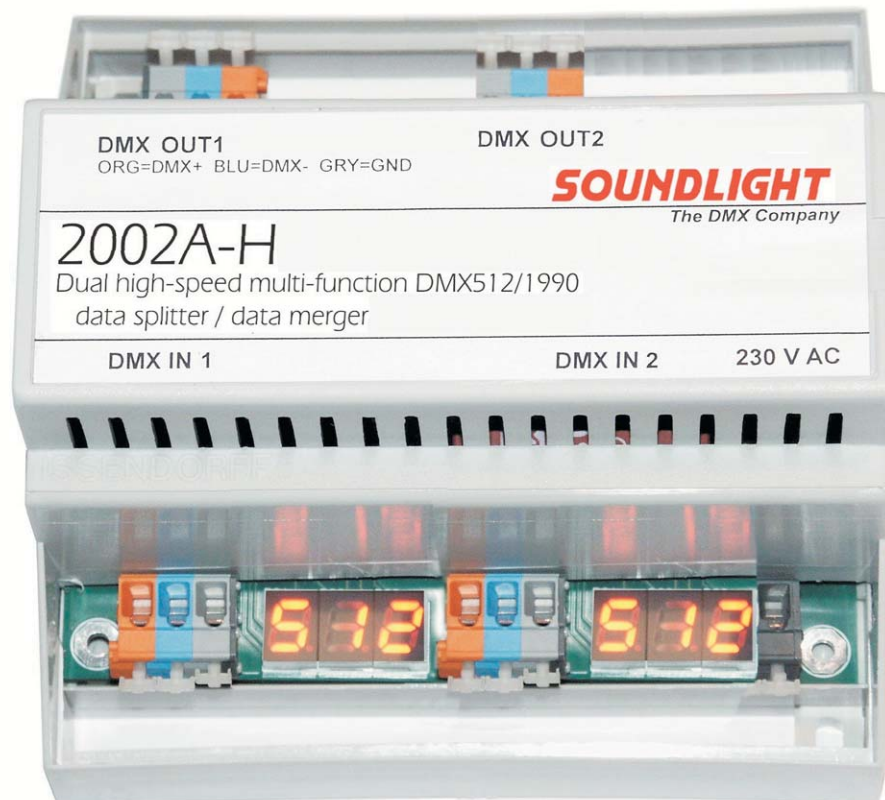


# OPERATING MANUAL

## DMX Merger 2002A-H Mk1



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## Thank you for choosing **SOUNDLIGHT**.

The SOUNDLIGHT DMX Merger 2002A-H is an intelligent device intended to combine two DMX signals of different signal sources to commonly control attached DMX devices. All connections are via patented cage clamp terminals to allow fast and easy installation and setup. The DMX data merger 2002A-H is not only processing, but also regenerating and buffering the DMX signal. This allows to refresh "worn" DMX links. The unit is compatible with DMX512/1990 and DMX512-A.

## Unpacking

Please remove the device carefully out of the box. You should find these items:

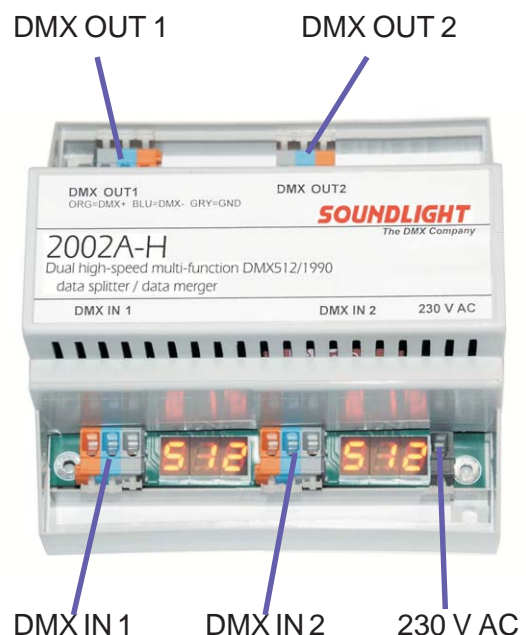
- the DMX Merger 2002A-H
- this manual

The shipment has left our factory in good condition. Please check each part carefully. In case of damage during transport be sure to notify the shipping company immediately (check deadlines!) and ask for a written report of damage. Claims for replacement of broken stuff can only be placed with a written and signed report from the responsible transport company.

## Connectors

The Merger 2002A-H consists of two independent DMX inputs as well as two independent DMX outputs. The fifth connector is power supply (230 VAC)

CN1, CN2	DMX IN		
	grey	GND, Masse	(Pin1)
	blue	DMX-	(Pin2)
	orange	DMX+	(Pin3)
CN3, CN4	DMX OUT		
	grey	GND, Masse	(Pin1)
	blue	DMX-	(Pin2)
	orange	DMX+	(Pin3)
CN5	Power supply 230V		
	blue	N	
	black	L 230V 50 Hz AC	



# Modes of Operation

There are several modes of operation available to combine the DMX signals between inputs DMX\_IN1 and DMX\_IN2 and Outputs DMX\_OUT 1 and DMX\_OUT2.

To change the mode of operation press key repeatedly, until the desired mode is reached. Pressing the key shortly only once will display the current selection and not change status. The last valid setting is retained within memory and re-set with the next session.

## **MODE 1     HTP - HTP**

HTP (Highest takes Precedence, the highest value prevails) is the classical method to combine two DMX signals.

Each DMX input accepts up to 512 DMX channels, the result is fed to both outputs simultaneously.

## **MODE 2     LTP - HTP**

LTP (Latest takes Precedence, the last modified value prevails) is the preferred mode to control movement of intelligent moving lights. The 2002A-H combines LTP and HTP merging modes and outputs both modes on different outputs.

Output 1:     LTP Merging

Output 2:     HTP Merging

## **MODE 3     SPLIT**

Split - divide: This mode will split the incoming DMX signal to two outputs. As DMX\_IN2 is inactive, the associated display will remain blank.

The split address is fixed to 257. This results in two output strings:

for example:

Input signal on DMX IN 1:     Channel 001 - 512

Output on     DMX OUT1:     Channel 001 - 256

Output on     DMX OUT2:     Channel 257 - 512     as 001 - 256

## **MODE 4     APPEND**

Append - to combine: This is the reverse operation to the SPLIT mode. Again, the append address is fixed to 257, and both outputs are fed with the same signal.

DMX channels 1...256 of input DMX\_IN1 are output as channels 1...257 in the combined output signal, DMX channels 1...256 of input DMX\_IN2 are output as DMX channels 257...512 in the combined output format.

## **MODE 5     FLIP**

Flip - changeover: Only one of both DMX inputs will be fed to the outputs. The non-active input is being signalled by blinking the display. Changeover occurs whenever one of the input signals fails and then stays intact as long as the input signal is stable and present. Nur einer der beiden DMX Eingänge wird auf die Ausgänge durchgeschaltet.

## **MODE 6     CHANGE**

Change - changeover: normally DMX\_IN1 will be fed to the outputs. If this signal fails, input DMX\_IN2 will be activated. The changeover action will be terminated as soon as DMX\_IN1 will be available again, and DMX\_IN1 will become active again.

## **MODE 7     TRIG 1**

Trigger - release: This mode will feed input DMX\_IN1 to both outputs. You can set the start address to define a DMX channel, which will switch the input to DMX\_IN2. A value of 251...255 is needed to initiate switching to DMX\_IN2.

Use this function to allow a second controller feeding your equipment with DMX data temporarily.

## MODE 8 TRIG 2

same as mode 7, but:

- the control channel is fixed to DMX\_IN1, channel 512.
- control range is 251...255 to initiate changeover
- per default, DMX\_IN2 is connected to the outputs
- the universe of DMX\_IN2 is limited to the set start address (maximum address)
- the changeover command will switch all outputs to DMX\_IN1
- the DMX universe of DMX\_IN1 is not limited

Use this configuration to allow partial access to your equipment and to control changeover from your controller

## MODE 9 MULTI-SPLIT

This mode will set the 2002A-H as signal splitter. You can set two split points. DMX\_IN1 will be fed to DMX\_OUT1 beginning with the first split address, DMX\_IN1 will be fed to DMX\_OUT2 beginning with the second split address. The second input (DMX\_IN2) is not used. Both split addresses will be displayed.

To activate this mode and to set the split addresses, proceed as follows:

- press lkey repeatedly until "N U L T I" appears
- hold key and then set the second split address using the rotary switches
- release key and then set the first split address using the rotary switches

## Error Messages

Wrong settings may produce error messages. Typical error messages are:

- Err 000 = Start address 000 has been set. This is not a valid DMX start address.  
Err 512 = A start address greater than 512 has been set. The address is invalid.

## Applications

The merger 2002A-H is suited for a wealth of applications. Typical applications include:

- combine two controllers: HTP Merging
- feed two controllers over one line: APPEND Mode
- transform DMX addresses: SPLIT Mode, Multi-Split
- precaution against signal loss: CHANGE or TRIG1 Mode
- controlled signal switching: TRIG1 oder TRIG2 Modus
- signal regeneration: HTP, LTP, TRIG1, TRIG2, SPLIT

## Technical Data

- Dimensions: 114 mm [W] x 113 mm [D] x 66 mm [H]  
Power supply: 230V AC approx. 2,5 VA  
DMX IN: 2x 1 Unit Load each  
DMX OUT: 2x 32 Unit Load, buffered  
Mode of operation: HTP, LTP, SPLIT, APPEND, FLIP, CHANGEOVER, TRIGGER  
Order Code: 2002A-H

## CE CONFORMITY



This DMX interface is microprocessor controlled and uses high frequency (16 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 throughout 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 DMX 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 merger 2002A-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 Nr. DE58883929).

## INTERNET-HOTLINE

Please check our internet domain <http://www.soundlight.de> for new versions, updates etc. Updated and foreign language manuals are available from [www.manuals.soundlight.de](http://www.manuals.soundlight.de). 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.