SOUNDLIGHT
The DMX Company

OPERATING MANUAL

DMX Booster/Splitter 3404LC-H RDM Mk3

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Thank you for choosing a SOUNDLIGHT device.

The **SOUNDLIGHT** DMX Splitter/Booster 3404LC-H is a highly sophisticated device, which was designed to buffer and distribute DMX light control signals complying with USITT DMX-512/1990 or DIN 56930/2, ANSI E1-11 DMX512-A and ANSI E1-20 DMX RDM, respectively. The unit 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 and displays the number of DMX slots received;

- future-proof
  The unit is software controlled an can be adapted to any change in protocol definition;

- unlimited channel count
  The number of DMX channels sent or received does not affect the operation of the DMX splitter/booster 3404LC-H, since the unit can handle all transmission lengths.

- cost-effective
  The SOUNDLIGHT 3404LC-H is a cost-effective solution for many purposes.

VERSIONS

The booster / splitter family comprises of these products:

3401A-EP	printed circuit board, 1x DMX IN, 1x DMX OUT, opto-isolated line booster
3401B-H	DIN rail mount RDM compatible Line Booster, opto-isolated
3402A-EP	printed circuit board 1x DMX IN, 2x DMX OUT opto-isolated in/out
3402A-EPD	printed circuit board 1x DMX IN, 2x DMX OUT opto-isolated in/out, with Display
3402A-FG	stand alone unit 1x DMX IN, 2x DMX OUT opto-isolated
3402A-FGD	stand alone unit 1x DMX IN, 2x DMX OUT opto-isolated, with Display
3402B-H	DIN rail mount RDM compatible splitter, 2x DMX RDM OUT, opto-isolated, 24VDC
3404A-H	DIN rail mount unit,1x DMX IN, 1x DMX THRU, 4x DMXOUT (common isolation)
3404B-H	DIN rail mount unit,1x DMX IN, 1x DMX THRU, 4x DMXOUT (individually buffered/isolated)
3404C-H	DIN rail mount unit,1x DMX IN, 1x DMX THRU, 4x DMX RDM OUT (indiv. buffered/isolated)
3405A-EP	printed circuit board 1x DMX IN, 1x DMX THRU, 5x DMX OUT opto-isolated
3405A-FG	19" rack mount unit 1x DMX IN, 1x DMX THRU, 5x DMX OUT opto-isolated, with Display
3408A-FG	19" rack mount unit 1x DMX RDM IN, 1x DMX THRU, 8x DMX RDM OUT, with Display
3410A-FG	19" rack mount unit 1x DMX IN, 1x DMX THRU, 10x DMX OUT opto-isolated, with Display

NOMENCLATURE

This document uses these indicators:

DANGER ! May cause harm to user and/or equipment

INFO: How to setup your device

INFO: Status information

The booster/splitter is using cage clamp terminals for both, input and output. This type of connector is very reliable, ruggedized and easy to use. Use a flat blade screwdriver only. To open, press lever, insert cable and release. For stranded wires, we suggest to use (insulated) ferrules.

The DMX data outputs are optically isolated in respect to to the DMX signal input.

DMX INPUT   Signal input for control signals according to USITT DMX512/1990 or DIN 56930-2
Pin 1   grey   screen / GND
Pin 2   blue   DMX - (inverted)
Pin 3   red   DMX + (normal)

DMX THRU   unbuffered or active bufferd output (depending on jumper setting)
Pin 1   grey   screen / GND
Pin 2   blue   DMX - (inverted)
Pin 3   red   DMX + (normal)

DMX OUTPUTS   outputs, galvanically isolated from the DMX signal input
Pin 1   grey   screen / GND
Pin 2   blue   DMX - (inverted)
Pin 3   red   DMX + (normal)

POWER SUPPLY   110-230V AC 50Hz approx. 4W
Pin 1   blue   Neutral
Pin 2   black   Live 110-230V AC

The power supply is 110-230V AC 50/60 Hz. Mains voltage can be dangerous to your health; connections must be carried out by a qualified technician only. Make sure the unit has been disconnected from mains before making any other connections to the booster/splitter. Verify before re-applying power. Make sure that the operating conditions (see: Technical Data) are met all all times.

Signalling is provided for user guidance.
The state of the booster/splitter interface is signalled by a 3 LED indicators.

Color   Labelling Description
green   SIGNAL   Valid DMX signal detected
yellow   RDM   Valid RDM command detected
green   POWER   Power supply present

Dimensions   86mm (W) x 67mm (H) x 92 mm (D)
Supply: 110 / 230VAC 50/60 Hz (Widerange 90-265V) approx. 4 W @ full load
Standby: 0,85W (no signal, no load)
DMX IN: 1 Unit Load
DMX OUT: 4 outputs, buffered, optically isolated vs input
DMX Protocol: USITT DMX512/1990, DIN56930-2, ANSI E1-11 DMX512-A, ANSI E1-20 DMX RDM
RDM device: Transparent Device, no UID
Display: 3 LED indicators
Operating Temp: 0C...+50C non-condensing
Storage Temp.:   -20C...+80C

Weight: 203 g
Mounting: on 35mm DIN rail, width 5 units (86mm)
IP rating: IP20, for dry rooms only
Order No.:   3404LC-H

DMX RDM PROPERTIES

DMX RDM The 3404LC-H can process DMX512, DMX512-A and/or DMX RDM telegrams. In respect to RDM traffic, the 3404LC-H acts as "invisible" device, which cannot be discovered or addressed. Thus no RDM setup is required, the 3404LC-H is ready to go. Please refer to the 3404LC-H product page (see below) for more information regarding RDM properties.

Multiple units can be operated and wired in parallel. To expand the number of outputs, simply connect the next splitter to the DMX THRU port. Do not connect additional splitters to the OUT ports, since this will shorten dicovery response telegrams.

CE CONFORMITY

This DMX splitter/booster is microprocessor controlled and uses high frequency (16 MHz quartz). The interface has been tested in the EMC lab to comply with EN55015.

CE To ensure the best performance regarding radiated and conducted emissions 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.

DISTURBANCES

If a trouble-free operation cannot be guaranteed, disconnect the booster/splitter 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 ist warranted against defects in metarials and workmanship for a period of 24 month, 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 arccordance with the manual;
- connection to wrong voltage or current;
- misuse.

SERVICE

There are no parts within the booster/splitter 3404LC-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. If you have any comments which may be worth considering, please send a message to info@soundlight.de.

PRODUCT INFO

The product info page can be found at: www.soundlight.eu/produkte/3404lc-h
Foreign language product manuals are available at: www.soundlight.eu/produkte/manuals
For more RDM info pls check www.soundlight.eu/rdm

END-OF-LIFETIME

When the end of the lifetime of this product has been reached, ist must be disposed of properly. Electronic devices must not be placed in domestic waste. They are to be collected by public recycling systems. Consult your local authorities for more information regarding the whereabouts of your next collection station. SOUND-LIGHT is a WEEE registered company (DE58883929).