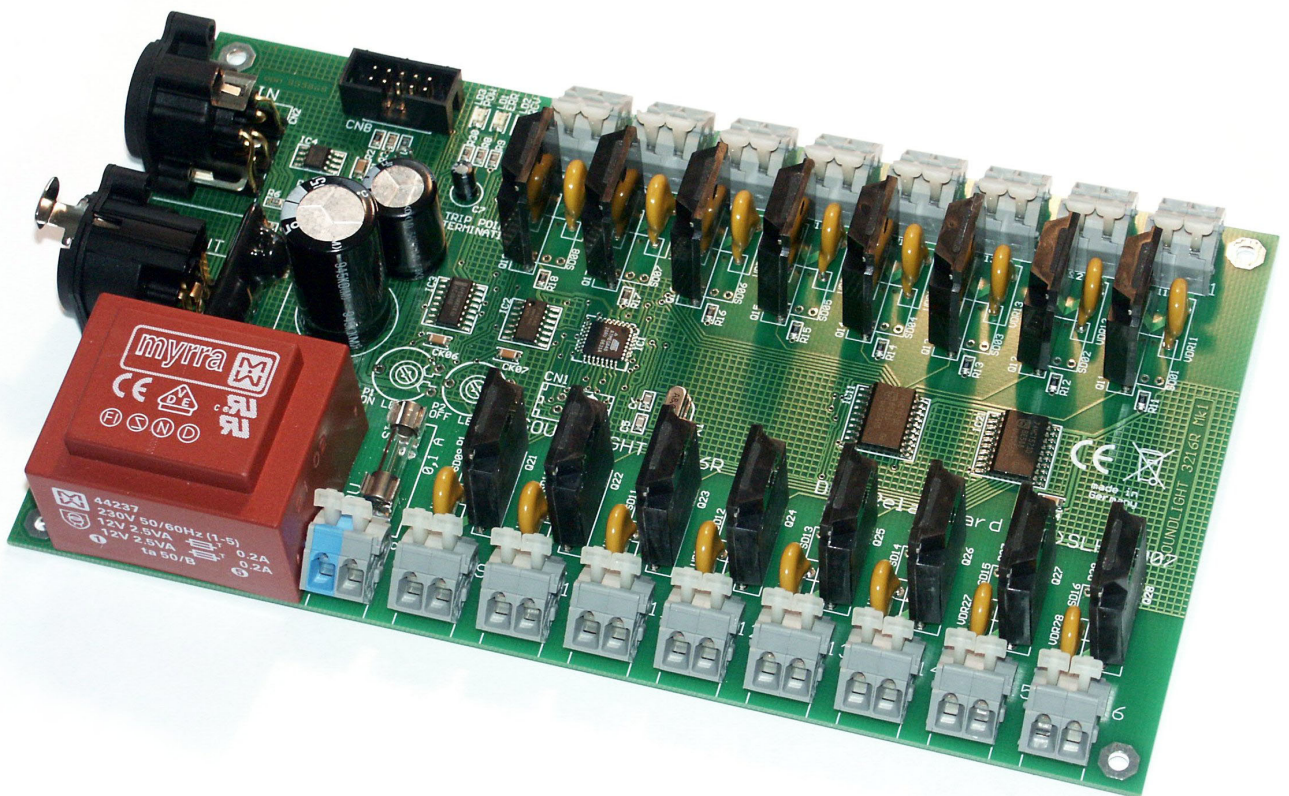


# OPERATING MANUAL

## DMX Solid State Relay 3308R-EP / 3316R-EP Mk1



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**Thank you for choosing a SOUNDLIGHT device.**

The SOUNDLIGHT DMX Relay Card 3308R/3316R6R is an intelligent DMX demultiplexer decoding digital data complying with standards USITT DMX512 and DIN 56930-2. The card drive eight resp. sixteen solid state relay outputs. The decoder 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 (for settings selectable) ensures flicker free switching
- **simple supply**  
The power supply is from standard mains voltage 230V AC 50 Hz
- **signal loss**  
In the case of a loss of the drive signal a pre-definable action will be taken.
- **cost-effective**  
The SOUNDLIGHT 3308R/3316R is a cost-effective solution for many purposes.

## APPLICATIONS

The DMX relay decoder 3308R-EP / 3316R-EP is ideally suited for many kinds of power switching applications. It features up to sixteen high-power noiseless AC solid state contacts and provides high noise immunity.

## 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.

Please note that individual deadlines may apply to claim transport damages. We will only be able to replace goods damaged during transit if we receive a written and signed confirmation issued by the freight forwarder. Make sure you receive such a document and send to us a.s.a.p.

When unpacking, you should identify these items:

- \* the interface card 3308R-EP or 3316R-EP
- \* the start address board 3000P
- \* this manual

## CONNECTORS

The decoder 3308R-EP / 3316R-EP consists of these input and output connectors:

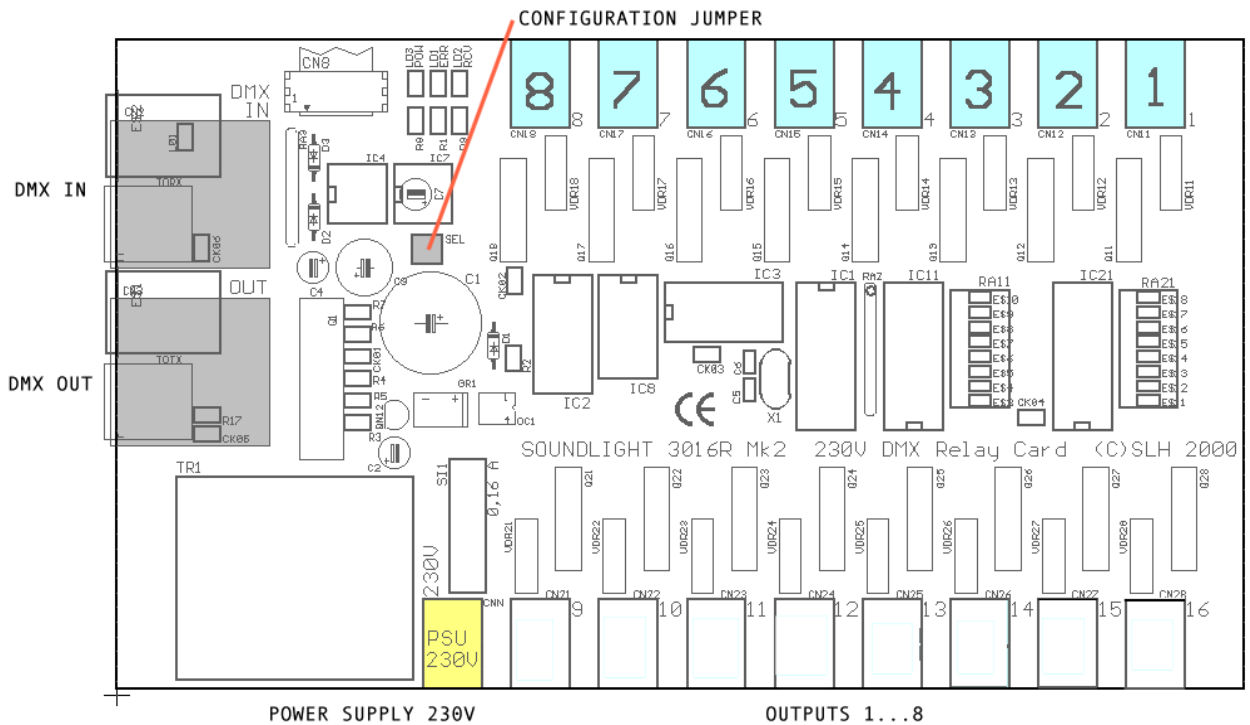
### CNN POWER SUPPLY 230V AC

grey L, 230V AC  
blue N, 230V AC

for 3308R-EP: 8 outputs

**CN21...28** potential-free power output contact 1... 8 (cage clamp 2-pole)

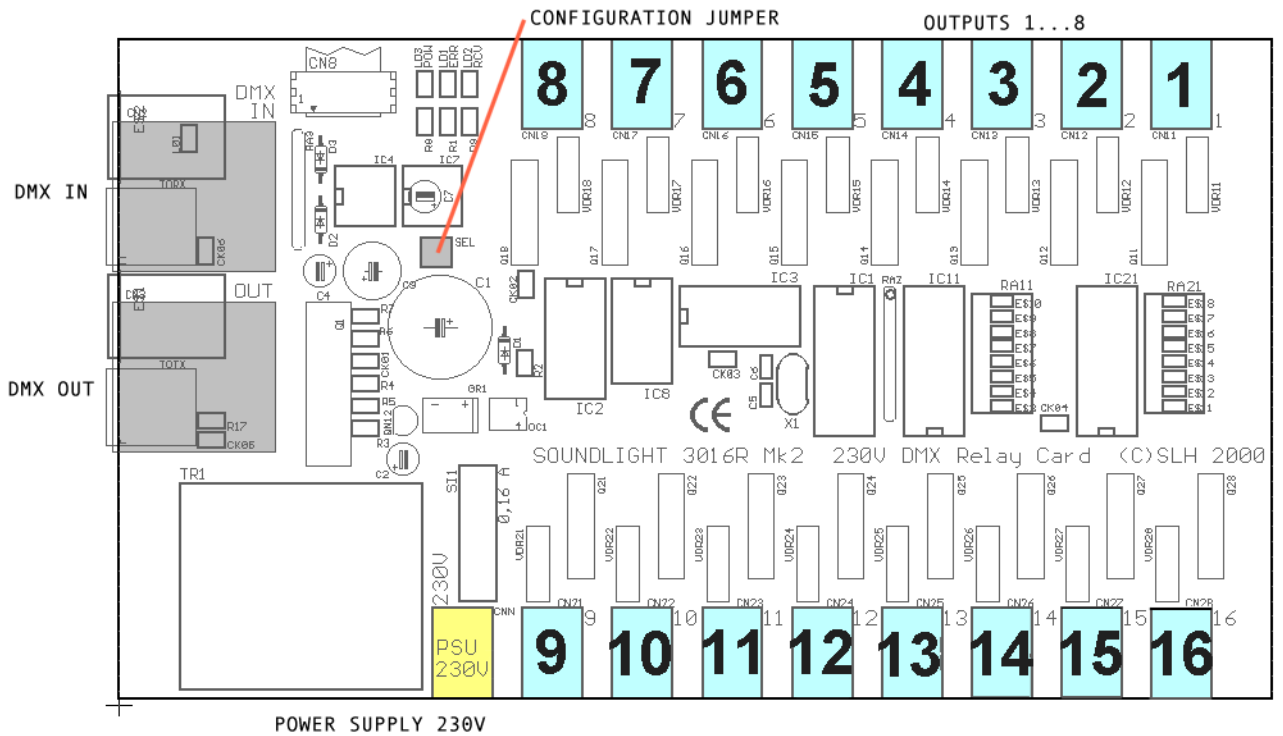
1 S1  
2 S2  
Outputs are voltage protected with VDR 260V



for 3316R-EP: 16 outputs

**CN11...18** potential-free power output contact 1... 8 (cage clamp 2-pole)  
**CN21...28** potential-free power output contact 9... 16 (cage clamp 2-pole)

1 S1  
2 S2  
Outputs are voltage protected with VDR 260V



<b>CN2</b>		<b>DMX INPUT (XLR 5-pin)</b>
	1	GND
	2	-DMX
	3	+DMX
	4	2. Link (spare)
	5	2. Link (spare)

<b>CN3</b>		<b>DMX OUTPUT (XLR 5-pin)</b>
	1	GND
	2	-DMX
	3	+DMX
	4	2. Link (spare)
	5	2. Link (spare)

The second link terminals are not used within the 3308r/3316R and fed thru to terminals 4/5 of the DMX input connector

## SIGNAL INDICATORS

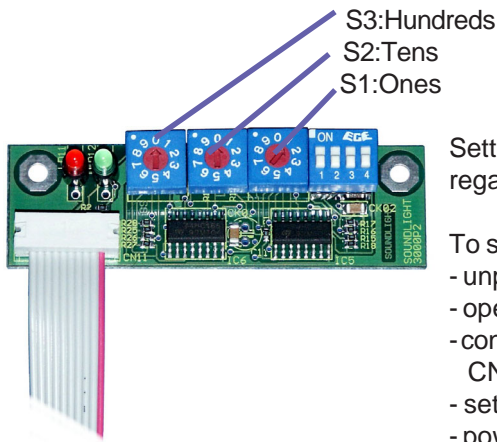
The state of the demultiplexer card is signalled with two indicator LEDs.

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

## START ADDRESS SWITCHES

The DMX relay decoder 3308R-EP / 3316R-EP has been preset to DMX start address 001. If another start address is required, it must be set using a start address board 3000P or 3003P. This start address board is optionally available. The 3206R-H can be operated with or without start address board attached.

Use the BCD switches to set the DMX start address, that is the address of the first DMX channel (DMX data slot) used to switch relay output #1. setting is straightforward, no binary calculation required as is with DIP switches.



Setting address 000 will disable all outputs and set all outputs to OFF regardless of data received.

To set a start address other than 001 proceed as follows:

- unpower the unit
- open the interface by removing the top cover
- connect the address board 3000P or 3003P using the 10pin connector CN2 (see page 5)
- set the desired address
- power up the decoder
- successful programming will be indicated by the status LEDs, which should blink red - green four times.

Similarly, the DIP settings (see below) must be programmed to the decoder.

## DIP SWITCHES

The interface can be configured using the start address board DIP switches.

With start address board 3003P, DIP switch settings conform to functions F1..F4.

### DIP SWITCH 1

**DMX HOLD: default: off = no**

When setting HOLD, the last valid setting will be retained at control signal loss. If DMX HOLD is not set, settings of DIP switch #2 will apply.

### DIP SWITCH 2

**OFF value: default: off = all outputs OFF**

When DMX HOLD is not set, all outputs will be driven to the OFF state at loss of the DMX512 control signal. Setting DIP switch #2 will drive all outputs to ON instead.

### DIP SWITCH 3/4

**(DMX PERSONALITY)**

OFF/OFF	1: single channel mode: 8 or 16 DMX data slots
OFF/ON	2: trip point 50%, no hysteresis
ON/OFF	3: Bit-Mode - one resp. two DMX data slots
ON/ON	4: VU-Meter mode

## DEFAULT ASSIGNMENT

The interface card 3308R recognizes 8 DMX data slots assigned to outputs 1...8.

The interface card 3308R recognizes 16 DMX data slots assigned to outputs 1...16.

When selecting Bit Mode, Bit 0 drives output 1, Bit 1 drives output 2, Bit 2 drives output 3 etc. For the 3316R-EP, DMX data slot 1 drives outputs 1...8, while DMX data slot 2 drives outputs 9...16.

When selecting VU Meter Mode, outputs 1...8 are activated in sequential order, beginning with output 1. For the 3316R-EP, two DMX data slots are used (eight steps each).

## SOLID STATE RELAYS

The interface is fitted with solid state relays allowing a maximum current of 5A (active cooling will be required then!). The standard operating current should not exceed 2.5A (equivalent to 500W @ 230V AC) per output. The maximum voltage rating is 250V AC. Output stage are protected by a varistor. Please note that only AC voltages can be processed by the SSR outputs. DC loads will latch the output.

## TECHNICAL DATA

Dimensions:	200 mm x 112 mm x 45 mm
Power supply:	230V AC 3W
DMX IN:	1 Unit Load
DMX OUT:	fed-thru
Relais Out:	230V AC max. 5A, typ. 500W @ 230V
Order Code:	3308R-EP (8-ch), 3316R (16-ch)

## 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. To ensure the best performance regarding radiated and conducted emissions we suggest to install the interface in a closed, conductive (e.g. metal) housing, which must be connected to GND. 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.

## 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.

## SERVICE

There are no parts within the DMX relais card 3308R-EPO / 3316R-EP 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 No. 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.

Updated and foreign language manuals can be downloaded from [www.manuals.soundlight.de](http://www.manuals.soundlight.de)