

OPERATING MANUAL

DMX512 to DALI Dekoder 7044A-H Mk1



(C) SOUNDLIGHT 1996-2010 * ALL RIGHTS RESERVED * NO PART OF THIS MANUAL MAY BE REPRODUCED, DUPLICATED OR USED COMMERCIALY WITHOUT THE PRIOR WRITTEN CONSENT OF THE OWNER * ALL STATEMENTS WITHIN THIS MANUAL HAVE BEEN CHECKED CAREFULLY AND ARE BELIEVED TO BE ACCURATE, HOWEVER SOUNDLIGHT DOES NOT ASSUME ANY RESPONSIBILITY FOR ERRORS OR OMISSIONS. * THE USER HAS TO CHECK THE SUITABILITY OF THE EQUIPMENT FOR THE INTENDED USE. SOUNDLIGHT EXPRESSLY EXCLUDES ANY RESPONSIBILITY FOR DAMAGES- DIRECT OR INDIRECT - WHICH MAY OCCUR DUE TO MISUSE, UNPROPER INSTALLATION, WRONG OPERATING CONDITIONS AND NON-COMPLIANCE TO THE INSTRUMENT'S INSTRUCTIONS, AS WELL AS IGNORANCE OF EXISTING SAFETY REGULATIONS.

SOUNDLIGHT *The DMX Company* Bennigser Str. 1 30974 Wennigsen-Steinkrug Tel.: 05045-91293-11

PREFACE

Thank you for choosing a SOUNDLIGHT device.

The SOUNDLIGHT DMX DALI Decoder 7044A-H is an intelligent DMX decoder complying with standards USITT DMX512 /1990 and DIN 56930-2. The interface converts DMX to DALI control data. The interface 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.
- **DALI bus compatible**
The 7044A-H is compatible to DALI bus systems.
- **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 7044A-H is a cost-effective solution for many purposes.

APPLICATIONS

The decoder 7044A-H is intended for control applications, where DALI units must be controlled from DMX. Please note, that DALI is much slower than DMX: controlling one DALI address takes the same time than transmitting a complete DMX telegram containing 512 data slots. Thus only up to four individual DALI units may be controlled simultaneously without seamless delay (DMX repetition rate is about 40 Hz, thus the repetition rate for changing contents on four DALI will be around 10 Hz. The decoder could be configured to output data for 16 addresses sequentially but for that reason the default setting is 4. If more units are to be controlled simultaneously we recommend to switch to group address setting, or use multiple decoders and DALI links in parallel.

CONNECTORS

The decoder 7044A-H consists of connectors for these inputs and outputs:

CN6 POWER SUPPLY 230V AC 50 Hz

1	black:	L	230V AC
2	blue:	N	0V AC

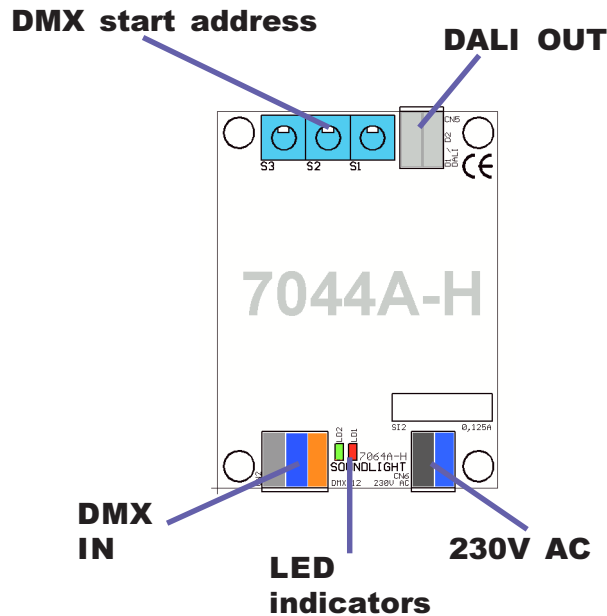
CN5 DALI Data bus

1	grey	DALI OUT
2	grey	DALI OUT

CN4

DMX Data input

1 (grey)	GND, Screen	conforms to XLR Pin 1
2 (blue)	Control signal -	conforms to XLR Pin 2
3 (orange)	Control signal +	conforms to XLR Pin 3



START ADDRESS

The DMX start address can be selected using the start address switches. Also, special programming of the interface is performed using the address range beyond 512 (see later). The address 000 is not a valid start address and will be decoded as 001 instead.

DALI addressing cannot be changed and is fixed from 1 thru 4 (16). The same applies to DALI group addressing. rtbaren Daten belegt werden.

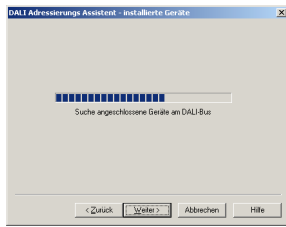
DALI

The DALI protocol can be set to individual addressing or group addressing mode using addresses 1 thru 4 (16). DALI data are derived from the incoming DMX data. Please note that the maximum intensity as used by DMX is 255 whereas the maximum intensity on the DALI line is 254. Thus the maximum level is clipped from 255 to 254.

The DALI output is intended for connection to a DALI bus system. The DALI bus must be fed from a DALI power supply (DALI PSU) and may be loaded with up to 64 bus participants. If required, addressing on the DALI bus must be performed using a suitable addressing tool (e.g. our USB-DALI interface). The 7044A-H does not perform any addressing of bus participants by itself.

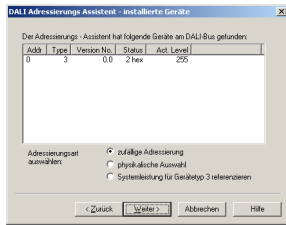
SETUP

For a eays DALI bus setup we recommend our SOUNDLIGHT USB-DALI adapter. Connect these items to the DALI bus:



- a DALI PSU
- the USB DALI adapter
- the DALI bus participants (excluding the 7044A-H)

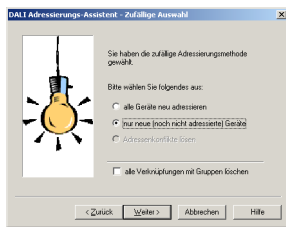
Start the program "configTool" and click button (2) "Geräte suchen" (search units). Click "weiter" (continue) without changing any setting on all popup windows until the list with the connected DALI devices is displayed. The 4 (16) DMX channels used for DALI conversion will be output as DALI address 1...4(16) then.



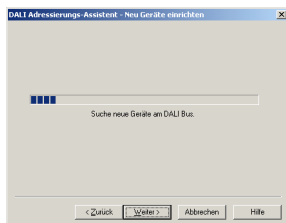
Addressing a DALI system consists of multiple steps:

1. The bus will be searched for pre-addressed units first. A device is considered being addressed when a DALI short address (1...64) has been assigned to that unit. If already programmed participants can be found, you may decide

- to leave that addressing as is
- or erase existing programming.



2. Then all new (unprogrammed) devices are searched and then a short address is assigned to each participant.

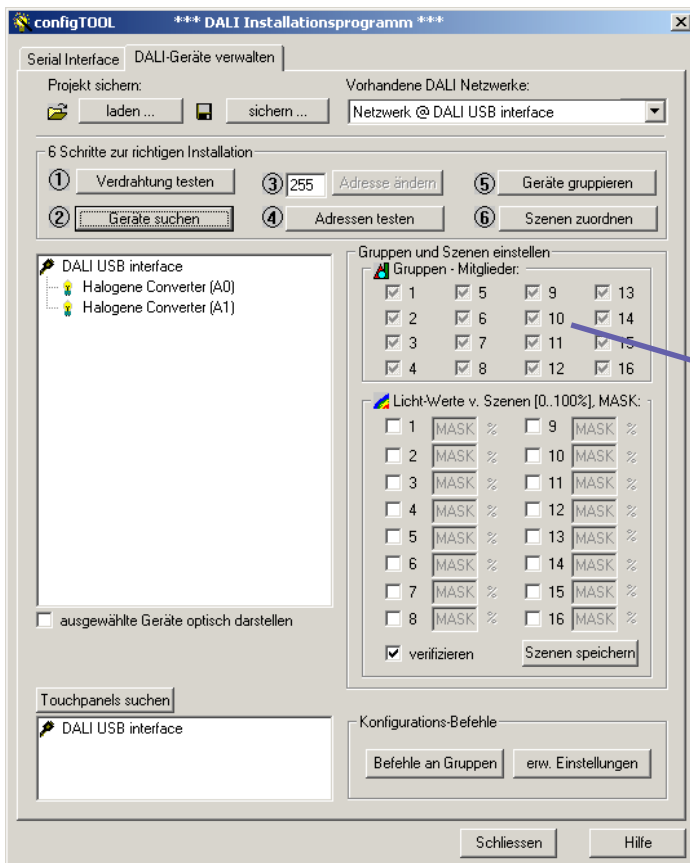


When all devices have been programmed all devices are read out completely (group assignments, pre-defined settings, min/max-levels, group assignments) and the data are displayed.

Please note:

New devices may not show any group assignments yet. To assign to a group, select the device and then simply set the group table (click the check boxes to set or delete a group assignment). By default, the 7044A-H can address groups 1...4.

Set the group assignment of each DALI participant to meet your individual needs.



Group table

More information regarding DALI programming and the USB-DALI interface can be found in the USB-DALI manual.

It is not necessary to use the USB-DALI programmer. Any DALI programmer which allows free user interaction can be used. A programmer which runs only automated pre-defined programming sequences does not match the needs of user-specific settings.

Please note, that the level value range transmitted by DMX consists of values 000...255, whereas the maximum DALI level is 254. (255 is the special value "MASK" used within DALI programming). "MASK" means: "do nothing".

You may select to use or not use MASK values at your option (see SETUP).

DALI COMMANDS

All data output on the DALI bus are Direct Arc Level commands. No other commands will be issued.

SETUP

On power up the operating parameters are read from memory. You may configure these parameters at any time using these programming options and following this programming sequence:

SETTING:

First only set the TENS and ONES. To program address "889" only set "089" first. Then increase the HUNDREDS setting until "889" - the LEDs will be blinking multiple times and programming will take place. Then turn the HUNDREDS setting backward, until at least the setting 489 is reached (normal operating range). Do NOT turn the knob forward as some other unwanted programming could take place.

- Outputting DALI GROUP commands

Address: 888 All data are output as DALI GROUP commands.

- Outputting DALI SINGLE ADDRESS commands

Address: 889 All data are output as DALI SINGLE ADDRESS commands.

- Hiding MASK value

Address: 890 Hiding MASK has been activated.
Data output is from 000 (0%) to 254 (100%).

- Activating MASK value

Address: 891 Hiding MASK has been deactivated.
Data output is from 000 (0%) to 255 (100%, MASK).

- Do not send DALI data in idle mode

Address: 892 Data are output only when data contents change.

- Send DALI data in idle mode (automatic refresh)

Address: 893 Data are output on DMX data change and on periodic refresh.

- Set maximum DALI address or group number

Address: 804-816 Tens and Ones represent the number of DALI addresses supported
(min. value 4, max. value 16, default value: 4)

TECHNICAL DATA

Dimensions:	65 mm x 105 mm x 65 mm
Power supply:	230V AC
DALI OUT:	optically isolated, potential.free, not polarity dependent
DALI Devices:	4-16 Addresses, single addressing or group addressing
DMX IN:	according to USITT DMX512 / DIN56930-2 / ANSI E1-11 compatible
DMX channels:	4...16
Mounting:	DIN rail 55mm
Order code:	7044A-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 instrument 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 demultiplexer 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 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 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.

End-of-Lifetime Procedures



Electronic devices are not domestic waste and must be disposed of properly. If the end of lifetime of this device has been reached, it must be recycled by your local WEEE recycling system. SOUNDLIGHT is a WEEE registered company (registration code DE-58883929)

SERVICE

There are no parts within the DMX decoder 7044A-H which require the user's attention. Should your unit require servicing, please send it to the factory, freight paid.

INTERNET-HOTLINE

Please check our internet domain <http://www.soundlight.de> for new versions, updates etc. Foreign manuals are available from www.manuals.soundlight.de. Additional RDM information is available from www.rdm.soundlight.de. 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.