RLYD04 Quick Start Guide

Connecting for the first time

Make connections one at a time.

First connect the power.
Is anything hot? Does the green LED blink? Did you measure the power with a voltmeter?
Second connect the DMX source.
Does the LED glow or flash very fast?
Use a Ohm meter to check the relays. Are they closing?
Last thing.
Connect your load to the relays.

Features
Quality low power DMX receiver chip equal to 1/8 unit load on DMX line
ESD protection and "fail safe" features on DMX receiver chip
Allows DMX512 digital protocol to control 4 Relays.
Quality Omron relays included on board.
Address all 512 channels.
Accepts AC or DC power.
Phoenix contact screw terminals

SPECS

Input Signal:
Northlight RLY04 board accepts DMX512 protocol, current and legacy versions.

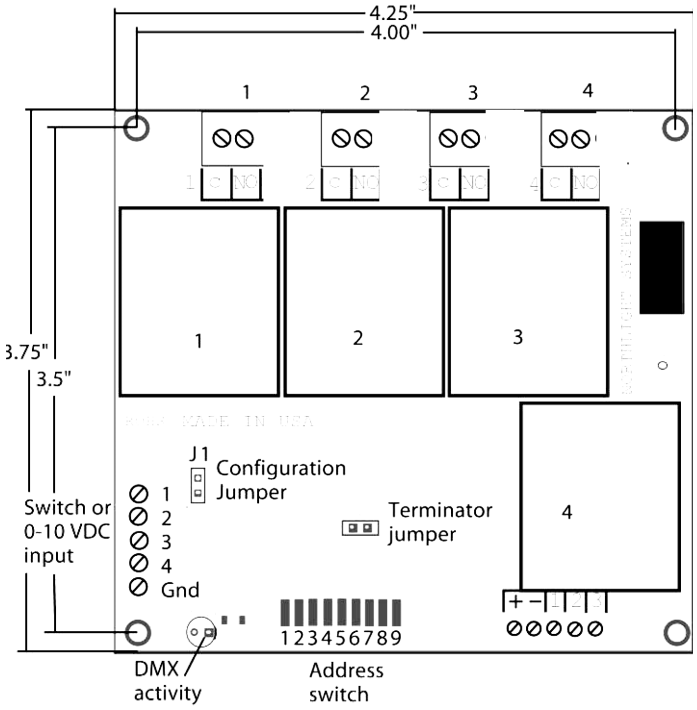
Output:
Output is 4 Relays capable of 10 Amps @ 120 VAC.
Screw terminals provided for Normally open and normally closed configuration.

Power requirements:
15 to 24 volts DC @ 350 mA. Max.
12 VAC

LED Indicators:
Green DMX signal present LED.

Board connections:
All connections are made width mini screw terminals.

Physical Dimensions
3.00"L X 3.25"W +/- .20"



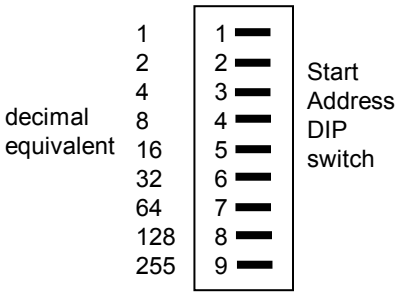
Ground
The signal ground connector is the common signal ground – not earth ground.

DMX512 In
The DMX input pin numbers correspond to the XLR pin numbers.

Pin 1 is signal ground, not earth ground
Pin 2 is DMX512 -
Pin 3 is DMX512 +

Address switch:
Mini DIP switches on board or panel mount.
The mini DIP switch, individual switches are numbered 1 – 9, left to right.

Set the starting address to the first in a group of 4.
The address is entered on the DIP switches in standard binary code starting with 1.
See the chart of all 512, address switch positions at the back of the full manual.



Each switch on the DIP switch, numbered 1-9, has a decimal equivalent.
To calculate the address on the DIP switch, just add up the decimal equivalents of the switches.
For example, to set the DMX output address to 8, set switch 4 to ON. Switch 4 is equal to 8.

Using the configuration jumper
There is 1 configuration jumper on the board.

J1 – Determines the output in the event of DMX signal loss.
Open(no jumper) - When the DMX signal is lost, the output will be zero.

Closed(jumper in place) – When the DMX signal is lost the board will hold and continue to output the last valid data.

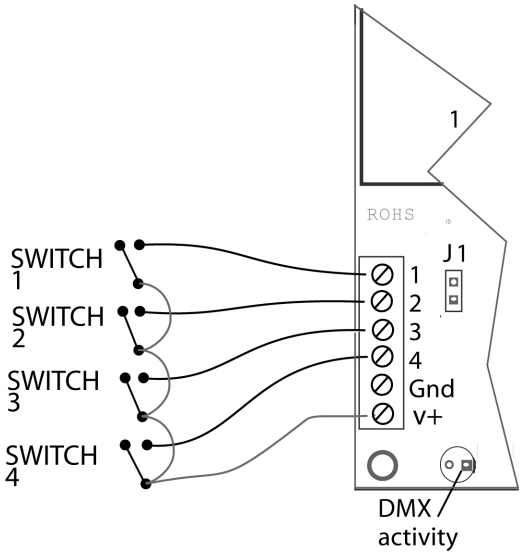
Using the relays

The relays used are Single Pole Single Throw standard relays.
Rated at 20 Amps .
The screw terminals accept up to 12 AWG wire and are connected to the relay contacts only, they do not provide AC power.

Analog Inputs

External 0-10VDC
The analog inputs use terminals 1-4 and GND. Do not use the terminal marked 10V
.
A standard analog voltage spanning 0 - 10 VDC @5mA can be used to control the relays.
This should be a smooth DC voltage with no noise or ripple.

When the analog voltage exceeds 75%(7.5 volts) the board will switch the corresponding relay on. Any lower voltage and the relay will be off.



Toggle switch
Use analog inputs are terminals 1-4 and 10V. Do not use the terminal marked GND.

The Relay4 board has provision for 4 toggle switches. Use the screw terminal labeled 10 V as the common for the switches.
The GND terminal is not used.

Warranty

Northlight Systems warrants this product against defects in materials and workmanship for a period of 1 year.

Returns Policy
If there is a defect, we will repair or replace the product at out discretion.

We offer a full refund on the purchase price if returned in original, unused and "**like new**", condition in less than 30 days.
Return the product with a description of the problem. Free repairs are for defective parts or workmanship only.
Repairs due to improper hookup, over voltage, short circuits, physical damage etc., will be charged to the customer.

Northlight will repair any circuit board for a flat fee of $20.00 plus return shipping.