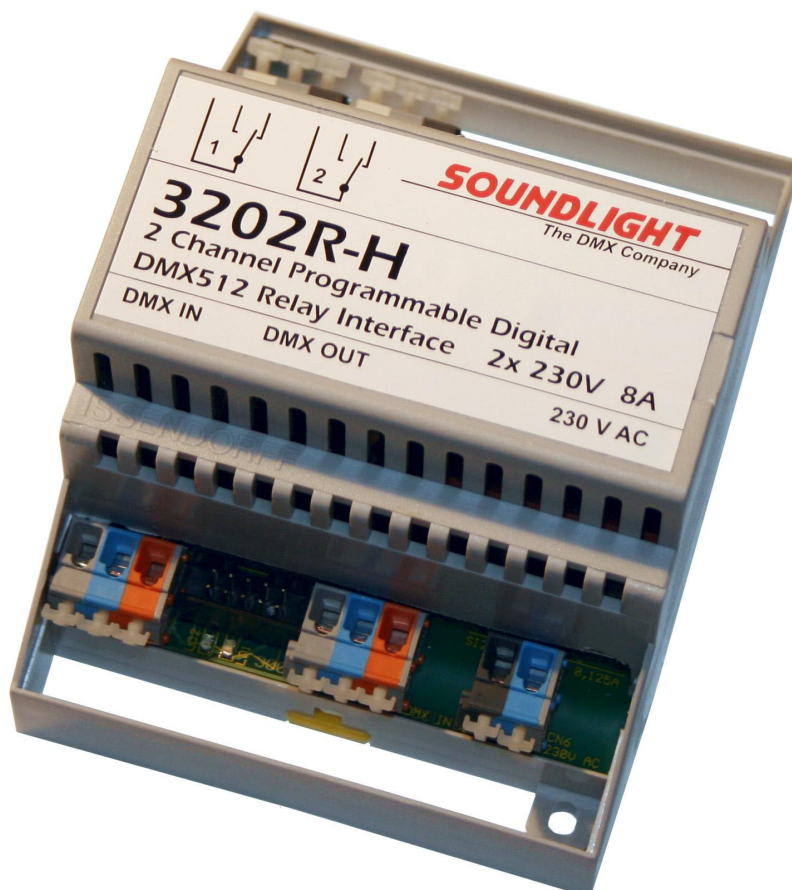


## OPERATING MANUAL

### DMX Relay Interface 3202R-H



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# PREFACE

Thank you for choosing a SOUNDLIGHT device.

The SOUNDLIGHT DMX Relay Card 3202R-H is an intelligent DMX demultiplexer decoding digital data complying with standards USITT DMX512, DIN 56930-2, and ANSI E1-11 DMX512-A. The card drives two contact relay outputs. The card can be used with all standard light control systems. Its special advantages include:

- **universal protocol decoding**  
Recognizes all variants of the protocol as defined by USITT / ESTA / DIN
- **future-proof**  
The unit is software controlled and can easily be adapted to any change in protocol definition.
- **integrated hysteresis**  
Adjustable hysteresis ensures flicker free switching
- **simple supply**  
The power supply is from standard mains voltage 230V AC
- **signal loss**  
In the case of a loss of the drive signal a pre-definable action will be taken.
- **cost-effective**  
The SOUNDLIGHT 3202R-H is a cost-effective solution for many purposes.

## Features

The relay card 3202R-H consists of a base printed circuit board and a detachable DMX start address setting board. The relay card can be operated with or without start address board at your option; see below for programming and address setting options. This card is intended for use in lighting effects and as reliable switching relay card; for limitations see "Additional Notes" on page 7.

## NOMENCLATURE

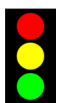
These symbols are used within this manual:



DANGER ! May cause harm to user and/or equipment



INFO: How to setup your device



INFO: Status information

# UNPACKING

Please unpack carefully and check that all items are intact. When leaving our factory, the card has been in good condition. In case of damage during transport please notify the carrier immediately.

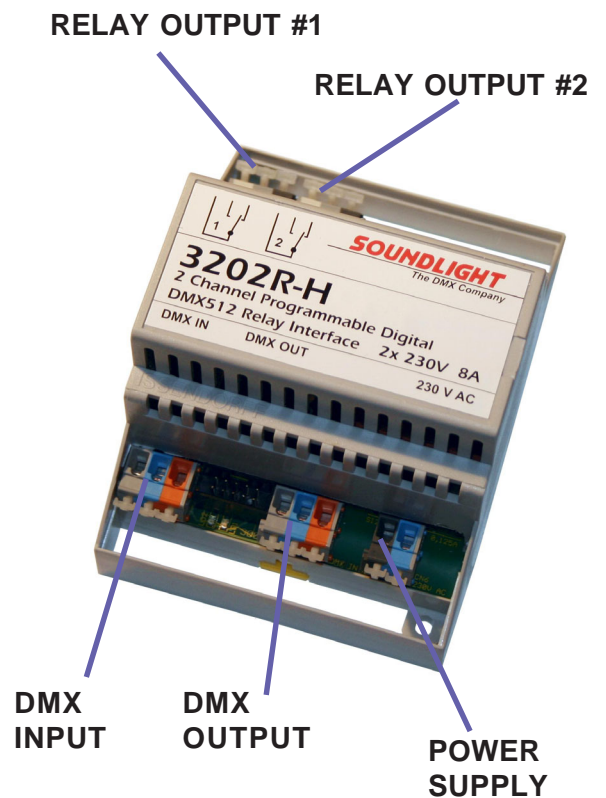
When unpacking, you should identify these items:

- \* the interface card 3202R complete with address board 3000P
- \* this manual

# CONNECTORS

The Relay Interface 3202R-H consists of connectors for five ports::

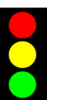
|            |                        |                      |
|------------|------------------------|----------------------|
| <b>CN6</b> | <b>DMX INPUT</b>       |                      |
|            | 1 grey                 | Screen, GND          |
|            | 2 blue                 | -DMX                 |
|            | 3 orange               | +DMX                 |
| <b>CN7</b> | <b>DMX OUTPUT</b>      |                      |
|            | 1 grey                 | Screen, GND          |
|            | 2 blue                 | -DMX                 |
|            | 3 orange               | +DMX                 |
| <b>CN1</b> | <b>RELAY OUTPUT #1</b> |                      |
| <b>CN2</b> | <b>RELAY OUTPUT #2</b> |                      |
|            | white                  | C (Common)           |
|            | d'grey                 | NC (Normally Closed) |
|            | l'grey                 | NO (Normally Open)   |
| <b>CN3</b> | <b>POWER SUPPLY</b>    |                      |
|            | black                  | 230V AC (L)          |
|            | blue                   | 230V AC (N)          |



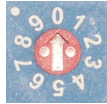
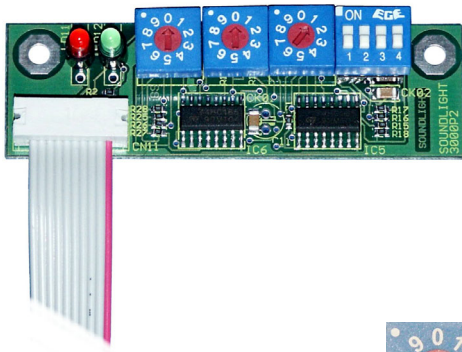
# SIGNAL INDICATORS

The state of the demultiplexer card is signalled with two indicator LEDs.

- green: OPERATION (blinking)
- red: ERROR (blinking)  
Error blinking at data errors or loss of communication.



# ADDRESS SWITCHES



A DMX start address board is required to set the DMX start address and the DMX personality. A start address board is NOT included with DIN rail mountable devices and must be ordered separately. The start address board can be used with all types of SOUNDLIGHT interfaces. At your option, a start address board 3000P (switches) or a start address board 3003P (LED display) can be used.

Use the rotary switches to set the DMX start address and the DIP switches to set the DMX personality. when using the start address board 3003P, use the ADR setting to set the start address and Functions F1...F4 to set the personality.

Setting address 000 disables all outputs, regardless of data received. To manually set the outputs, use these settings:

|              |             |
|--------------|-------------|
| Address 801: | RELAY #1 ON |
| Address 802: | RELAY #2 ON |

**IMPORTANT NOTICE:** Make sure to apply a valid DMX signal when setting the start address. It may take up to five seconds until the new start address is being recognized and activated. A fourfold red-green blinking of the indicator LEDs indicates succesful programming of parameters. The address board can be detached when all settings have been made and stored in memory.

# DIP\_SWITCH\_SETTINGS

The DMX relay interface can be set to meet your specific needs using the DIP switches.4:

## S1: HOLD Mode

|     |  |
|-----|--|
| OFF | HOLD Mode OFF  |
| ON  | HOLD Mode ON ("last look" retained at loss of control) |



## S2: SAFETY LEVEL

When HOLD MODE (S1) has not been activated, S2 takes control:

|        |   |
|--------|---|
| S2=OFF | all Outputs OFF at loss of control signal |
| S2=ON  | all Outputs ON at loss of control signal  |

## S3, S4: DMX PERSONALITY, trip points

|        |      |                    |
|--------|------|--------------------|
| S3=OFF | <45% | Relay switches OFF |
| S4=OFF | >55% | Relay switches ON  |
| S3=ON  | <25% | Relay switches OFF |
| S4=OFF | >75% | Relay switches ON  |
| S3=OFF | <10% | Relay switches OFF |
| S4=ON  | >90% | Relay switches ON  |
| S3=ON  | 0%   | Relay switches OFF |
| S4=ON  | >0%  | Relay switches ON  |

## RELAY DATA

The relays used feature a high voltage changeover contact for universal use for all applications.

|                         |                           |
|-------------------------|---------------------------|
| max. switching current: | 10A @ 230V resistive load |
| max. inrush current:    | 12A @ 230V resistive load |
| max. switching voltage: | 440V AC @ resistive load  |
| max. switching power:   | 3000VA AC                 |
| contacts:               | 1x changeover (NC/NO)     |

Approbationen



### IMPORTANT NOTICE:

When selecting and ordering the appropriate relay card, please note, that all data given by the relay manufacturers are for **RESISTIVE LOAD** only. Incandescent lamps may be considered to be resistive loads. Switching inductive loads, such as transformers or solenoids, requires lower loads - we strongly recommend not to exceed 50% of the resistive load data. Besides, contacts may burn due to inductive spikes and sparks. Make sure to add protective circuitry (RC combinations, VDR resistors) if switching inductive loads. Switching inductive loads on the mains power supply may also generate high frequency noise and degrade the power supply quality. If switching capacitive loads (electronic ballasts or psu) inrush current limiting devices may be required to prevent contact damage.



## TECHNICAL DATA

|               |                                    |
|---------------|------------------------------------|
| Dimensions:   | 85 mm x 66 mm x 112 mm (B x H x T) |
| Mounting:     | standard DIN rail                  |
| Width:        | 5U                                 |
| Power supply: | 230V AC approx. 5VA                |
| DMX IN:       | 1 Unit Load                        |
| DMX OUT:      | fed thru                           |
| Relay Out:    | 250V AC max. 10A (resistive load)  |
| Order code:   | 3202R-H                            |

## DISTURBANCES

If a trouble-free operation cannot be guaranteed, disconnect the relay card interface and secure it against unwanted operation. This is especially necessary, when

- the unit has visible damages;
- the unit does not operate;
- internal parts are loose;
- connection cables show visible damages.

## LIMITED WARRANTY

This DMX interface is warranted against defects in materials and workmanship for a period of 12 months, beginning with the date of purchase. The warranty is limited to repair or exchange of the hardware product; no further liability is assumed. SOUNDLIGHT is not responsible for damages or for loss of data, sales or profit which arise from usage or breakdown of the hardware product. In Germany, SOUNDLIGHT will repair or replace established defects in hardware, provided that the

defective part is sent in, freight paid, through the responsible dealer along with warranty card and/or sales receipt prior to expiration of warranty.

**Warranty is void:**

- when modifying or trying to repair the unit without authorisation;
- modification of the circuitry;
- damages by interference of other persons;
- operation which is not in accordance with the manual;
- connection to wrong voltage or current;
- misuse.

## CE CONFORMITY



This DMX relay card is microprocessor controlled and uses high frequency (8 MHz quartz). The interface has been tested in our EMC lab to comply with EN5022B and IEC65/144.

Please make sure that shielded data cable is used and the shield is connected properly to the GND pin. Shield must never make contact to other signal lines.

## FCC STATEMENT

This product has been tested and complies with the specifications 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 according to 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 is found 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 or devices
- Connect the equipment to an outlet other than the receiver's
- Consult a dealer or an experienced radio/TV technician for assistance

FCC Caution: Any change or modification to the product not expressly approved by SLH could void the user's authority to operate the device.

## SERVICE

There are no parts within the DMX relais card 3202R-H which require the user's attention. Should your unit require servicing, please send it to the factory, freight paid.

## END OF LIFETIME



When the useful lifetime of this product has been reached, it must be disposed of properly. Electronic devices must not be placed in domestic waste. Consult your local authorities to find the nearest collection point of used electric and electronic devices. SOUNDLIGHT is a WEEE registered company (Reg Nr. DE58883929).

## INTERNET-HOTLINE

Please check our internet domain <http://www.soundlight.de> for new versions, updates etc. If you have any comments which may be worth considering, please send a message to [support@soundlight.de](mailto:support@soundlight.de). We will check your message and reply accordingly.

## ADDITIONAL NOTES

The relay interface 3202R-H has been designed for use in lighting effects or as effects unit. Thus, switching speed has been optimized and the 3202R-H is a *fast switching* card.

We do **not** recommend to use this board as switching board in power distribution systems, where high noise immunity, but only slow switching speed is required. As DMX512 by itself does not contain any provisions for error detection or error correction, false or disturbed data packets could lead to short interval erroneous switching. When switching loads such as discharge lamps (e.g. followspots, scanners or moving heads), this then could lead to lamp problems as many lamps cannot be hot-restriking, or moving lights would shut off and then go through their initialization sequence.

We have programmed a noise-immune slow-speed switching version of the well renowned 3200R interface, which is available as 3206R-H. This interface is **limited in speed due to multiple packet detection** and performs multiple interpretations of the incoming DMX512 signal. It will change its output state **only** if the appropriate DMX command can be detected reliably **and** repeatedly. Thus we advise to use the 3206R-H for power switching applications.