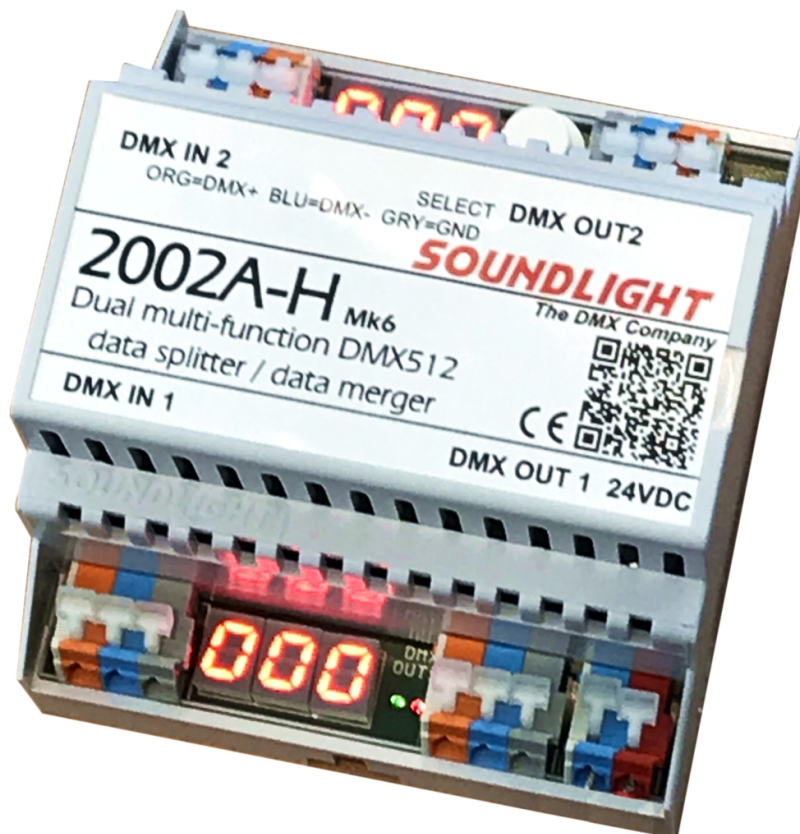


OPERATING MANUAL

DMX Merger 2002A-H Mk6.1



NEW MODEL

- INCREASED VERSATILITY
- HIGHER SPEED
- LOWER POWER
- REDUCED SIZE
- FUTURE PROOF
- RDM SETUP



RoHS
compliant

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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, and can be configured using DMX RDM. The device also acts as DMX RDM - DMX512 gateway.

Unpacking

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

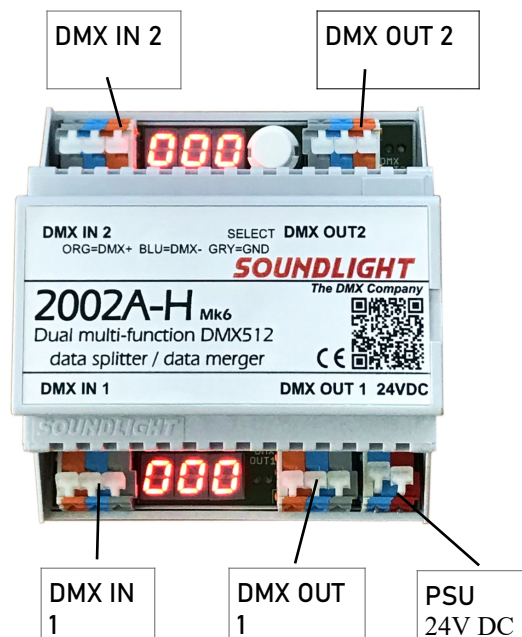
- the DMX Merger 2002A-H
- this manual

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 (obey 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 (9...24 VDC)

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 24VDC
blue	0V
red	+24V (9...24VDC)



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.

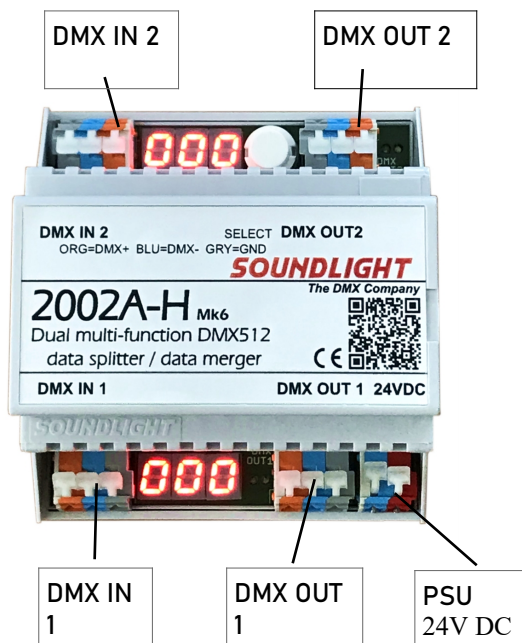
To change the mode of operation press key repeatedly, until the desired mode is reached. Pressing the key shortly only once will display the current selection and not change status. The last valid setting is retained within memory and re-set with the next session.

MODES USING 2 INPUTS AND 2 OUTPUTS

MODE 1 **HTP - 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.



DMX OUT 1:
direct HTP output of merged signals.

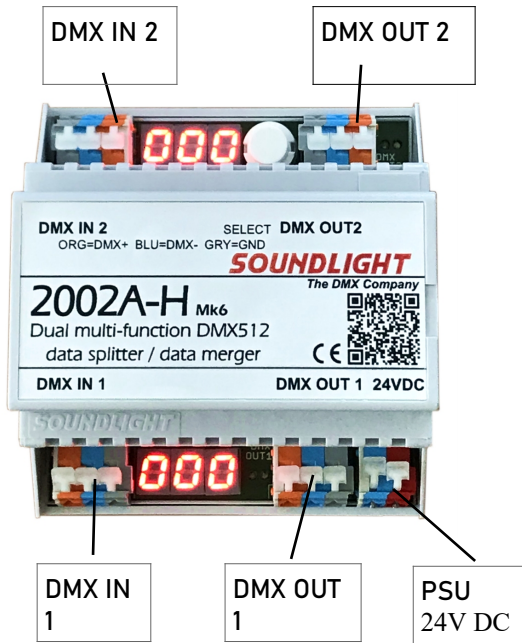
DMX OUT2:
direct HTP output of merged signals, but subject to MINIMUM LEVEL / MAXIMUM LEVEL SETTINGS and MIN-MAXMODE settings, which can be accessed using RDM.

DMX IN1 always acts as RDM control input in all modes.

MODE 2 **LTP - HTP** (*LTP*)

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

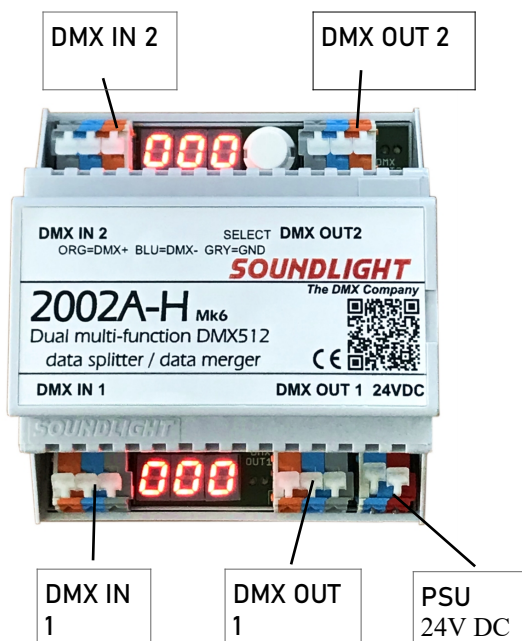
SPLIT (SPL)

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:

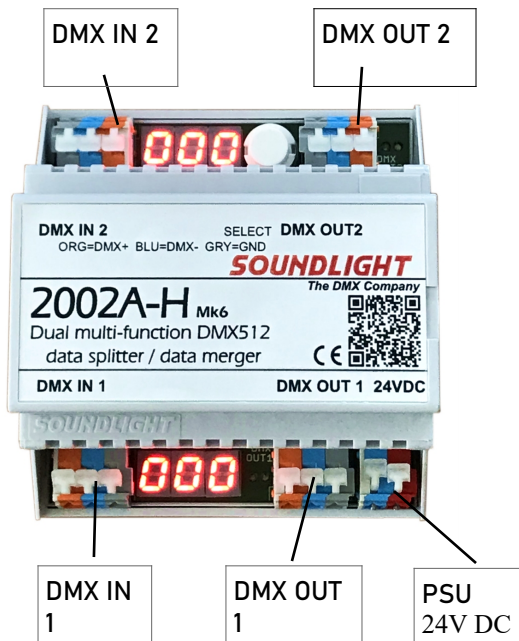
Input signal on	DMX IN 1:	Channel 001 - 512	
Output on	DMX OUT1:	Channel 001 - 256	
Output on	DMX OUT2:	Channel 257 - 512	as 001 - 256



MODE 4

APPEND (APP)

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.

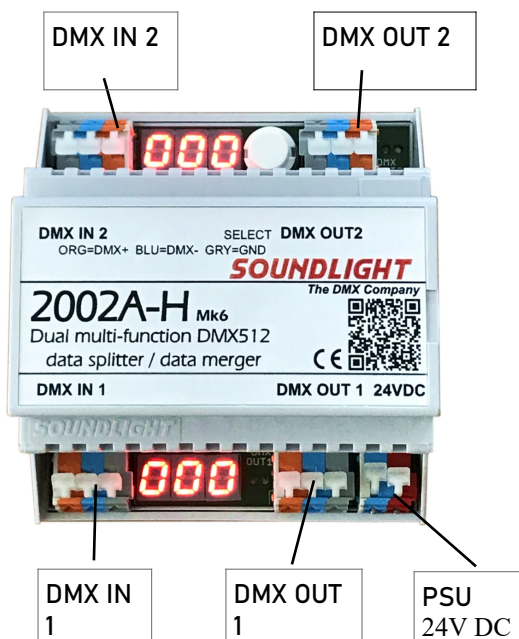


DMX IN 1: 1-256
DMX IN 2: belegt 257-512

MODE 5

FLIP (FLP)

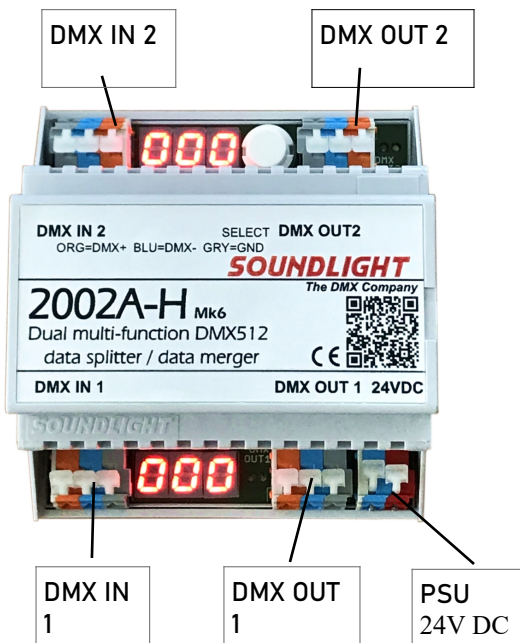
Flip - changeover: Only one of both DMX inputs will be fed to the outputs. The non-active input is being signalled by blinking the display. Changeover occurs whenever one of the input signals fails and then stays intact as long as the input signal is stable and present. Nur einer der beiden DMX Eingänge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



MODE 6

CHANGE (CHR)

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.



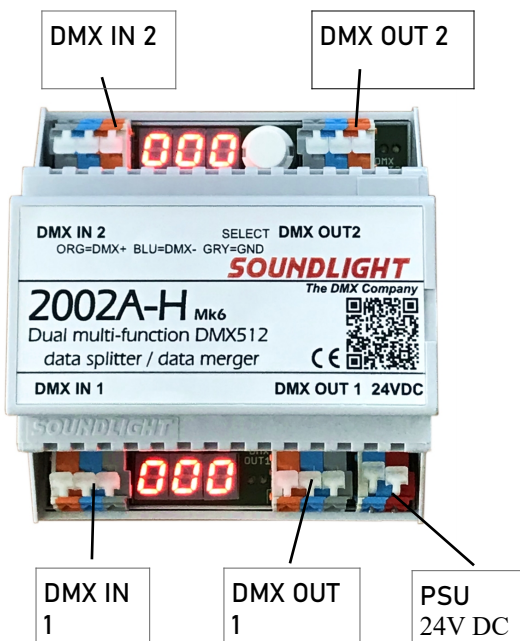
Both outputs are in use, feeding the same signal.

MODE 7

TRIG (TRG)

Trigger - release: This mode will feed input DMX_IN1 to both outputs. Using DMX slot #1 you can switch the output 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.



Both outputs are in use, feeding the same signal.

MODE 8

SCALE (S C R)

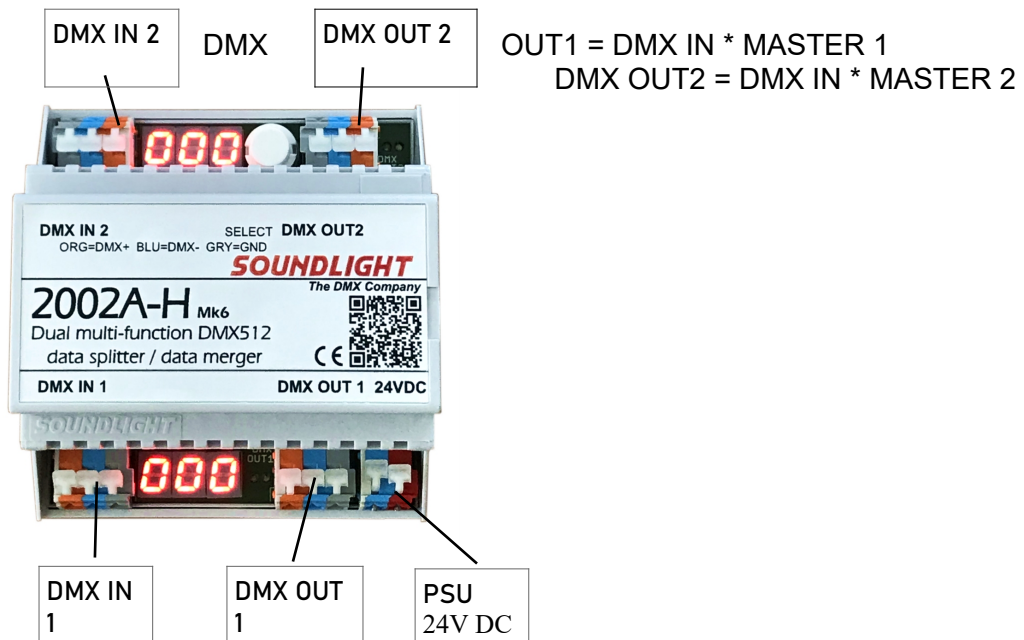
The 2002A-H is working as digital master fader. The data stream input at DMX INPUT can be scaled using the data from DMX INPUT #2. Thus you can easily create a „Master Fader“ for lighting control systems, which do not offer a grandmaster function.

DMX IN#1 is used as signal input, DMX IN#2 is used as master. DMX addresses 001 and 002 will be used als master control inputs.

There are two master fader functions available simultaneously.

Signal-Engine 1: Signal input: DMX_IN1
 Signal output: DMX_OUT1
 Master input: DMX_IN2, @ address 001

Signal-Engine 2: Signal input: DMX_IN1
 Signal output: DMX_OUT2
 Master input: DMX_IN2, @ address 002



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 TRIG Mode
- signal regeneration: HTP, LTP, TRIG, SPLIT

Displays

Output allocation, modes of operation or input values are shown on LED displays for both engines 1 and 2.

STATUS1, STATUS2: LED indicator red/green

When used as DMX INPUT:

- green: DMX Signal present
- red: blinks when DMX signal fails

When used as DMX OUTPUT:

- green: DMX signal containing values >0 present
- red: Output disabled

DISPLAY1, DISPLAY2

Normally shows the DMX signal slot count.

When selecting or changing the operating mode, the mode is being displayed for about two seconds.



Technical Data

Dimensions:	86 mm [W] x 92 mm [D] x 66 mm [H]
Mounting:	DIN Rail 35mm
Power Supply:	24V DC approx. 25mA
DMX IN:	2x 1 Unit Load each
Protocol:	USITT DMX512/1990, ANSI E1-11 DMX512-A, DIN56930-2, ANSI E1-20 DMX RDM
DMX OUT:	2x 32 Unit Load, buffered
Modes of operation:	HTP, LTP, SPLIT, APPEND, FLIP, CHANGEOVER, TRIGGER, etc.
Storage temperature:	-10...+70°C
Operating temperature:	0...+50°C
Safety rating:	IP20
Order Code.:	2002A-H Mk6

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 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 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 No. 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. 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.

Product Homepage



Find all product data and product news on the product homepage:

www.soundlight.de/produkte/2002a-h