

OPERATING MANUAL

1-10V to DALI Decoder 7601A-H Mk1



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PREFACE

Thank you for choosing a SOUNDLIGHT device.

The SOUNDLIGHT 1-10V to DALI Decoder 7601A-H converts architectural analog control voltage (1-10V) into digital DALI control commands. The interface can be used with all lighting control systems. Its special advantages include:

- **future-proof**
The unit is software controlled and can easily be adapted to any change in protocol definition.
- **simple supply**
The power supply is from standard regulated DC voltage, 24V DC
- **universal mount**
The decoder neatly snaps onto standard 35mm DIN rails.
- **cost-effective**
The SOUNDLIGHT 3202R is a cost-effective solution for many purposes.

APPLICATIONS

Der Decoder 7601A-H eignet sich für alle Steuerungsaufgaben, bei denen DALI-Geräte in ein analoges 1-10V Steuerungssystem eingebunden werden sollen. Für Film- oder Fernseharbeiten auf dem Set ist der Decoder ebenso geeignet wie im Theater, auf der Showbühne oder beim Live-Act. Überall, wo Sie DALI Equipment über eine analoge Eingabe dimmen wollen, ist die 7601A-H genau richtig.

NOMENCLATURE

These symbols are used within this manual:



DANGER ! May cause harm to user and/or equipment



INFO: How to setup your device



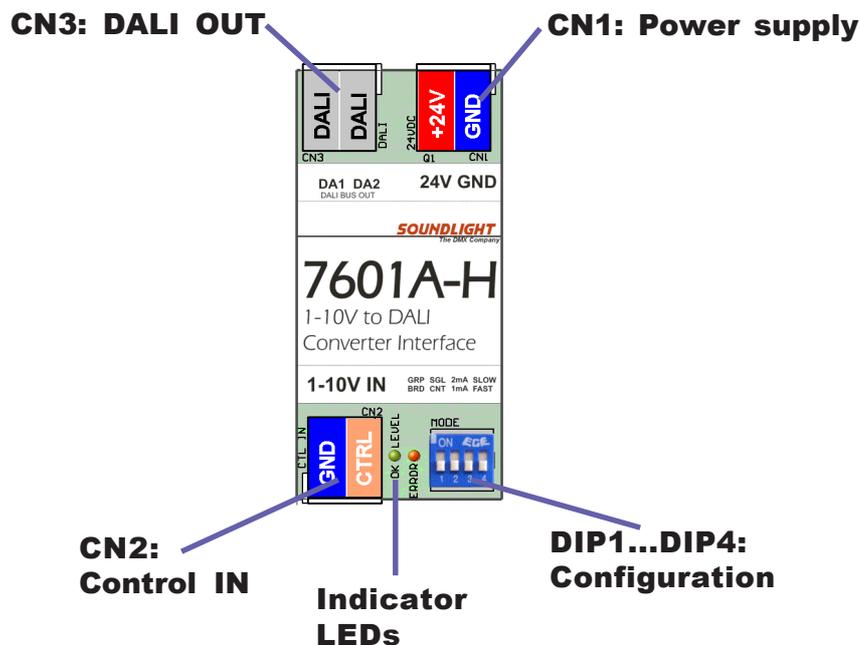
INFO: Status information

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 decoder 7601A-H consists of these input and output connectors:

CN1 POWER SUPPLY 24V DC

1	red:	+	24V DC
2	blue:	-	0V DC

CN2 CONTROL INPUT

1	orange	control signal +
2	blue	control signal -

CN3 DALI DATA BUS

1	grey	DALI OUT
2	grey	DALI OUT

POWER SUPPLY

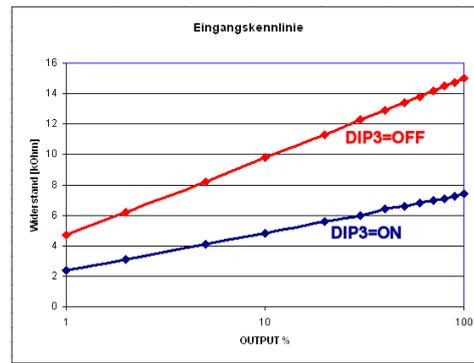
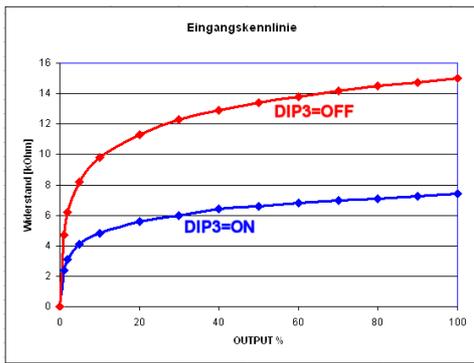
Power supply must be derived from a regulated and stabilized power supply 24V DC. We recommend to use a standard DIN rail compatible electronic PSU. Power supply voltage range is 18...24V. Low voltage conditions are indicated by the ERROR LED (see chapter: INDICATORS).



CONTROL INPUT

The control input supplies a control current (<1mA) and accepts either a control voltage (1...10V) or a passive resistor (potentiometer). Active control outputs (such as 3044B-H) can be used. Active outputs must be capable to sink the control current delivery by the decoder.

For input characteristics (voltage and resistance), see the diagrams on page 4.



Input characteristics of the 1-10V to DALI converter 7601A-H

The control input can be reconfigured to accept entertainment lighting control voltages 0...+10V. The internal control current source will then be disabled. For more info, refer to chapter "Jumper".

IMPORTANT NOTE: Always check correct input signal polarity: org = +, blu = -

DALI OUTPUT

The DALI protocol refers to IEC 60929. DALI data are output in BROADCAST mode; thus individual addressing of connected ballasts is not required. The output format can be changed to GROUP or SINGLE ADDRESS mode (see chapter: DIP SWITCHES, see chapter: JUMPER). When sending data in group or address mode, DALI participants must have been addressed by a suitable programming tool (e.g. USB-DALI-Interface) to be able to reply to the DALI data.

The DALI output drives a standard DALI bus. Since the output is a passive bus participant, the bus must be powered from a standard DALI bus power supply (e.g. DALI-PS). Usually, a DALI bus can be loaded with up to 64 bus participants.

The 7601A-H does not perform DALI addressing. If addressing is required, use a suitable DALI addressing tool to assign group and/or individual addresses.

DIP-SWITCHES

The Interface 7601A-H can be configured by DIP switches. The switches set these operating parameters:

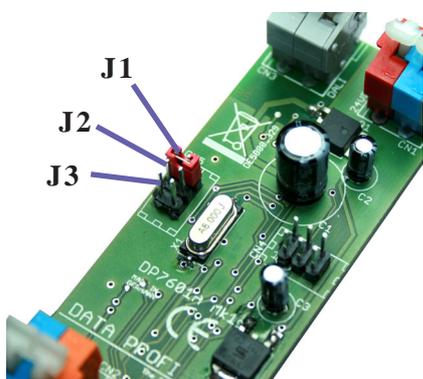


DIP1...DIP4: Configuration

- DIP 1: DALI OUTPUT FORMAT**
 OFF: Broadcast mode
 ON: Group 1
- DIP 2: DALI OUTPUT GENERATION**
 OFF: continuous
 ON: single; only when value changes
- DIP 3: INPUT CONTROL CURRENT**
 OFF: < 1mA
 ON: < 2mA
- DIP 4: INPUT SMOOTHING**
 OFF: off (FAST MODE)
 ON: ramping (SLOW MODE)



JUMPER



The decoder features internal jumpers to provide additional configuration of the unit. These settings are **NOT** for the standard user, they have been provided for technicians and experienced users to accommodate the unit to more sophisticated applications.

You need to open the decoder to access the jumpers; damages resulting from improper handling are not covered by warranty. Jumpers (2.54mm / 0.1") are not comprised and must be added (optional accessories).



Please do not make any modifications if you do not have the necessary skills and do not have equipment to measure and analyze DALI signal contents.

J1: INPUT VOLTAGE

open (default): 1-10V input (internal current source enabled)
closed: 0-10V input (internal current source disabled)

J2: DALI GROUP or ADDRESS NUMBER

open (default): Group 1 / Address 1
closed: Group 2 / Address 2

J3: DALI COMMAND FORMAT

open (default): Output in group addressed format
closed: Output in single addressed format

INDICATORS

Two indicator LEDs are provided to report device status.



red LED: **ERROR** Error condition, e.g. low power supply voltage

green LED: **AUSGABE** Data output
lit when input signal present and output data are being generated.

NOTE:

When DIP2 has been set, output data are only generated when the input value changes!

TECHNICAL DATA

Dimensions: DIN rail mount, width 2 units
Power supply: 24V DC (18...24,5V)
DALI OUT: optically isolated, potential free, polarity independent
DALI Format: BROADCAST (default), Group 1/2 or Address 1/2
Input: 1-10V, approx. 0,7mA or Resistor (potentiometer) 0..22kOhm
Operating temperature: 0...50°C
Mounting: DIN rail 35mm
Order code: 7601A-H

CE CONFORMITY



This interface is microprocessor controlled and uses high frequency (8 MHz quartz). The interface has been tested in our EMC lab to comply with EN55015.

To ensure the best performance regarding radiated and conducted emissions we suggest to install the interface card 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 GND. 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 DALI driver 7601A-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.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.