

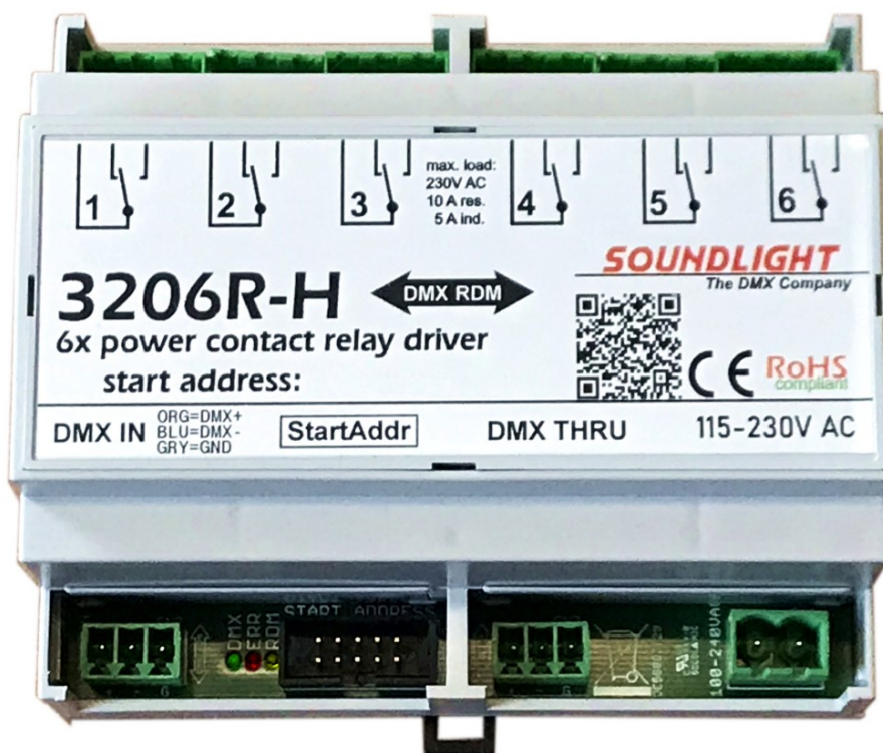
SOUNDLIGHT

The DMX Company

OPERATING MANUAL

DMX Relay Interface 3206R-H RDM

VERSION 3206R-H Mk8.10 115-230V AC



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Thank you for choosing a SOUNDLIGHT device.

The SOUNDLIGHT DMX Relay Card 3206R-H 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 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 115...230V AC 50/60 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-H is a cost-effective solution for many purposes.

APPLICATIONS

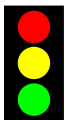
The DMX relay decoder 3206R-H is ideally suited for all kinds of signal switching applications. It features six potential-free high-power N.O./N.C. output contacts and high noise immunity. Applications include signal switching and power switching in entertainment lighting systems for theatre, stage and television.

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
- * a product data sheet

Please note that a programming adaptor (e.g. 3000P) is NOT included with DIN rail mount devices. **All settings can be configured using DMX RDM.** For manual setup, a programming adaptor (required to set DMX start address, DMX personality and DMX HOLD mode) 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.

SAFE SWITCHING

The 3206R-H Mk8 has been designed to provide the highest performance level and safe switching. Please note, that DMX512 data transmission must be considered as being a standard for fast entertainment lighting effects. Data transmission is fast but not safe since there is no checksum and corrupted data packets may result in wrong switching. Thus hazardous effects must NOT be controlled by DMX512 without additional safety precautions.

To minimize erroneous switching, the 3206R-H Mk8.10 uses these features:

- 1. Multiple packet evaluation

Multiple DMX data packets must be received and analyzed before a switching action takes place. This causes a slight delay but guarantees a highly improved performance. The multiple packet analyzer can be switched off by setting the FAST MODE parameter. Use your RDM controller to change the setting.

Our website http://www.rdm.soundlight.eu/how_to/index.htm shows some examples how to change settings.

- 2. DMX startup delay

The relay module will only operate after a safe DMX data transmission has been detected. Thus relay switching is prohibited for about 3 seconds after applying a valid DMX signal. After that period of time, instantaneous switching is allowed.

CONNECTORS

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



CN13 POWER SUPPLY 115...230V AC

- 1 L, 115-230V AC 50/60 Hz
- 2 N, 115-230V AC 50/60 Hz

CN8 Switching output 1

- 1 COMMON
- 2 N.O.
- 3 N.C.

CN7 Switching output 2

- 1 COMMON
- 2 N.O.
- 3 N.C.

CN6 Switching output 3

- 1 COMMON
- 2 N.O.
- 3 N.C.

CN5 Switching output 4

- 1 COMMON
- 2 N.O.
- 3 N.C.

CN4 Switching output 5

- 1 COMMON
- 2 N.O.
- 3 N.C.

CN3 Switching output 6

- 1 COMMON
- 2 N.O.
- 3 N.C.

CN10 DMX Input

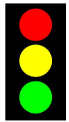
- 1 GND
- 2 DMX - (signal complement)
- 3 DMX + (signal true)

CN101 DMX Thru

- 1 GND
- 2 DMX - (signal complement)
- 3 DMX + (signal true)

SIGNAL INDICATORS

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



green: OPERATION

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

yellow: RDM detected (blinking)
RDM configuration active, address switches locked (steady)

START ADDRESS SETTING



All settings of the 3206R-H can be modified using a suitable DMX RDM controller. We recommend to use the JESE GET/SET controller being the most versatile device available. Alternatively, some parameters (DMX start address, personality, HOLD mode) can be changed using a start address board 3006P.



DIN rail decoders do not come with start address boards; if needed this must be purchased separately. Start address boards are valuable tools and can be used with many SOUNDLIGHT devices.

The DMX relay decoder 3206R-H has been preset to DMX start address 001. If another start address is required, it must be set using a start address board 3000P, 3003P, 3005P, 3006P or 3008P. SD-models require using a 3006P-SD or 3008P-SD. Start address boards are optionally available. The 3206R-H can be operated with or without start address board attached.

The 3006P-SD start address board features a SubDevice mode and can be used to set the host device in either Root mode or SubDevice mode (SD type Relay modules only!) . Changing from Root mode to SubDevice mode must be performed by RDM.

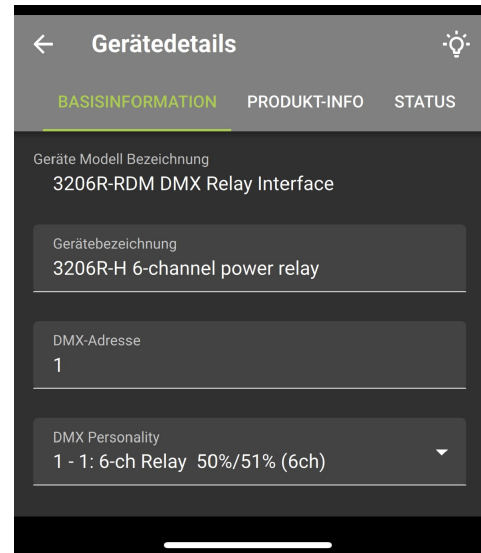
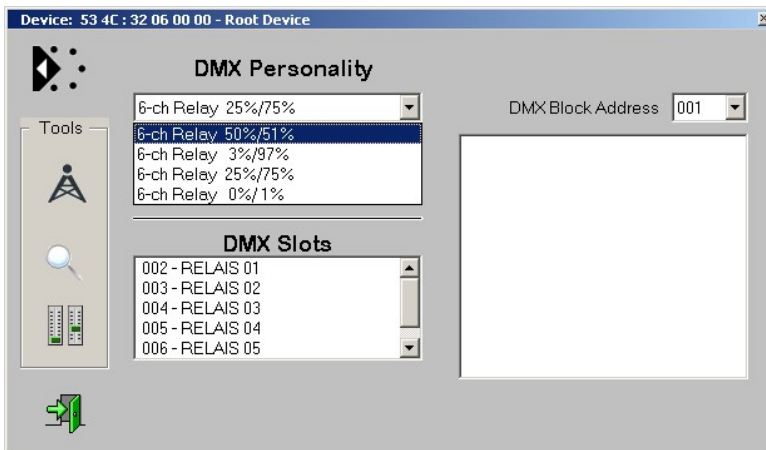
DMX PERSONALITY

The DMX personality selects the trip point of the relays.
Four settings are available:

<u>PERSONALITY</u>	<u>trip points</u>	<u>DIP3</u>	<u>DIP 4</u>
1	50% / 51%	off	off
2	25% / 75%	off	on
3	3% / 97%	on	off
4	0% / 1%	on	on

The DMX personality can either be set using DMX RDM or locally using a start address board

3000P (mechanical switches), 3003P (LED display), 3005P, 3006P (character LCD) or 3008P (graphics LCD).



Setting the DMX personality: using the JESE controller (top left) or the DMXcat controller (top right)

SETTING THE PERSONALITY BY START ADDRESS BOARD

When using a start address board 3000P, use DIP switches 3 and 4 to set the desired personality. Refer to the personality table above. Start address boards 3005Ü thru 3008P are menu driven; use setting „Personality“

NOTICE:

Once settings have been changed using DMX RDM, the address switches of a start address board 3000P become inactive (blocked). To re-enable the start address switches, temporarily set any address from 900...999 (simply set the hundreds digit to „9“ temporarily). This will re-enable switches.

RDM FUNCTIONS:

For a full description of all RDM functions available pls refer to our RDM MANUAL, which is available for free download at www.soundlight.eu/produkte/manuals

FUNCTION PROGRAMMING

If you do not own a DMX RDM controller, some options may be programmed using a standard start address board 3000P.

CAUTION: Function programming only takes place when **powering up** the relay module. the procedure runs automatically, but the start address board must have been connected and set to the respective programming code.

Addresses beyond the valid DMX start address range (1...512) are used as programming codes:

- Procedure:
1. unpower the module (e.g. remove mains supply)
 2. Connect address board 3000P
 3. Set the desired programming code
 4. Power up module (reconnect mains)
 5. A programming cycle takes place (LEDs red/green blink 4x)
 6. Reset to standard DMX start address

PROGRAMMING CODES:

:

- 700: set to standard mode / factory defaults
- 705: set to FAST MODE
- 706: set to EXCLUSIVE MODE
- 707: Disable RDM (set to Standard DMX mode)
- 708: set ConfigAccess lock immediately
- 709: reset ConfigAccess lock
- 777 Enable RDM
- 900: re-enable Addressboard (remove RDM lock)

Be careful using above code. You may disable complete RDM functionality using code 707, but then your device cannot be discovered anymore or configured by RDM. If locked, there would be no chance to unlock, since there is no RDM access possible. A „Reset“ or „Factory Defaults“ will not help. Re- enable RDM using code 777 to gain access again.

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 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. 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:

RDM Setting	Function	DIP1	DIP2
0 (00hex):	no HOLD, all outputs OFF upon loss of signal	off	off
1 (01hex):	no HOLD, all Outputs ON upon loss of signal	off	on
2 (02hex):	DMX HOLD (last look remains active)	on	off

- Setting the DMX hold mode reflects setting of DIP switches 1 and 2 (and vice versa).
- Setting the DMX personality reflects setting of DIP switches 3 and 4 (and vice versa).

NOTICE:

Once settings have been changed using DMX RDM, the address switches of start address board 3000P become inactive (blocked). To re-enable start address switches, temporarily set any address from 900...999 (simply set the hundreds digit to „9“). 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 approx. 3,5W (full load) <0,5W (idle)
DMX IN:	1 Unit Load
DMX OUT:	fed-thru
DMX Data Format:	DMX512/1990, DMX512-A, DIN56930-2, ANSI E1-20, ANSI E1-37
Switch Out:	max. 10A @ 230V resistive load
Storage Temperature:	0...70°C
Operating Temperature:	0...50°C
Order code:	3206R-H RDM

CE CONFORMITY



This DMX relay interface 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 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 relays card 3206R-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 No. DE58883929).

INTERNET-HOTLINE

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

Updated and foreign language manuals can be downloaded from our website:

www.soundlight.eu/produkte/manuals

There you can also download a copy of the RDM Manual explaining many RDM commands in more detail.

Check our domain www.soundlight.eu/rdm for more information on the new DMX RDM standard.