

LIMITED TWO YEAR WARRANTY AND EXCLUSIONS

Leviton warrants to the original consumer purchaser and not for the benefit of anyone else that this product at the time of its sale by Leviton is free of defects in materials and workmanship under normal and proper use for two years from the purchase date. Leviton's only obligation is to correct such defects by repair or replacement, at its option, if within such two year period the product is returned prepaid, with proof of purchase date, and a description of the problem to **Leviton Manufacturing Co., Inc., Att: Service Department, 20497 SW Teton Ave., Tualatin, Oregon 97062**. All products returned to Leviton-NSI must have factory authorization for return prior to shipping. The purchaser is responsible for completing and mailing to Leviton, within 15 days of purchase, the warranty registration card enclosed with each product. This warranty excludes and there is disclaimed liability for labor for removal of this product or reinstallation. This warranty is void if this product is installed improperly or in an improper environment, overloaded, misused, opened, abused, or altered in any manner, or is not used under normal operating conditions or not in accordance with any labels or instructions. There are no other or implied warranties of any kind, including merchantability and fitness for a particular purpose, but if any implied warranty is required by the applicable jurisdiction, the duration of any such implied warranty, including merchantability and fitness for a particular purpose, is limited to two years. Leviton is not liable for incidental, indirect, special, or consequential damages, including without limitation, damage to, or loss of use of, any equipment, lost sales or profits or delay or failure to perform this warranty obligation. The remedies provided herein are the exclusive remedies under this warranty, whether based on contract, tort or otherwise.

For Technical Assistance Call:
1-800-864-2502
www.nsicorp.com
www.leviton.com



NRD 8000

ADDRESSABLE DIMMER PACK

USER GUIDE



Table of Contents

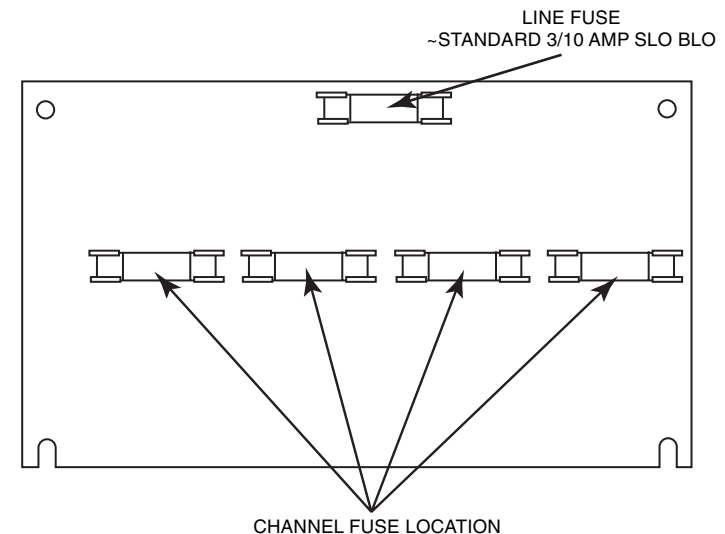
INTRODUCTION	3
SPECIFICATIONS	3
MICROPLEX INPUTS	3
MICROPLEX EXPANSION	3
CONTROL STATUS INDICATORS	3
POWER ON INDICATOR	3
ADDRESSING	4
AC OUTPUT RECEPTACLES	5
AUTO TEST	5
CIRCUIT PROTECTION	5
MOUNTING	5
WIRING FOR AC POWER	5
OPERATIONAL HINTS	6
TROUBLESHOOTING GUIDE	7

TROUBLESHOOTING GUIDE

Symptom	Check List
No output, LED indicators show status OK	<ol style="list-style-type: none"> 1. Check fixture lamps. 2. Check channel fuses. (Refer to diagram below)
No power	<ol style="list-style-type: none"> 1. Check line fuse (Refer to diagram below) 2. If fuse blows after replacement. Check transformer.
Lights always OFF	<ol style="list-style-type: none"> 1. Check channel fuses. 2. Check fixture lamps. 3. Check blackout feature on console. 4. Check DIP switch assignment. 5. Check maximum dimmer assignment on control console. 6. Check soft patch on control console.
Lights always ON	<ol style="list-style-type: none"> 1. Check DIP switch assignment. 2. Check signal cable. 3. Check output mode of control console.
Lights and LED indicators on dimmer pack flicker or glow dimly.	<ol style="list-style-type: none"> 1. Transmission length may be a problem. Get console closer with a shorter cable to verify. Remedy may be the use of 18-gauge cable or an external power supply at the console. (Call dealer or Leviton Technical Services for details). 2. Check pre-heat setting of console.

CAUTION: PLEASE DISCONNECT POWER BEFORE REMOVING COVER FOR SERVICE, AS HIGH VOLTAGE IS OTHERWISE PRESENT.

If problems persist contact your nearest Leviton-NSI authorized dealer or Leviton-NSI Technical Services at 1-800-864-2502, between the hours of 8:00 AM to 5:00 PM PST, Monday thru Friday.



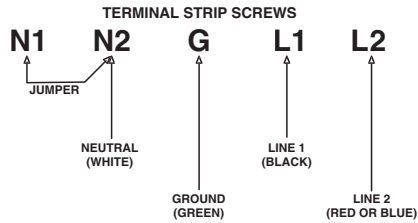
REPLACE WITH VALUES AS LISTED BELOW:

NRD 8000 = 15 AMP FAST BLO

NOTES:

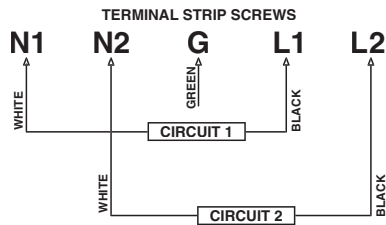
- Amperage requirements of power service may be reduced for decreased maximum power (i.e. 30 amps for 1,000w/channel).
- ELECTRICAL SERVICE MUST BE FUSED AT 40 AMPS MAXIMUM.
- NEUTRAL WIRE MUST BE CONNECTED TO BOTH NEUTRAL TERMINALS. Double check for correct connection.

**240 VAC SINGLE PHASE (THREE WIRE SYSTEM)
208 VAC THREE PHASE (TWO LEGS OF STAR OR "Y" SYSTEM)**



40 AMP SUPPLY TO ACHIEVE MAXIMUM RATED POWER

TWO 120 VAC SINGLE PHASE CIRCUITS



40 AMPS EACH CIRCUIT FOR MAXIMUM RATED POWER

OPERATIONAL HINTS

- 1) Use a power source of a circuit separate from your audio system.
- 2) Ensure that the rating of the breaker or fuse for the power source chosen is adequate. The required rating (in amps) of the breaker or fuse may be calculated with the following formula:

$$I = P/E$$

Where I = the current (in amps)
P = the power (in watts)
And E = the voltage (in volts)

- 3) Always use quality 12 gauge (or heavier) grounded power cables for input power.
- 4) Always use quality 18 gauge (or heavier) grounded power cables for output power.
- 5) Avoid placing AC power cables or extension cords for lighting near sensitive audio cables (guitar cords, mic cables, audio snakes, etc.).
- 6) Avoid blocking the ventilation holes on the sides of your dimmer pack. It is very important your unit has this ventilation to avoid possible damage which may void the warranty.

INTRODUCTION

Thank you for your decision to purchase a Leviton-NSI product.

The Leviton-NSI NRD 8000 is a rack mountable eight channel dimmer system that provides 1,200 watts per channel or a maximum power capacity of 9,600 watts.

The Leviton-NSI NRD 8000 is fully user addressable allowing assignment of up to eight of a possible 128 control channels. Microplex technology, developed by Leviton-NSI for the stage lighting market, is the electrical marriage of microprocessor technology with digitally controlled multiplexing. Microplex technology allows your system to be connected using standard microphone cables or even audio snakes. System expansion is further simplified through the ability to daisy chain additional dimmer packs to an existing system. This application of Microplex technology makes system set up and operation easy and convenient.

Our philosophy at Leviton-NSI is to utilize only the highest quality components. Problems that often plague dimmers such as flickering lights, buzzing in audio equipment and triac failure are minimized with toroidal devices. In place of triacs, Leviton-NSI only uses professional grade dual SCR's.

You can be confident your Leviton-NSI Dimmer Packs feature the best performance and reliability available.

SPECIFICATIONS

Nominal Input Voltages:	120VAC, 60Hz 240VAC, 50Hz
Number of Channels:	Eight
Power Output per Channel:	1,200 Watts @ 120V 1,200 Watts @ 240V
Total Maximum Power Output:	9,600 Watts
Filtering:	(8) Toroidal Chokes, 400 μSEC.
Control Signal Type:	Leviton-NSI "Microplex"
Input Voltage to Output Response Time:	50 MSEC.
Control Isolation:	1,200 Volt HV
+15 V DC Available to Controller:	400 MA
Dimensions (HxWxD):	5.25" x 19" x 10.25"
Mounting Spec. (from hole centers):	18.75"

MICROPLEX INPUTS

Both the male and female Microplex connectors may be used for input signals. Microplex technology allows your system to be connected using standard microphone cables or even audio snakes. Digitally coded signals may be received from your Leviton-NSI controller or another dimmer pack. The Microplex system also provides D.C. phantom power to your controller. Up to one hundred twenty-eight individual control channels plus phantom power to your controller may be transmitted through a single microphone cable.

MICROPLEX EXPANSION

The male and female Microplex connectors are wired in parallel allowing either one to be used for input or output of control signals. When used as an output, the Microplex connectors will provide control signals to another dimmer pack. This is called daisy chaining and makes expansion of your system easy.

CONTROL STATUS INDICATORS

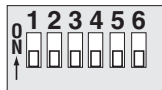
Individual yellow LED's indicate when channels are active. This feature is an excellent trouble shooting tool in identifying possible problems with signal transmissions or defective lamps and fixtures.

POWER ON INDICATOR

This green LED will light whenever the dimmer pack is receiving AC power and functioning properly.

ADDRESSING

Each Leviton-NSI dimmer pack is fully user addressable to receive any of 128 possible control signals. Control signals may be assigned in increments of four by addressing the NRD 8000 to receive them. To accomplish this simply position the address select DIP switches as described in the following chart.



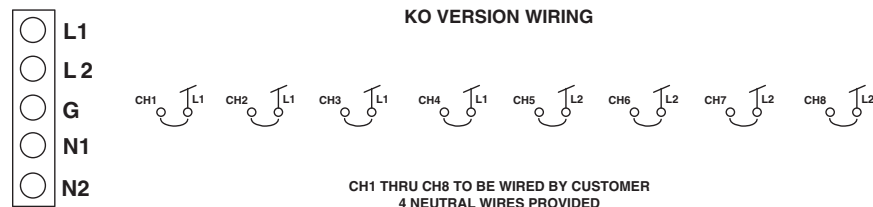
Channels	1	2	3	4	5	6
1-4	Off	Off	Off	Off	Off	N/A
5-8	On	Off	Off	Off	Off	N/A
9-12	Off	On	Off	Off	Off	N/A
13-16	On	On	Off	Off	Off	N/A
17-20	Off	Off	On	Off	Off	N/A
21-24	On	Off	On	Off	Off	N/A
25-28	Off	On	On	Off	Off	N/A
29-32	On	On	On	Off	Off	N/A
33-36	Off	Off	Off	On	Off	N/A
37-40	On	Off	Off	On	Off	N/A
41-44	Off	On	Off	On	Off	N/A
45-48	On	On	Off	On	Off	N/A
49-52	Off	Off	On	On	Off	N/A
53-56	On	Off	On	On	Off	N/A
57-60	Off	On	On	On	Off	N/A
61-64	On	On	On	On	Off	N/A
65-68	Off	Off	Off	Off	On	N/A
69-72	On	Off	Off	Off	On	N/A
73-76	Off	On	Off	Off	On	N/A
77-80	On	On	Off	Off	On	N/A
81-84	Off	Off	On	Off	On	N/A
85-88	On	Off	On	Off	On	N/A
89-92	Off	On	On	Off	On	N/A
93-96	On	On	On	Off	On	N/A
97-100	Off	Off	Off	On	On	N/A
101-104	On	Off	Off	On	On	N/A
105-108	Off	On	Off	On	On	N/A
109-112	On	On	Off	On	On	N/A
113-116	Off	Off	On	On	On	N/A
117-120	On	Off	On	On	On	N/A
121-124	Off	On	On	On	On	N/A
125-128	On	On	On	On	On	N/A

The NRD 8000 is actually two four channel dimmers coupled together to provide eight channels of dimming in a single rack mountable package. Each group of four channels has its own address switches. These control channels are addressed in increments of four as outlined in the chart above.

IMPORTANT: All Leviton-NSI Dimmer Packs are shipped from the factory addressed for channels 1-4. Units must be readdressed (see chart above) before being capable of receiving any other channels.

AC OUTPUT RECEPTACLES

Dual standard 5-15R "Edison" AC outlet receptacles are provided for each channel of both the NRD 8000. These receptacles provide power to the lamps in your lighting system. The amount of power supplied to these outlets controls the intensity of the lights they drive. Multiplexed signals received from your Leviton-NSI controller are translated into power levels to achieve the desired light intensity. Each dual receptacle corresponds to a single channel with the maximum power capabilities described in the specifications section of this manual. Under no circumstance should maximum recommended power capabilities be exceeded. Exceeding the rating may be hazardous and will void your warranty. Most lamp fixtures and rain lights may be connected to these outlets. Do not connect any other electrical appliances or equipment to the dimmer packs.



AUTO TEST

This built-in test function allows you to connect and test lamps at full intensity without the need of a controller. When DIP switch #6 is off (down) and the dimmer pack is receiving AC power and no control source is connected to the pack, all dimmers are driven to full. All working lamps will light to full intensity.

CIRCUIT PROTECTION

The NRD 8000 is equipped with safety circuit interruption devices to ensure protection from overloading or shorted circuits. The NRD 8000 utilizes resettable external circuit breaker for each individual channel as well as internal fusing.

MOUNTING

The Leviton-NSI NRD 8000 Dimmer Pack may be mounted in standard EIA 19" racks. The NRD 8000 is provided with two mounting flanges or ears designed for securing to the rack mounting rails. Most standard rack rails are already properly drilled to accept mounting 19" EIA standards for industrial equipment, however in some cases you may need to drill holes to accommodate your dimmer pack. When doing this, ensure hole spacing is accurate before attempting to drill.

WIRING FOR AC POWER

The NRD 8000 is equipped with a standard screw terminal connection to facilitate customer wiring for AC power. Leviton-NSI recommends only qualified individuals with a knowledge of electricity attempt to wire the NRD 8000 to electrical power. Leviton-NSI assumes no liability for personal injury, lamp failure, or other equipment damage when the unit is improperly connected to an electrical service or connected by unqualified personnel.

It is important to verify wiring before connecting or energizing the service main. Miswiring may cause the 3/10 Amp internal power supply fuses to blow. Circuit damage and blown lamps may also result from improper wiring.

The NRD 8000 is actually two 4 channel dimmers coupled together for the flexibility of eight independent channels in one rack mount package. The NRD 8000 may be wired to achieve the maximum power rating of 1,200 watts per channel or a total of 9,600 watts. The system may also be configured to provide two 1,200 watt outputs to each channel for a total of 2,400 watts per channel by setting both addressing switches the same. It is important to know what your power requirements are before making connections to the dimmer.

The NRD 8000 may be connected to either of the following types of electrical power services as illustrated below. It is recommended that a suitable power connector and cable (such as a standard 4 prong range or dryer plug) be attached to the unit for portable operation.