OPERATING MANUAL

DMX Relay Card 3206R-HP RDM

VERSION 3206R-HP1/HP2 Mk3.0   230V AC

SOUNDLIGHT *The DMX Company* Bennigser Strasse 1   D-30974 Wennigsen Tel. 05045-912 93-11

Thank you for choosing a SOUNDLIGHT device.

The SOUNDLIGHT DMX Relay Card 3206R-HP is an intelligent DMX demultiplexer decoding digital data complying with standards USITT DMX512 and DIN 56930-2. The card drive six changeover contact 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 an can easily be adapted to any change in protocol definition.

- **integrated hysteresis**
  Adjustable hysteresis(for settings selactable) 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 3206R-HP is a cost-effective solution for many purposes.

APPLICATIONS

The DMX relay decoder 3206R-HP is ideally suited for all kinds of signal switching applications. It features six potential-free high-power N.O.output contacts and high noise immunity. Applications include signal switching and power switching.

NOMENCLATURE

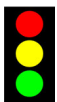These symbols are used within this manual:

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 3206R-H RDM
* this manual

Please note that a programming adaptor (3000P) is NOT included with DIN rail mount devices. A programming adaptor (required to set DMX start address and operating options) must be ordered separately. If you already have it, there is no need to buy again: the start address board can be used for all our DMX interfaces, pcb and DIN rail mount alike.

CONNECTORS

The decoder 3206R-HP consists of these input and output connectors:

CN13   **POWER SUPPLY 230V AC**

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

CN8   **Switching output 1 (2-pin spring terminal or 6.35mm AMP connector)**
  1   grey   N.O.
  2   grey   N.O.

CN7   **Switching output 2 (2-pin spring terminal or 6.35mm AMP connector)**
  1   grey   N.O.
  2   grey   N.O.

CN6   **Switching output 3 (2-pin spring terminal or 6.35mm AMP connector)**
  1   grey   N.O.
  2   grey   N.O.

CN5   **Switching output 4 (2-pin spring terminal or 6.35mm AMP connector)**
  1   grey   N.O.
  2   grey   N.O.

CN4   **Switching output 5 (2-pin spring terminal or 6.35mm AMP connector)**
  1   grey   N.O.
  2   grey   N.O.

CN3   **Switching output 6 (2-pin spring terminal or 6.35mm AMP connector)**
  1   grey   N.O.
  2   grey   N.O.

CN10   **DMX Input / Output**
  1   grey   GND
  2   blue   DMX - (signal complement)
  3   orange   DMX + (signal true)

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 3206R-HP 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-HP 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.

S3:   Hundreds
S2:   Tens
S1:   Ones
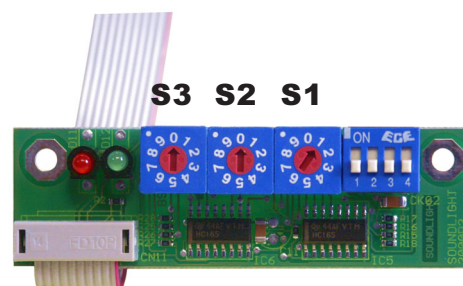
Setting address 000 will disable all outputs and sett all outputs to OFF regardless of data received.

To set a start adress 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
- succesful 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.

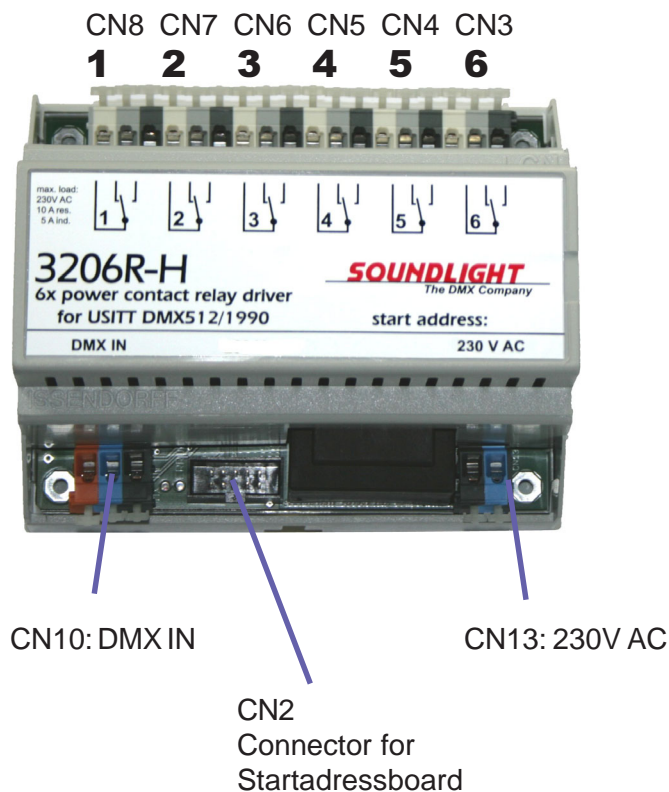**DIP SWITCH 3, 4   Hysteresisdefault: off/off = trip point 50%/51%**

These switches determine the ON and OFF trip points.
Four settings are available:

DIP switch	3	4	trip points
	OFF	OFF	50% / 51%
	ON	OFF	25% / 75%
	OFF	ON	3% / 97%
	ON	ON	0% / 1%

WIRING

To put the DMX relay interface 3206R-H to work, it must be wired properly. We strongly recommend to use fused line and load connections.

Output connectors: CN8 CN7 CN6 CN5 CN4 CN3
                        1   2   3   4   5   6

CN10: DMX IN   CN13: 230V AC

CN2
Connector for
Startadressboard

RELAY TYPES

This decoder is fitted with contact relays designed for a switching current of **max 16A at 230V** (resistive load only!). 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 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 frequence 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. If in doubt pls consult the relay maker data sheet (OMRON, Type G2R-1-ASI, available at

http://components.omron.eu/en/products/catalogue/relays/pcb_power_relays/up_to_16a/g2r/default.html).

 DMX RDM

The 3206R-H RDM ist kompatibel with ANSI E1-20 DMX RDM Version 1.0. Please note some special properties of devices complying with DMX RDM:

- DMX HOLD properties are not supported by RDM standard ANSI E1-20. A factory specific command (DMX HOLD) has been added to compensate these restraints. Use parameters 0...2 to set the desired HOLD mode:
   0: no HOLD, all outputs OFF upon loss of signal
   1: no HOLD, all Outputs ON upon loss of signal
   2: DMX HOLD (last look remains active)

- Setting the DMX personality reflects setting of DIP switches 3 and 4 (and vice versa).

NOTE:
Once settings have benn changed using DMX RDM, the address switches become inactive (blocked). To re-enable start address switsches, temporarily set any address from 900...999 (simply set the "900" digit). This will re-enable switches.

TECHNICAL DATA

Dimensions:	115 mm (W) x 67 mm (H) x 113 mm (D)
Power supply:	230V AC (208-264V) 50/60 Hz typ appox. 3,5W
DMX IN:	1 Unit Load
DMX OUT:	fed-thru
Switch Out:	max. 16A @ 230V resistive load
Order code:	3206R-HPx RDM
	3206R-HP1: version with Hengstler relays 6.35mm Faston
	3206R-HP2: version with Tyco HiInrush relays and WAGO cage clamp terminals

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 EN55015 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 ist warranted against defects in metarials and workmanship for a period of 12 month, 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 arccordance with the manual;
- connection to wrong voltage or current;
- misuse.

SERVICE

There are no parts within the DMX relais card 3206R-HP 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 reched, 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*. We will check your message and reply accordingly.

Updated and foreign laguage manuals can be downloaded from www.manuals.soundlight.de

ACCESSORIES

To set the DMX start address and change the operating parameters, a DMX start address board is needed. These boards are optionally available:
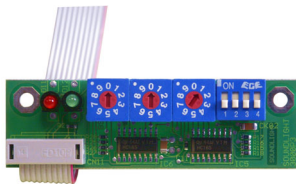
DMX START ADDRESS BOARD 3000P

Three address BCD switches and a DIP switch to set operating parameters. This is the standard board, which is compatible wil all our decoders (both pcb and DIN rail mount)
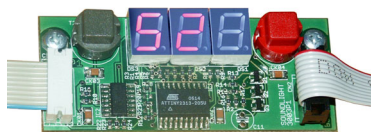
DMX START ADDRESS BOARD 3003P RDM

Start address board with LED display and pushbuttons to set the DMX start address. Adress is retained in nonvolatile onboard memory, two settings may be stored.
DIP switches are emulated by soft functions F1...F4.

Start address boards are not contained with DIN rail mount decoders and must always be ordered separately!