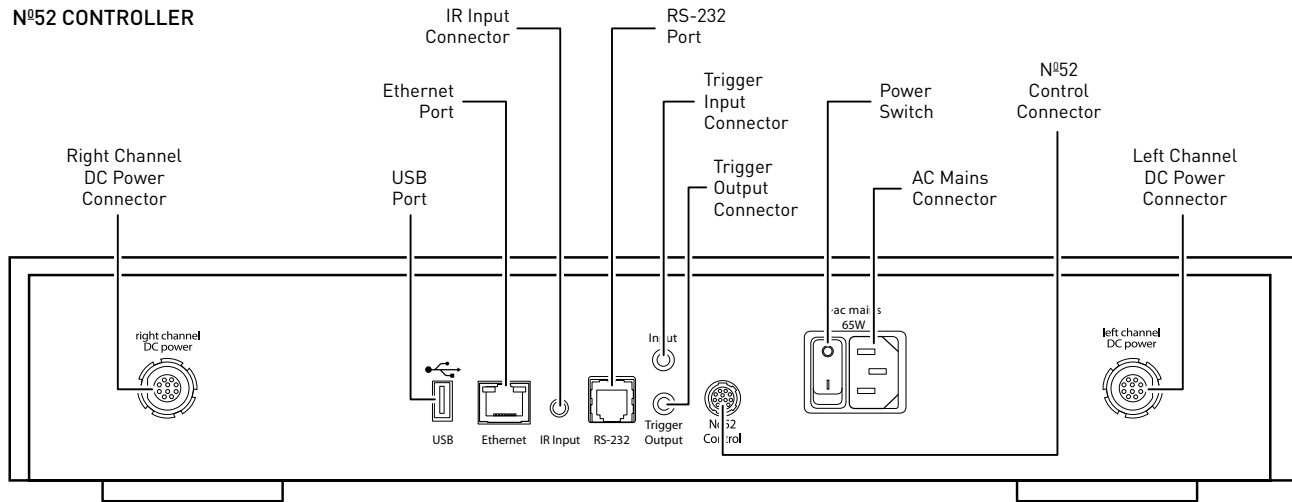
Whenever you select an input the N°52 applies the volume offset selected for it in the Setup menu to the Main output volume level and to the Aux output volume level.

The more quickly you rotate the volume knob the more quickly the volume will change. Rotating the knob too quickly will slow the rate of volume change to avoid accidentally sending a dangerous signal level to your loudspeakers. Rotating the knob slowly slows the rate the volume changes, allowing you to make very precise adjustments in the listening level. The volume taper characteristics can be changed in the Setup menu.

Standby button and LED: Press this button to put the N°52 into and out of the Standby mode. The LED illuminates fully when the N°52 is On, illuminates dimly when the N°52 is in either the Green or Power Save Standby mode, and flashes slowly in unison with the Preamplifier LED when the N°52 is in the Normal Standby mode. See *Operating States*, on page 3, for more information about the different Standby mode settings.

REAR-PANEL OVERVIEW

N°52 CONTROLLER



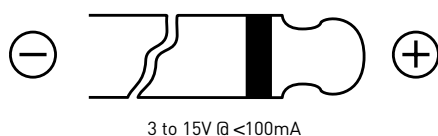
Controller chassis connectors

DC Power connectors: These connectors provide DC power from the Controller chassis to the Preamplifier chassis. Use the two supplied multi-pin DC power cables to connect the Controller's left-channel DC Power connector to the Preamplifier's left-channel DC Power connector, and the Controller's right-channel DC Power connector to the Preamplifier's right-channel DC Power connector.

USB port: This USB Type-A connector allows you to perform firmware upgrades that may be offered in the future. Check our Web site (www.marklevinson.com) for available updates; if one is offered, follow the instructions on the Web site. The USB port also allows you to import and export setup configuration information via a USB memory stick. See the *N^o52 User Guide* for more information.

Ethernet port: This port supports connection to a home network. For information on how to configure and use the Ethernet port, see the *N^o52 User Guide*.

IR input connector: This connector accepts 3V – 15V IR (infrared) control signals with no more than 100mA of current from other equipment. The 3.5mm jack accepts a tip/sleeve (mono) plug with the tip wired for positive polarity.



RS-232 port: This RJ-11 connector provides serial control through a standard RS-232 connection. For further information, see the *N^o52 User Guide*.

Trigger output connector: This 3.5mm tip/sleeve connector can be used to activate other components in the audio system and listening room, such as amplifiers, lights and window shades. A 12V DC signal is output whenever the N^o52 is on.

Trigger input connector: This 3.5mm tip/sleeve connector can be connected to the trigger output of another system component or control system that supplies a trigger voltage. Whenever the N^o52 detects a voltage between 5V and 12V DC at this connection it will turn On; when the trigger signal at this connection ceases the N^o52 will enter the Standby mode.

N^o52 Control connector: This multi-pin connector shares control information between the Controller chassis and the Preamplifier chassis. Use the supplied multi-pin N^o52 control cable to connect the Controller's N^o52 Control connector to the N^o52 Control connector on the Preamplifier.

Power switch: This mechanical switch turns the N^o52's power supply on or off. It is usually left on, and it cannot be turned on or off using the remote control. During normal operation, do not use Power switch to power off the N^o52. Instead, use the Standby button to place the N^o52 into Standby. See *Operating States*, on page 3, for more information.

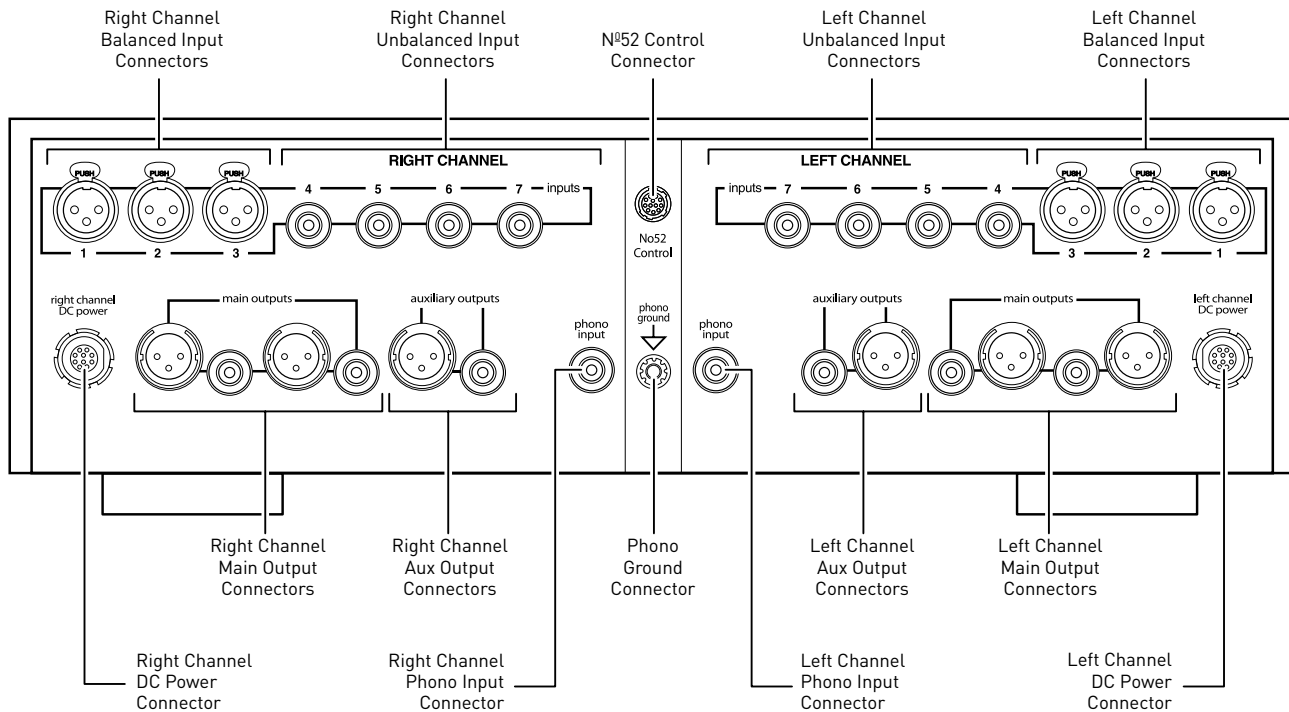
AC Mains connector: This connector provides AC power to the N^o52 when the supplied power cord is connected from it to an AC electrical outlet.

CAUTION: The N^o52 has been designed for use with 100 – 240-volt, 50Hz/60Hz AC. Before operating the N^o52, verify that the voltage level of the electrical outlet you intend to use is within this range.

You should unplug the N^o52 from the AC wall outlet during lightning storms and extended periods of non-use.

REAR-PANEL OVERVIEW

N°52 PREAMPLIFIER



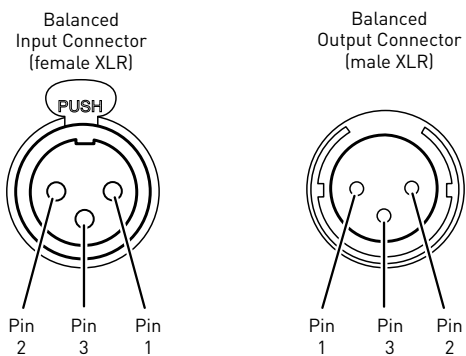
Preamplifier chassis connectors

Balanced input connectors: These connectors accept left-channel and right-channel balanced input signals from source 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 the illustration below to ensure that the N°52 balanced input connector pin assignments correspond to the balanced output connector pin assignments of the source component you want to connect. If not, wire the cable so that the appropriate N°52 input pin connects to the appropriate source component output pin.

Balanced connector pin assignments:

- Pin 1: Signal ground
- Pin 2: Signal + (non-inverting)
- Pin 3: Signal - (inverting)
- Connector ground lug: Chassis ground



Unbalanced input connectors: These connectors accept left-channel and right-channel unbalanced input signals from source components without balanced output connectors. Four unbalanced (RCA) stereo connectors numbered 4, 5, 6 and 7 are available.

N^o52 Control connector: This multi-pin connector shares control information between the Controller chassis and the Preamplifier chassis. Use the supplied multi-pin N^o52 control cable to connect the Preamplifier's N^o52 Control connector to the N^o52 Control connector on the Controller.

DC Power connectors: These connectors receive DC power supplied by the Controller chassis. Use the two supplied multi-pin DC power cables to connect the Preamplifier's left-channel DC Power connector to the Controller's left-channel DC Power connector, and the Preamplifier's right-channel DC Power connector to the Controller's right-channel DC Power connector.

Main output connectors: These 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 the illustration on page 8 to ensure that the N^o52 balanced output connector pin assignments correspond to the balanced input connector pin assignments of the associated component you want to connect. If not, wire the cable so that the appropriate N^o52 output pin connects to the appropriate associated component input pin.

Auxiliary output connectors: These connectors provide a second left-channel and right-channel output that can be used to send audio to a powered subwoofer, to a second listening zone or to recording components such as CD recorders or tape decks. One stereo set of balanced (male XLR) output connectors and one stereo set of unbalanced (RCA) output connectors are available.

The front panel Aux button activates the Aux mode, allowing you to use the front-panel controls to determine which input is sent to the Auxiliary outputs. Settings you make in the Input Setup menu determine if the selected input will appear at the XLR Auxiliary output connectors, the RCA Auxiliary output connectors, both sets of connectors or if it will not be sent to the Auxiliary outputs at all, even if selected in the Aux mode. (For information about setting these parameters see the *N^o52 User Guide*.) The Aux LED lights when Aux mode is activated. See *Aux button and LED* on page 5 for additional information.

NOTE: The following Auxiliary output conditions will apply if you use the Aux mode to set the Auxiliary output signal to anything other than "Off" or "Main Var[iable]:"

Input Setup Menu Aux Setting for Selected Input	RCA Auxiliary Outputs	XLR Auxiliary Outputs
Both	Active (0dB gain)	Active (+6dB gain)
RCA only	Active (0dB gain)	Muted
XLR Only	Muted	Active (0dB gain)
Off	Muted	Muted

See the *N^o52 User Guide* for more information.

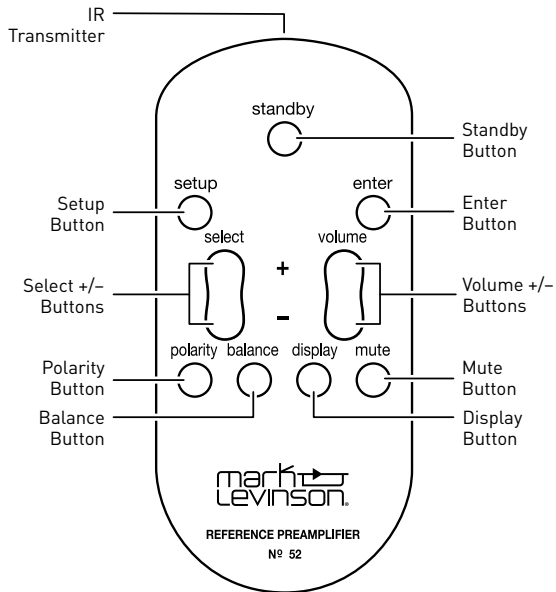
For best performance, use balanced connections whenever possible. Refer to the illustration on page 8 and to the documentation for the connected component to ensure that the balanced input connector pin assignments correspond to the N^o52's Auxiliary output balanced connector pin assignments. If not, wire the cable so that the appropriate input pin connects to the appropriate output pin.

Phono input connectors: These unbalanced (RCA) stereo input connectors accept input signals from most phono cartridges. Two gain settings, multiple resistive load and multiple capacitive load settings are available for the Phono inputs in the Setup menu, allowing the connection of moving-coil, moving-magnet, high-output, and low-output designs. For information about setting the Phono Input parameters see the *N^o52 User Guide*.

Phono Ground connector: This post provides an earth-reference ground connection for the connected phono cartridge. Connecting the phono cartridge grounding wire to the phono ground connector grounds the 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 connected phono cartridge both with and without the phono ground connection. Select whichever results in the best performance.

REMOTE CONTROL OVERVIEW



IR transmitter: This transmitter sends infrared signals to the IR receiver on the Controller's front-panel display

Standby button: Press this button to put the N°52 into and out of the Standby mode. The Standby LED on the Controller front panel illuminates fully when the N°52 is On, illuminates dimly when the N°52 is in either the Green or Power Save Standby mode, and flashes slowly in unison with the Preamplifier LED when the N°52 is in the Normal Standby mode.

Setup button: Press this button to display the Setup menu, which you can use to customize the N°52 to suit your individual preferences, listening space and other system components. The Setup LED on the Controller front panel lights when the Setup menu is active. For complete information about the settings parameters available in the Setup menu, see the *N°52 User Guide*.

Enter button: Press this button to select or deselect a menu item when the Setup menu is displayed. The Enter button does not function during normal operation.

Select +/- buttons: Press these buttons to select the desired input to send to the Main output connectors. The name and volume level of the selected input are indicated on the front-panel display. (Note: The Select buttons will bypass any input for which Input Name Setup menu parameter has been set to "Unused.")

Volume +/- buttons: Press these buttons to adjust the volume level of the Main outputs (and of the Aux outputs if you have set them to Main Var[iable] in the Aux mode). The volume changes in 1.0dB increments up to 23.0dB and in 0.1dB increments above 23.0dB. The minimum volume level is OFF; the maximum volume level is determined in the Setup menu.

Whenever you select an input, the N°52 applies the volume offset selected for it in the Setup menu to the Main output volume level and to the Aux output volume level.

Polarity button: This button controls the polarity of the Main output signal, and of the Aux output signal if you have set them to Main Var[iable] in the Aux mode.

There is no right or wrong setting for the signal polarity. We recommend that you experiment with signal polarity to determine the best sound for individual recordings. The sonic difference between an output signal with inverted and non-inverted polarity ranges from subtle to inaudible, depending on the microphone technique and other factors used in the original recording. In some cases, individual recordings will just sound better one way than the other.

Mute button: Press this button to mute and unmute the level of the Main outputs by the amount determined in the Setup menu. The Mute LED on the Controller chassis lights when the mute function is active.

Balance button: Press this button to set the left-to-right channel balance of the Main output connectors. The Balance LED on the Controller chassis lights when the balance function is active.

NOTE: When the balance function is inactive, the Balance LED on the Controller chassis remains lit if the left-to-right channel balance of the Main output connectors is offset.

Display button: Press this button to change the intensity of the N°52's front-panel display characters and its front-panel LEDs. Multiple presses of the Display button cycle through the available brightness levels: High, Medium, Low, and Off.

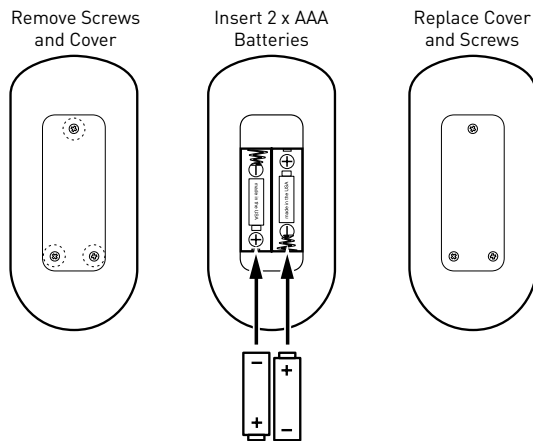
QUICK SETUP AND LISTEN

REMOTE CONTROL

Battery Replacement

Your N^o52 remote control comes with two AAA alkaline batteries already installed. If the remote control seems to operate intermittently, or if the remote control's IR transmitter LED illuminates dimly or not at all when a button is pressed, replace both batteries with new ones. We recommend that you use alkaline batteries, which do not leak and last longer than carbon batteries.

To replace the batteries, remove the remote control's battery cover, insert the batteries and replace the battery cover as shown in the illustration below. Be sure to observe proper battery polarity.



Using the Remote Control

When using the remote control, aim it toward the N^o52 Controller chassis' front panel IR receiver. Make sure that no objects, such as furniture, block the remote's view of the receiver. Bright lights, fluorescent lights, and plasma video displays may interfere with the function of the remote.

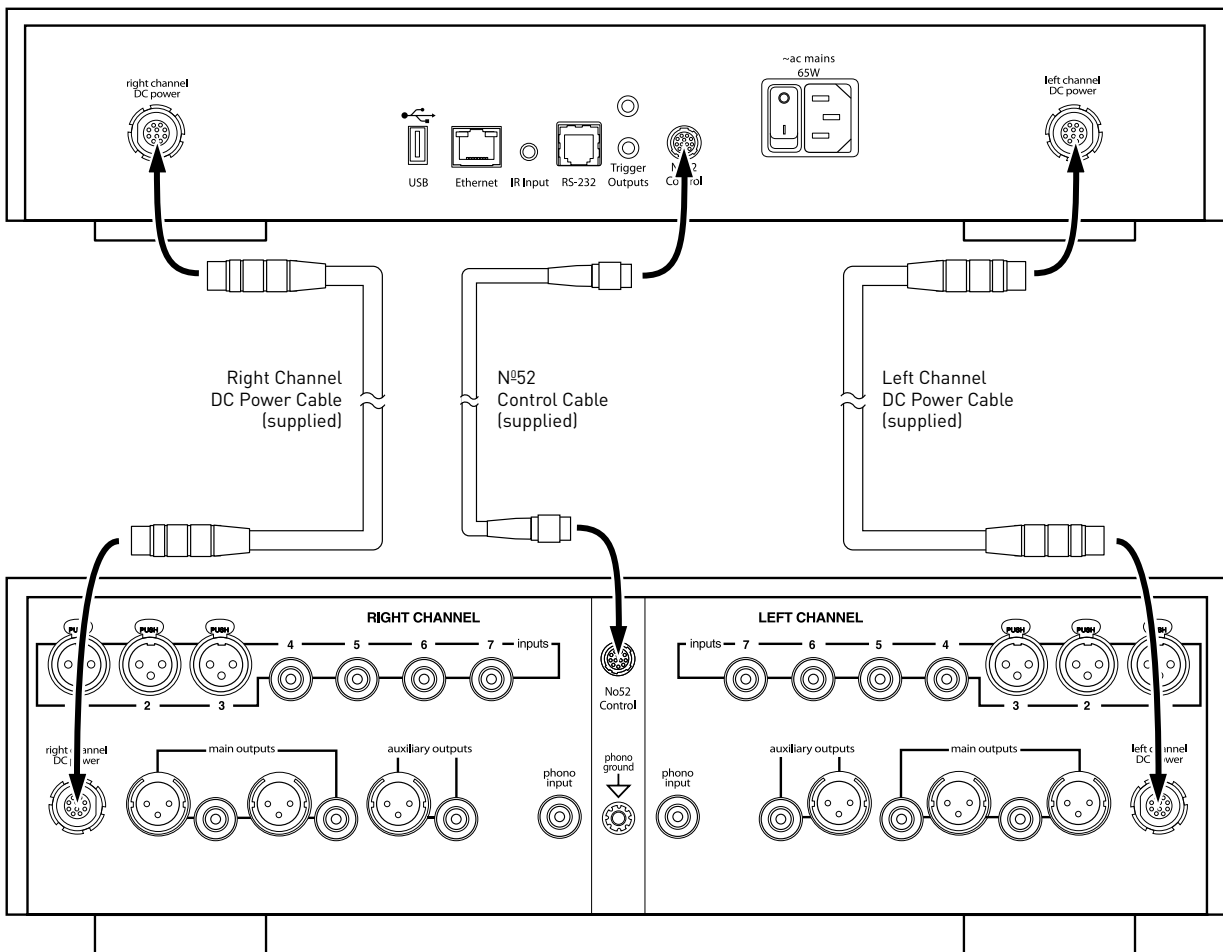
- The remote has a range of about 17 feet (5m), depending on the lighting conditions.
- You can use the remote at an angle of up to 45° to either side of the N^o52 Controller.
- Placing the N^o52 controller inside a cabinet behind tinted glass will reduce the remote control's effective range.
- Do not use remote controls for different components at the same time. Remote controls for different components can interfere with one another.

INITIAL CONNECTIONS

CAUTION: Before making connections, make sure the N°52 and all associated components are powered off and disconnected from electrical outlets.

1. Using one of the supplied DC power cables, connect the Controller's left-channel DC Power connector to the Preamplifier's left-channel DC Power connector. Connect the right-channel DC Power connectors using the other supplied DC power cable.
2. Using the supplied N°52 control cable, connect the Controller's N°52 Control connector to the Preamplifier's N°52 Control connector.

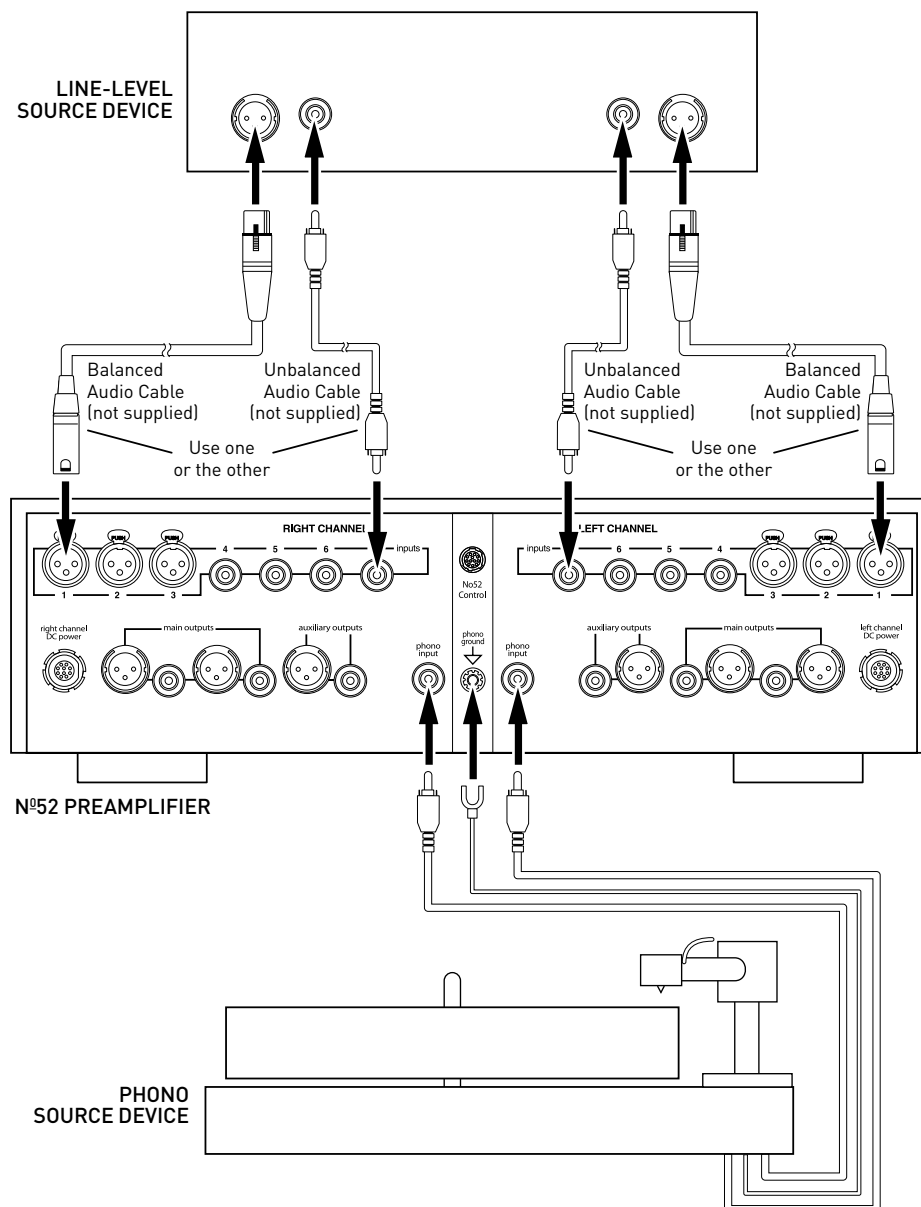
N°52 CONTROLLER



N°52 PREAMPLIFIER

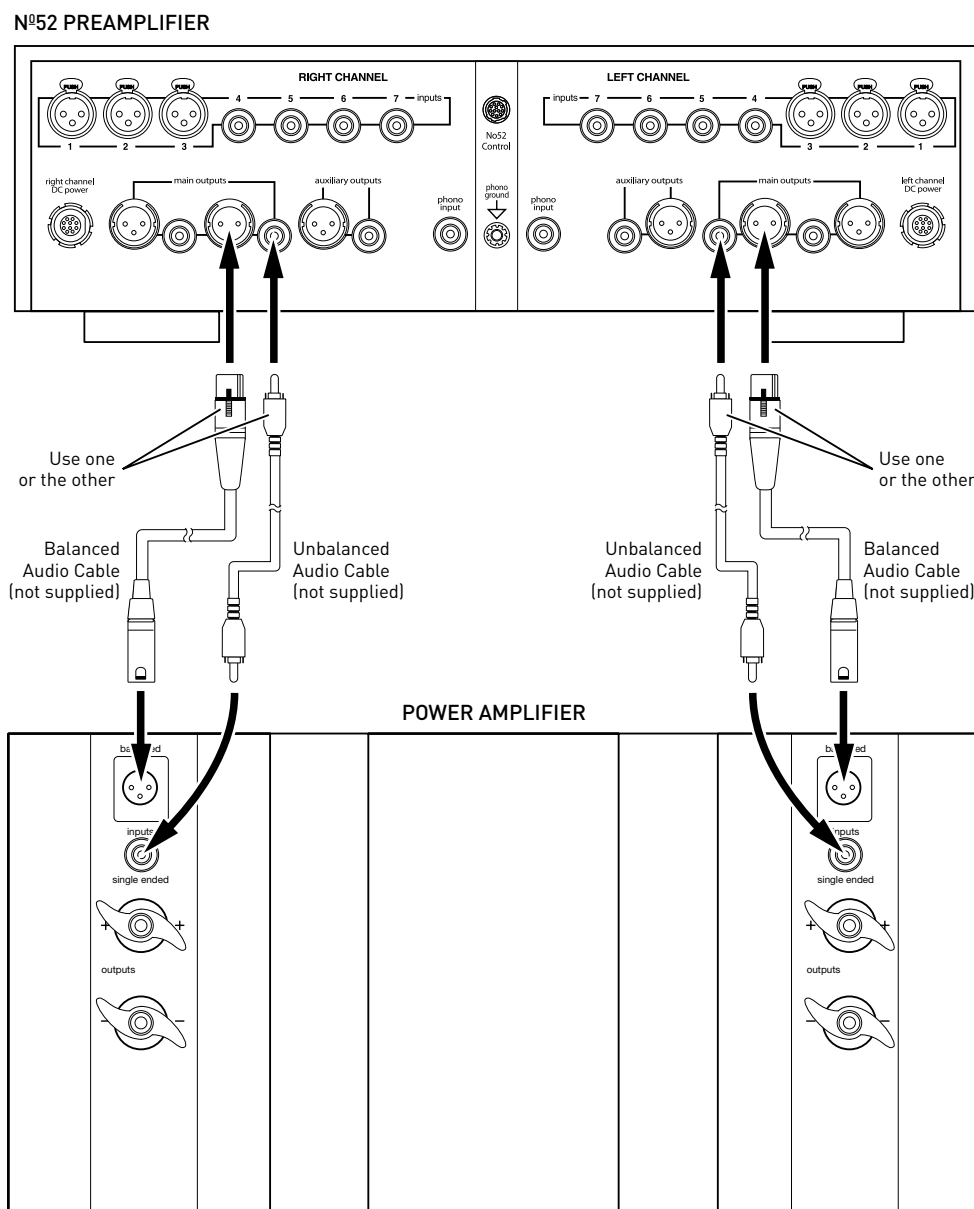
3. Connect a source component to the desired N°52 Preamplifier input connectors.

- Use the N°52 Balanced input connectors numbered 1, 2, or 3 if the source component offers balanced output connectors.
- Use the N°52 Unbalanced input connectors numbered 4, 5, 6 or 7 if the source component does not offer balanced output connectors.
- Use the N°52 Phono input connectors to connect to a turntable/phono cartridge.

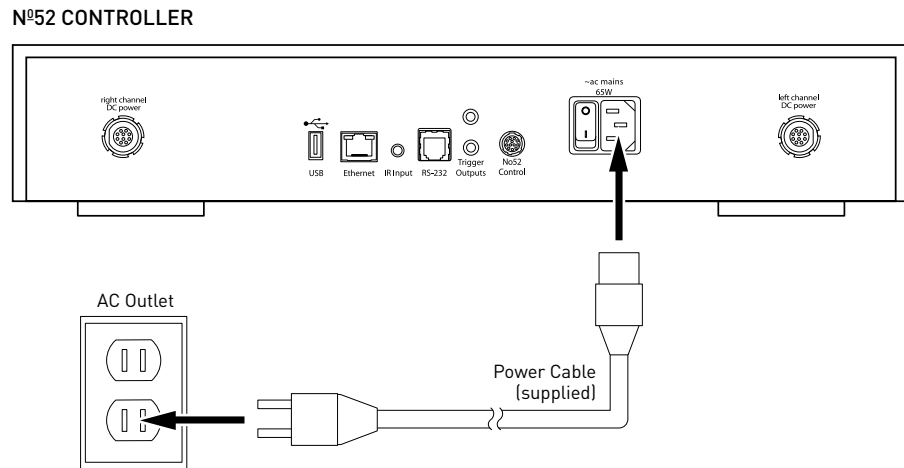


4. Connect the desired N°52 Preamplifier Main output connectors to the associated power amplifier input connectors.

- Use the N°52 balanced Main output connectors if the associated power amplifier offers balanced input connectors.
- Use the N°52 unbalanced Main output connectors if the associated power amplifier does not offer balanced input connectors.



5. Connect the supplied power cable to the Controller and into an electrical outlet.



6. Power the N°52 and all associated components on.
NOTE: Power amplifiers should be powered on last.
7. Rotate the N°52 select knob or press the Select +/- buttons on the remote to select the N°52 input that corresponds to the input connectors to which you connected the source component.
 - The N°52's front-panel display indicates the name and volume level of the selected input.
 - Factory-default input names correspond to their assigned stereo input connector number. For example, Input 1 is assigned to the input connectors numbered 1, Input 2 is assigned to the input connectors numbered 2, and so on.

8. Make sure the N°52's volume is set to a reasonable level. Then, begin playing the connected source device.

NOTE: For information about making Network and SSP (Surround-Sound Processor) mode connections, see the *N°52 User Guide*.

FACTORY-DEFAULT SETTINGS

The following are the factory-default settings for the N°52's Setup menu. For information about all Setup menu settings see the *N°52 User Guide*, which can be found on the supplied USB memory stick.

INPUTS

The following setting defaults apply to all Inputs:

Name:	Input X (the selected input connector number)
Gain:	0dB
Volume Offset:	0.0dB
SSP:	Off (Note: SSP is not available for the Phono input)
Aux:	Both

The following additional setting defaults apply only to the Phono input:

Mono Mode:	Off
Phono Gain :	+40dB
Phono Balance:	0.0dB
20Hz High-Pass Filter:	Off
Resistive Load:	47k ohms
Capacitive Load:	None

VOLUME CONTROL

Maximum Volume:	80.0dB
Muting Level:	-40.0dB
Turn-On Volume Level:	40.0dB
Volume Taper:	Mode 1

POWER MANAGEMENT

Standby Mode:	Green
Auto Off:	On

ADVANCED SETTINGS

Display Intensity:	High
Timer:	10 seconds
Configuration Lock:	Off
DHCP:	On
Static IP Address:	192.168.50.10
Static Subnet Address:	255.255.0.0

SPECIFICATIONS

Power Consumption:	65W (maximum)		
Operating Voltage:	100V – 240V AC, 50Hz/60Hz		
Gain (line-level stage):	0dB, +6dB, +12dB, or +18dB (user-selectable)		
Gain (phono stage):	+40dB, +60dB @1kHz (user-selectable)		
Volume Control Range:	80.0dB		
Gain Resolution:	1.0dB increments up to 23.0dB on display (–57dB to –80dB); 0.1dB increments above 23.0dB on display (0dB to –57dB)		
Input Overload (line-level):	Gain	XLR Inputs	RCA Inputs
	+18dB	2V	1V
	+12dB	4V	2V
	+6dB	8V	4V
	0dB	16V	8V
Input Overload (phono):	>100mV @1kHz (40dB gain); >10mV @1kHz (60dB gain)		
Input Impedance (line-level):	100k ohms		
Input Impedance (phono):	Resistive: 3.3Ω, 5.0Ω, 7.7Ω, 10Ω, 33Ω, 50Ω, 77Ω, 100Ω, 330Ω, 47kΩ (user-selectable) Capacitive: 50pF, 100pF, 150pF, 200pF, 250pF, 300pF, 350pF, 0.01μF (user-selectable)		
Output Impedance:	<20 ohms – balanced (XLR) connectors <10 ohms – unbalanced (RCA) connectors		
Maximum Main Output:	16V – balanced (XLR) connectors 8V – unbalanced (RCA) connectors		
THD + N:	<0.001% (balanced line-level); <–0.02% (phono)		
Crosstalk:	<120dB (any input to any output, input unterminated) <140dB (any input to any output, input terminated)		
Residual Noise:	<120dB (20Hz – 20kHz, input terminated, balanced)		
Frequency Response (line-level):	10Hz – 40kHz (±0.2dB)		
Frequency Response (phono):	±1dB (RIAA response)		
Overall Dimensions (H x W x D):	Controller – 3-1/4" (w/feet) x 17-1/4" x 13" (79mm x 438mm x 330mm); Preamplifier – 5-1/2" (w/feet) x 17-1/4" x 13" (140mm x 438mm x 330mm)		
Net Weight:	Controller – 25 lb (11.4kg); Preamplifier – 35 lb (15.9kg)		

HARMAN

HARMAN International Industries, Incorporated
8500 Balboa Boulevard
Northridge, CA 91329 USA

© 2013 HARMAN International Industries, Incorporated. All rights reserved.

Mark Levinson is a registered trademark of HARMAN International Industries, Incorporated.

Other company and product names may be trademarks of the respective companies with which they are associated.

This document should not be construed as a commitment on the part of HARMAN International Industries, Incorporated. The information it contains, as well as the features, specifications and appearance of the product, is subject to change without notice. HARMAN International Industries, Incorporated, assumes no responsibility for errors that may appear within this document

For customer service and product shipment information, refer to our Web site: www.marklevinson.com

Part No. 070-21694 Rev: A

www.marklevinson.com