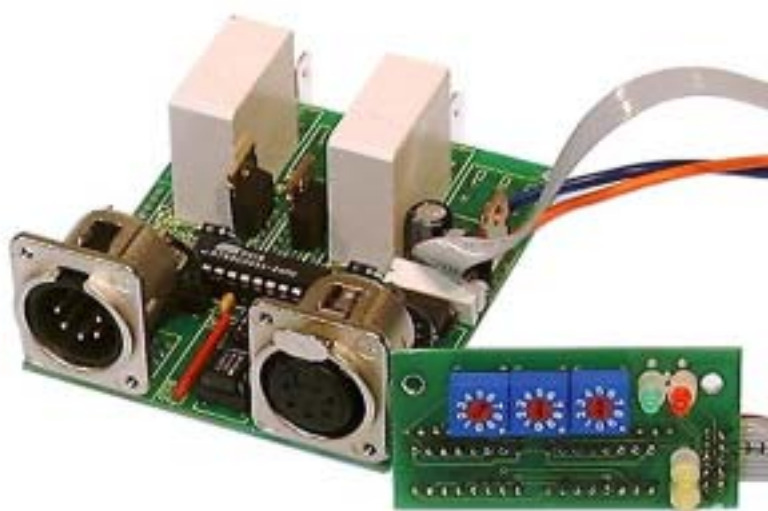


Operating Manual

DMX Relay Card 3002R



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Preface

Thank you for choosing a SOUNDLIGHT device.

The SOUNDLIGHT DMX Relay Card 3002R is an intelligent DMX demultiplexer decoding digital data complying with standard USITT DMX512 and DIN 56930-2 to contact relay output. The card 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.
- integrated hysteresis
Adjustable hysteresis ensures flicker free switching
- simple supply
The power supply is from standard regulated DC voltage, 12V DC
- signal loss
In the case of a loss of the drive signal the last setting will remain intact.
- cost-effective
The SOUNDLIGHT 3002R is a cost-effective solution for many purposes.

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 3002R
- this manual

Installation

Please mount the card in a closed, screened case. The card features fastening holes for tapped screws M3. We recommend use of brass distance bolts or spacers to mount the card 10mm above the case base plate. Connect the power supply to PSU leads or the PSU screw terminals.

The power supply connector leads are:

red: +12V DC stabilized
blue: 0V, GND

Upon application of supply voltage the card is ready for operation.

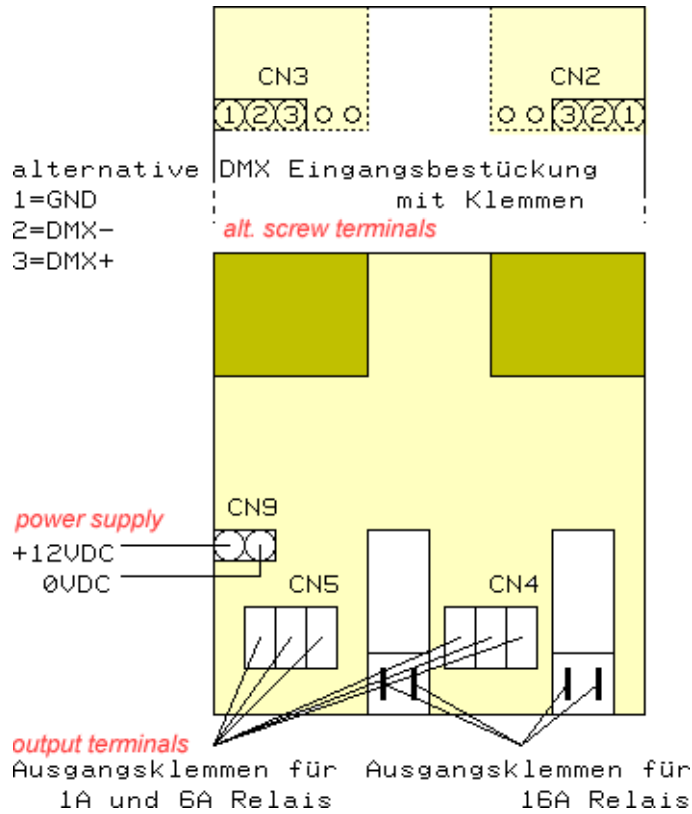
DMX INPUT / OUTPUT

Connection to the DMX512 data line is by 5-pin onboard XLR connectors, as defined in the standards document. For pin assignment see below.

DMX INPUT	(male)
1	GND
2	DMX -

- 3 DMX +
- 4 not connected, thru-wired to Pin 4 DMX OUT
- 5 not connected, thru-wired to Pin 5 DMX OUT

DMX OUTPUT	(female)
1	GND
2	DMX -
3	DMX +
4	not connected, thru-wired to Pin 4 DMX IN
5	not connected, thru-wired to Pin 5 DMX IN



The drawing shows the position of the onboard connectors. The lower connectors are the relay output contacts; pin assignment of CN4/CN5 may vary due to type of relay used. Please verify with ohmmeter.

The state of the demultiplexer card is signalled with two indicator LEDs.

- green: OPERATION (blinking)
- red: ERROR (blinking)
Error blinking at data errors or loss of communication.

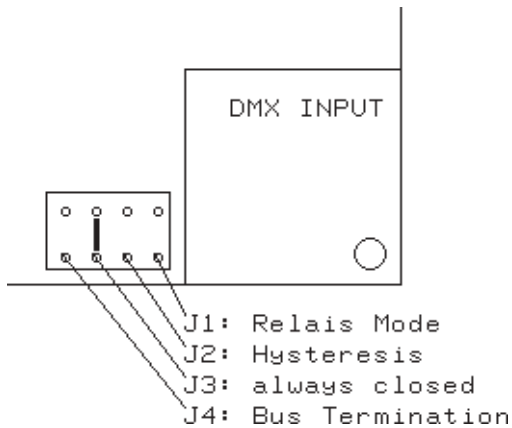
Start Address Switches

The three decimal coding switches set the start address, that is the address of the first channel to be decoded. The setting is fully decimal, no binary conversion is necessary as is with DIL switches.

- S1: Ones
- S2: Tens
- S3: Hundreds

If the switch block is set to non-defined address 000, all outputs are disabled regardless of the data received.

Jumper Settings



Optional jumpers allow configuration of the 3002R relay card..

J1: OUTPUT MODE SETTING

open:	both relays act individually: Rel.1: DMX channel #1 Rel.2: DMX channel #2
closed:	both relays act in ladder mode, driven from DMX channel #1
0-25%	both relays off
25-50%	Rel.2 ON
50-75%	Rel.1 ON
75-100%	Both relays ON

J2: SWITCHING HYSTERESIS

open:	<25% relay switches OFF >75% relay switches ON
closed:	<45% relay switches OFF >55% relay switches ON

J3: BUS TEST MODE

open:	Factory test mode only
closed:	<i>This jumper must always be closed</i>

J4: BUS TERMINATION

open:	DMX data bus not terminated
closed:	DMX data bus terminated <i>set termination jumper if this is the last device in the DMX chain</i>

Jumpers 1 and 2 may be modified by the user. They define the board switching characteristics. If J1 is closed, both relays respond to DMX channel #1 and switching action is defined by CH1 data bits (bit 7 = relay 1, bit 6 = relay 2). Jumper J4 should be set only, if the card is the last card attached to the DMX data line (the last device has to be terminated by a suitable termination resistor). Of course external termination plugs can be used; in this case J4 should be left open all the time.

Service Settings

The DMX relay card 3002R can be set to various service settings. This is to test individual outputs.

Settings include:

801:	Output 1 On
802:	Output 2 On
997:	both outputs are switching synchronously
999:	both outputs are switching alternatively

Please allow up to 1 second for the outputs to settle according to the test switch state.

Relay Types

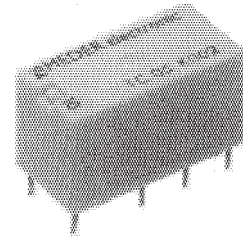
The card can be equipped with a variety of different contact relays. Catalog models include the 3002R-EP1 with 1A signal contact relays, the 3002R-EP6 with 6A changeover contacts, and the 3002R-EP16 with 16A heavy load relays.

Please note that all current data are given for resistive load only. Switching of inductive loads requires application of a suitable degradation factor - see relay manufacturer's data sheet.

3002R-EP1**1A RELAY**

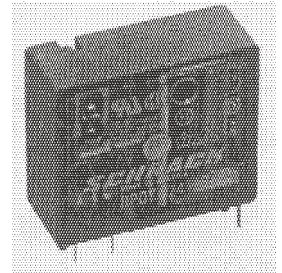
Low noise contacts, ideal for signal switching (e.g. audio)

max. switching current: 1A @ 24V DC, 0,5A @120V AC resistive load
 max. switching voltage: 120V DC/AC
 max. switching power: 30W DC, 60W AC
 contacts: 1x changeover (NC/NO)

**3002R-EP6****6A RELAY**

high voltage changeover contact, universal use for all applications

max. switching current: 8A @ 230V resistive load
 max. switching voltage: 440V AC @ resistive load
 max. switching power: 2000VA AC
 contacts: 1x changeover (NC/NO)

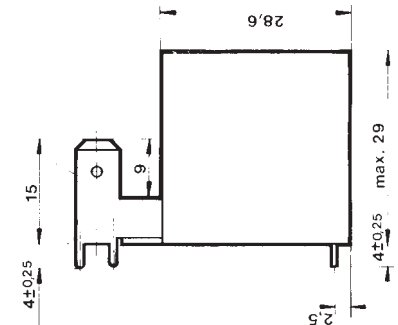


Approbationen

**3002R-EP16****16A RELAY**

high current N.O. contact, for power switching applications

max. switching current: 16A @ 230V resistive load
 max. switching voltage: 380V AC @ resistive load
 max. switching power: 4000VA AC
 contacts: 1x closing contact (N.O.)



Approbationen

**Note:**

When selecting and ordering the appropriate relay card, please note, that all data given by the relay manufacturers are for **RESISTIVE LOAD** only. Incandescent lamps may be considered to be resistive loads. Switching inductive loads, such as transformers or solenoids, requires lower loads - we recommend not to exceed 50% of the resistive load data. Besides, contacts may burn due to inductive spikes and sparks. Make sure to add protective circuitry (RC combinations, VDR resistors) if switching inductive loads. Switching inductive loads on the mains power supply may also generate high frequency noise and degrade the power supply quality.

Technical Data

Dimensions: 72 mm x 89 mm x 45 mm
 Power Supply: 12V DC approx. 30mA (no relay) to 150mA (both relays)
 DMX IN: 1 Unit Load
 DMX OUT: fed-through
 Relay Out: see relay data (above)
 Order Code.: 3002R-EP0 (no relays fitted)
 3002R-EP1 (1A signal relays fitted)
 3002R-EP6 (6A universal relays fitted)
 3002R-EP16 (16A mini contactors fitted)

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:

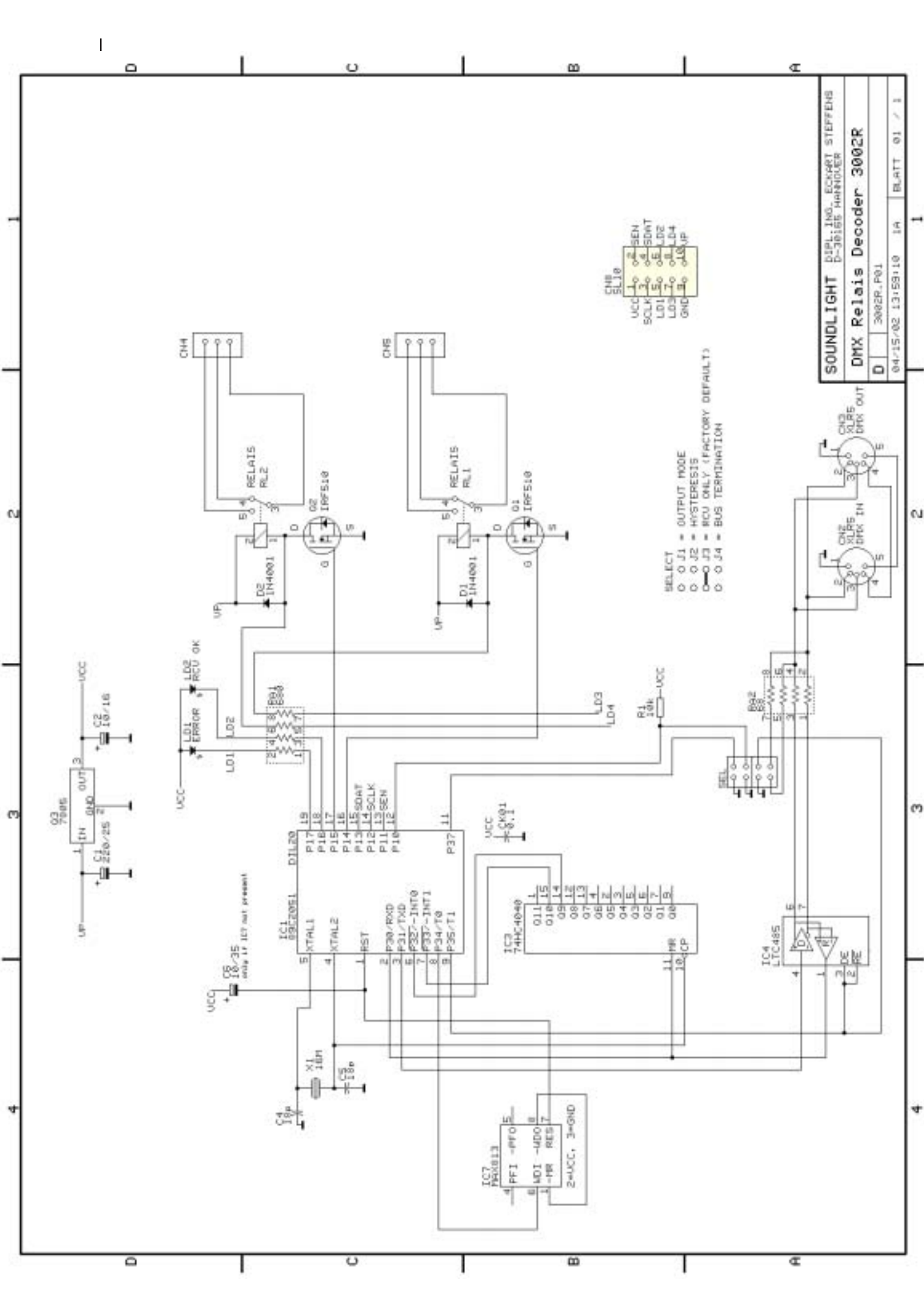
- when modifying or trying to repair the unit without authorisation;
- modification of the circuitry;
- damages by interference of other persons;
- operation which is not in accordance with the manual;
- connection to wrong voltage or current;
- misuse.

Service

There are no parts within the DMX relay card 3002R which require the user's attention. Should your unit require servicing, please send it to the factory, freight paid.

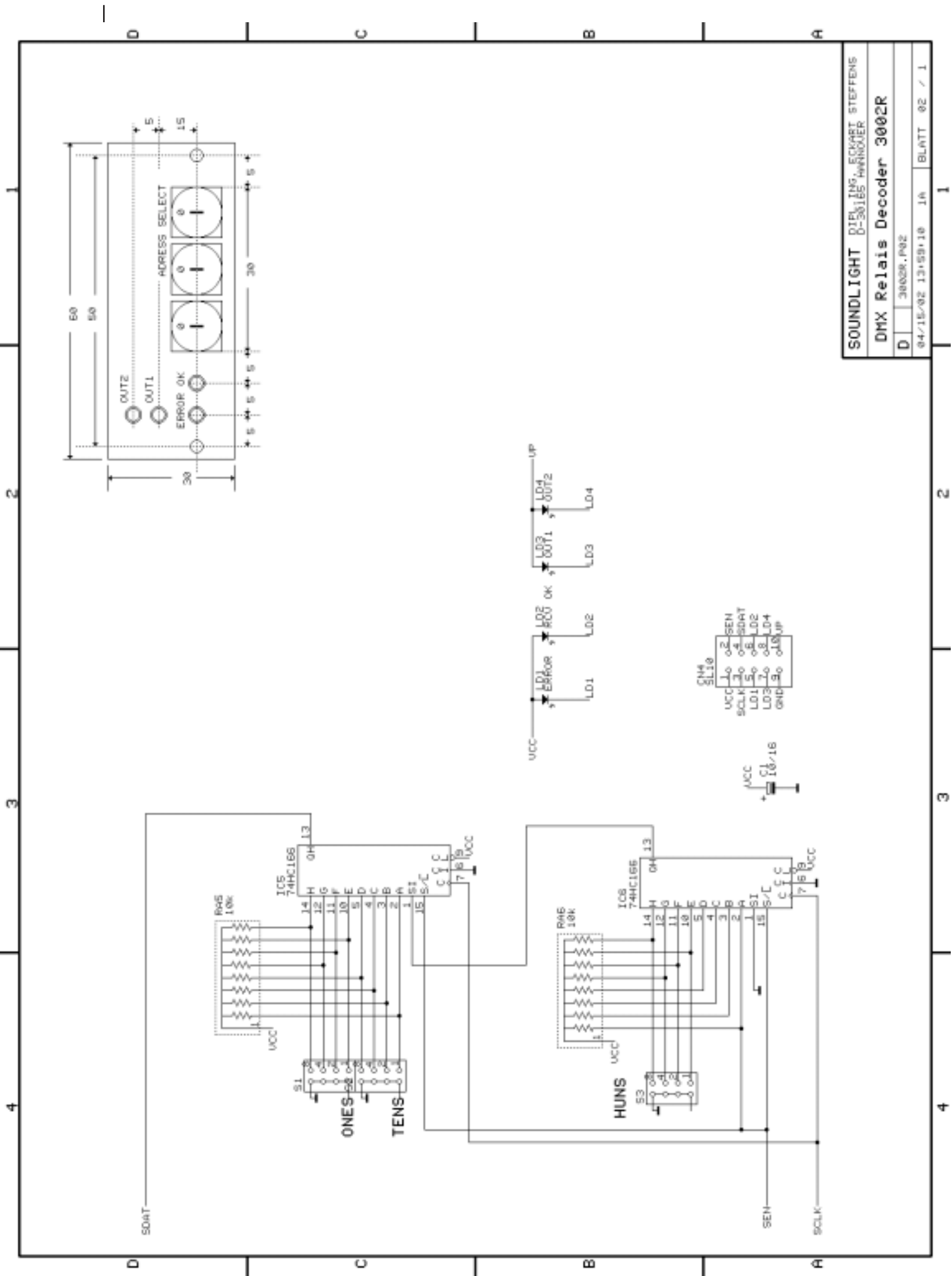
Internet-Hotline

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 support@soundlight.de. We will check your message and reply accordingly.



- SELECT
- 0 J1 = OUTPUT MODE
 - 0 J2 = HYSTERESIS
 - 0 J3 = RCU ONLY (FACTORY DEFAULT)
 - 0 J4 = BUS TERMINATION

SOUNDLIGHT DIPL.-ING. ECKHART STEFFENS
DMX Relais Decoder 3002R
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SOUNDLIGHT DITTLING, ECKHART STEFFENS
D-30165 HAHNROUER
DMX Relais Decoder 3002R
D 3002R.P02
04/15/02 13:53:10 1A BLATT 02 / 1