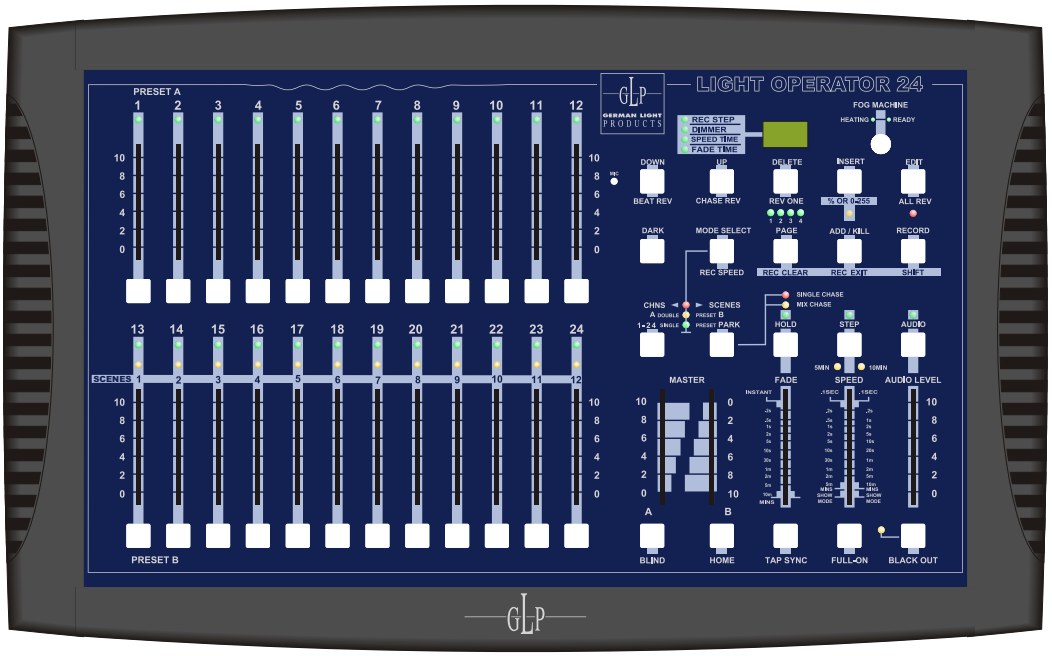
Service Manual

LIGHT OPERATOR 24

(No.24-004-2027 Rev1.0)

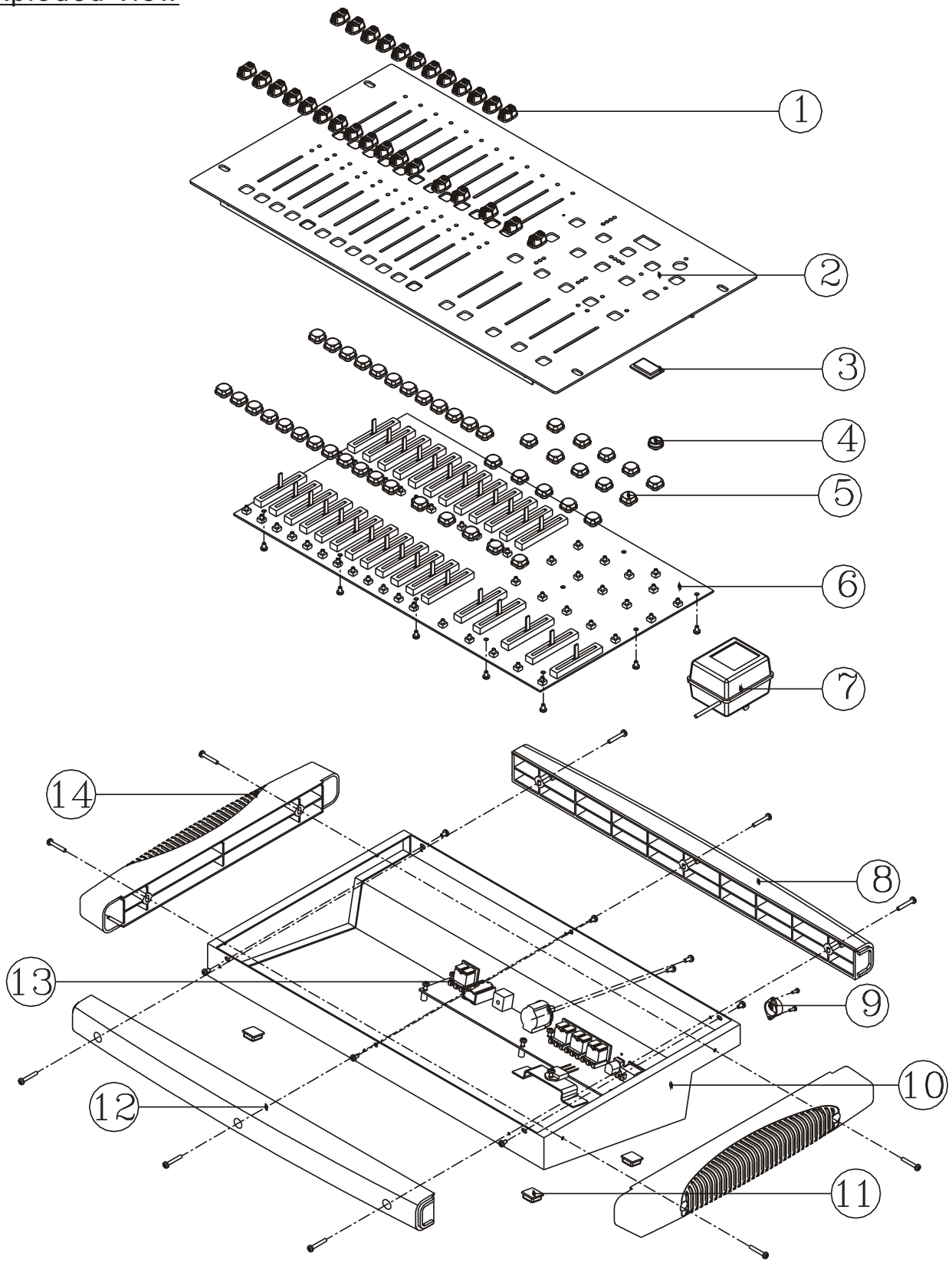


(BOM:26-013-0013)

GERMAN LIGHT
PRODUCTS

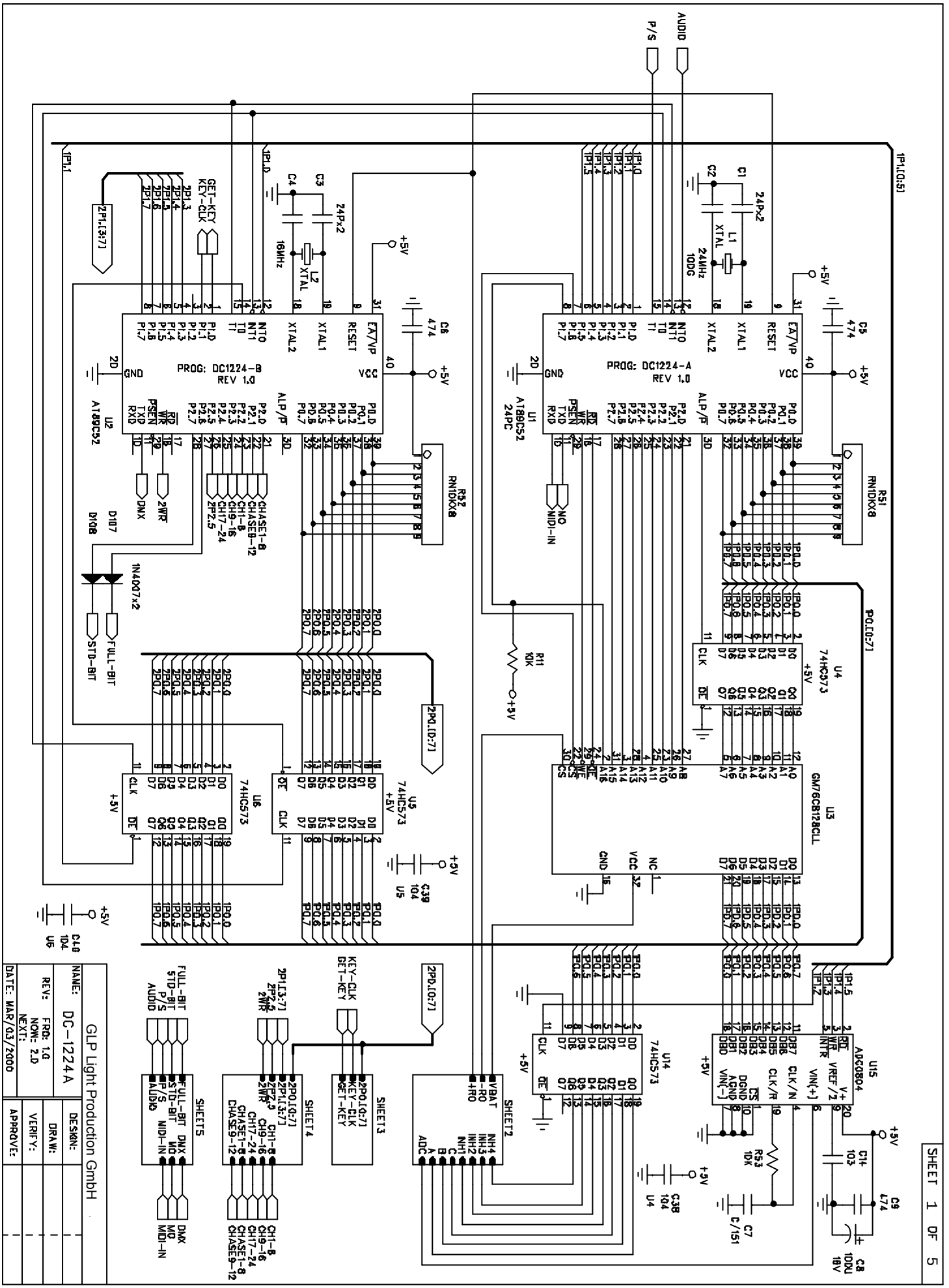
e-mail: service@glp.de
Internet: http://www.GLP.de

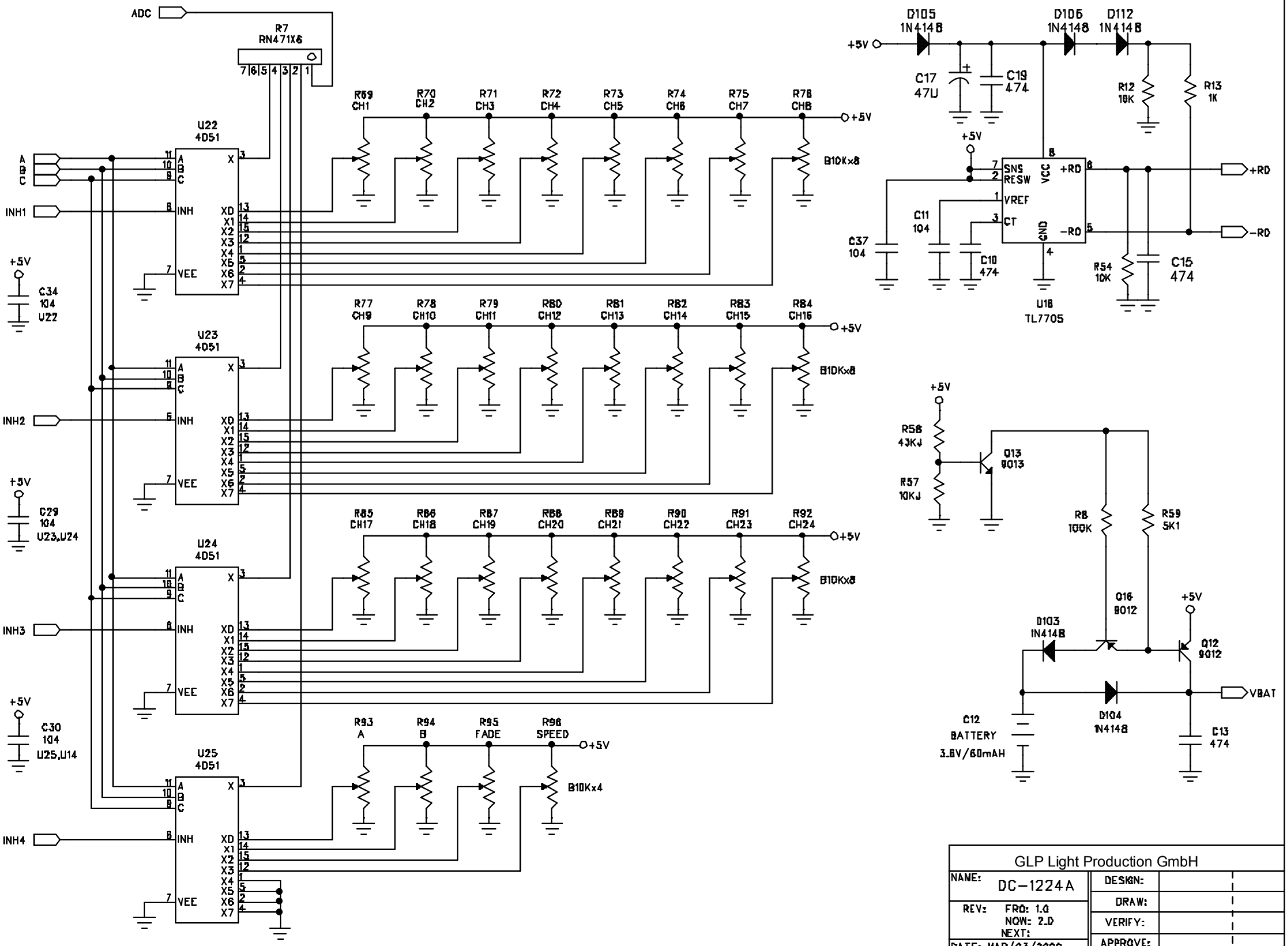
Exploded View



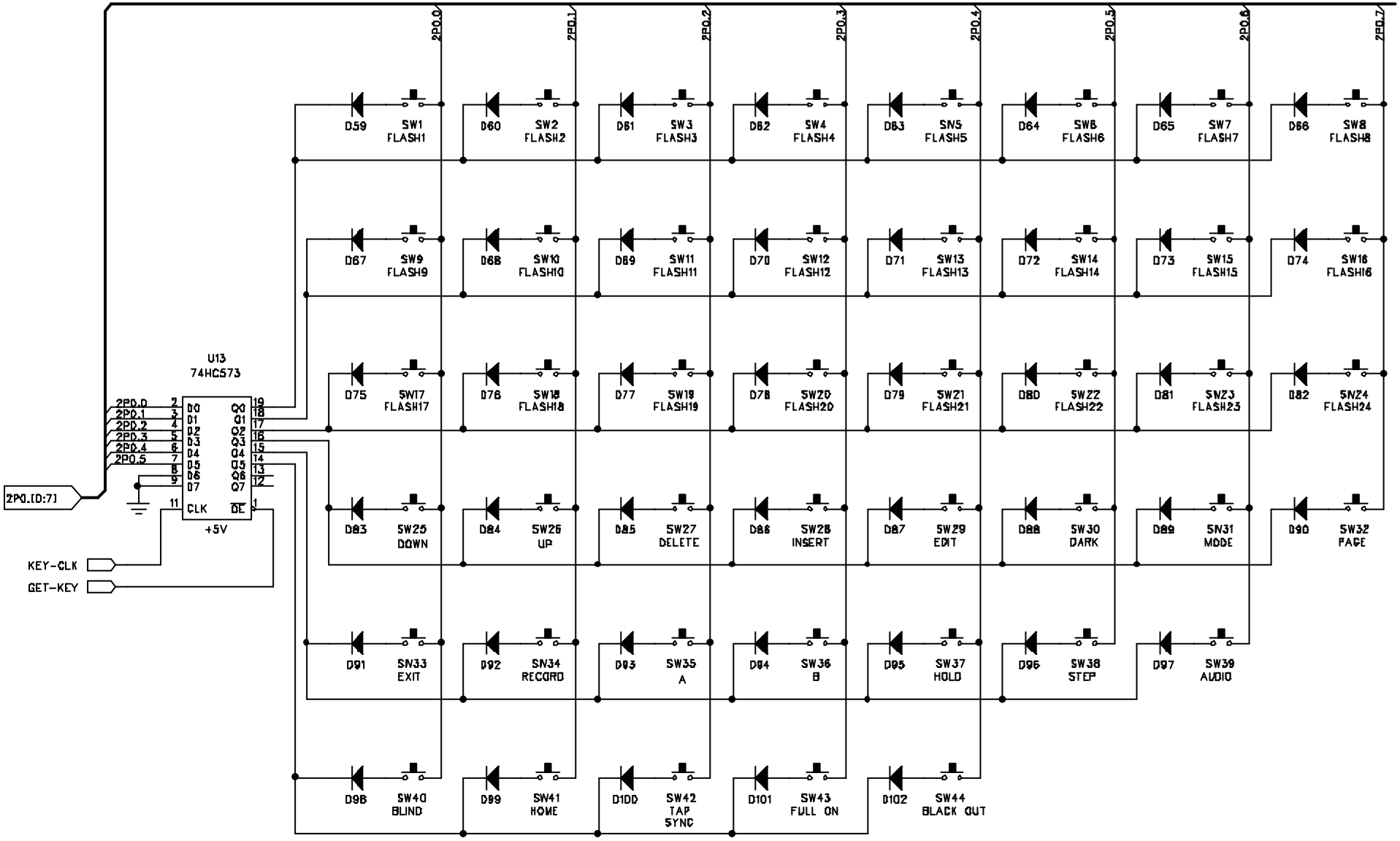
Assembly Parts List

1.	21-002-0098	Fader Buttons (ABS)
2.	23-110-0009	Front Panel
3.	25-008-0046	Transparent display cover
4.	21-002-0033	Push buttons (round-shape)
5.	21-002-0099	Push buttons (square-shape)
6.	27-001-0385	KIT DC-1224A
7.	10-002-0005	External power supply
8.	23-001-2280	Plastic frame (top)
9.	25-018-0036	Plastic part on DC input port (ABS)
10.	22-001-0159	Chassis
11.	25-014-0003	Rubber foot #A060
12.	23-110-0036	Plastic frame with "GLP" printing(bottom)
13.	27-001-0366	Circuit Board Module
14.	23-001-2496	Plastic frame (left/right side)

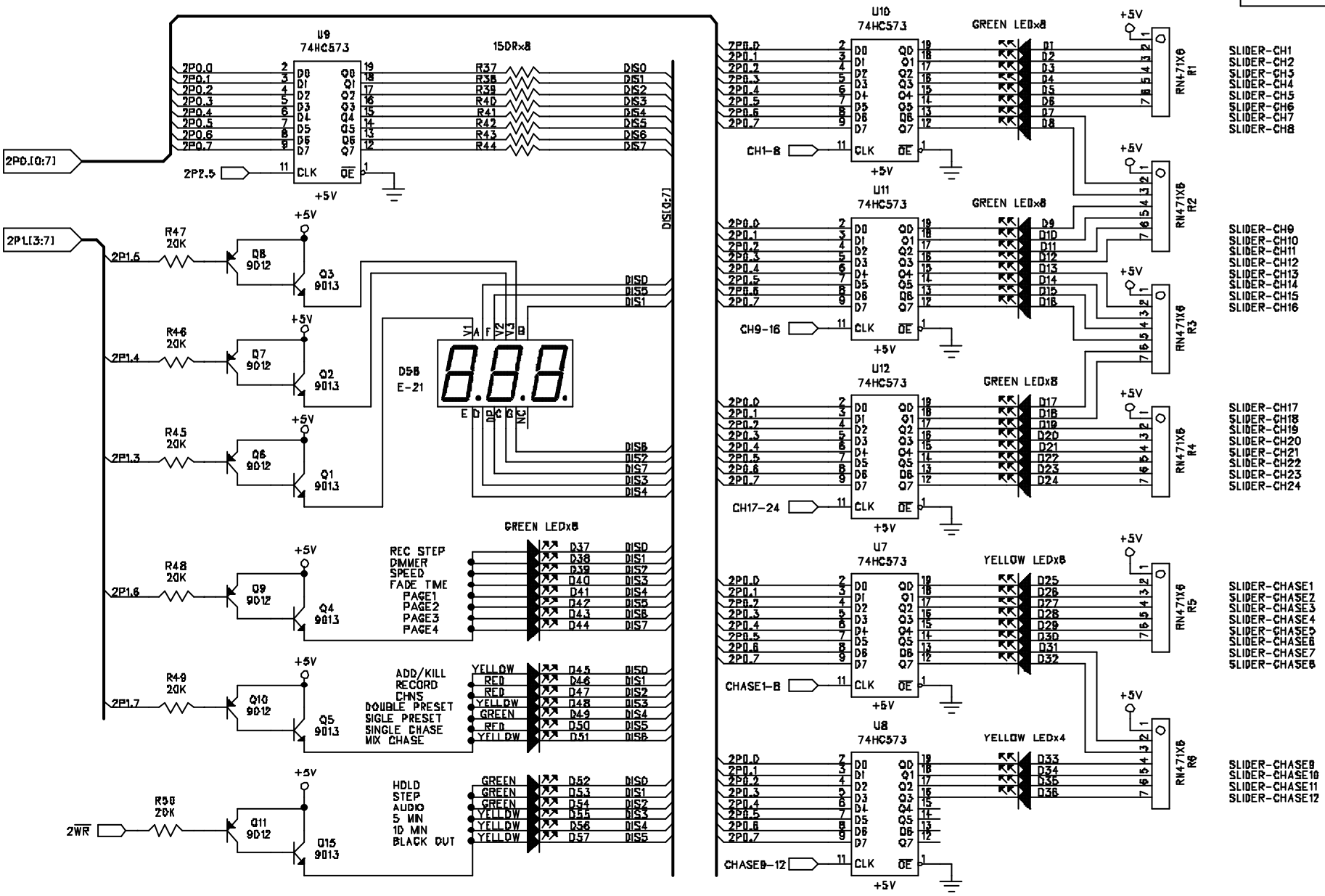

PROG: DC1224-A
REV 1.0
PROG: DC1224-B
REV 1.0
74HC573
GM76C8128CLL
ADC0804
74HC573
74HC573
74HC573
74HC573
AT89C52
AT89C52
1N4007x2
RN10KX8
RN10KX8
24Mhz
16MHz
24Px2
24Px2
XTAL
XTAL
L1
L2
104
474
10K
10Ω
10Ω
1Ω
151
103
GLP Light Production GmbH
NAME: DC-1224A
REV: FRD: 1.0
NOW: 2.0
NEXT:
DATE: MAR/03/2000
DESIGN:
DRAW:
VERIFY:
APPROVE:
SHEET 1 OF 5



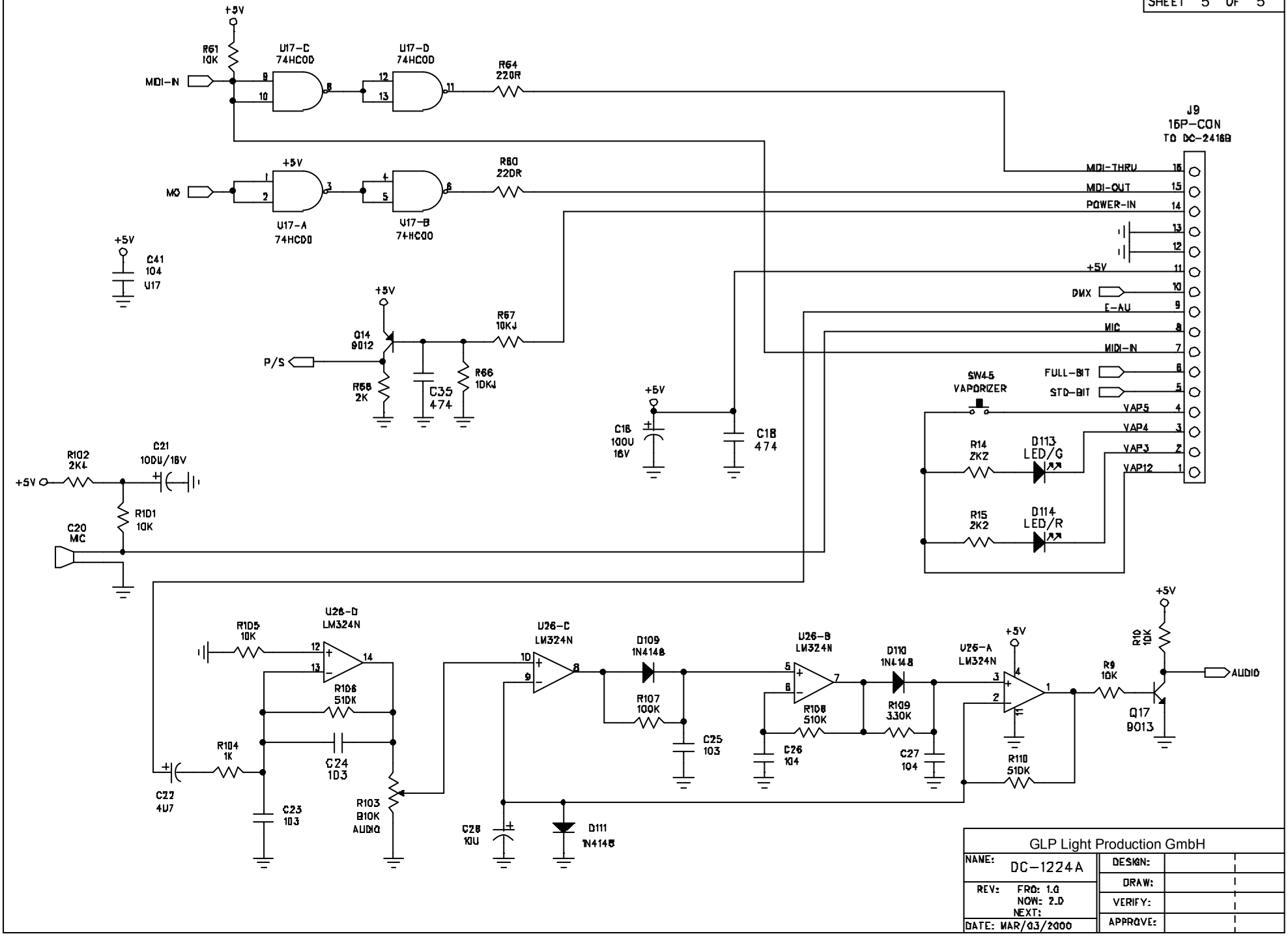
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DATE: MAR/03/2000	VERIFY:	
	APPROVE:	



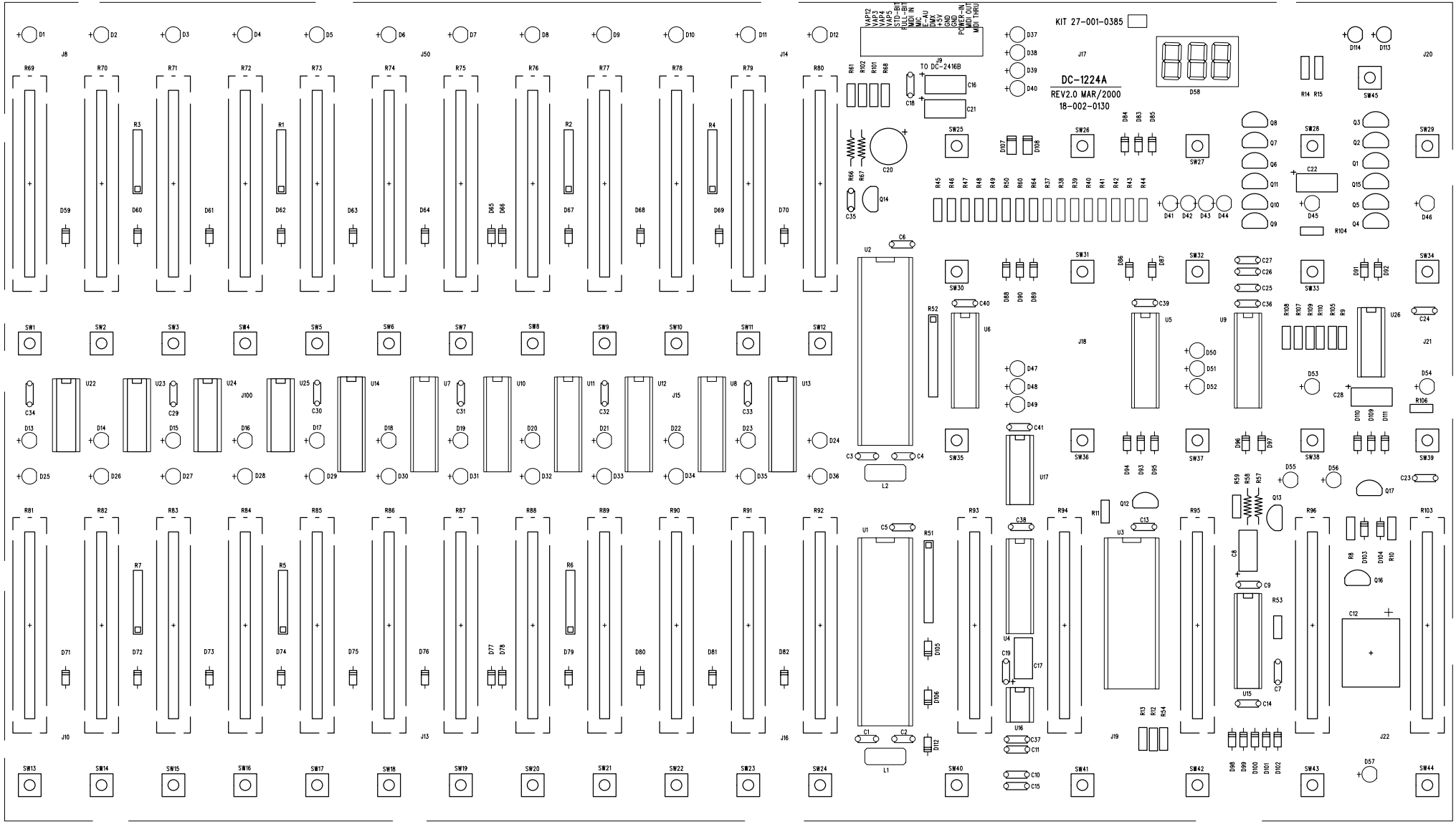
GLP Light Production GmbH			
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		VERIFY:	
DATE: MAR/03/2000		APPROVE:	



GLP Light Production GmbH		
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DATE: MAR/03/2000	VERIFY:	
	APPROVE:	



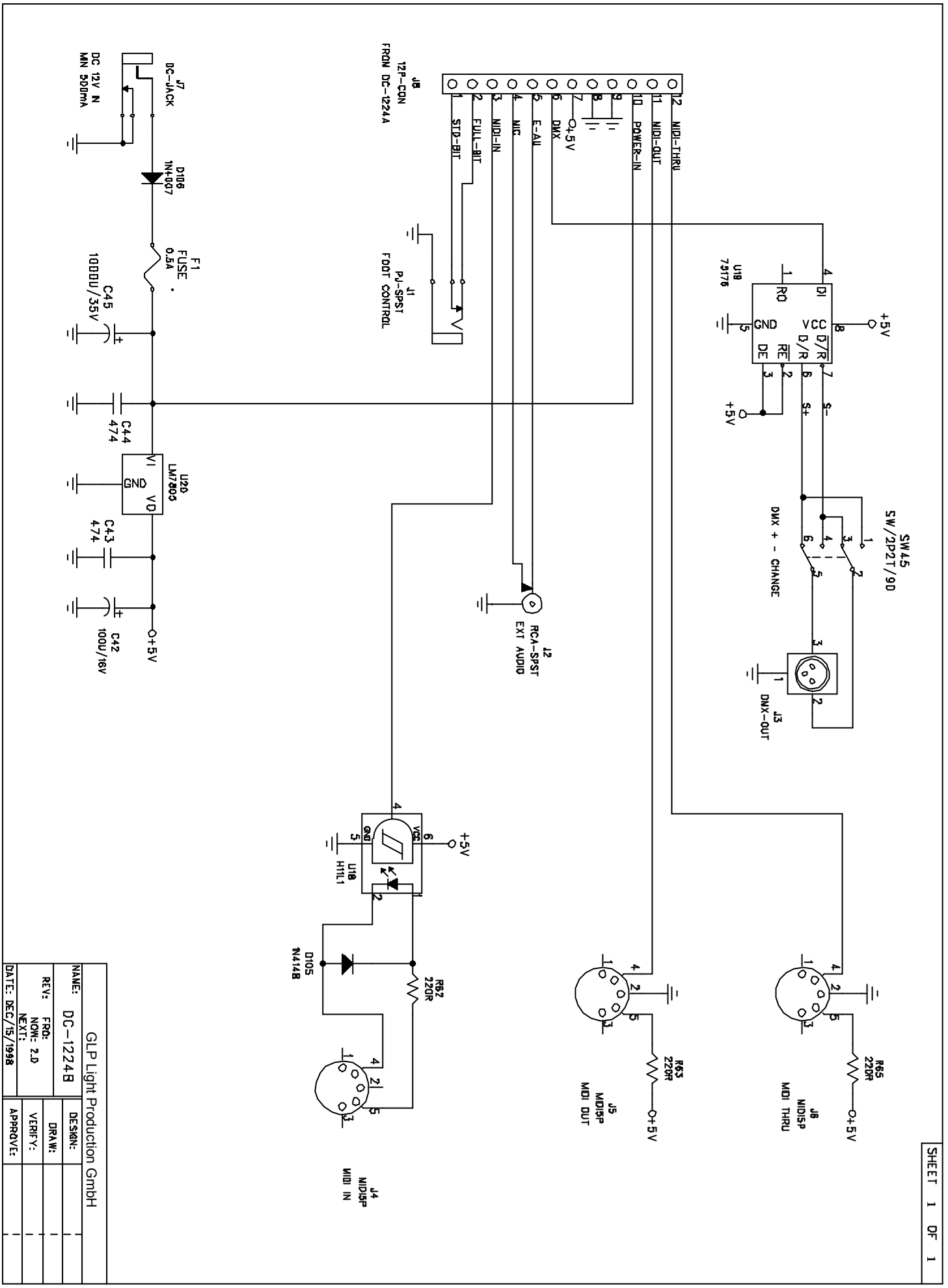
GLP Light Production GmbH		
NAME: DC-1224A	DESIGN:	
REV: FRO: 1.0 NOW: 2.0 NEXT:	DRAW:	
DATE: MAR/03/2000	VERIFY:	
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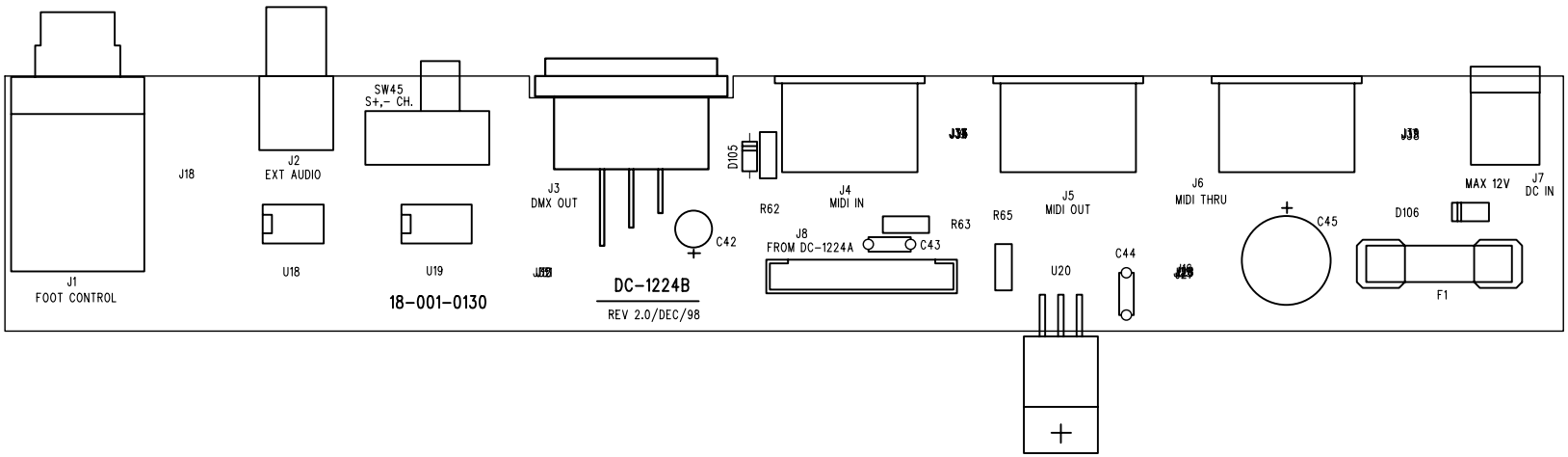

KIT 27-001-0385
DC-1224A
REV2.0 MAR/2000
18-002-0130
TO DC-2416B
VAP12
VAP7
VAP4
VAP5
STD-BUS
MIDI IN
MIC
+12V
DMX
+5V
GND
POWER-IN
MIDI OUT
MIDI THRU

Service Parts List (KIT DC-1224A 27-001-0385)

Schematic Reference Number	Part Number	Component Description
C1-4	03-001-0008	24PF DC 50V, Ceramic Capacitor
C5-6, C9-10, C13, C15, C18-19, C35	03-003-0012	0.47UF 474 63V, Monolithic Capacitor
C7	03-001-0034	150PF 151 50V, Ceramic Capacitor
C8, C16, C21	03-002-0011	100UF 16V, Electrolytic Capacitor
C11, C26, C27, C29-34, C36-41	03-003-0011	0.1UF 104 63V, Monolithic Capacitor
C12	25-007-0001	Battery, 3.6V 60MAH
C14, C23-25	03-003-0008	10NF 103 63V, Monolithic Capacitor
C17	03-002-0046	47UF 50V, Electrolytic Capacitor
C20	09-001-0001	Microphone, KSJ9767P
C22	03-002-0042	4.7UF 50V, Electrolytic Capacitor
C28	03-002-0043	10UF 50V, Electrolytic Capacitor
D1-24, D37-44, D49, D52-54, D113	12-006-0004	Green LED
D25-36, D45, D48, D51, D55-57	12-006-0012	Yellow LED
D46-47, D50, D114	12-006-0011	Red LED
D58	12-003-0013	LED Display, TOT3361BG (E21)
D59-106, D109-112	04-001-0001	Diode, 1N4148
D107, D108	04-001-0003	Diode, 1N4007
J9	16-001-0133	Male Connector, 2.00MM, 16PIN
L1	14-002-0002	Short Crystal, 24MHz
L2	14-002-0004	Short Crystal, 16MHz
R1-7	02-003-0027	470Rx6, 7Pin, Resistor Networks
R51, R52	02-003-0011	10Kx8, 9Pin, Resistor Networks
Q1-5, Q13, Q15	05-001-0002	S9013 G-848 NPN, Transistor
Q6-12, Q14, Q16	05-001-0001	S9012 G-832 PNP, Transistor
U1	01-001-0034	AT89C55-24PC 20MHZ ATMEL, IC
U2	01-001-0057	89E554RC 40-C-PI SST, IC
U3	01-002-0027	GM76C8128CLL, IC
U4-14	01-003-0066	74HC573, Logic IC
U15	01-007-0004	ADC0104, Converter IC
U16	01-008-0002	TL7705, Timer Circuit IC
U17	01-003-0078	74HC00, Logic IC
U22-25	01-003-0027	HEF4051BP PHILIPS, Logic IC
U26	01-005-0001	LM324M, Amplifier IC

Schematic Diagram




J1
FOOT CONTROL
J18
J2
EXT AUDIO
U18
SW45
S+,- CH.
U19
18-001-0130
J3
DMX OUT
C42
DC-1224B
REV 2.0/DEC/98
D105
R62
J4
MIDI IN
J8
FROM DC-1224A
R63
C43
R65
J5
MIDI OUT
U20
C44
J6
MIDI THRU
C45
D106
F1
MAX 12V
J7
DC IN

Service Parts List (KIT DC-1224B 27-001-0366)

Schematic Reference Number	Part Number	Component Description
C42	03-002-0011	100UF 16V, Electrolytic Capacitor
C43, C44	03-003-0012	0.47UF 474 63V, Monolithic Capacitor
C45	03-002-0032	1000UF 35V, Electrolytic Capacitor
D105	04-001-0001	Diode, 1N4148
D106	04-001-0003	Diode, 1N4007
F1	20-001-0018	Fuse 0.5A 250V 5X20mm
J1	15-002-0010	Phone Jack, HTJ-064-05A
J2	15-003-0009	RCA Jack, RS-105A
J3	16-001-0140	AXR/XLR Female Connector (3Pin)
J4-6	16-001-0073	MIDI Connector (5Pin)
J7	15-001-0004	DC Jack, DS-208B (HJ-103)
J8	16-001-0115	Connector, 2mm, 16Pin
R62, R63, R65	02-001-0034	Resistor, 220 OHM 1/4W 5%
SW45	11-002-0002	Push Button(s), SK22F12G7
U18	01-006-0010	Optical Coupled IC, H11L1
U19	01-005-0008	Amplifier IC, SN75716
U20	01-004-0001	Voltage Regulator, LM7805CT 1A

