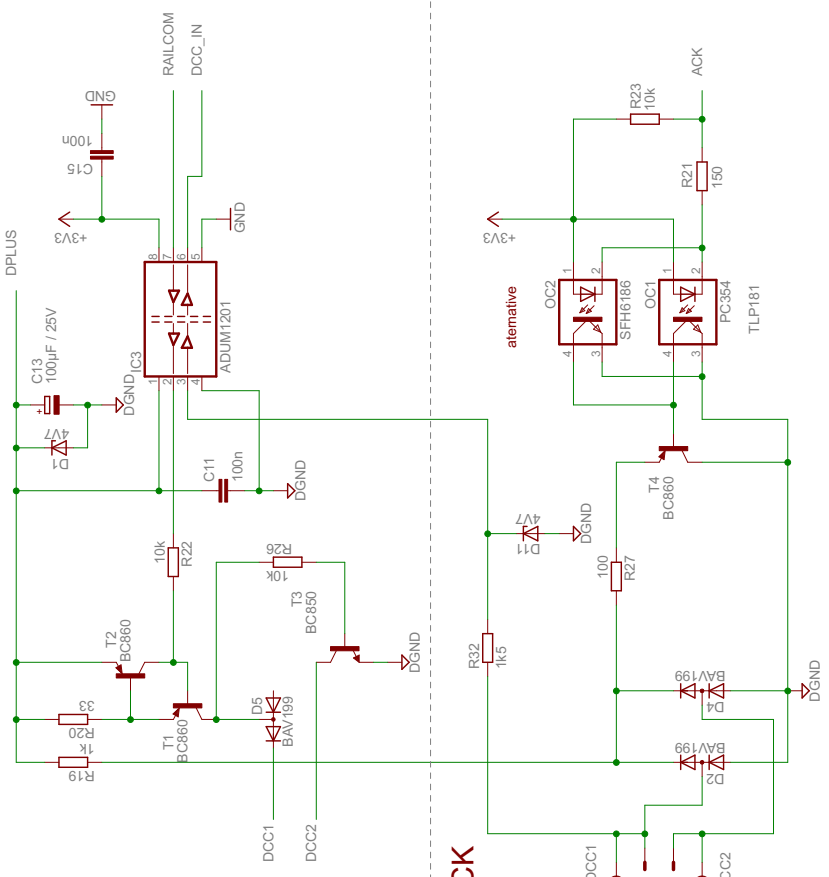
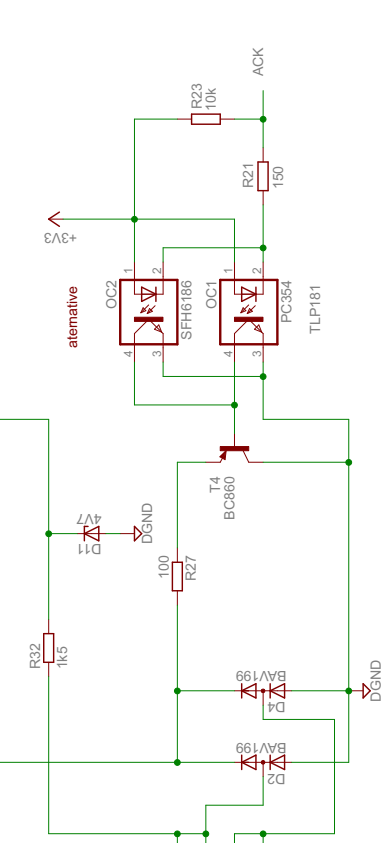


Railcom (not fitted)



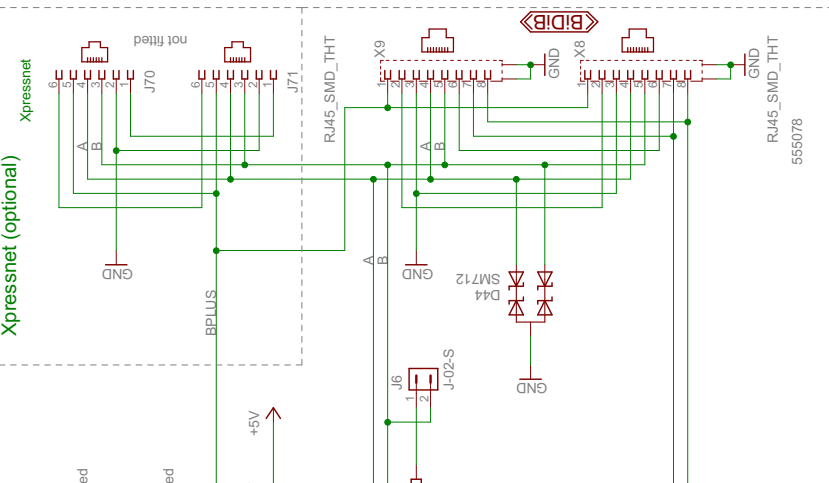
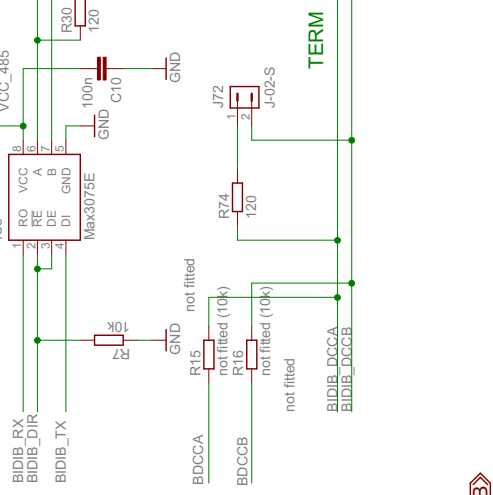
DCC+ACK (not fitted)



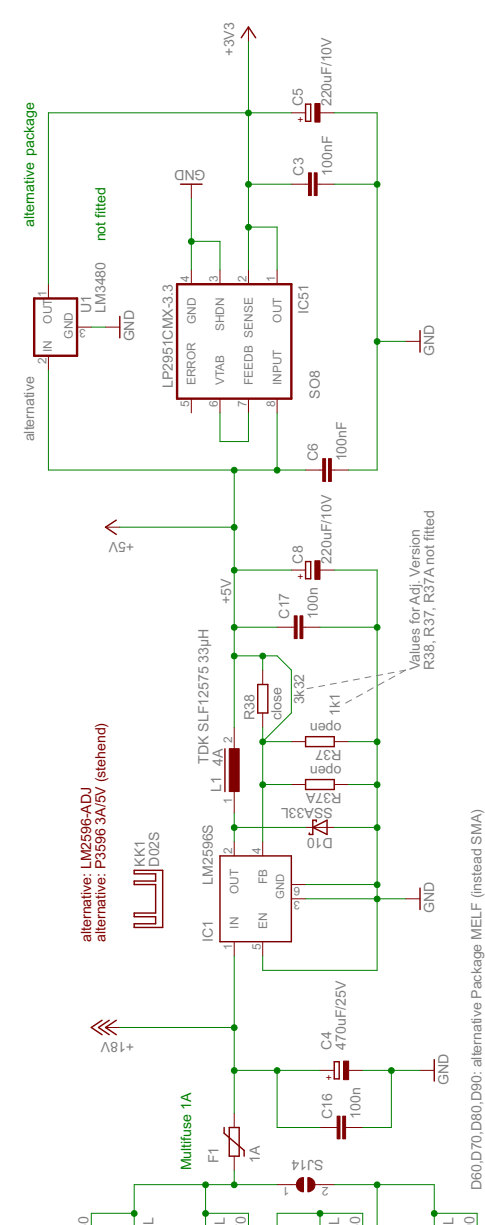
BIDiB



fit either R10 or R11 (solder jumper)

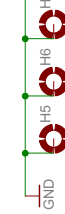


Spannungsversorgung



History:

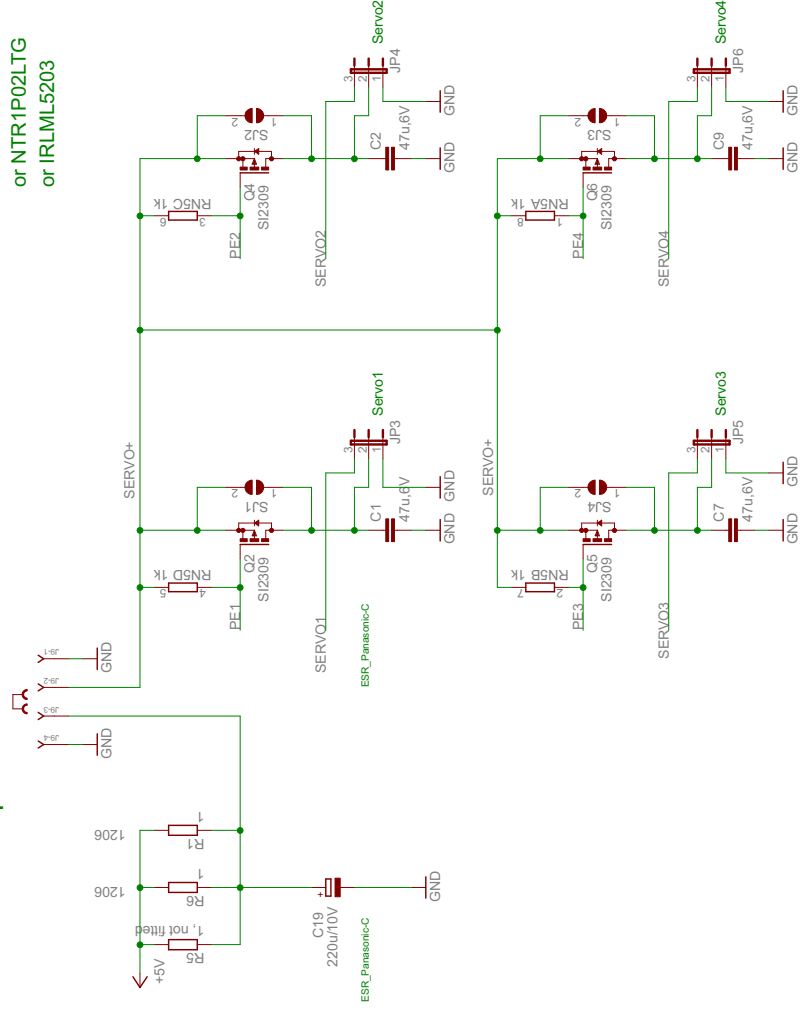
V1.0: 04. 05.2011, Schaltungsentwurf
 V1.1: 13.03.2012, Bauteil-Steinschleife korrigiert.
 RJ45 mit THT-Version
 Railcom-Out auf TX
 SERVO_ENA added
 DCC in und ACK umgebaut: nur ein ADUM1201, OC dazu
 Widerstände bei Servos als WNW
 V1.3: 19.10.2012 3V3 Spannungsregler -> 2951, C, R, alle SMD
 Gleichrichter als SMA oder MELF (1N4007)
 R1 dazu



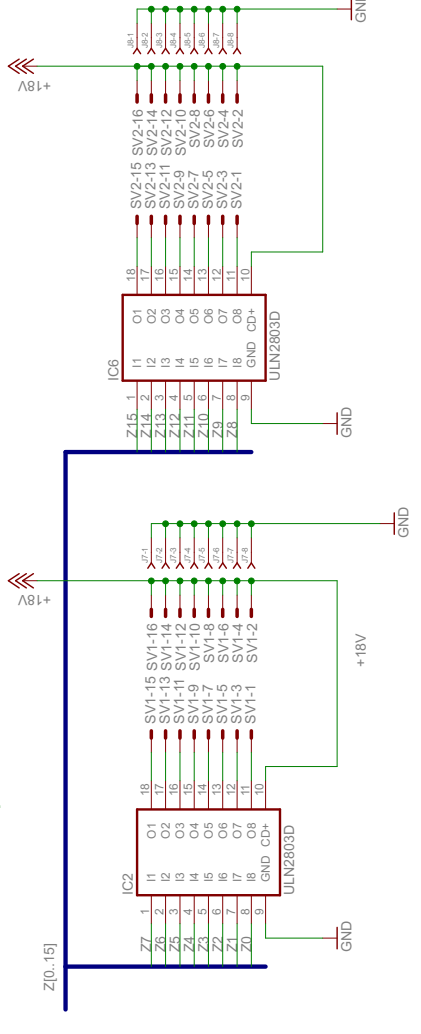
Entwicklung:
 Wolfgang Kufer
 Christoph Schöner
 www.opendcc.de
 www.lighttrain.de

LightControl_V1.3
 01.11.2012 23:04:07
 Sheet: 1/3

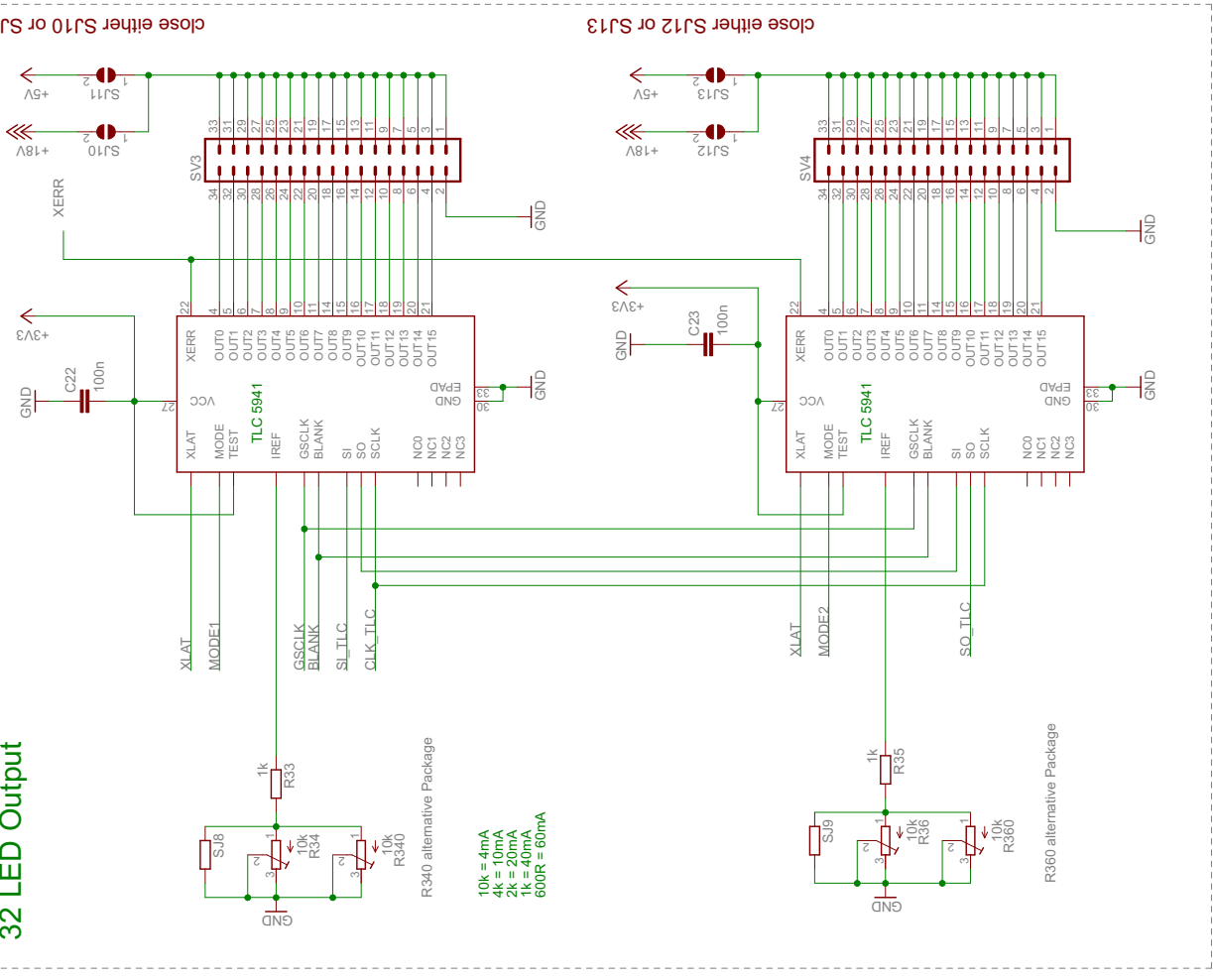
4x Servo Output



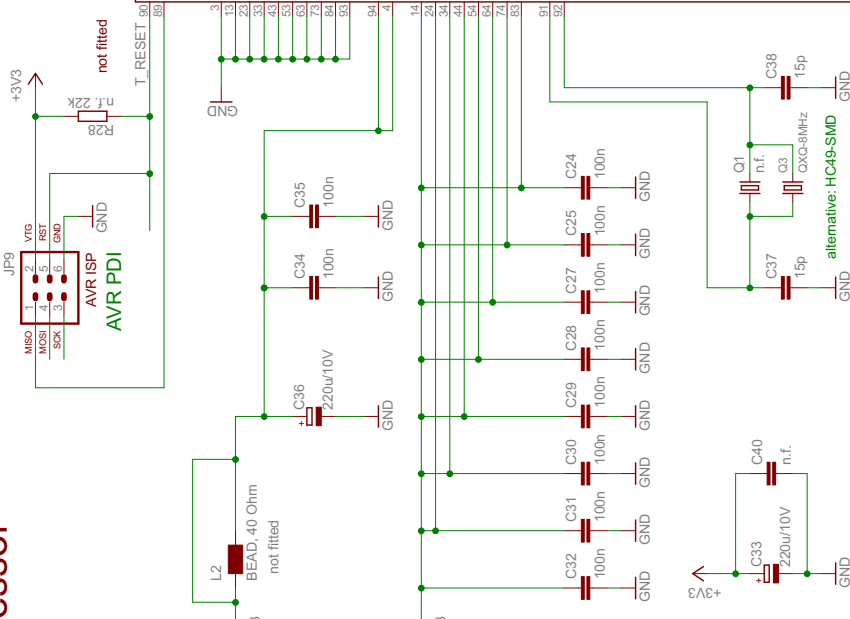
16 Power Output



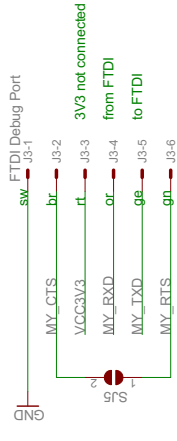
32 LED Output



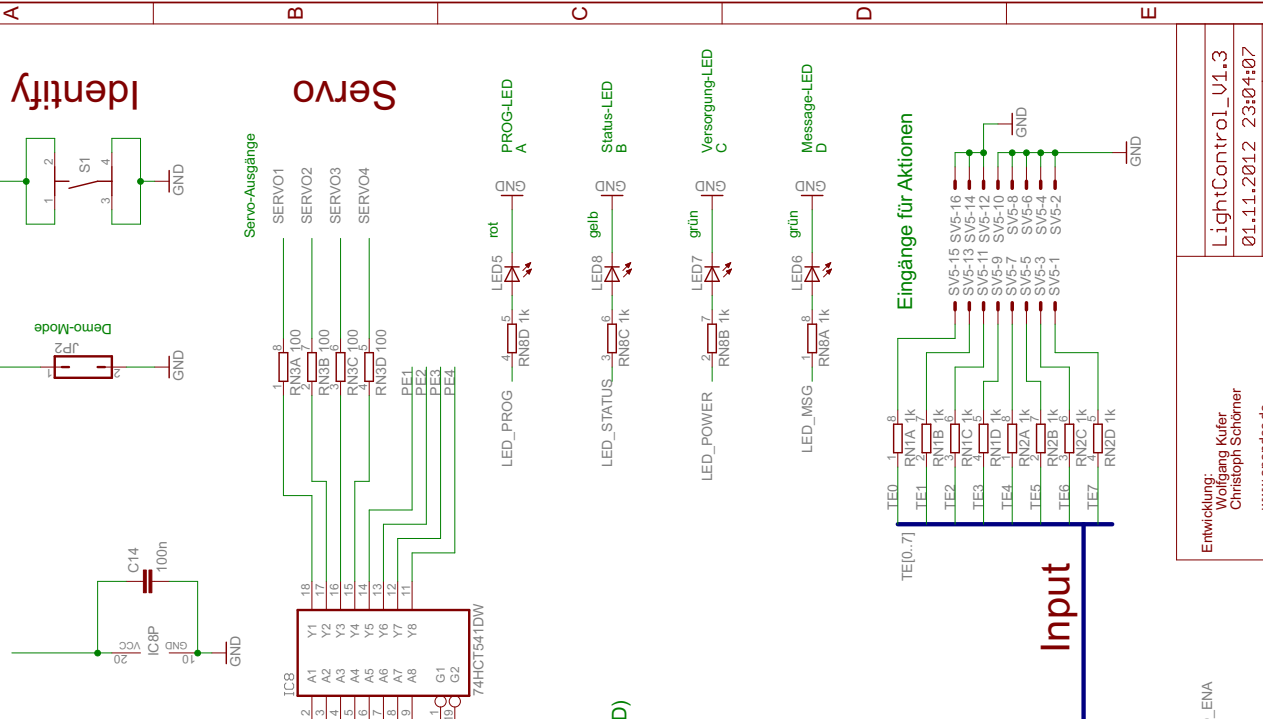
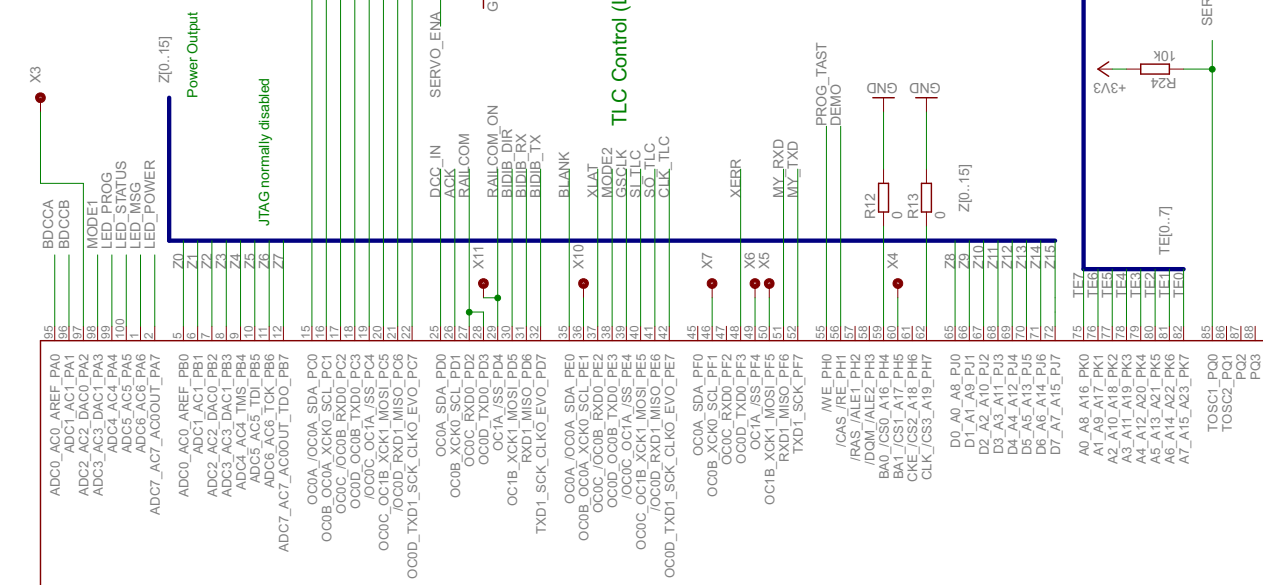
Prozessor



FTDI DEBUG PORT



DC-Power (optional)



Entwicklung:
Wolfgang Kufner
Christoph Schöner
www.openccc.de
www.lightbainn.de

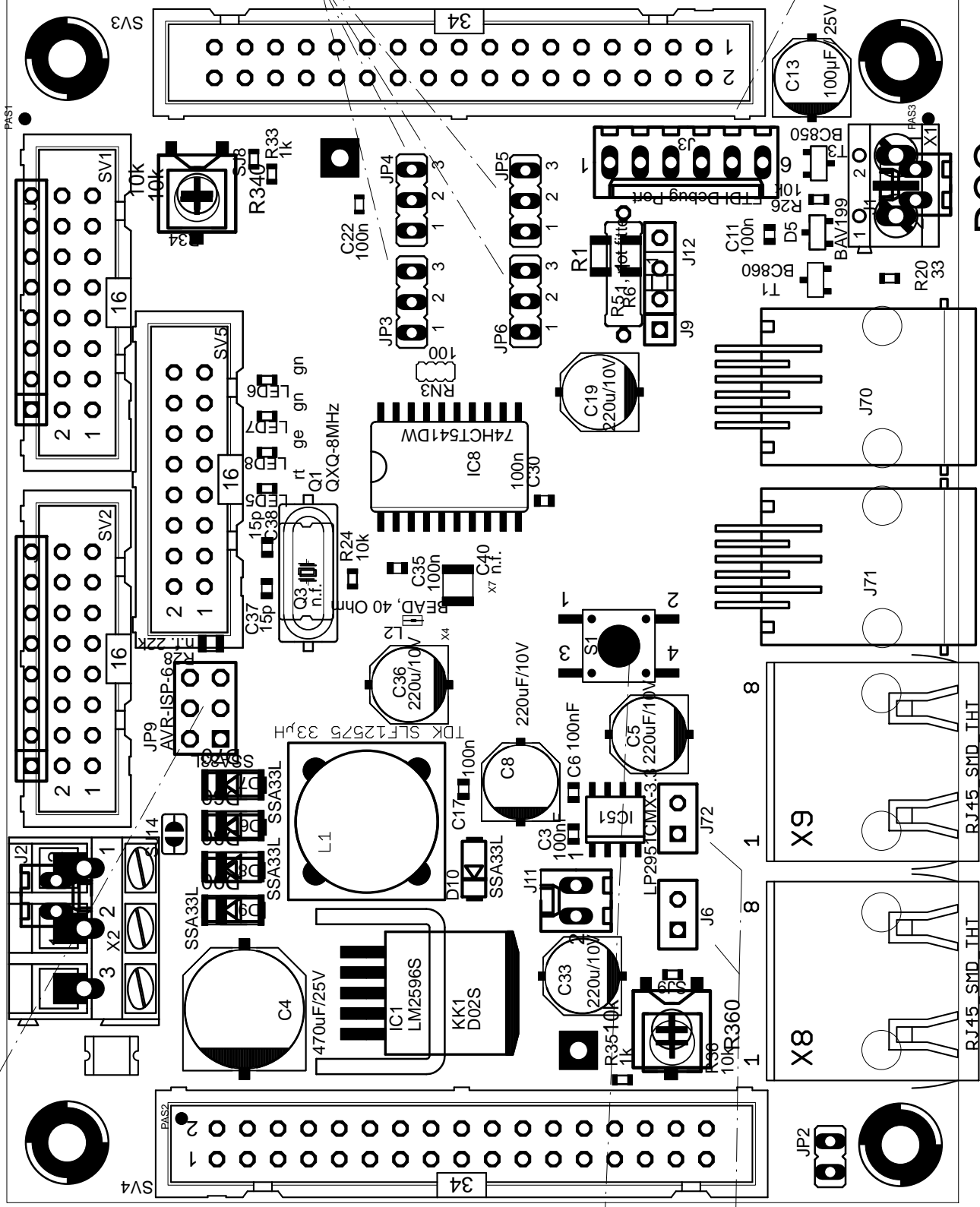
LightControl_V1.3
01.11.2012 23:04:07
Sheet: 3/3

LightControl1 V1.3

(c)www.opendcc.de
(c)www.fichtelbahn.de

DC/AC

Power-Out2
Power-Out1
Key-In



LED-Out2

Identify

Term

DCC

not fitted

<<BiDiB>>

PAS5 ●

SJ6

SJ7

PAS4 ●

SJ10
SJ11

SJ12
SJ13

C16
100n

C2 47u,6V

C27 100n
R13 0
R12 0

R37A open
R37 open
R38 close

C7
47u,6V

C9
100n

C25 100n

C28 100n

U\$2
TLC5941

LM3480
U1

C1
47u,6V

C29 100n

C23 100n

Q1
S12309

Q2
S12309

Q3
S12309

Q4
S12309

Q5
S12309

Q6
S12309

C15 100n

C19 1k

C24 100n

C27 100n

D44
SM712

D42
B240

D43
B240

D44
SM712

D45
SM712

R21 150

R23 10k

R7 10k

R10 0
R11 0

R14 22

R15 (10k) not fitted

R16 (10k) not fitted

R17 10k

R18 10k

R22 10k

R27 100

R32 1k5

R74 120

R37A open

R37 open

R38 close

R39 10k

R40 10k

S12 5

S13 5

S14 5

S15 5

S16 5

S17 5

S18 5

S19 5

S20 5

T2 BC860

T4 BC860

T5 BC860

T6 BC860

T7 BC860

T8 BC860

T9 BC860

T10 BC860

T11 BC860

U\$1
TLC5941

U\$2
TLC5941

U\$3
LM3480

U\$4
Max3075E

U\$5
ULN2803D

U\$6
ULN2803D

U\$7
ULN2803D

U\$8
ULN2803D

U\$9
ULN2803D

D1 4V7

D2 BAV199

D3 B240

D4 BAV199

D5 B240

D6 B240

D7 B240

D8 B240

D9 B240

PAS6 ●

PAS7 ●

PAS8 ●

PAS9 ●

PAS10 ●

PAS11 ●

PAS12 ●

PAS13 ●

PAS14 ●

SJ14

SJ15

SJ16

SJ17

SJ18

SJ19

SJ20

SJ21

SJ22

SJ23