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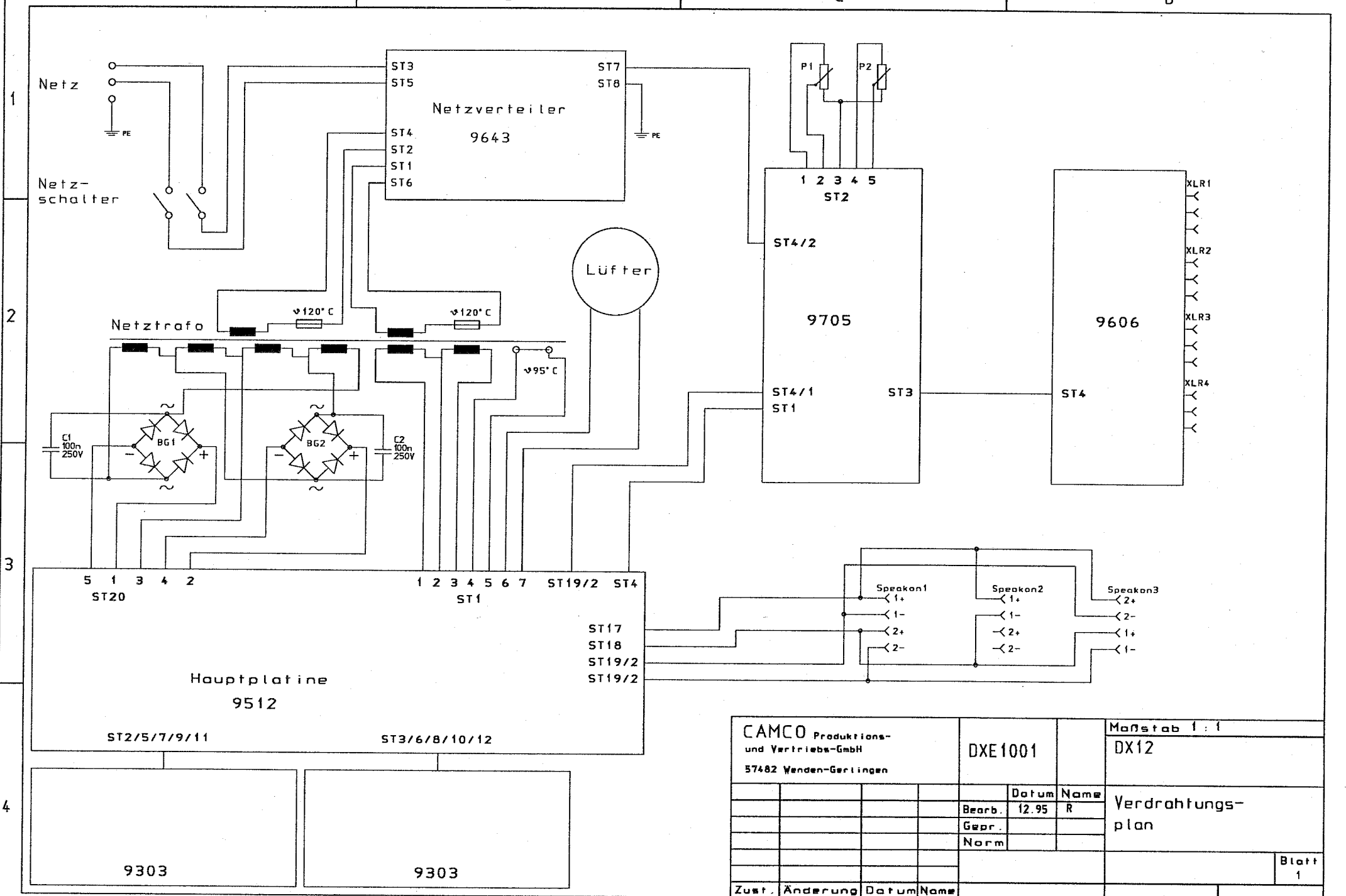
Wiring Diagramm	DX12 DXE 1001 DX24 DXE 1002
Inlet board DX12 / DX24 (9606)	Circuit diagramm Component part diagramm Component part list
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A

B

C

D



CAMCO Produktions- und Vertriebs-GmbH		DXE1001		Maßstab 1:1	
57482 Wenden-Gertlingen				DX12	
		Datum	Name	Verdrahtungsplan	
		Bearb.	12.95 R		
		Gepr.			
		Norm			
Zust.	Änderung	Datum	Name	Blatt 1	

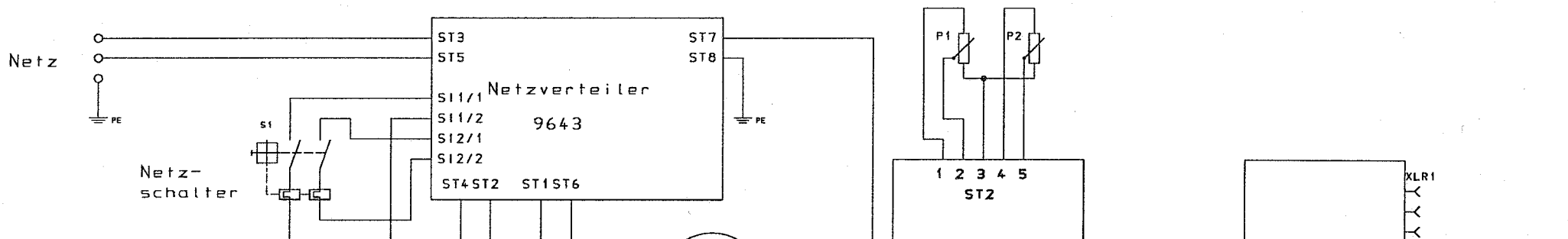
A

B

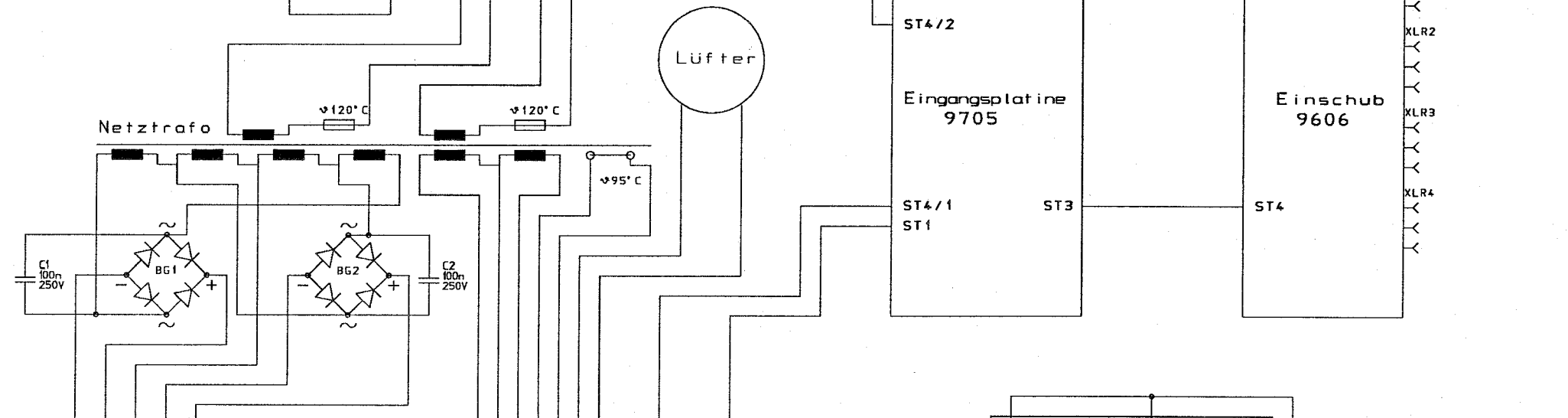
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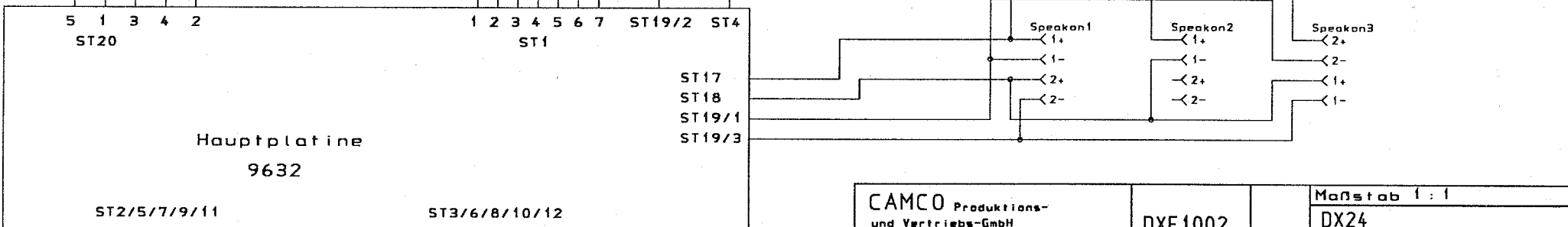
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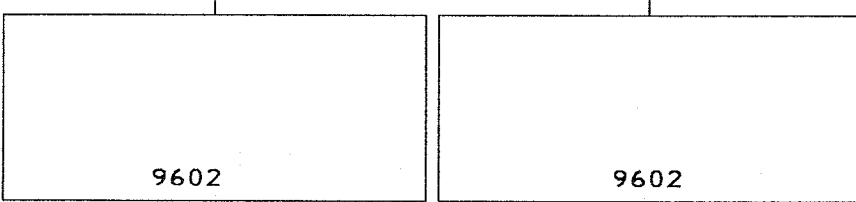
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4



CAMCO Produktions- und Vertriebs-GmbH		DXE1002		Maßstab 1:1	
57482 Wenden-Geetingen				DX24	
		Datum	Name	Verdrahtungsplan	
		Bearb.	7.96 R		
		Gepr.			
		Norm			
Zust.	Änderung	Datum	Name		
				Blatt 1	

PCB-Description: Inlet DX12 / DX24

PCB-Number: 9606

Date: 20.March.1997

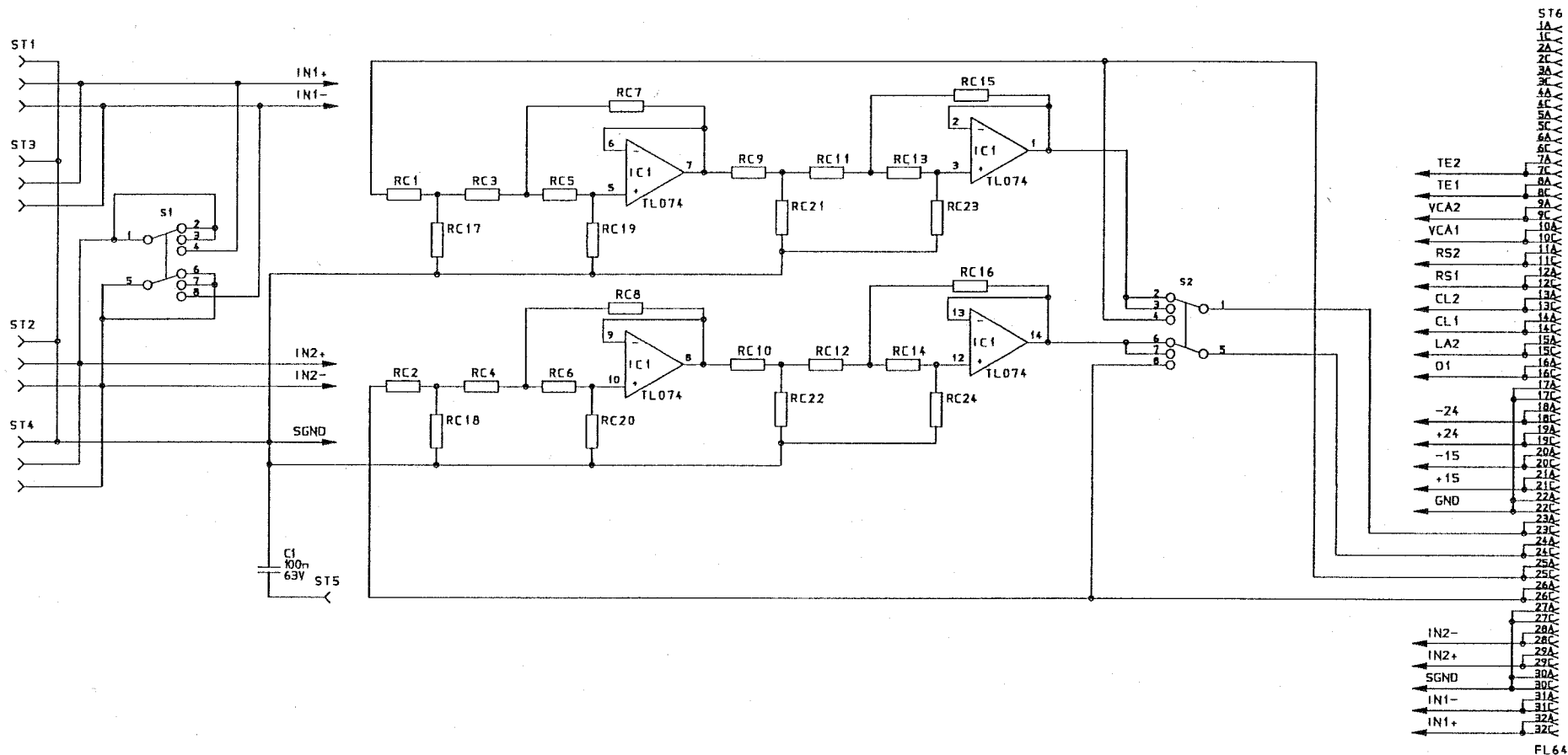
<u>Term:</u>	<u>Component:</u>	<u>Description:</u>
C1	Capacitor	100 nF 63 V
IC1	IC	TL074
RC1	Resistor or Capacitor	
RC2	Resistor or Capacitor	
RC3	Resistor or Capacitor	
RC4	Resistor or Capacitor	
RC5	Resistor or Capacitor	
RC6	Resistor or Capacitor	
RC7	Resistor or Capacitor	
RC8	Resistor or Capacitor	
RC9	Resistor or Capacitor	
RC10	Resistor or Capacitor	
RC11	Resistor or Capacitor	
RC12	Resistor or Capacitor	
RC13	Resistor or Capacitor	
RC14	Resistor or Capacitor	
RC15	Resistor or Capacitor	
RC16	Resistor or Capacitor	
RC17	Resistor or Capacitor	
RC18	Resistor or Capacitor	
RC19	Resistor or Capacitor	
RC20	Resistor or Capacitor	
RC21	Resistor or Capacitor	
RC22	Resistor or Capacitor	
RC23	Resistor or Capacitor	
RC24	Resistor or Capacitor	
S1	Switch	2-pole 2-level
S2	Switch	2-pole 2-level
ST1	XLR-Connector	3-pole
ST2	XLR-Connector	3-pole
ST3	XLR-Connector	3-pole
ST4	XLR-Connector	3-pole
ST5	AMP-Connector	1-pole
ST6	DIN Connector	64-pole

A

B

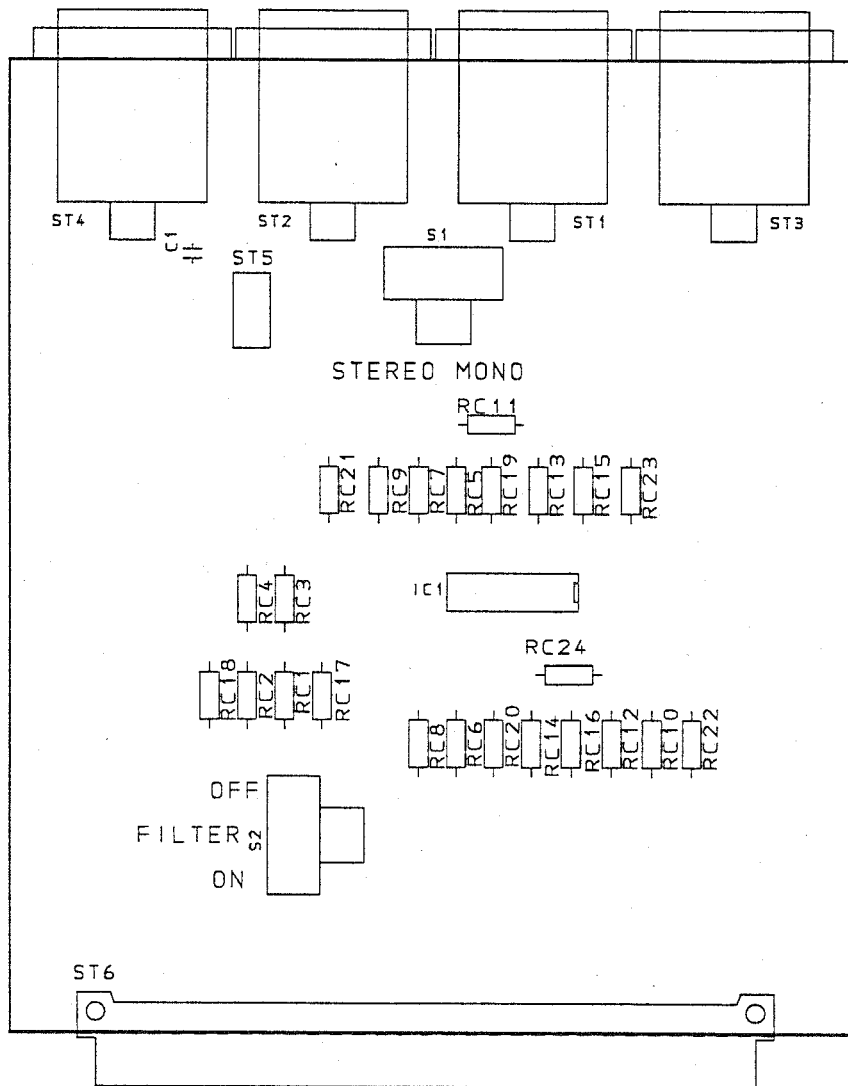
C

D



FL 64

CAMCO Produktions- und Vertriebs-GmbH		Nr. 9606		Maßstab 1:1	
57482 Wenden-Gerlingen				DX12	
		Bearb.	Datum	Name	Einschub
		3.96		R	
		Gepr.			
		Norm			
Zust.	Änderung	Datum	Name		Blatt 1 von 1



CAMCO Produktions- und Vertriebs-GmbH 57482 Wenden-Gerlingen				Nr. 9606		Maßstab 1 : 1	
						DX12	
				Datum		Name	
				3.96		R	
				Gepr.			
				Norm			
						Blatt	
Zust.	Änderung	Datum	Name				

PCB-Description: Input PCB DX12 / DX24

PCB-Number: 9705

Date: 23. September. 1997

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<u>Term:</u>	<u>Component:</u>	<u>Description:</u>
C1	Capacitor	47 pF 500 V
C2	Capacitor	47 pF 500 V
C3	Radial Electrolytic	2.2 μ F 35 V
C4	Radial Electrolytic	2.2 μ F 35 V
C5	Capacitor	47 pF 500 V
C6	Capacitor	100 nF 63 V
C7	Capacitor	100 nF 63 V
C8	Capacitor	100 nF 63 V
C9	Radial Electrolytic	47 μ F 35 V
C10	Capacitor	100 nF 63 V
C11	Capacitor	100 nF 63 V
C12	Capacitor	220 pF 500 V
C13	Capacitor	220 pF 500 V
C14	Capacitor	100 pF 500 V
C15	Capacitor	47 pF 500 V
C16	Capacitor	47 pF 500 V
C17	Capacitor	100 nF 63 V
C18	Capacitor	100 nF 63 V
C19	Capacitor	330 pF 500 V
C20	Capacitor	330 pF 500 V
C21	Capacitor	100 pF 500 V
C22	Radial Electrolytic	22 μ F 35 V
C23	Radial Electrolytic	22 μ F 35 V
C24	Radial Electrolytic	22 μ F 35 V
C25	Radial Electrolytic	22 μ F 35 V
C26	Capacitor	22 pF 500 V
C27	Capacitor	22 pF 500 V
C28	Capacitor	22 pF 500 V
C29	Capacitor	22 pF 500 V
C30	Capacitor	22 pF 500 V
C31	Capacitor	22 pF 500 V
C32	Capacitor	100 nF 63 V
C33	Capacitor	100 nF 63 V
C36	Radial Electrolytic	47 μ F 35 V
C37	Capacitor	100 nF 63 V
C38	Capacitor	100 nF 63 V
C39	Capacitor	100 nF 63 V
C40	Capacitor	100 nF 63 V
D1	Diode	SD101
D2	Diode	SD101
D3	Diode	SD101
D4	Diode	SD101
D5	Zenerdiode	4,3 V
D6	Diode	SD101

PCB-Description: Input PCB DX12 / DX24

PCB-Number: 9705

Date: 23.September.1997

<u>Term:</u>	<u>Component:</u>	<u>Description:</u>
D7	Diode	SD101
D8	Diode	SD101
D9	Diode	BAT46
D10	Diode	1N4148
D11	Diode	1N4148
D12	Zenerdiode	4,3 V
D13	Diode	SD101
D14	Diode	SD101
D15	Diode	SD101
D16	Diode	SD101
D17	Diode	1N4148
D18	Diode	1N4148
D19	Diode	SD101
D20	Diode	SD101
D22	Diode	1N4148
D23	Diode	1N4148
D24	Diode	1N4148
D25	Diode	1N4148
D26	LED	5 mm
D27	LED	5 mm
D28	LED	5 mm
D29	LED	5 mm
D30	LED	5 mm
D31	LED	5 mm
IC1	VCA	SSM2018
IC2	VCA	SSM2018
IC3	IC	5534
IC4	IC	TL072
IC5	IC	TL072
IC6	IC	TL072
IC7	IC	TL072
K1	Relay	DS2E
LP1	Relay	
LP2	Relay	
LP3	Relay	
LP4	Relay	
R1	Resistor	22 kOhm 0.4 W 1 %
R2	Resistor	22 kOhm 0.4 W 1 %
R3	Resistor	100 Ohm 0.4 W 1 %
R4	Resistor	100 Ohm 0.4 W 1 %
R5	Resistor	1.6 kOhm 0.4 W 1 %
R6	Resistor	1.6 kOhm 0.4 W 1 %
R7	Resistor	1.8 kOhm 0.4 W 1 %
R8	Resistor	1.8 kOhm 0.4 W 1 %

PCB-Description: Input PCB DX12 / DX24

PCB-Number: 9705

Date: 23. September. 1997

<u>Term:</u>	<u>Component:</u>	<u>Description:</u>
R9	Resistor	47 kOhm 0,4 W 1 %
R10	Resistor	47 kOhm 0,4 W 1 %
R11	Resistor	100 kOhm 0,4 W 1 %
R12	Resistor	56 kOhm 0,4 W 1 %
R13	Resistor	220 kOhm 0,4 W 1 %
R14	Resistor	220 kOhm 0,4 W 1 %
R15	Resistor	22 kOhm 0,4 W 1 %
R16	Resistor	22 kOhm 0,4 W 1 %
R17	Trimming Pot.	25 kOhm
R18	Trimming Pot.	25 kOhm
R19	Resistor	1 kOhm 0,4 W 1 %
R20	Resistor	1 kOhm 0,4 W 1 %
R21	Resistor	24 kOhm 0,4 W 1 %
R22	Resistor	24 kOhm 0,4 W 1 %
R23	Resistor	150 kOhm 0,4 W 1 %
R24	Resistor	150 kOhm 0,4 W 1 %
R25	Resistor	22 kOhm 0,4 W 1 %
R26	Resistor	22 kOhm 0,4 W 1 %
R27	Resistor	22 kOhm 0,4 W 1 %
R28	Resistor	22 kOhm 0,4 W 1 %
R29	Resistor	470 kOhm 0,4 W 1 %
R30	Resistor	470 kOhm 0,4 W 1 %
R31	Resistor	100 kOhm 0,4 W 1 %
R32	Resistor	100 kOhm 0,4 W 1 %
R33	Resistor	2,7 MOhm 0,4 W 1 %
R34	Resistor	2,7 MOhm 0,4 W 1 %
R35	Resistor	330 kOhm 0,4 W 1 %
R36	Resistor	10 Ohm 0,4 W 1 %
R37	Resistor	330 kOhm 0,4 W 1 %
R38	Resistor	150 Ohm 0,4 W 1 %
R39	Resistor	68 kOhm 0,4 W 1 %
R40	Resistor	68 kOhm 0,4 W 1 %
R41	Resistor	22 kOhm 0,4 W 1 %
R42	Resistor	22 kOhm 0,4 W 1 %
R43	Resistor	22 kOhm 0,4 W 1 %
R44	Resistor	22 kOhm 0,4 W 1 %
R45	Resistor	22 kOhm 0,4 W 1 %
R46	Resistor	22 kOhm 0,4 W 1 %
R47	Resistor	22 kOhm 0,4 W 1 %
R48	Resistor	22 kOhm 0,4 W 1 %
R49	Resistor	51 kOhm 0,4 W 1 %
R50	Resistor	51 kOhm 0,4 W 1 %
R51	Resistor	51 kOhm 0,4 W 1 %
R52	Resistor	51 kOhm 0,4 W 1 %

PCB-Description: Input PCB DX12 / DX24

PCB-Number: 9705

Date: 23. September. 1997

<u>Term:</u>	<u>Component:</u>	<u>Description:</u>
R53	Resistor	47 kOhm 0.4 W 1 %
R54	Resistor	47 kOhm 0.4 W 1 %
R55	Resistor	51 kOhm 0.4 W 1 %
R56	Resistor	51 kOhm 0.4 W 1 %
R57	Resistor	47 kOhm 0.4 W 1 %
R58	Resistor	47 kOhm 0.4 W 1 %
R59	Resistor	1 kOhm 0.4 W 1 %
R60	Resistor	1 kOhm 0.4 W 1 %
R61	Resistor	27 kOhm 0.4 W 1 %
R62	Resistor	27 kOhm 0.4 W 1 %
R63	Resistor	33 kOhm 0.4 W 1 %
R64	Resistor	27 kOhm 0.4 W 1 %
R65	Resistor	33 kOhm 0.4 W 1 %
R66	Resistor	27 kOhm 0.4 W 1 %
R67	Resistor	100 kOhm 0.4 W 1 %
R68	Resistor	22 kOhm 0.4 W 1 %
R69	Resistor	100 kOhm 0.4 W 1 %
R70	Resistor	100 kOhm 0.4 W 1 %
R71	Resistor	1 MOhm 0.4 W 1 %
R72	Resistor	1 MOhm 0.4 W 1 %
R73	Trimming Pot.	25 kOhm
R74	Trimming Pot.	25 kOhm
R75	Resistor	100 Ohm 0.4 W 1 %
R76	Resistor	22 kOhm 0.4 W 1 %
R77	Resistor	1 kOhm 0.4 W 1 %
R78	Resistor	220 kOhm 0.4 W 1 %
R79	Resistor	100 kOhm 0.4 W 1 %
R80	Resistor	22 kOhm 0.4 W 1 %
R81	Resistor	150 Ohm 0.4 W 1 %
R82	Trimming Pot.	25 kOhm
R83	Trimming Pot.	25 kOhm
S1	Switch	2-pole 3-level
S2	Switch	2-pole 3-level
S3	Switch	2-pole 3-level
ST1	Post Connector	26-pole
ST2	Comatel Connector	5-pole
ST3	DIN Connector	64-pole
ST4	AMP-Connector	2-pole
ST5	Comatel Connector	2-pole
ST6	Connector	
ST7	Connector	
ST8	Connector	
ST9	Connector	
ST10	Connector	

Service Manual DX12 / DX24



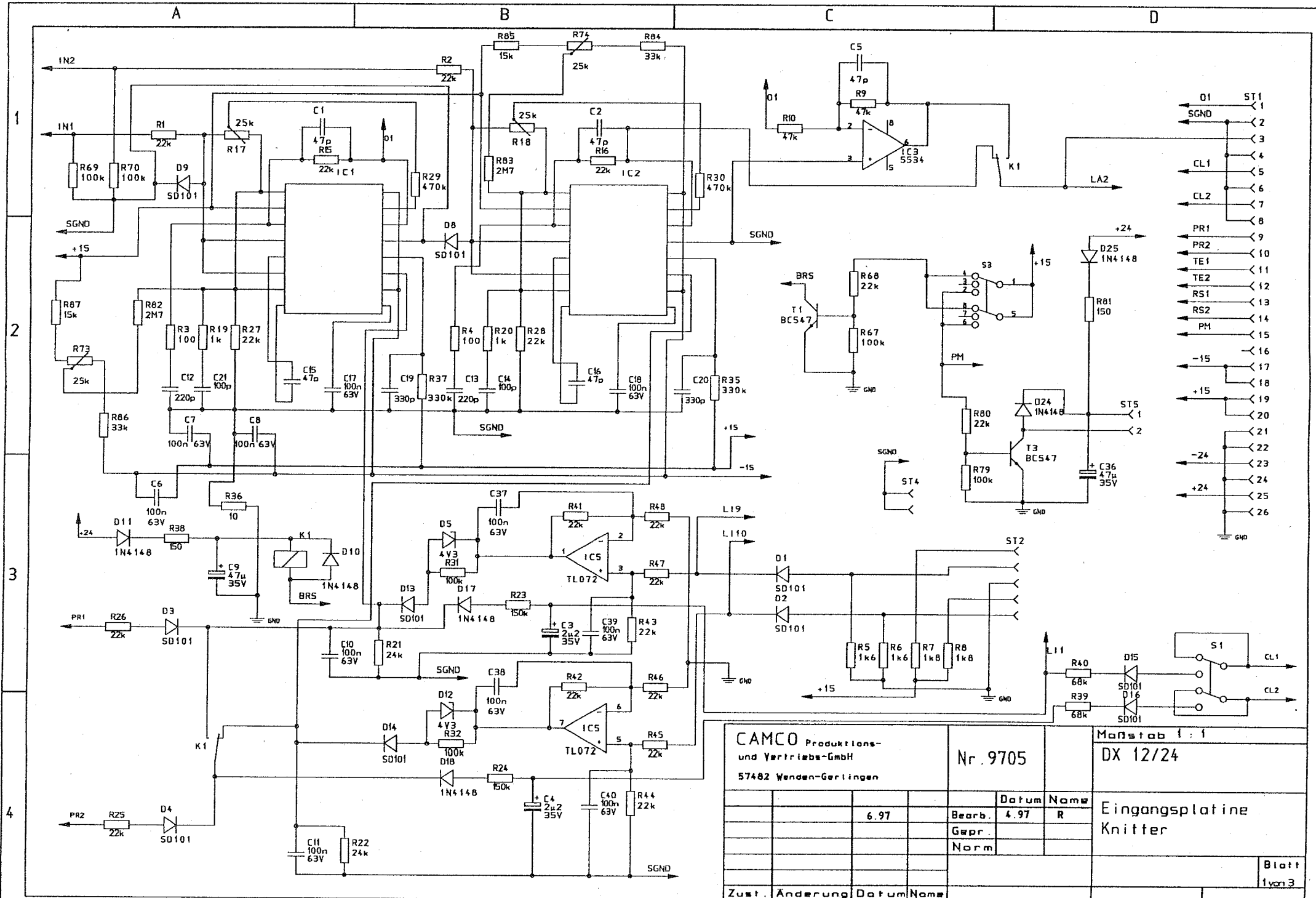
PCB-Description: Input PCB DX12 / DX24

PCB-Number: 9705

Date: 23.September.1997

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<u>Term:</u>	<u>Component:</u>	<u>Description:</u>
ST11	Connector	
T1	Transistor	BC547
T2	Transistor	BC547
T3	Transistor	BC547



CAMCO Produktions- und Vertriebs-GmbH		Nr. 9705		Maßstab 1:1	
57482 Wenden-Gerlingen				DX 12/24	
	6.97	Bearb.	4.97	Norm	R
		Gepr.			
		Norm			
Zust.	Änderung	Datum	Name	Eingangsplatine Knitter	
				Blatt 1 von 3	

A

B

C

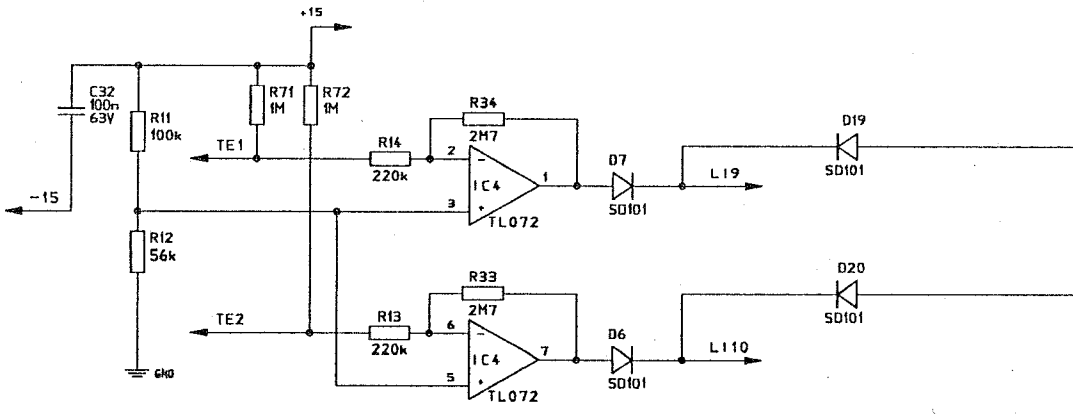
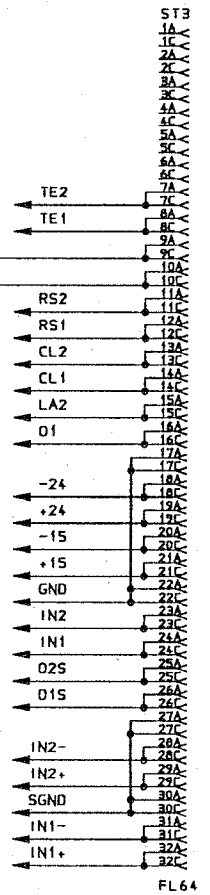
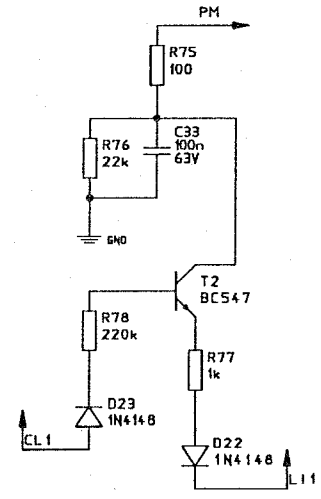
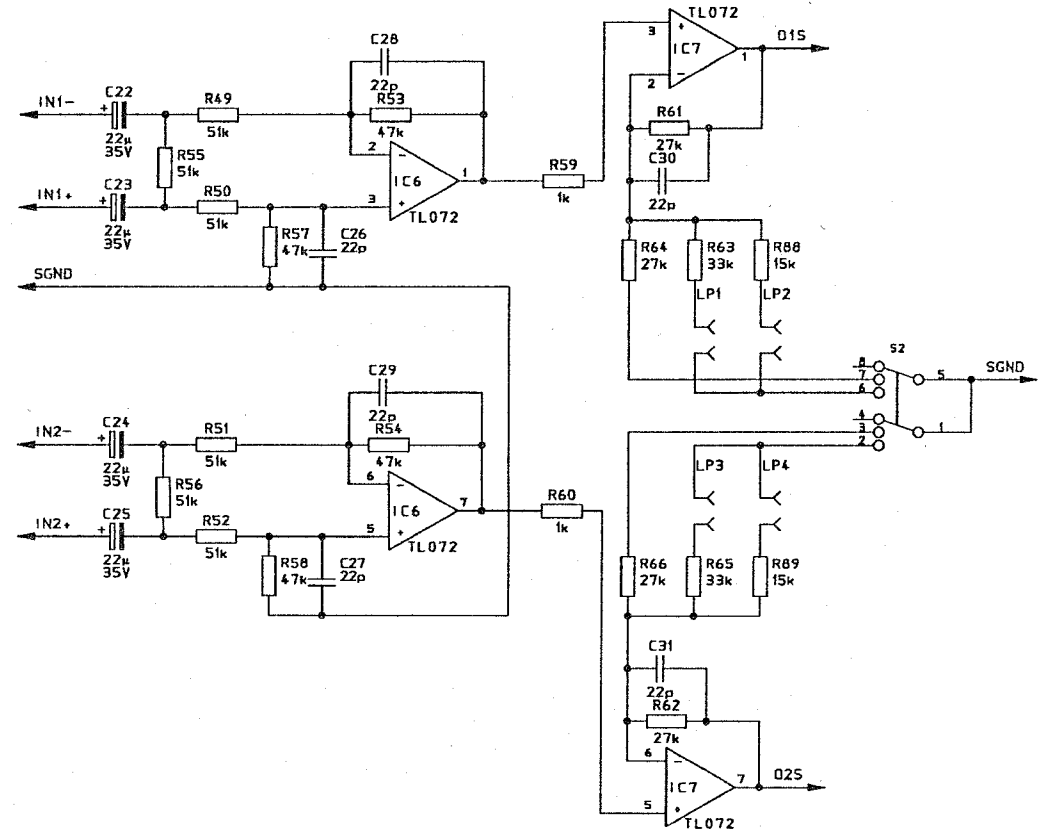
D

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CAMCO Produktions- und Vertriebs-GmbH		Nr. 9705		Maßstab 1:1	
57482 Wenden-Gerlingen				DX 12/24	
			Datum	Name	Eingangsplatine Knitter
	6.97	Bearb.	4.97	R	
		Gepr.			
		Norm			
Zust.	Änderung	Datum	Name		Blatt 2 von 3

A

B

C

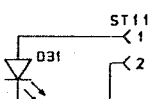
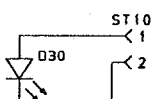
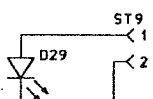
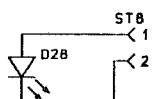
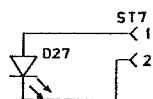
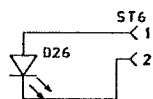
D

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CAMCO Produktions- und Vertriebs-GmbH 57482 Wenden-Gerlingen				Nr. 9705		Maßstab 1:1 DX 12/24		
		6.97		Datum	Name	LED-Platine Knitter		
				Bearb.	4.97			R
				Gepr.				
				Norm				
Zust.	Änderung	Datum	Name					Blatt 3 von 3

A

B

C

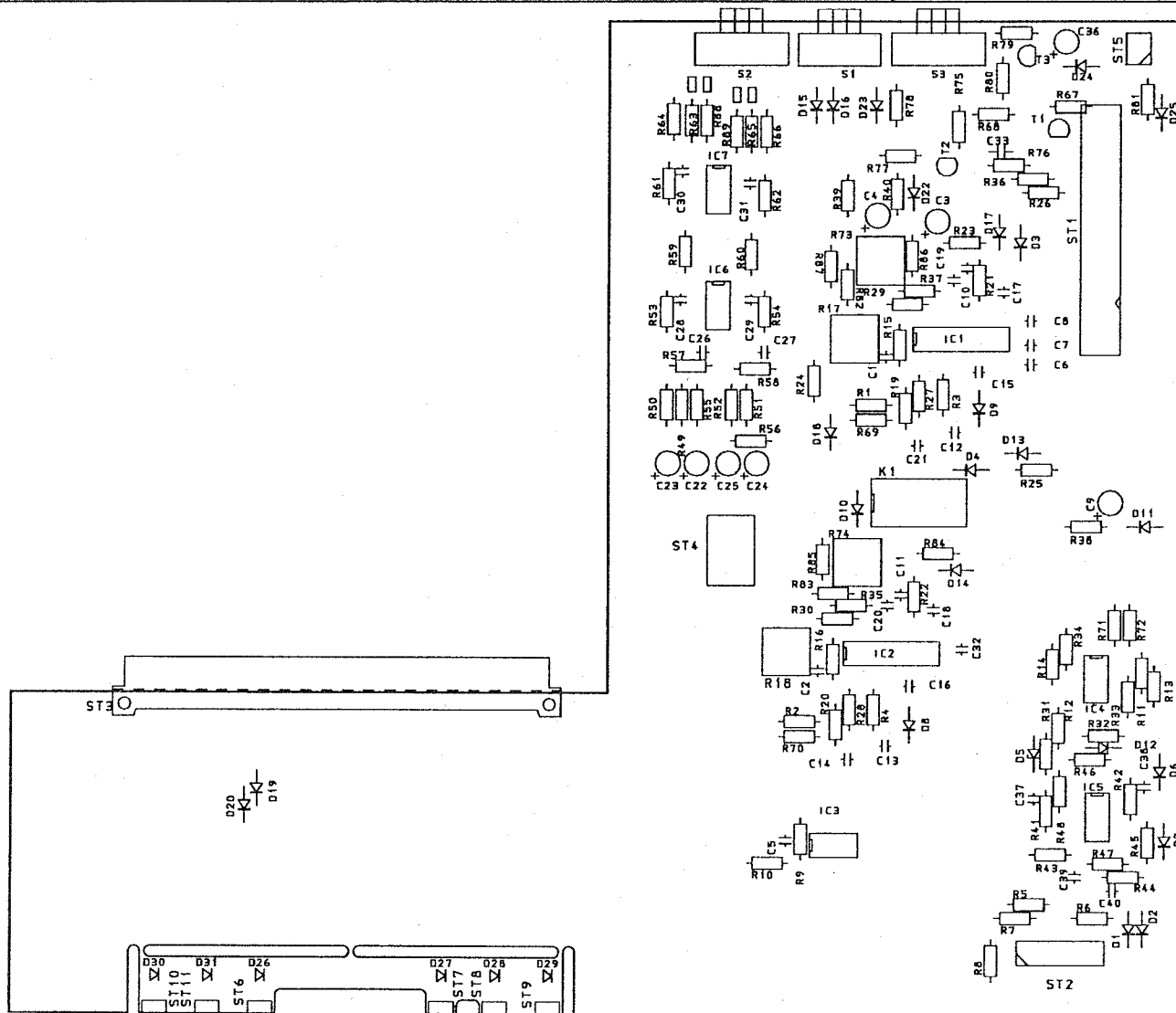
D

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CAMCO Produktions-
und Vertriebs-GmbH
57482 Wenden-Gerlingen

Nr.9705

Maßstab 1:1

DX 12/24

Zust.	Änderung	Datum	Name	Bearb.	Datum	Name
		6.97			4.97	R
				Gepr.		
				Norm		

Eingangsplatine
KnitterBlatt
1 von 1

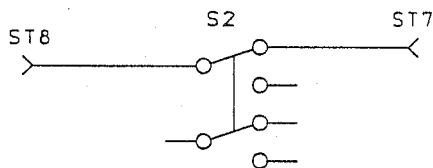
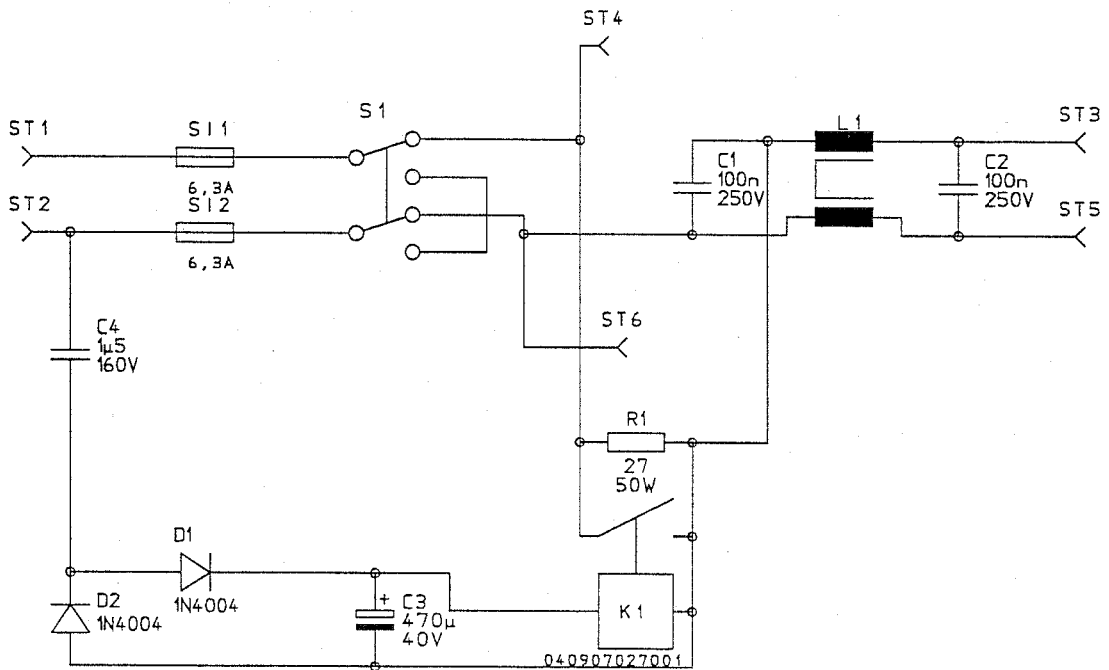
PCB-Description: Mains PCB DX12 / DX24

PCB-Number: 9643

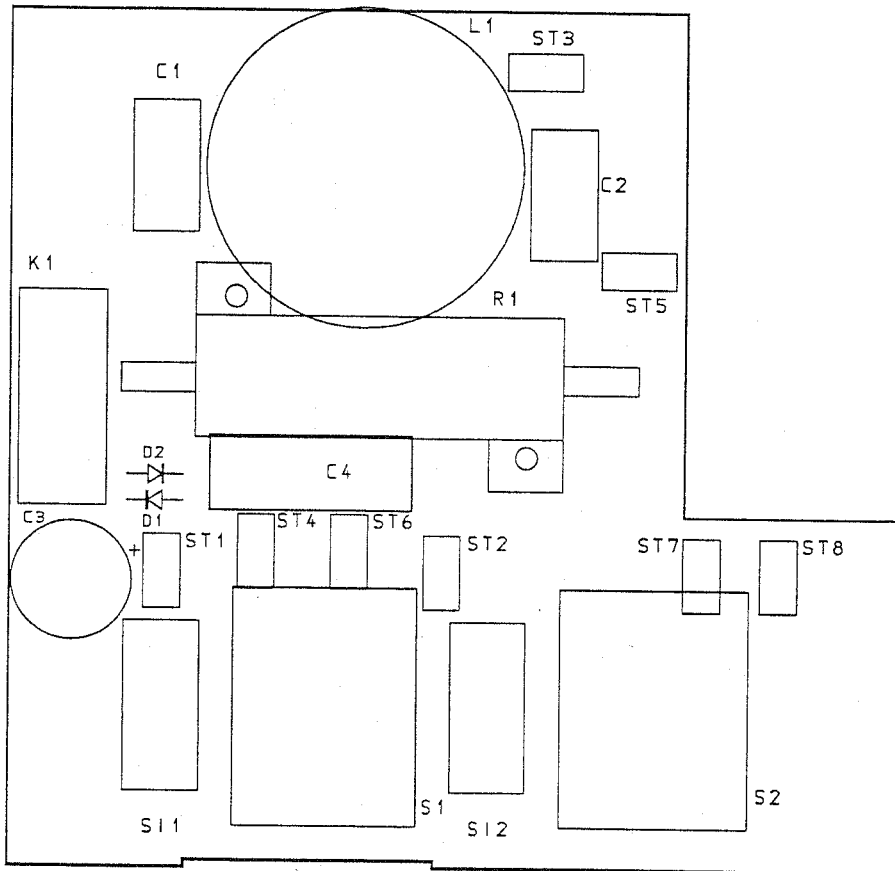
Date: 5.12.1996

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<u>Term:</u>	<u>Component:</u>	<u>Description:</u>
C1	Capacitor	100 nF 250 V
C2	Capacitor	100 nF 250 V
C3	Radial Electrolytic	470 μ F 40 V
C4	Capacitor	1.5 μ F 160 V
D1	Diode	1N4004
D2	Diode	1N4004
K1	Relay	040907 027001
L1	Coil reactor	Current Comp.
R1	Resistor	27 Ohm 50 W
S1	Switch	2-pole
S2	Switch	2-pole
SI1	Fuse	6.3A 5x 20 mm
SI2	Fuse	6.3A 5x 20 mm
ST1	AMP-Connector	1-pole
ST2	AMP-Connector	1-pole
ST3	AMP-Connector	1-pole
ST4	AMP-Connector	1-pole
ST5	AMP-Connector	1-pole
ST6	AMP-Connector	1-pole
ST7	AMP-Connector	1-pole
ST8	AMP-Connector	1-pole



CAMCO Produktions- und Vertriebs-GmbH 574-82 Wenden-Gerlingen		Nr. 9643		Maßstab 1 : 1	
				PS10 / DX12 / DX24 Netzplatine	
			Datum	Name	Filter + Einschaltstrom- begrenzung
		Bearb.	12.96	R	
		Gepr.			
			Norm		
					Blatt
Zust.	Änderung	Datum	Name		



CAMCO Produktions- und Vertriebs-GmbH 57482 Wenden-Gerlingen				Nr. 9643		Maßstab 1 : 1	
						PS10 / DX12 / DX24	
						Netzplatine	
				Datum		Name	
				Bearb. 12.96		R	
				Gepr.			
				Norm			
						Filter + Einschaltstrom- begrenzung	
						Blatt	
Zust.	Änderung	Datum	Name				

PCB-Description: Main board DX24

PCB-Number: 9632

Date: 8.October.1997

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<u>Term:</u>	<u>Component:</u>	<u>Description:</u>
C1	Capacitor	100 nF 100 V
C2	Capacitor	100 nF 100 V
C3	Capacitor	100 nF 100 V
C4	Capacitor	100 nF 100 V
C5	Radial Electrolytic	3300 µF 100 V
C6	Radial Electrolytic	3300 µF 100 V
C7	Radial Electrolytic	3300 µF 100 V
C8	Radial Electrolytic	3300 µF 100 V
C9	Radial Electrolytic	3300 µF 100 V
C10	Radial Electrolytic	3300 µF 100 V
C11	Radial Electrolytic	3300 µF 100 V
C12	Radial Electrolytic	3300 µF 100 V
C13	Radial Electrolytic	3300 µF 100 V
C14	Radial Electrolytic	3300 µF 100 V
C15	Radial Electrolytic	3300 µF 100 V
C16	Radial Electrolytic	3300 µF 100 V
C17	Radial Electrolytic	3300 µF 100 V
C18	Radial Electrolytic	3300 µF 100 V
C19	Radial Electrolytic	3300 µF 100 V
C20	Radial Electrolytic	3300 µF 100 V
C21	Capacitor	100 nF 63 V
C22	Radial Electrolytic	1000 µF 35 V
C23	Radial Electrolytic	1000 µF 35 V
C24	Capacitor	15 nF 100 V
C25	Capacitor	15 nF 100 V
C26	Radial Electrolytic	1000 µF 35 V
C27	Capacitor	470 nF 63 V
C28	Radial Electrolytic	100 µF 35 V
C29	Capacitor	470 nF 63 V
C30	Radial Electrolytic	100 µF 35 V
C31	Capacitor	100 nF 250 V
C32	Capacitor	100 nF 250 V
C33	Capacitor	100 nF 63 V
C34	Radial Electrolytic	2,2 µF 35 V
C35	Radial Electrolytic	2,2 µF 35 V
C36	Capacitor	100 nF 63 V
C37	Radial Electrolytic	100 µF 35 V
C38	Radial Electrolytic	100 µF 35 V
C39	Capacitor	100 nF 63 V
C40	Capacitor	100 pF 500 V
C41	Capacitor	100 pF 500 V
C42	Capacitor	22 pF 500 V
C43	Capacitor	22 pF 500 V
C44	Radial Electrolytic	470 µF 10 V

PCB-Description: Main board DX24

PCB-Number: 9632

Date: 8.October.1997

<u>Term:</u>	<u>Component:</u>	<u>Description:</u>
C45	Capacitor	47 pF 500 V
C46	Radial Electrolytic	470 µF 10 V
C47	Capacitor	47 pF 500 V
C48	Capacitor	100 pF 500 V
C49	Capacitor	100 pF 500 V
C50	Radial Electrolytic	100 µF 35 V
C51	Capacitor	330 pF 500 V
C52	Capacitor	330 pF 500 V
C53	Capacitor	100 nF 63 V
C54	Capacitor	100 nF 63 V
C55	Capacitor	100 nF 63 V
C56	Capacitor	100 nF 63 V
C57	Capacitor	100 nF 63 V
C58	Capacitor	100 nF 63 V
C59	Radial Electrolytic	1 µF 35 V
C60	Radial Electrolytic	1 µF 35 V
C61	Capacitor	100 pF 500 V
C62	Capacitor	100 pF 500 V
C63	Capacitor	100 nF 63 V
C64	Capacitor	100 nF 63 V
C65	Capacitor	*
C66	Capacitor	*
C67	Capacitor	100 nF 63 V
D1	Diode	1N4004
D2	Zenerdiode	24 V
D3	Zenerdiode	24 V
D4	Diode	1N4004
D5	Zenerdiode	24 V
D6	Zenerdiode	24 V
D7	Diode	1N4004
D8	Diode	1N4004
D9	Diode	1N4148
D10	Diode	1N4004
D11	Diode	1N4148
D12	Diode	1N4004
D13	Diode	1N4148
D14	Diode	1N4148
D15	Diode	1N4004
D16	Diode	1N4004
D17	Diode	1N4004
D18	Diode	1N4004
D19	Diode	BAT46
D20	Diode	BAT46
D21	Zenerdiode	remove

PCB-Description: Main board DX24

PCB-Number: 9632

Date: 8.October.1997

<u>Term:</u>	<u>Component:</u>	<u>Description:</u>
D22	Zenerdiode	remove
D23	Diode	1N4148
D24	Zenerdiode	remove
D25	Diode	1N4148
D26	Diode	BAT46
D27	Diode	BAT46
D28	Zenerdiode	remove
D29	Diode	1N4148
D30	Diode	1N4148
D31	Diode	1N4148
D32	Diode	1N4148
D33	Diode	1N4148
D34	Diode	1N4148
D35	LED	5mm red
D36	LED	5mm green
D37	Zenerdiode	5.6 V
D38	Zenerdiode	5.6 V
D39	Zenerdiode	5.6 V
D40	Zenerdiode	5.6 V
D41	LED	5mm green
D42	LED	5mm green
D43	Diode	1N4148
D44	Diode	1N4148
D45	Diode	1N4148
D46	Diode	1N4148
D47	LED	5mm green
D48	LED	5mm red
D49	Diode	BAT46
D50	Diode	BAT46
D51	Diode	1N4148
D52	Diode	1N4148
D53	Diode	BAT46
D54	Diode	BAT46
D55	Diode	1N4148
D56	Diode	1N4148
D57	Diode	1N4148
D58	Diode	1N4148
D59	Diode	1N4148
D60	Diode	1N4148
D61	Diode	BAT46
D62	Diode	BAT46
D63	Zenerdiode	15 V
D65	Diode	1N4148
D66	Diode	1N4148

PCB-Description: Main board DX24

PCB-Number: 9632

Date: 8.October.1997

<u>Term:</u>	<u>Component:</u>	<u>Description:</u>
D67	Diode	1N4148
D68	Diode	1N4148
D69	Diode	1N4148
D70	Diode	1N4148
D71	Diode	1N4148
D72	Diode	1N4148
IC1	IC	5534
IC2	IC	LM324
IC3	IC	LM324
IC4	IC	5534
IC5	IC	LF412
IC6	IC	LF412
IC7	IC	LF412
IC8	IC	LF412
IC9	IC	LM324
IC10	IC	TL074
IC11	IC	LF412
K1	Relay	2-pole
K2	Relay	2-pole
K3	Relay	DS2E
L1	Coil reactor	
L2	Coil reactor	
R1	Resistor	68 Ohm 0.4 W 1 %
R2	Resistor	68 Ohm 0.4 W 1 %
R3	Resistor	10 kOhm 0.4 W 1 %
R4	Resistor	68 Ohm 0.4 W 1 %
R5	Resistor	68 Ohm 0.4 W 1 %
R6	Resistor	10 kOhm 0.4 W 1 %
R7	Resistor	2.7 kOhm 0.4 W 1 %
R8	Resistor	180 Ohm 0.4 W 1 %
R9	Resistor	180 Ohm 0.4 W 1 %
R10	Resistor	150 kOhm 0.4 W 1 %
R11	Resistor	180 Ohm 0.4 W 1 %
R12	Resistor	180 Ohm 0.4 W 1 %
R13	Resistor	22 kOhm 0.4 W 1 %
R14	Resistor	1.3 kOhm 0.4 W 1 %
R15	Resistor	1.3 kOhm 0.4 W 1 %
R16	Resistor	100 kOhm 0.4 W 1 %
R17	Resistor	1.3 kOhm 0.4 W 1 %
R18	Resistor	1.3 kOhm 0.4 W 1 %
R19	Resistor	47 kOhm 0.4 W 1 %
R20	Resistor	1.5 kOhm 0.4 W 1 %
R21	Resistor	1.5 kOhm 0.4 W 1 %
R22	Resistor	470 kOhm 0.4 W 1 %

PCB-Description: Main board DX24

PCB-Number: 9632

Date: 8.October.1997

<u>Term:</u>	<u>Component:</u>	<u>Description:</u>		
R23	Resistor	1.5 kOhm	0.4 W	1 %
R24	Resistor	1.5 kOhm	0.4 W	1 %
R25	Resistor	100 Ohm	0.4 W	1 %
R26	Resistor	1.5 kOhm	0.4 W	1 %
R27	Resistor	1.5 kOhm	0.4 W	1 %
R28	Resistor	100 Ohm	0.4 W	1 %
R29	Resistor	1.5 kOhm	0.4 W	1 %
R30	Resistor	1.5 kOhm	0.4 W	1 %
R31	Resistor	100 Ohm	0.4 W	1 %
R32	Resistor	2.7 Ohm	2 W	
R33	Resistor	2.7 Ohm	2 W	
R34	Resistor	100 Ohm	0.4 W	1 %
R35	Resistor	33 Ohm	5 W	
R36	Resistor	33 Ohm	5 W	
R37	Resistor	1 kOhm	0.4 W	1 %
R38	Resistor	150 Ohm	0.4 W	1 %
R39	Resistor	150 Ohm	0.4 W	1 %
R40	Resistor	1 kOhm	0.4 W	1 %
R41	Resistor	47 kOhm	0.4 W	1 %
R42	Resistor	26 kOhm	0.4 W	1 %
R43	Resistor	1.3 kOhm	0.4 W	1 %
R44	Resistor	1.3 kOhm	0.4 W	1 %
R45	Resistor	26 kOhm	0.4 W	1 %
R46	Resistor	10 kOhm	0.4 W	1 %
R47	Resistor	47 kOhm	0.4 W	1 %
R48	Resistor	10 kOhm	0.4 W	1 %
R49	Resistor	10 kOhm	0.4 W	1 %
R50	Resistor	10 kOhm	0.4 W	1 %
R51	Resistor	100 kOhm	0.4 W	1 %
R52	Resistor	100 kOhm	0.4 W	1 %
R53	Resistor	100 kOhm	0.4 W	1 %
R54	Resistor	100 kOhm	0.4 W	1 %
R55	Resistor	150 Ohm	0.4 W	1 %
R56	Resistor	10 Ohm	0.4 W	1 %
R57	Resistor	2.2 kOhm	0.4 W	1 %
R58	Resistor	100 kOhm	0.4 W	1 %
R59	Resistor	2.2 kOhm	0.4 W	1 %
R60	Resistor	1 kOhm	0.4 W	1 %
R61	Resistor	20 kOhm	0.4 W	1 %
R62	Resistor	9.1 kOhm	0.4 W	1 %
R63	Resistor	1 kOhm	0.4 W	1 %
R64	Resistor	1 kOhm	0.4 W	1 %
R65	Resistor	1 kOhm	0.4 W	1 %
R66	Trimming Pot.	2.2 kOhm		

PCB-Description: Main board DX24

PCB-Number: 9632

Date: 8.October.1997

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<u>Term:</u>	<u>Component:</u>	<u>Description:</u>
R67	Resistor	750 kOhm 0.4 W 1 %
R68	Resistor	750 kOhm 0.4 W 1 %
R69	Resistor	1 kOhm 0.4 W 1 %
R70	Resistor	47 kOhm 0.4 W 1 %
R71	Resistor	47 kOhm 0.4 W 1 %
R72	Resistor	100 kOhm 0.4 W 1 %
R73	Resistor	20 kOhm 0.4 W 1 %
R74	Resistor	20 kOhm 0.4 W 1 %
R75	Resistor	10 kOhm 0.4 W 1 %
R76	Resistor	470 kOhm 0.4 W 1 %
R77	Resistor	470 kOhm 0.4 W 1 %
R78	Resistor	270 Ohm 0.4 W 1 %
R79	Resistor	470 kOhm 0.4 W 1 %
R80	Resistor	470 kOhm 0.4 W 1 %
R81	Resistor	470 kOhm 0.4 W 1 %
R82	Resistor	100 kOhm 0.4 W 1 %
R83	Resistor	2.2 kOhm 0.4 W 1 %
R84	Resistor	2.2 kOhm 0.4 W 1 %
R85	Resistor	2.2 kOhm 0.4 W 1 %
R86	Resistor	2.2 kOhm 0.4 W 1 %
R87	Resistor	470 kOhm 0.4 W 1 %
R88	Resistor	47 kOhm 0.4 W 1 %
R89	Resistor	47 kOhm 0.4 W 1 %
R90	Resistor	10 kOhm 0.4 W 1 %
R91	Resistor	220 kOhm 0.4 W 1 %
R92	Resistor	220 kOhm 0.4 W 1 %
R93	Resistor	10 kOhm 0.4 W 1 %
R94	Resistor	10 kOhm 0.4 W 1 %
R95	Resistor	10 kOhm 0.4 W 1 %
R96	Resistor	4.7 kOhm 0.4 W 1 %
R97	Resistor	6.8 kOhm 0.4 W 1 %
R98	Resistor	6.8 kOhm 0.4 W 1 %
R99	Resistor	100 kOhm 0.4 W 1 %
R100	Resistor	22 kOhm 0.4 W 1 %
R101	Resistor	100 kOhm 0.4 W 1 %
R102	Resistor	9.1 kOhm 0.4 W 1 %
R103	Resistor	470 kOhm 0.4 W 1 %
R104	Trimming Pot.	2.2 kOhm
R105	Resistor	270 Ohm 0.4 W 1 %
R106	Resistor	68 kOhm 0.4 W 1 %
R107	Resistor	470 kOhm 0.4 W 1 %
R108	Resistor	1 kOhm 0.4 W 1 %
R109	Resistor	1 kOhm 0.4 W 1 %
R110	Resistor	1 kOhm 0.4 W 1 %

PCB-Description: Main board DX24

PCB-Number: 9632

Date: 8.October.1997

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<u>Term:</u>	<u>Component:</u>	<u>Description:</u>	
R111	Resistor	10 kOhm	0,4 W 1 %
R112	Resistor	68 kOhm	0,4 W 1 %
R113	Resistor	1 MOhm	0,4 W 1 %
R114	Resistor	1 MOhm	0,4 W 1 %
R115	Resistor	100 kOhm	0,4 W 1 %
R116	Resistor	100 kOhm	0,4 W 1 %
R117	Resistor	10 kOhm	0,4 W 1 %
R118	Resistor	10 kOhm	0,4 W 1 %
R119	Resistor	470 kOhm	0,4 W 1 %
R120	Resistor	10 kOhm	0,4 W 1 %
R121	Resistor	10 kOhm	0,4 W 1 %
R122	Resistor	4,7 kOhm	0,4 W 1 %
R123	Resistor	1,5 kOhm	0,4 W 1 %
R124	Resistor	470 kOhm	0,4 W 1 %
R125	Resistor	100 kOhm	0,4 W 1 %
R126	Resistor	1,5 kOhm	0,4 W 1 %
R127	Resistor	3,9 kOhm	0,4 W 1 %
R128	Resistor	3,9 kOhm	0,4 W 1 %
R129	Resistor	10 kOhm	0,4 W 1 %
R130	Resistor	10 kOhm	0,4 W 1 %
R131	Resistor	470 kOhm	0,4 W 1 %
R132	Resistor	470 kOhm	0,4 W 1 %
R133	Resistor	100 kOhm	0,4 W 1 %
R134	Resistor	100 kOhm	0,4 W 1 %
R135	Resistor	100 kOhm	0,4 W 1 %
R136	Resistor	27 kOhm	0,4 W 1 %
R137	Resistor	100 kOhm	0,4 W 1 %
R138	Resistor	27 kOhm	0,4 W 1 %
R139	Resistor	10 kOhm	0,4 W 1 %
R140	Resistor	10 kOhm	0,4 W 1 %
R141	Resistor	91 kOhm	0,4 W 1 %
R142	Resistor	91 kOhm	0,4 W 1 %
R143	Resistor	470 kOhm	0,4 W 1 %
R144	Resistor	470 kOhm	0,4 W 1 %
R145	Resistor	2,2 kOhm	0,4 W 1 %
R146	Resistor	2,2 kOhm	0,4 W 1 %
R147	Resistor	470 kOhm	0,4 W 1 %
R148	Resistor	2,2 kOhm	0,4 W 1 %
R149	Resistor	470 kOhm	0,4 W 1 %
R150	Resistor	2,2 kOhm	0,4 W 1 %
R151	Resistor	100 kOhm	0,4 W 1 %
R152	Resistor	100 kOhm	0,4 W 1 %
R153	Resistor	1,5 kOhm	0,4 W 1 %
R154	Resistor	1,5 kOhm	0,4 W 1 %

PCB-Description: Main board DX24

PCB-Number: 9632

Date: 8.October.1997

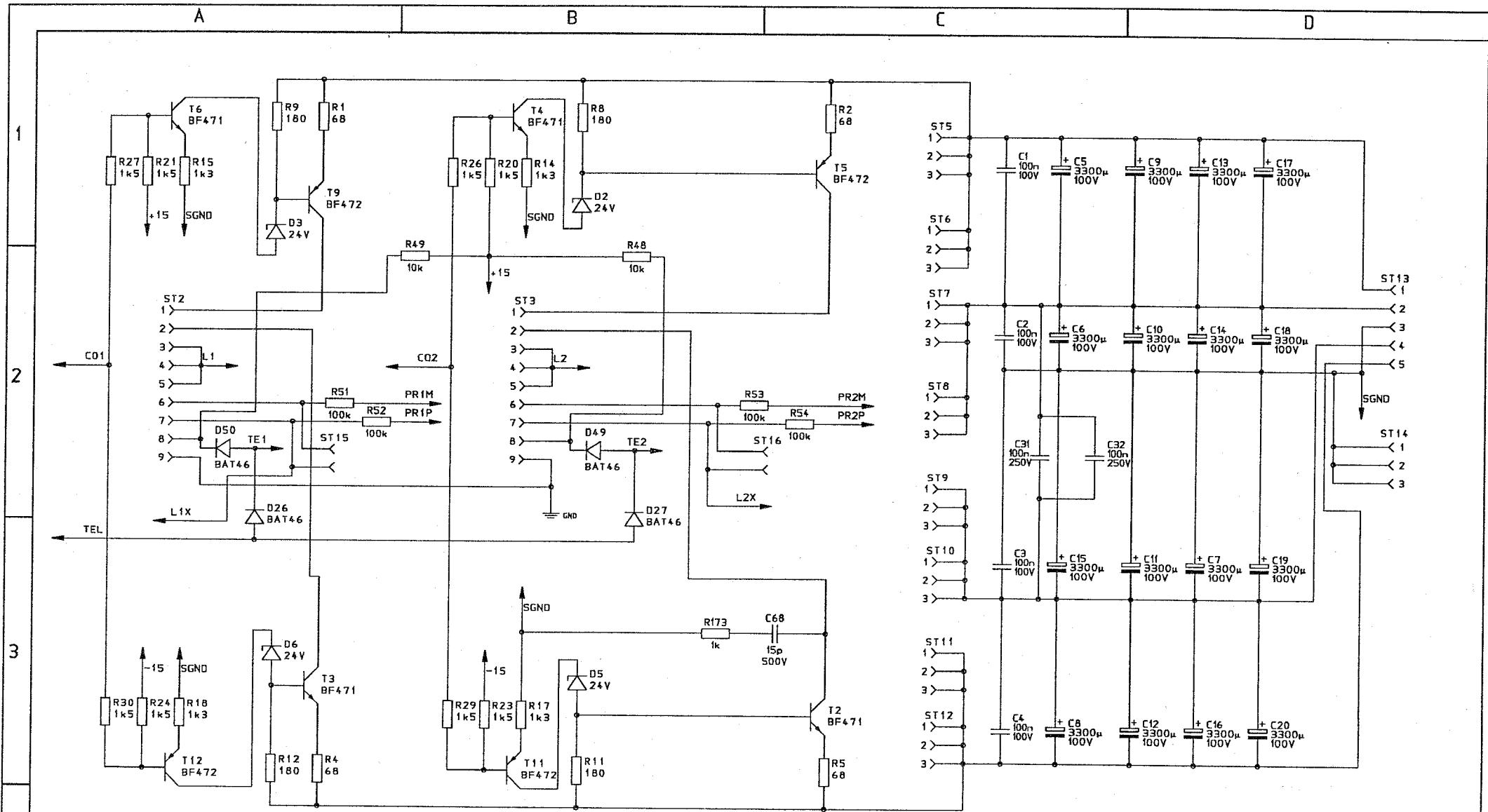
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R155	Resistor	75 kOhm	0.4 W	1 %
R156	Resistor	75 kOhm	0.4 W	1 %
R157	Resistor	100 kOhm	0.4 W	1 %
R158	Resistor	100 kOhm	0.4 W	1 %
R159	Resistor	3.3 kOhm	0.4 W	1 %
R160	Resistor	2.7 kOhm	0.4 W	1 %
R161	Resistor	1.2 Ohm	0.4 W	1 %
R162	Resistor	1.2 Ohm	0.4 W	1 %
R163	Resistor	1 MOhm	0.4 W	1 %
R164	Trimming Pot.	2.2 kOhm		
R165	Resistor	22 kOhm	0.4 W	1 %
R166	Trimming Pot.	25 kOhm		
R167	Resistor	15 kOhm	0.4 W	1 %
R168	Trimming Pot.	25 kOhm		
R169	Resistor	1 kOhm	0.4 W	1 %
R170	Resistor	100 kOhm	0.4 W	1 %
R171	Resistor	100 kOhm	0.4 W	1 %
R172	Resistor	20 kOhm	0.4 W	1 %
SI1	Fuse	1.6A		5x 20 mm
SI2	Fuse	1.6A		5x 20 mm
ST1	Comatel Connector	7-pole		
ST2	Comatel Connector	9-pole		
ST3	Comatel Connector	9-pole		
ST4	Post Connector	26-pole		
ST5	Comatel Connector	3-pole		
ST6	Comatel Connector	3-pole		
ST7	Comatel Connector	3-pole		
ST8	Comatel Connector	3-pole		
ST9	Comatel Connector	3-pole		
ST10	Comatel Connector	3-pole		
ST11	Comatel Connector	3-pole		
ST12	Comatel Connector	3-pole		
ST13	AMP-Connector	5-pole		
ST14	AMP-Connector	3-pole		
ST15	Comatel Connector	2-pole		
ST16	Comatel Connector	2-pole		
ST17	AMP-Connector	1-pole		
ST18	AMP-Connector	1-pole		
T1	Transistor	BD140		
T2	Transistor	BF471		
T3	Transistor	BF471		
T4	Transistor	BF471		
T5	Transistor	BF472		
T6	Transistor	BF471		

PCB-Description: Main board DX24

PCB-Number: 9632

Date: 8.October.1997

<u>Term:</u>	<u>Component:</u>	<u>Description:</u>
T7	Transistor	BC547
T8	Transistor	BC547
T9	Transistor	BF472
T10	Transistor	BC547
T11	Transistor	BF472
T12	Transistor	BF472
T13	Transistor	BC547
T14	Transistor	BC547
TR1	Current Transformer	
TR2	Current Transformer	
VR1	Voltage Regulator	7815
VR2	Voltage Regulator	7915



CAMCO Produktions- und Vertriebs-GmbH		Nr. 9632		Maßstab 1 : 1	
57482 Wenden-Gertingen				DX24	
		Datum	Name	Hauptplatine	
	10.97	Bearb.	9.96 R		
		Gepr.			
		Norm			
Zust.	Änderung	Datum	Name		
					Blatt 1 von 4

A

B

C

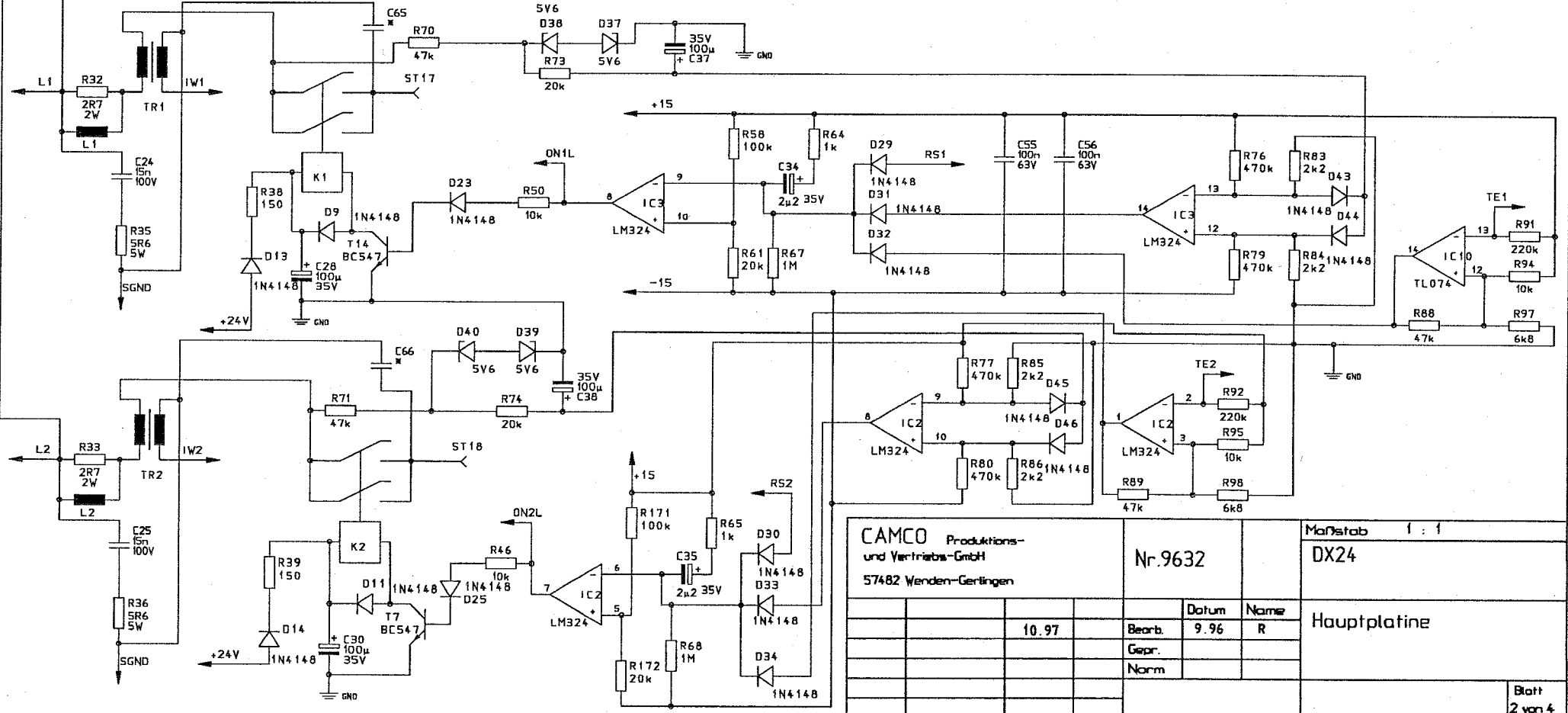
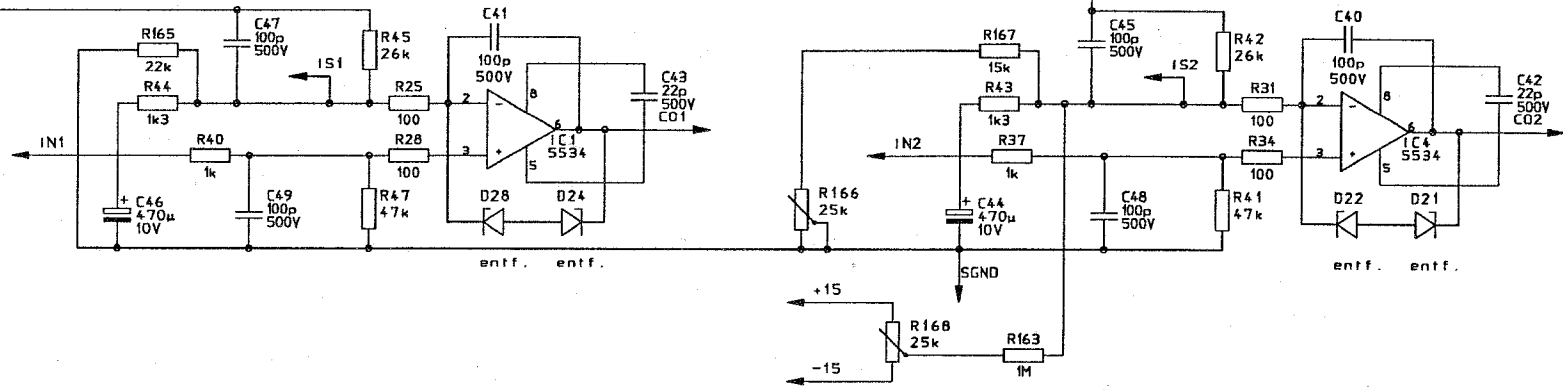
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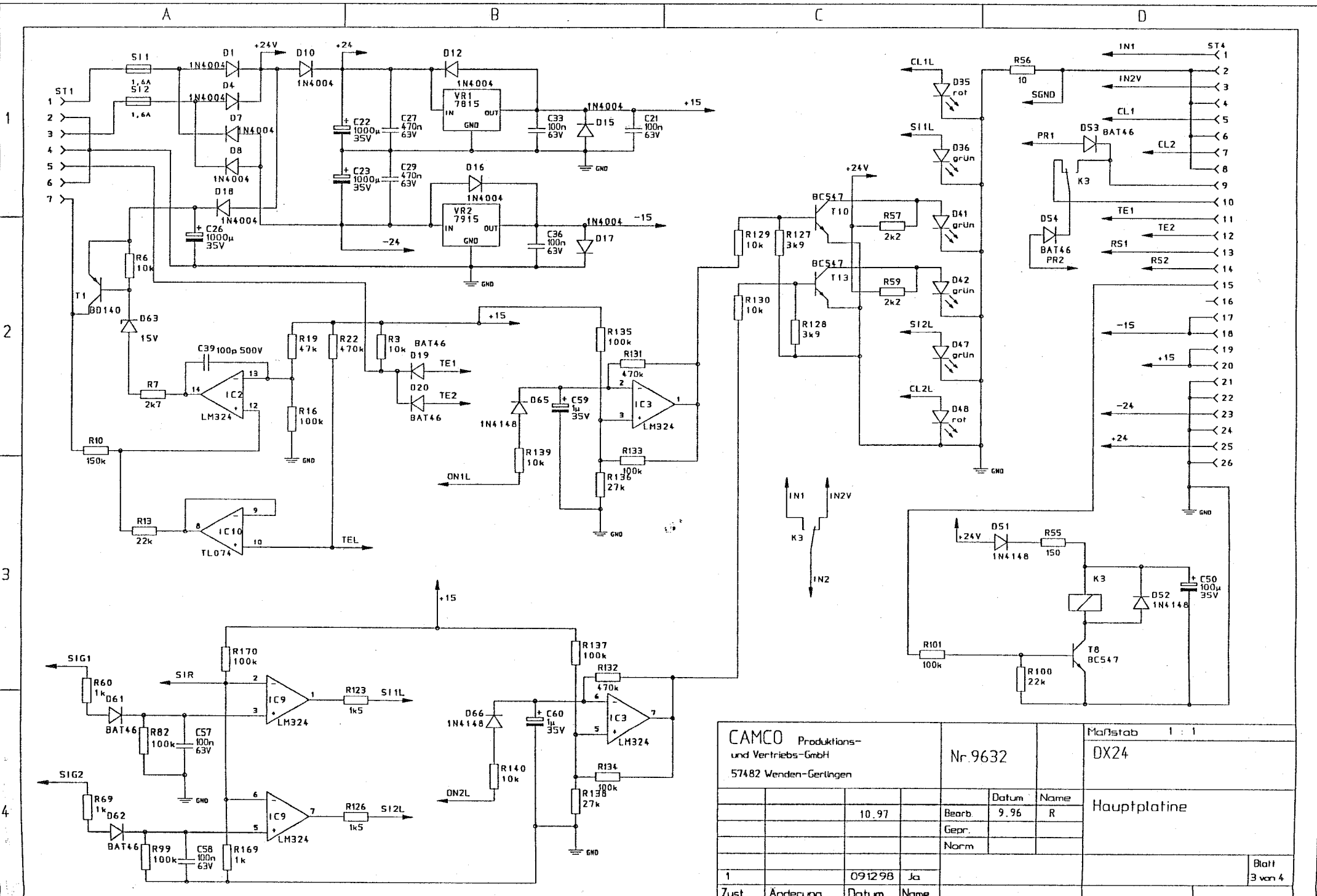
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4



CAMCO Produktions- und Vertriebs-GmbH		Nr. 9632		Maßstab 1 : 1	
57482 Wenden-Gertingen		10.97		DX24	
		9.96		Hauptplatine	
		Norm			
				Blatt 2 von 4	
Zust.	Änderung	Datum	Name		



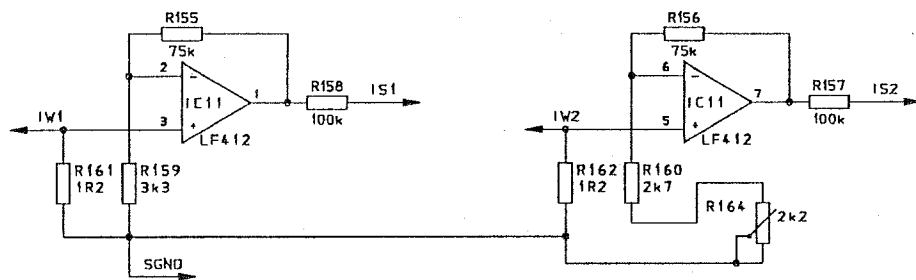
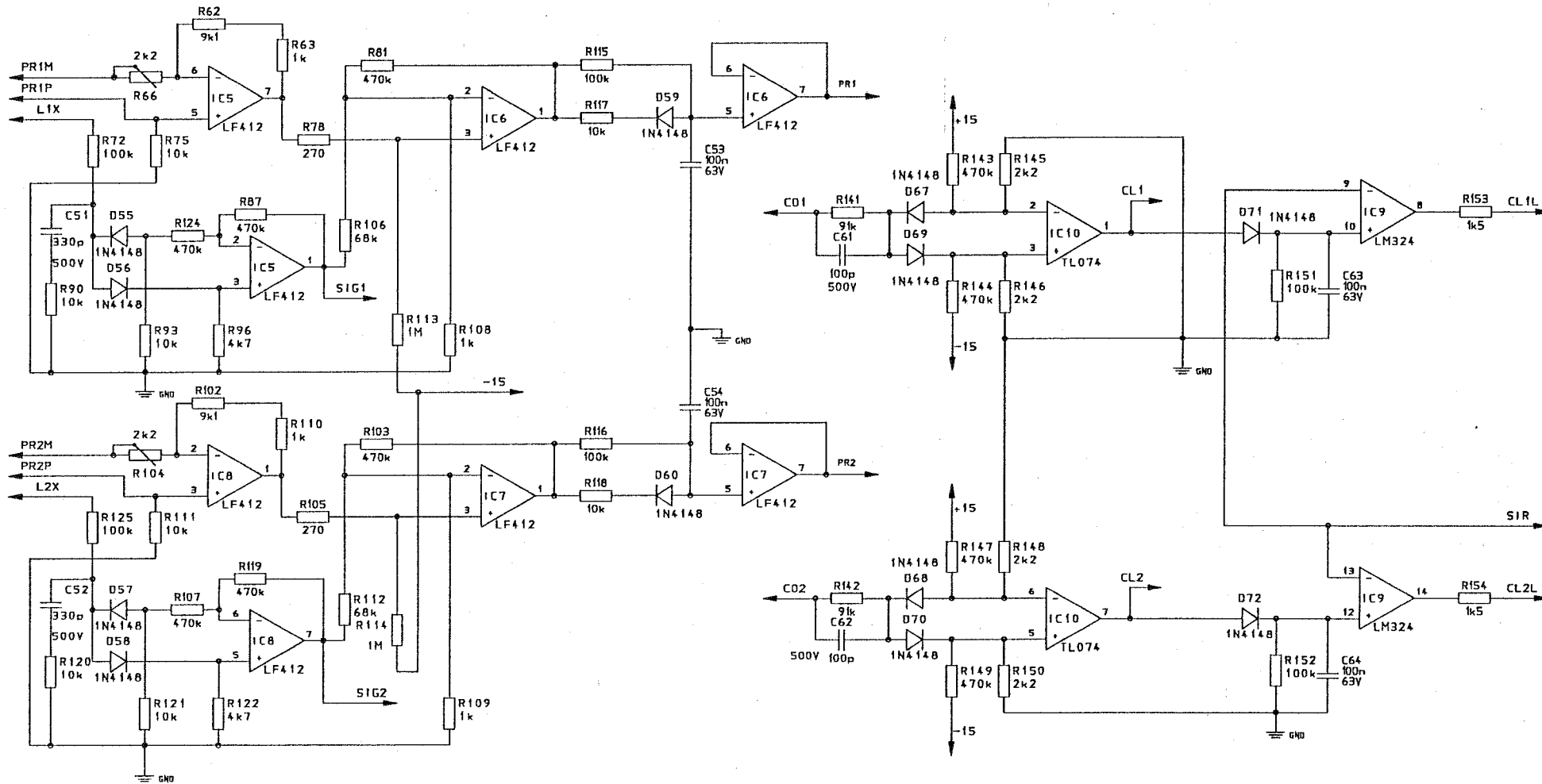
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		Gepr.	R		
		Norm			
1		091298	Ja		
Zust.	Änderung	Datum	Name	Blatt 3 von 4	

A

B

C

D



CAMCO Produktions- und Vertriebs-GmbH		Nr. 9632		Maßstab 1:1	
57482				DX24	
		Datum Name		Hauptplatine	
		3.97		Bearb. 9.96 R	
				Gepr.	
				Norm	
Zust. Änderung		Datum Name		Blatt 4 von 4	

A

B

C

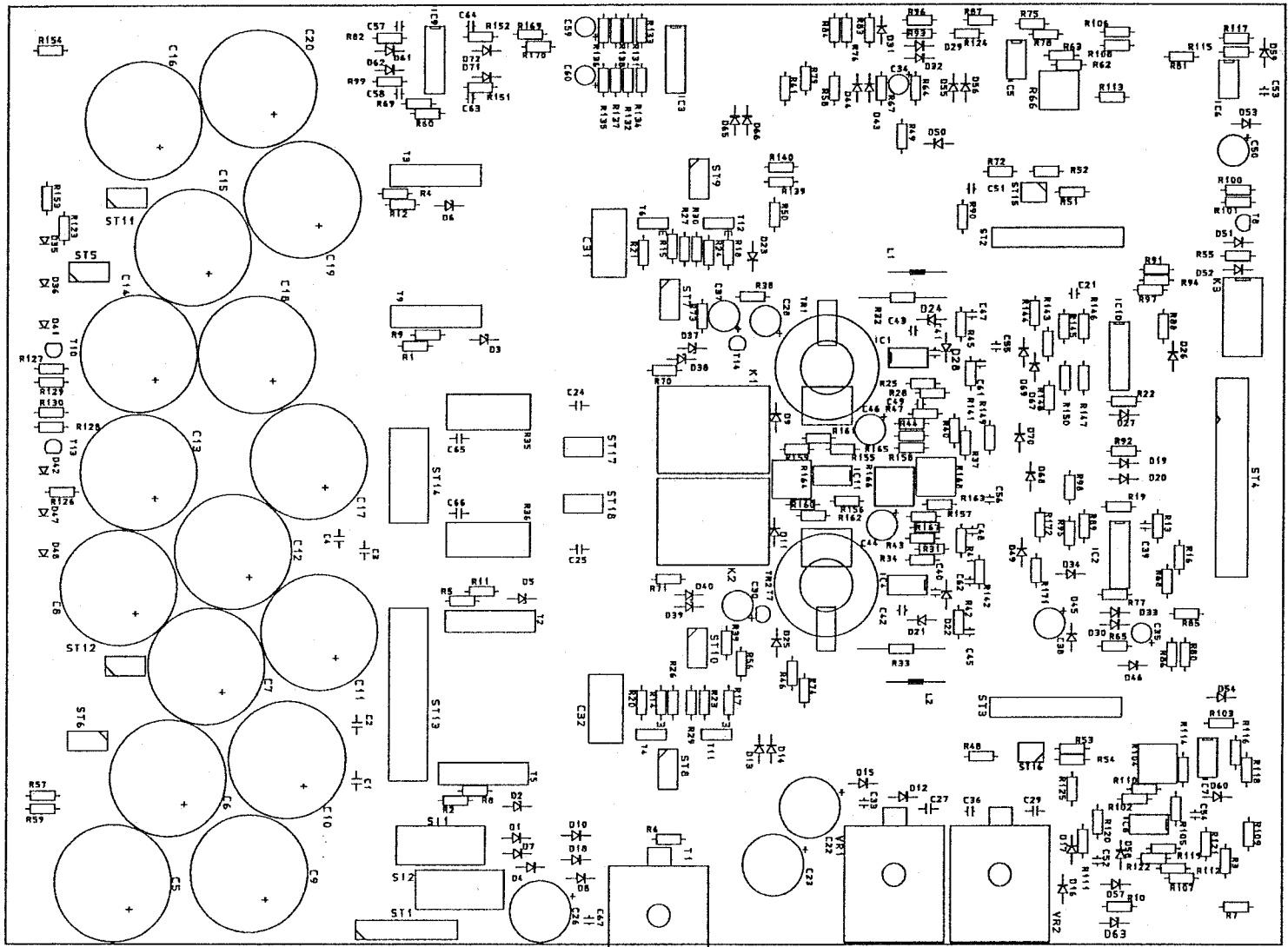
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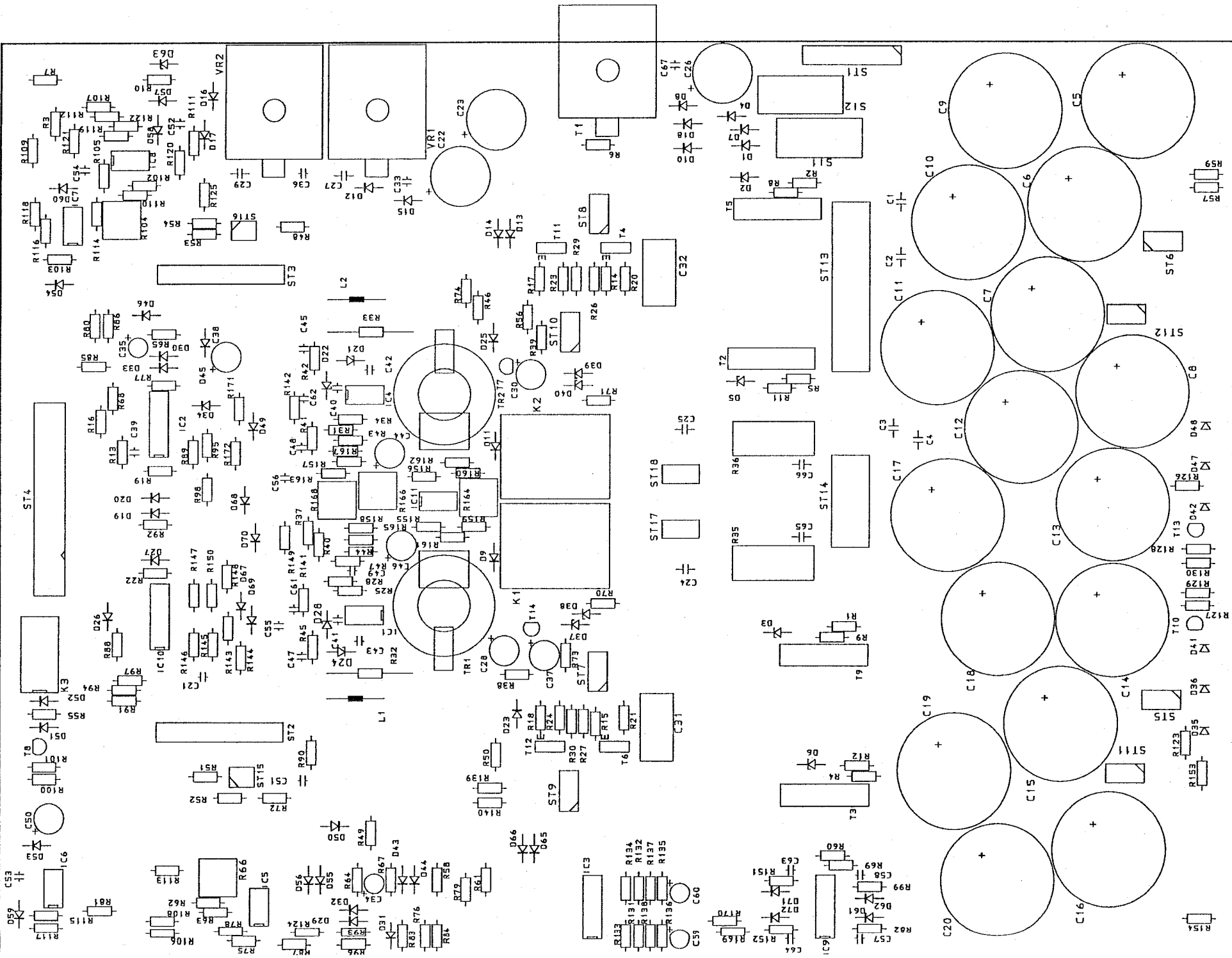
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3

4



CAMCO Produktions- und Vertriebs-GmbH		Nr. 9632		Maßstab 1 : 1	
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		Datum	Name	Hauptplatine	
		Bearb.	9.96 R		
		Gepr.			
		Norm			
Zust.	Änderung	Datum	Name		Blatt 1 von 1



PCB-Description: Mainboard DX12

PCB-Number: 9512

Date: 8.October.1997

<u>Term:</u>	<u>Component:</u>	<u>Description:</u>		
C1	Capacitor	100 nF	100 V	5 %
C2	Capacitor	100 nF	100 V	5 %
C3	Capacitor	100 nF	100 V	5 %
C4	Capacitor	100 nF	100 V	5 %
C5	Radial Electrolytic	3300 µF	63 V	5 %
C6	Radial Electrolytic	3300 µF	63 V	5 %
C7	Radial Electrolytic	3300 µF	63 V	5 %
C8	Radial Electrolytic	3300 µF	63 V	5 %
C9	Radial Electrolytic	3300 µF	63 V	5 %
C10	Radial Electrolytic	3300 µF	63 V	5 %
C11	Radial Electrolytic	3300 µF	63 V	5 %
C12	Radial Electrolytic	3300 µF	63 V	5 %
C13	Radial Electrolytic	3300 µF	63 V	5 %
C14	Radial Electrolytic	3300 µF	63 V	5 %
C15	Radial Electrolytic	3300 µF	63 V	5 %
C16	Radial Electrolytic	3300 µF	63 V	5 %
C17	Radial Electrolytic	3300 µF	63 V	5 %
C18	Radial Electrolytic	3300 µF	63 V	5 %
C19	Radial Electrolytic	3300 µF	63 V	5 %
C20	Radial Electrolytic	3300 µF	63 V	5 %
C21	Capacitor	100 nF	63 V	5 %
C22	Radial Electrolytic	1000 µF	35 V	5 %
C23	Radial Electrolytic	1000 µF	35 V	5 %
C24	Capacitor	15 nF	100 V	5 %
C25	Capacitor	15 nF	100 V	5 %
C26	Radial Electrolytic	1000 µF	35 V	5 %
C27	Capacitor	470 nF	63 V	5 %
C28	Radial Electrolytic	100 µF	35 V	5 %
C29	Capacitor	470 nF	63 V	5 %
C30	Radial Electrolytic	100 µF	35 V	5 %
C31	Capacitor	100 nF	250 V	5 %
C32	Capacitor	100 nF	250 V	5 %
C33	Capacitor	100 nF	63 V	5 %
C34	Radial Electrolytic	1 µF	35 V	5 %
C35	Radial Electrolytic	1 µF	35 V	5 %
C36	Capacitor	100 nF	63 V	5 %
C37	Radial Electrolytic	47 µF	35 V	5 %
C38	Radial Electrolytic	47 µF	35 V	5 %
C39	Capacitor	100 nF	63 V	5 %
C40	Capacitor	47 pF	500 V	5 %
C41	Capacitor	47 pF	500 V	5 %
C42	Capacitor	22 pF	500 V	5 %
C43	Capacitor	22 pF	500 V	5 %
C44	Radial Electrolytic	1000 µF	10 V	5 %

PCB-Description: Mainboard DX12

PCB-Number: 9512

Date: 8.October.1997

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<u>Term:</u>	<u>Component:</u>	<u>Description:</u>		
C45	Capacitor	220 pF	500 V	5 %
C46	Radial Electrolytic	1000 µF	10 V	5 %
C47	Capacitor	220 pF	500 V	5 %
C48	Capacitor	100 pF	500 V	5 %
C49	Capacitor	100 pF	500 V	5 %
C50	Radial Electrolytic	100 µF	35 V	5 %
C51	Capacitor	330 pF	500 V	5 %
C52	Capacitor	330 pF	500 V	5 %
C53	Capacitor	100 nF	63 V	5 %
C54	Capacitor	100 nF	63 V	5 %
C55	Capacitor	100 nF	63 V	5 %
C56	Capacitor	100 nF	63 V	5 %
C57	Capacitor	100 nF	63 V	5 %
C58	Capacitor	100 nF	63 V	5 %
C59	Radial Electrolytic	1 µF	35 V	5 %
C60	Radial Electrolytic	1 µF	35 V	5 %
C61	Capacitor	100 pF	500 V	5 %
C62	Capacitor	100 pF	500 V	5 %
C63	Capacitor	100 nF	63 V	5 %
C64	Capacitor	100 nF	63 V	5 %
C65	Capacitor	*		
C66	Capacitor	*		
C67	Capacitor	15 pF	500 V	
C68	Capacitor	10 nF	100 V	
C69	Capacitor	10 nF	100 V	
D1	Diode	1N4004		
D2	Zenerdiode	24 V		
D3	Zenerdiode	24 V		
D4	Diode	1N4004		
D5	Zenerdiode	24 V		
D6	Zenerdiode	24 V		
D7	Diode	1N4004		
D8	Diode	1N4004		
D9	Diode	1N4148		
D10	Diode	1N4004		
D11	Diode	1N4148		
D12	Diode	1N4004		
D13	Diode	1N4148		
D14	Diode	1N4148		
D15	Diode	1N4004		
D16	Diode	1N4004		
D17	Diode	1N4004		
D18	Diode	1N4004		
D19	Diode	BAT46		

PCB-Description: Mainboard DX12

PCB-Number: 9512

Date: 8.October.1997

<u>Term:</u>	<u>Component:</u>	<u>Description:</u>	
D20	Diode	BAT46	
D21	Zenerdiode	5.6 V	
D22	Zenerdiode	5.6 V	
D23	Diode	1N4148	
D24	Zenerdiode	5.6 V	
D25	Diode	1N4148	
D26	Diode	BAT46	
D27	Diode	BAT46	
D28	Zenerdiode	5.6 V	
D29	Diode	1N4148	
D30	Diode	1N4148	
D31	Diode	1N4148	
D32	Diode	1N4148	
D33	Diode	1N4148	
D34	Diode	1N4148	
D35	LED	5 mm	red
D36	LED	4 mm	green
D37	Zenerdiode	5.6 V	
D38	Zenerdiode	5.6 V	
D39	Zenerdiode	5.6 V	
D40	Zenerdiode	5.6 V	
D41	LED	5 mm	green
D42	LED	5 mm	green
D43	Diode	1N4148	
D44	Diode	1N4148	
D45	Diode	1N4148	
D46	Diode	1N4148	
D47	LED	5 mm	green
D48	LED	5 mm	red
D49	Diode	BAT46	
D50	Diode	BAT46	
D51	Diode	1N4148	
D52	Diode	1N4148	
D53	Diode	BAT46	
D54	Diode	BAT46	
D55	Diode	1N4148	
D56	Diode	1N4148	
D57	Diode	1N4148	
D58	Diode	1N4148	
D59	Diode	1N4148	
D60	Diode	1N4148	
D61	Diode	BAT46	
D62	Diode	BAT46	
D63	Zenerdiode	15 V	

PCB-Description: Mainboard DX12

PCB-Number: 9512

Date: 8.October.1997

<u>Term:</u>	<u>Component:</u>	<u>Description:</u>		
D65	Diode	1N4148		
D66	Diode	1N4148		
D67	Diode	1N4148		
D68	Diode	1N4148		
D69	Diode	1N4148		
D70	Diode	1N4148		
D71	Diode	1N4148		
D72	Diode	1N4148		
IC1	IC	5534		
IC2	IC	LM324		
IC3	IC	LM324		
IC4	IC	5534		
IC5	IC	LF412		
IC6	IC	LF412		
IC7	IC	LF412		
IC8	IC	LF412		
IC9	IC	LM324		
IC10	IC	TL074		
IC11	IC	LF412		
K1	Relay	2-pole		
K2	Relay	2-pole		
K3	Relay	DS2E		
L1	Coil reactor			
L2	Coil reactor			
R1	Resistor	68 Ohm	0.4 W	1 %
R2	Resistor	68 Ohm	0.4 W	1 %
R3	Resistor	10 kOhm	0.4 W	1 %
R4	Resistor	68 Ohm	0.4 W	1 %
R5	Resistor	68 Ohm	0.4 W	1 %
R6	Resistor	10 kOhm	0.4 W	1 %
R7	Resistor	10 kOhm	0.4 W	1 %
R8	Resistor	180 Ohm	0.4 W	1 %
R9	Resistor	180 Ohm	0.4 W	1 %
R10	Resistor	150 kOhm	0.4 W	1 %
R11	Resistor	180 Ohm	0.4 W	1 %
R12	Resistor	180 Ohm	0.4 W	1 %
R13	Resistor	22 kOhm	0.4 W	1 %
R14	Resistor	1.3 kOhm	0.4 W	1 %
R15	Resistor	1.3 kOhm	0.4 W	1 %
R16	Resistor	100 kOhm	0.4 W	1 %
R17	Resistor	1.3 kOhm	0.4 W	1 %
R18	Resistor	1.3 kOhm	0.4 W	1 %
R20	Resistor	1.5 kOhm	0.4 W	1 %
R21	Resistor	1.5 kOhm	0.4 W	1 %

PCB-Description: Mainboard DX12

PCB-Number: 9512

Date: 8.October.1997

<u>Term:</u>	<u>Component:</u>	<u>Description:</u>		
R22	Resistor	470 kOhm	0.4 W	1 %
R23	Resistor	1.5 kOhm	0.4 W	1 %
R24	Resistor	1.5 kOhm	0.4 W	1 %
R25	Resistor	100 Ohm	0.4 W	1 %
R26	Resistor	1.5 kOhm	0.4 W	1 %
R27	Resistor	1.5 kOhm	0.4 W	1 %
R28	Resistor	100 Ohm	0.4 W	1 %
R29	Resistor	1.5 kOhm	0.4 W	1 %
R30	Resistor	1.5 kOhm	0.4 W	1 %
R31	Resistor	100 Ohm	0.4 W	1 %
R32	Resistor	2.7 Ohm	2 W	
R33	Resistor	2.7 Ohm	2 W	
R34	Resistor	100 Ohm	0.4 W	1 %
R35	Resistor	33 Ohm	5 W	
R36	Resistor	33 Ohm	5 W	
R37	Resistor	1 kOhm	0.4 W	1 %
R38	Resistor	150 Ohm	0.4 W	1 %
R39	Resistor	150 Ohm	0.4 W	1 %
R40	Resistor	1 kOhm	0.4 W	1 %
R41	Resistor	47 kOhm	0.4 W	1 %
R42	Resistor	10 kOhm	0.4 W	1 %
R43	Resistor	470 Ohm	0.4 W	1 %
R44	Resistor	470 Ohm	0.4 W	1 %
R45	Resistor	10 kOhm	0.4 W	1 %
R46	Resistor	10 kOhm	0.4 W	1 %
R47	Resistor	47 kOhm	0.4 W	1 %
R48	Resistor	10 kOhm	0.4 W	1 %
R49	Resistor	10 kOhm	0.4 W	1 %
R50	Resistor	10 kOhm	0.4 W	1 %
R51	Resistor	100 kOhm	0.4 W	1 %
R52	Resistor	100 kOhm	0.4 W	1 %
R53	Resistor	100 kOhm	0.4 W	1 %
R54	Resistor	100 kOhm	0.4 W	1 %
R55	Resistor	150 Ohm	0.4 W	1 %
R56	Resistor	10 Ohm	0.4 W	1 %
R57	Resistor	2.2 kOhm	0.4 W	1 %
R58	Resistor	100 kOhm	0.4 W	1 %
R59	Resistor	2.2 kOhm	0.4 W	1 %
R60	Resistor	1 kOhm	0.4 W	1 %
R61	Resistor	20 kOhm	0.4 W	1 %
R62	Resistor	9.1 kOhm	0.4 W	1 %
R63	Resistor	1 kOhm	0.4 W	1 %
R64	Resistor	1 kOhm	0.4 W	1 %
R65	Resistor	1 kOhm	0.4 W	1 %

PCB-Description: Mainboard DX12

PCB-Number: 9512

Date: 8.October.1997

<u>Term:</u>	<u>Component:</u>	<u>Description:</u>		
R66	Trimming Pot	2 kOhm	Bourns	
R67	Resistor	470 kOhm	0.4 W	1 %
R68	Resistor	470 kOhm	0.4 W	1 %
R69	Resistor	1 kOhm	0.4 W	1 %
R70	Resistor	33 kOhm	0.4 W	1 %
R71	Resistor	33 kOhm	0.4 W	1 %
R72	Resistor	100 kOhm	0.4 W	1 %
R73	Resistor	20 kOhm	0.4 W	1 %
R74	Resistor	20 kOhm	0.4 W	1 %
R75	Resistor	10 kOhm	0.4 W	1 %
R76	Resistor	470 kOhm	0.4 W	1 %
R77	Resistor	470 kOhm	0.4 W	1 %
R78	Resistor	270 Ohm	0.4 W	1 %
R79	Resistor	470 kOhm	0.4 W	1 %
R80	Resistor	470 kOhm	0.4 W	1 %
R81	Resistor	470 kOhm	0.4 W	1 %
R82	Resistor	100 kOhm	0.4 W	1 %
R83	Resistor	2.2 kOhm	0.4 W	1 %
R84	Resistor	2.2 kOhm	0.4 W	1 %
R85	Resistor	2.2 kOhm	0.4 W	1 %
R86	Resistor	2.2 kOhm	0.4 W	1 %
R87	Resistor	470 kOhm	0.4 W	1 %
R88	Resistor	47 kOhm	0.4 W	1 %
R89	Resistor	47 kOhm	0.4 W	1 %
R90	Resistor	10 kOhm	0.4 W	1 %
R91	Resistor	220 kOhm	0.4 W	1 %
R92	Resistor	220 kOhm	0.4 W	1 %
R93	Resistor	10 kOhm	0.4 W	1 %
R94	Resistor	10 kOhm	0.4 W	1 %
R95	Resistor	10 kOhm	0.4 W	1 %
R96	Resistor	5.1 kOhm	0.4 W	1 %
R97	Resistor	6.8 kOhm	0.4 W	1 %
R98	Resistor	6.8 kOhm	0.4 W	1 %
R99	Resistor	100 kOhm	0.4 W	1 %
R100	Resistor	22 kOhm	0.4 W	1 %
R101	Resistor	100 kOhm	0.4 W	1 %
R102	Resistor	9.1 kOhm	0.4 W	1 %
R103	Resistor	470 kOhm	0.4 W	1 %
R104	Trimming Pot	2 kOhm	Bourns	
R105	Resistor	270 Ohm	0.4 W	1 %
R106	Resistor	56 kOhm	0.4 W	1 %
R107	Resistor	470 kOhm	0.4 W	1 %
R108	Resistor	1 kOhm	0.4 W	1 %
R109	Resistor	1 kOhm	0.4 W	1 %

PCB-Description: Mainboard DX12

PCB-Number: 9512

Date: 8.October.1997

<u>Term:</u>	<u>Component:</u>	<u>Description:</u>		
R110	Resistor	1 kOhm	0.4 W	1 %
R111	Resistor	10 kOhm	0.4 W	1 %
R112	Resistor	56 kOhm	0.4 W	1 %
R113	Resistor	1 MOhm	0.4 W	1 %
R114	Resistor	1 MOhm	0.4 W	1 %
R115	Resistor	100 kOhm	0.4 W	1 %
R116	Resistor	100 kOhm	0.4 W	1 %
R118	Resistor	10 kOhm	0.4 W	1 %
R119	Resistor	470 kOhm	0.4 W	1 %
R120	Resistor	10 kOhm	0.4 W	1 %
R121	Resistor	10 kOhm	0.4 W	1 %
R122	Resistor	5.1 kOhm	0.4 W	1 %
R123	Resistor	1.5 kOhm	0.4 W	1 %
R124	Resistor	470 kOhm	0.4 W	1 %
R125	Resistor	100 kOhm	0.4 W	1 %
R126	Resistor	1.5 kOhm	0.4 W	1 %
R127	Resistor	3.9 kOhm	0.4 W	1 %
R128	Resistor	3.9 kOhm	0.4 W	1 %
R129	Resistor	10 kOhm	0.4 W	1 %
R130	Resistor	10 kOhm	0.4 W	1 %
R131	Resistor	470 kOhm	0.4 W	1 %
R132	Resistor	470 kOhm	0.4 W	1 %
R133	Resistor	100 kOhm	0.4 W	1 %
R134	Resistor	100 kOhm	0.4 W	1 %
R135	Resistor	100 kOhm	0.4 W	1 %
R136	Resistor	27 kOhm	0.4 W	1 %
R137	Resistor	100 kOhm	0.4 W	1 %
R138	Resistor	27 kOhm	0.4 W	1 %
R139	Resistor	10 kOhm	0.4 W	1 %
R140	Resistor	10 kOhm	0.4 W	1 %
R141	Resistor	91 kOhm	0.4 W	1 %
R142	Resistor	91 kOhm	0.4 W	1 %
R143	Resistor	470 kOhm	0.4 W	1 %
R144	Resistor	470 kOhm	0.4 W	1 %
R145	Resistor	2.2 kOhm	0.4 W	1 %
R146	Resistor	2.2 kOhm	0.4 W	1 %
R147	Resistor	470 kOhm	0.4 W	1 %
R148	Resistor	2.2 kOhm	0.4 W	1 %
R149	Resistor	470 kOhm	0.4 W	1 %
R150	Resistor	2.2 kOhm	0.4 W	1 %
R151	Resistor	100 kOhm	0.4 W	1 %
R152	Resistor	100 kOhm	0.4 W	1 %
R153	Resistor	1.5 kOhm	0.4 W	1 %
R154	Resistor	1.5 kOhm	0.4 W	1 %

PCB-Description: Mainboard DX12

PCB-Number: 9512

Date: 8.October.1997

<u>Term:</u>	<u>Component:</u>	<u>Description:</u>		
R155	Resistor	75 kOhm	0.4 W	1 %
R156	Resistor	75 kOhm	0.4 W	1 %
R157	Resistor	100 kOhm	0.4 W	1 %
R158	Resistor	100 kOhm	0.4 W	1 %
R159	Resistor	3.3 kOhm	0.4 W	1 %
R160	Resistor	2.7 kOhm	0.4 W	1 %
R161	Resistor	1.2 Ohm	0.4 W	1 %
R162	Resistor	1.2 Ohm	0.4 W	1 %
R163	Resistor	1 MOhm	0.4 W	1 %
R164	Trimming Pot	2 kOhm	Bourns	
R166	Trimming Pot	25 kOhm	Bourns	
R168	Trimming Pot	25 kOhm	Bourns	
R170	Resistor	100 kOhm	0.4 W	1 %
R171	Resistor	100 kOhm	0.4 W	1 %
R172	Resistor	20 kOhm	0.4 W	1 %
SI1	Fuse	1.6A	5x 20mm	
SI2	Fuse	1.6A	5x 20mm	
ST1	Comatel Connector	7-pole		
ST2	Comatel Connector	8-pole		
ST3	Comatel Connector	8-pole		
ST4	Post Connector	26-pole		
ST5	Comatel Connector	2-pole		
ST6	Comatel Connector	2-pole		
ST7	Comatel Connector	2-pole		
ST8	Comatel Connector	2-pole		
ST9	Comatel Connector	2-pole		
ST10	Comatel Connector	2-pole		
ST11	Comatel Connector	2-pole		
ST12	Comatel Connector	2-pole		
ST15	Comatel Connector	2-pole		
ST16	Comatel Connector	2-pole		
ST17	AMP-Connector	1-pole		
ST18	AMP-Connector	1-pole		
ST19	AMP-Connector	3-pole		
ST20	AMP-Connector	5-pole		
T1	Transistor	BD140		
T2	Transistor	BF471		
T3	Transistor	BF471		
T4	Transistor	BF471		
T5	Transistor	BF472		
T6	Transistor	BF471		
T9	Transistor	BF472		
T10	Transistor	BC547		
T11	Transistor	BF472		

Service Manual DX12 / DX24

CAMCO

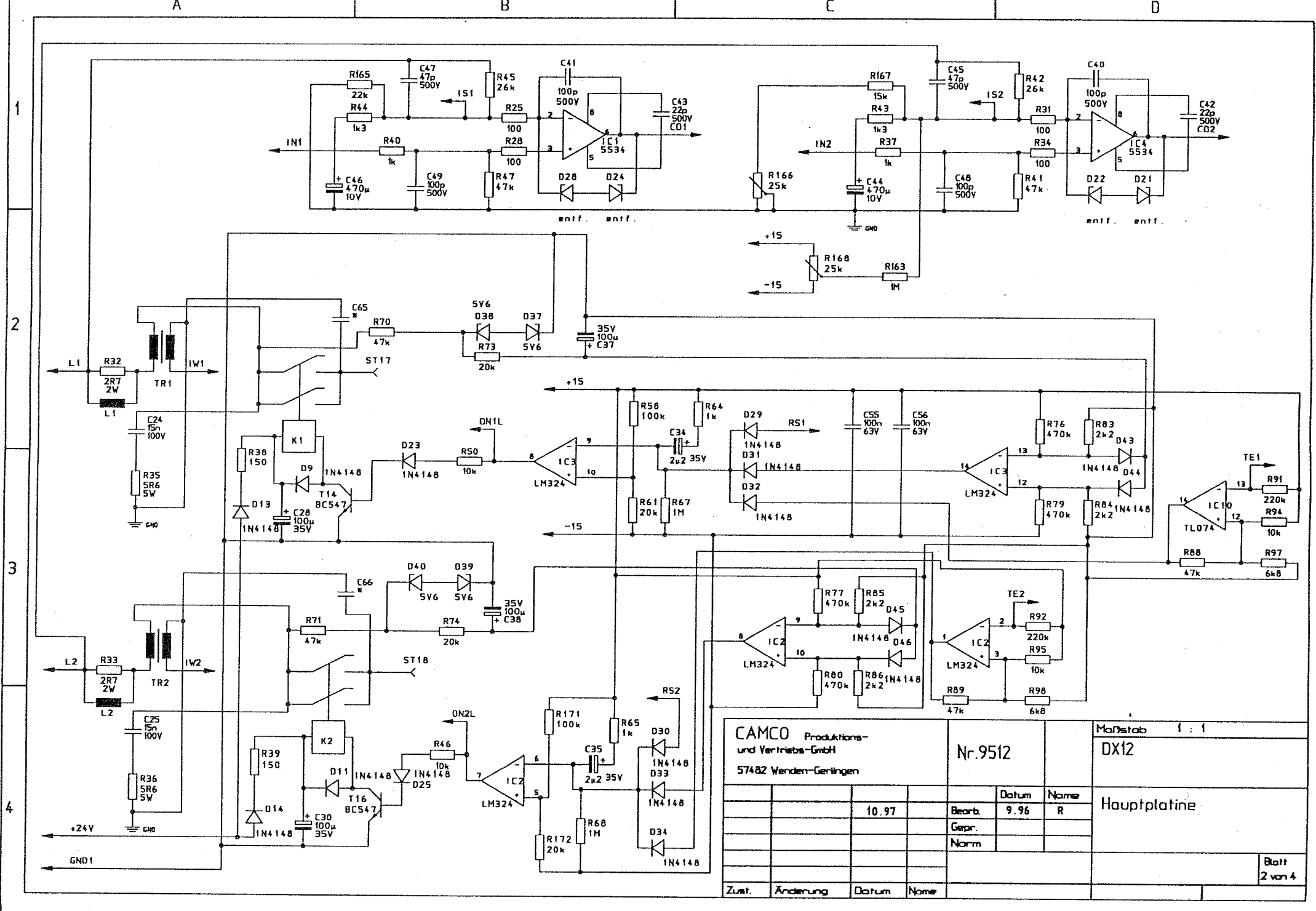
PCB-Description: Mainboard DX12

PCB-Number: 9512

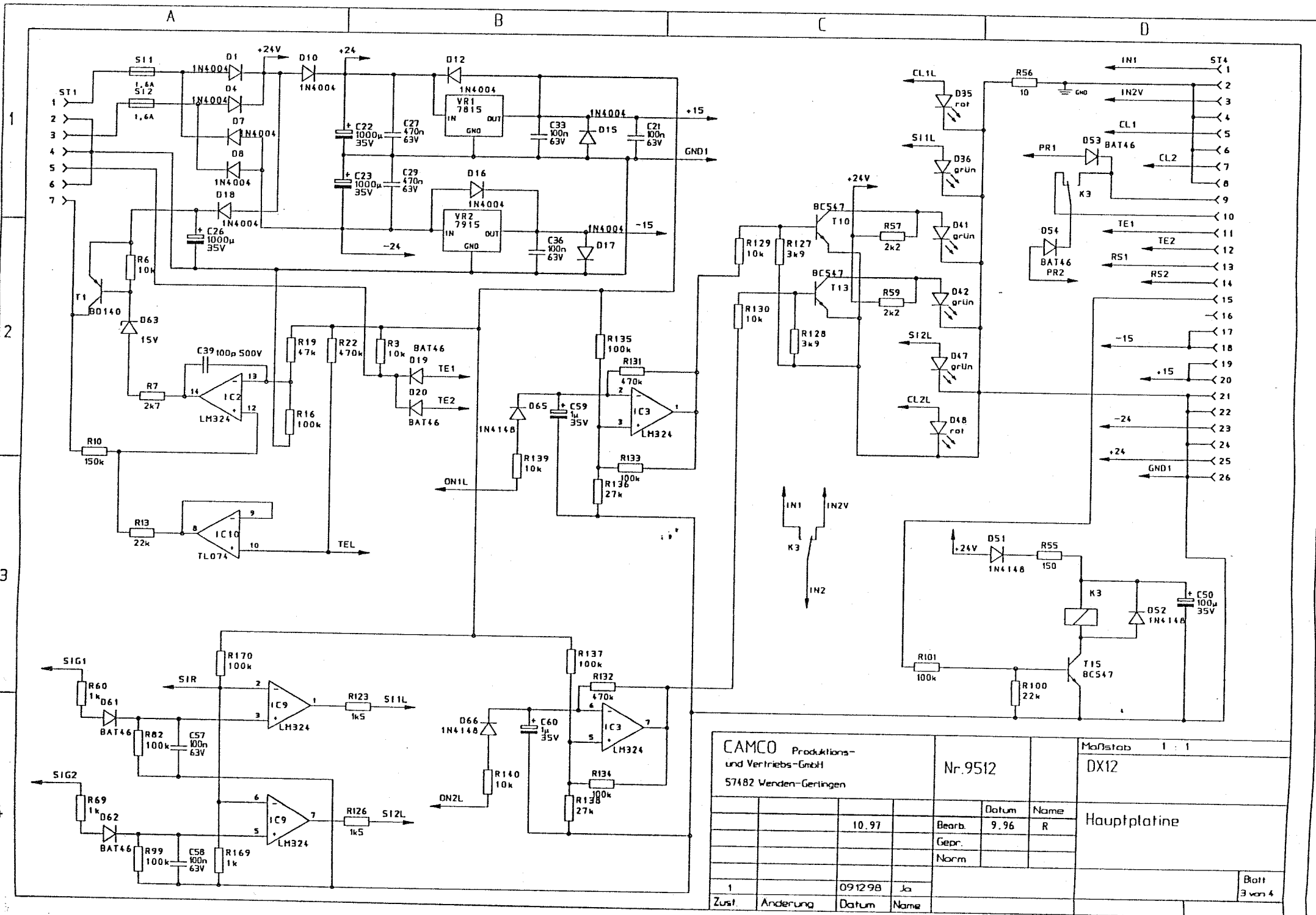
Date: 8.October.1997

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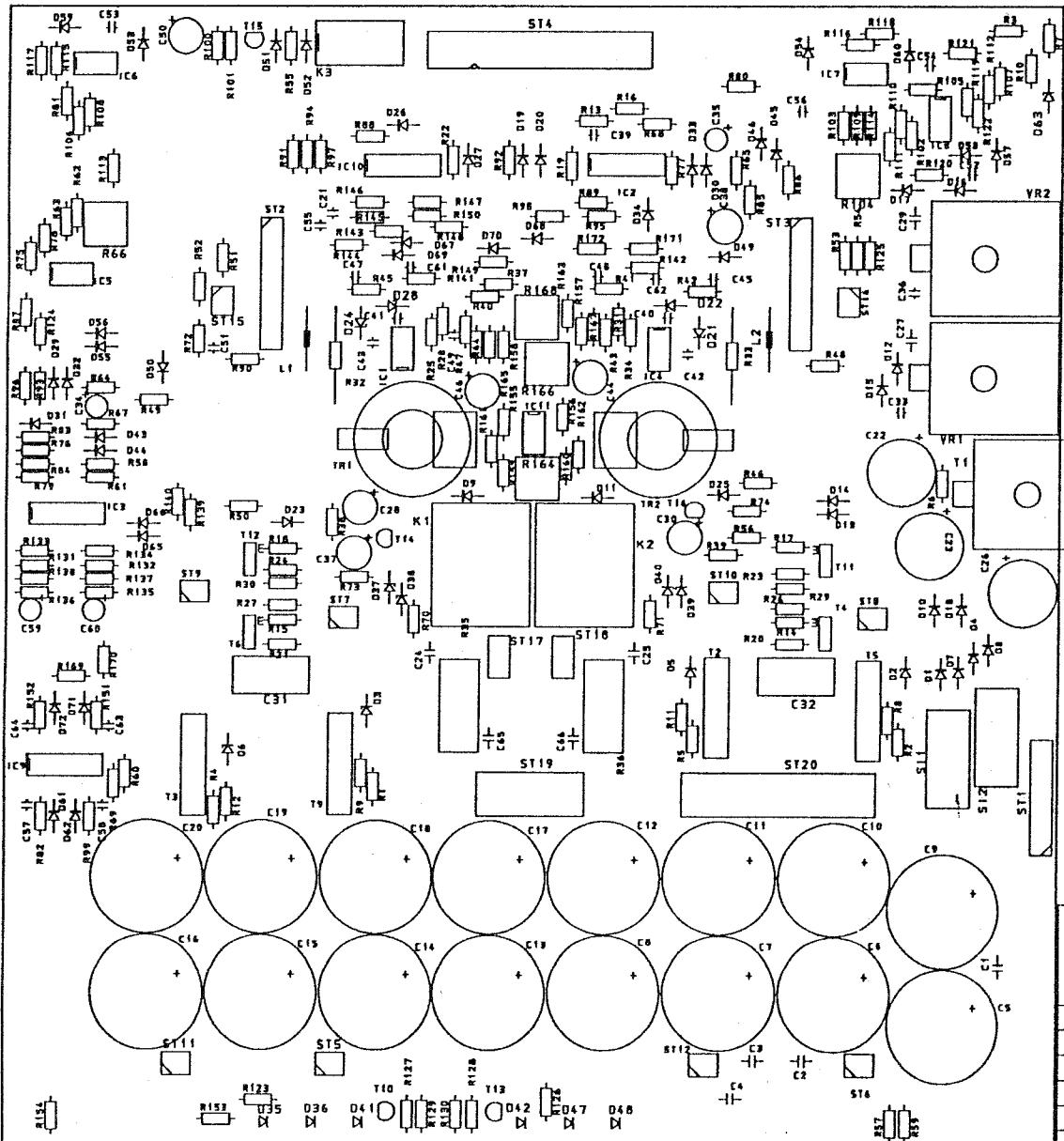
<u>Term:</u>	<u>Component:</u>	<u>Description:</u>
T12	Transistor	BF472
T13	Transistor	BC547
T14	Transistor	BC547
T15	Transistor	BC547
T16	Transistor	BC547
TR1	Current Transformer	
TR2	Current Transformer	
VR1	Voltage Regulator	7815
VR2	Voltage Regulator	7915



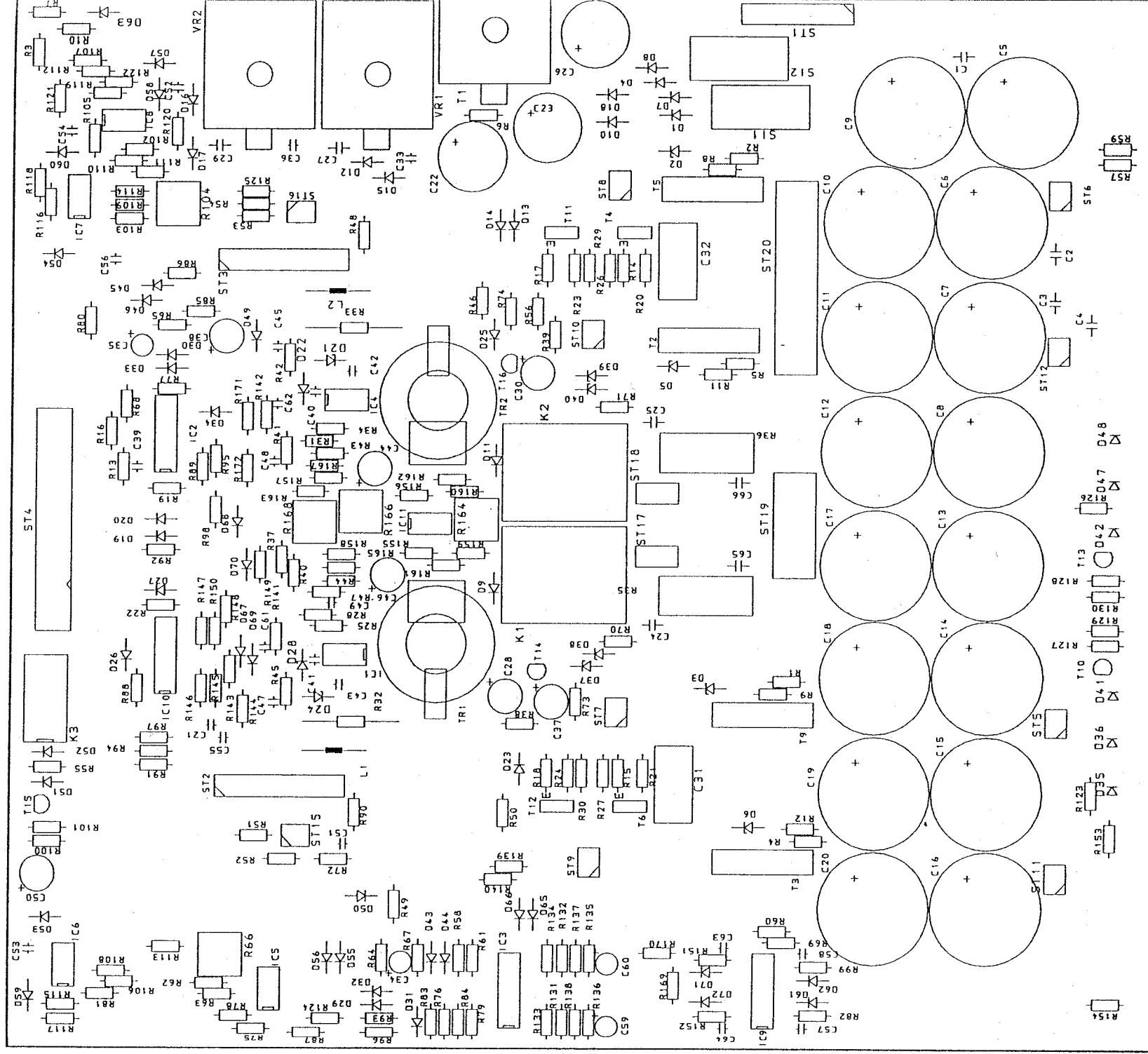
CAMCO Produktions- und Vertriebs-GmbH		Nr. 9512		Maßstab 1:1	
57482 Wenden-Gertingen				DX12	
		Datum	Name	Hauptplatine	
	10.97	9.96	R		
		Bearb.			
		Gepr.			
		Norm			
Zust.	Änderung	Datum	Name		
				Blatt 2 von 4	



CAMCO Produktions- und Vertriebs-GmbH 57482 Wenden-Gertingen		Nr. 9512		Maßstab 1 : 1 DX12	
		Bearb.	Datum	Name	Hauptplatte
	10. 97	9. 96	R		
		Gepr.			
		Norm			
1		091298	Ja		Batt 3 von 4
Zust.	Anderung	Datum	Name		



CAMCO Produktions- und Vertriebs-GmbH		Nr.9512		Maßstab 1:1	
57482 Wenden-Geringen				DX12	
		Datum	Name	Hauptplatine	
	297	2.97	R		
Zust.	Änderung	Datum	Name		Blatt (von 1



PCB-Description: Heat sink PCB DX12

PCB-Number: 9303

Date: 24.July.1997

<u>Term:</u>	<u>Component:</u>	<u>Description:</u>		
C1	Capacitor	100 nF	63 V	
C2	Capacitor	100 pF	500 V	
C3	Capacitor	4.7 nF	100 V	
C4	Capacitor	2.2 nF	500 V	
C5	Radial Electrolytic	47 µF	35 V	
C6	Radial Electrolytic	47 µF	35 V	
C7	Capacitor	220 pF	500 V	
C8	Capacitor	220 pF	500 V	
C9	Capacitor	4.7 nF	100 V	
C10	Capacitor	4.7 nF	100 V	
C11	Capacitor	220 pF	500 V	
C12	Capacitor	220 pF	500 V	
C13	Capacitor	10 nF	100 V	
C14	Capacitor	4.7 nF	100 V	
C15	Capacitor	100 nF	250 V	
C16	Capacitor	remove		
C17	Capacitor	4.7 nF	100 V	
C18	Capacitor	4.7 nF	100 V	
C19	Capacitor	1 nF	500 V	
C20	Capacitor	100 pF	500 V	
C21	Capacitor	100 pF	500 V	
D1	Diode	MUR1520		
D2	Diode	MUR1520		
D3	Diode	1N4148		
D4	Diode	1N4148		
D5	Diode	1N4004		
D6	Diode	1N4004		
D7	Diode	1N4004		
D8	Diode	1N4004		
D9	Diode	1N4004		
D10	Diode	1N4004		
D11	Diode	1N4004		
D12	Diode	1N4004		
D13	Zenerdiode	15 V		
D14	Zenerdiode	15 V		
D15	Diode	1N4004		
D16	Diode	1N4004		
D17	Diode	1N4148		
D18	Diode	1N4148		
R1	Resistor	0.15 Ohm	5 W	
R2	Resistor	0.15 Ohm	5 W	
R3	Resistor	0.15 Ohm	5 W	
R4	Resistor	10 Ohm	0.4 W	1 %
R5	Resistor	10 Ohm	0.4 W	1 %

PCB-Description: Heat sink PCB DX12

PCB-Number: 9303

Date: 24.July.1997

Page 2 of 3

<u>Term:</u>	<u>Component:</u>	<u>Description:</u>		
R6	Resistor	0.15 Ohm	5 W	
R7	Resistor	0.15 Ohm	5 W	
R8	Resistor	0.15 Ohm	5 W	
R9	Resistor	10 Ohm	0.4 W	1 %
R10	Resistor	0.15 Ohm	5 W	
R11	Resistor	0.15 Ohm	5 W	
R12	Resistor	0.15 Ohm	5 W	
R13	Resistor	10 Ohm	0.4 W	1 %
R14	Resistor	0.15 Ohm	5 W	
R15	Resistor	0.15 Ohm	5 W	
R16	Resistor	0.15 Ohm	5 W	
R17	Resistor	100 Ohm	0.4 W	1 %
R18	Resistor	100 Ohm	0.4 W	1 %
R19	Resistor	100 Ohm	0.4 W	1 %
R20	Resistor	100 Ohm	0.4 W	1 %
R21	Resistor	560 Ohm	0.4 W	1 %
R22	Resistor	560 Ohm	0.4 W	1 %
R23	Resistor	430 Ohm	0.4 W	1 %
R24	Resistor	430 Ohm	0.4 W	1 %
R25	Resistor	470 Ohm	0.4 W	1 %
R26	Resistor	2.2 kOhm	0.4 W	1 %
R27	Resistor	330 Ohm	0.4 W	1 %
R28	Resistor	2.2 kOhm	0.4 W	1 %
R29	Resistor	3.3 kOhm	0.4 W	1 %
R30	Resistor	3.9 kOhm	0.4 W	1 %
R31	Resistor	1 kOhm	0.4 W	1 %
R32	Resistor	1 kOhm	0.4 W	1 %
R33	Resistor	1 kOhm	5 W	
R34	Resistor	1 kOhm	5 W	
R35	Resistor	18 kOhm	1 W	
R36	Resistor	18 kOhm	1 W	
R37	Resistor	100 Ohm	0.4 W	1 %
R38	Resistor	1 kOhm	0.4 W	1 %
R39	Resistor	470 Ohm	0.4 W	1 %
R40	Resistor	16 kOhm	0.4 W	1 %
R41	Resistor	16 kOhm	0.4 W	1 %
R42	Resistor	39 kOhm	0.4 W	1 %
R43	Resistor	39 kOhm	0.4 W	1 %
R44	Resistor	3.9 kOhm	0.4 W	1 %
ST1	Comatel Connector	2-pole		
ST2	Comatel Connector	2-pole		
ST3	Comatel Connector	2-pole		
ST4	Comatel Connector	2-pole		
ST5	Comatel Connector	8-pole		

PCB-Description: Heat sink PCB DX12

PCB-Number: 9303

Date: 24.July.1997

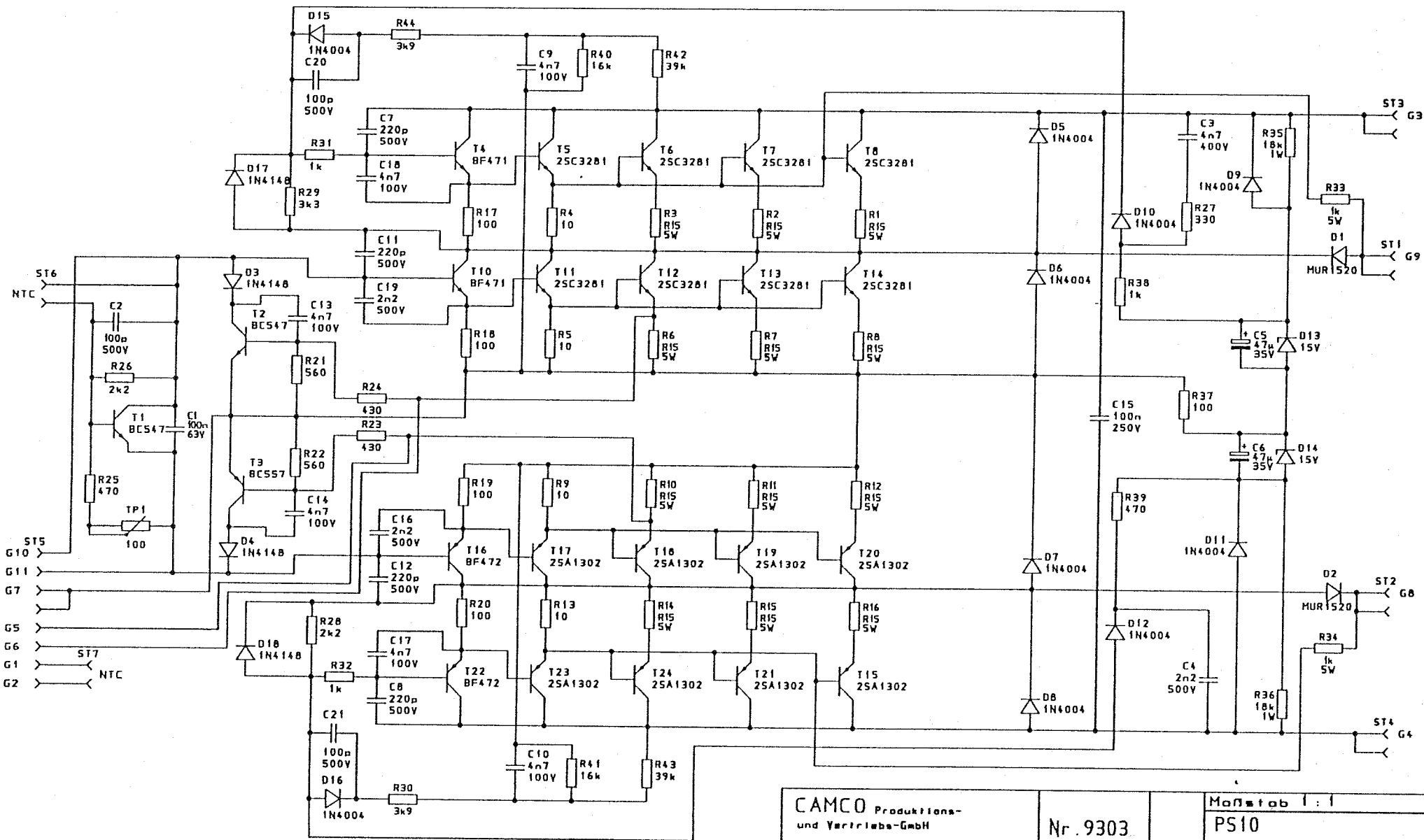
<u>Term:</u>	<u>Component:</u>	<u>Description:</u>
ST6	Comatel Connector	2-pole
ST7	Comatel Connector	2-pole
T1	Transistor	NPN BC547
T2	Transistor	NPN BC547
T3	Transistor	PNP BC557
T4	Transistor	NPN BF471
T5	Transistor	NPN 2SC3281
T6	Transistor	NPN 2SC3281
T7	Transistor	NPN 2SC3281
T8	Transistor	NPN 2SC3281
T10	Transistor	NPN BF471
T11	Transistor	NPN 2SC3281
T12	Transistor	NPN 2SC3281
T13	Transistor	NPN 2SC3281
T14	Transistor	NPN 2SC3281
T15	Transistor	PNP 2SA1302
T16	Transistor	PNP BF472
T17	Transistor	PNP 2SA1302
T18	Transistor	PNP 2SA1302
T19	Transistor	PNP 2SA1302
T20	Transistor	PNP 2SA1302
T21	Transistor	PNP 2SA1302
T22	Transistor	PNP BF472
T23	Transistor	PNP 2SA1302
T24	Transistor	PNP 2SA1302
TP1	Trimming Pot.	100 Ohm

A

B

C

D



CAMCO Produktions- und Vertriebs-GmbH		Nr. 9303		Maßstab 1:1	
57482 Wenden-Gröningen				PS10	
		Bearb.	1.96	Name	R
		Gwpr.			
		Norm			
				KK-Platine	
				Subbass	
				Blatt	
Zust.	Änderung	Datum	Name		

1

2

3

4

PCB-Description: Power Block DX24

PCB-Number: 9602

Date: 26.November.1996

<u>Term:</u>	<u>Component:</u>	<u>Description:</u>		
C1	Capacitor	100 nF	63 V	
C2	Capacitor	100 pF	500 V	
C3	Capacitor	4.7 nF	400 V	
C4	Capacitor	2.2 nF	500 V	
C5	Radial Electrolytic	47 µF	35 V	
C6	Radial Electrolytic	47 µF	35 V	
C7	Capacitor	220 pF	500 V	
C8	Capacitor	220 pF	500 V	
C9	Capacitor	4.7 nF	63 V	
C10	Capacitor	4.7 nF	63 V	
C11	Capacitor	220 pF	500 V	
C12	Capacitor	220 pF	500 V	
C13	Capacitor	4.7 nF	63 V	
C14	Capacitor	4.7 nF	63 V	
C15	Capacitor	100 nF	250 V	
C16	Capacitor	2.2 nF	500 V	
C17	Capacitor	4.7 nF	63 V	
C18	Capacitor	4.7 nF	63 V	
C19	Capacitor	2.2 nF	500 V	
C20	Capacitor	100 pF	500 V	
C21	Capacitor	100 pF	500 V	
D1	Diode	MUR1520		
D2	Diode	MUR1520		
D3	Diode	1N4148		
D4	Diode	1N4148		
D5	Diode	1N4004		
D6	Diode	1N4004		
D7	Diode	1N4004		
D8	Diode	1N4004		
D9	Diode	1N4004		
D10	Diode	1N4004		
D11	Diode	1N4004		
D12	Diode	1N4004		
D13	Zenerdiode	15V		
D14	Zenerdiode	15V		
D15	Diode	1N4004		
D16	Diode	1N4004		
D17	Diode	1N4148		
D18	Diode	1N4148		
R1	Resistor	0.15 Ohm	5 W	
R2	Resistor	0.15 Ohm	5 W	
R3	Resistor	0.15 Ohm	5 W	
R4	Resistor	10 Ohm	0.4 W	1%
R5	Resistor	10 Ohm	0.4 W	1%

PCB-Description: Power Block DX24

PCB-Number: 9602

Date: 26.November.1996

<u>Term:</u>	<u>Component:</u>	<u>Description:</u>		
R6	Resistor	0.15 Ohm	5 W	
R7	Resistor	0.15 Ohm	5 W	
R8	Resistor	0.15 Ohm	5 W	
R9	Resistor	10 Ohm	0.4 W	1 %
R10	Resistor	0.15 Ohm	5 W	
R11	Resistor	0.15 Ohm	5 W	
R12	Resistor	0.15 Ohm	5 W	
R13	Resistor	10 Ohm	0.4 W	1 %
R14	Resistor	0.15 Ohm	5 W	
R15	Resistor	0.15 Ohm	5 W	
R16	Resistor	0.15 Ohm	5 W	
R17	Resistor	100 Ohm	0.4 W	1 %
R18	Resistor	100 Ohm	0.4 W	1 %
R19	Resistor	100 Ohm	0.4 W	1 %
R20	Resistor	100 Ohm	0.4 W	1 %
R21	Resistor	620 Ohm	0.4 W	1 %
R22	Resistor	620 Ohm	0.4 W	1 %
R23	Resistor	470 Ohm	0.4 W	1 %
R24	Resistor	470 Ohm	0.4 W	1 %
R25	Resistor	470 Ohm	0.4 W	1 %
R26	Resistor	2.2 kOhm	0.4 W	1 %
R27	Resistor	330 Ohm	0.4 W	1 %
R28	Resistor	2.2 kOhm	0.4 W	1 %
R29	Resistor	3.3 kOhm	0.4 W	1 %
R30	Resistor	3.9 kOhm	0.4 W	1 %
R31	Resistor	1 kOhm	0.4 W	1 %
R32	Resistor	1 kOhm	0.4 W	1 %
R33	Resistor	1 kOhm	5 W	
R34	Resistor	1 kOhm	5 W	
R35	Resistor	18 kOhm	1 W	
R36	Resistor	18 kOhm	1 W	
R37	Resistor	100 Ohm	0.4 W	1 %
R38	Resistor	1 kOhm	0.4 W	1 %
R39	Resistor	470 Ohm	0.4 W	1 %
R40	Resistor	16 kOhm	0.4 W	1 %
R41	Resistor	16 kOhm	0.4 W	1 %
R42	Resistor	39 kOhm	0.4 W	1 %
R43	Resistor	39 kOhm	0.4 W	1 %
R44	Resistor	3.9 kOhm	0.4 W	1 %
R45	Resistor	0.15 Ohm	5 W	
R46	Resistor	0.15 Ohm	5 W	
R47	Resistor	0.15 Ohm	5 W	
R48	Resistor	0.15 Ohm	5 W	
R49	Resistor	0.15 Ohm	5 W	

PCB-Description: Power Block DX24

PCB-Number: 9602

Date: 26.November.1996

<u>Term:</u>	<u>Component:</u>	<u>Description:</u>
R50	Resistor	0.15 Ohm 5 W
R51	Resistor	0.15 Ohm 5 W
R52	Resistor	0.15 Ohm 5 W
R53	Trimming Pot.	100 Ohm
ST1	Comatel Connector	3-pole
ST2	Comatel Connector	3-pole
ST3	Comatel Connector	3-pole
ST4	Comatel Connector	3-pole
ST5	Comatel Connector	9-pole
ST6	Tab	
ST7	Tab	
T1	Transistor	BC547
T2	Transistor	BC547
T3	Transistor	BC557
T4	Transistor	BF471
T5	Transistor	2SC3281
T6	Transistor	2SC3281
T7	Transistor	2SC3281
T8	Transistor	2SC3281
T9	Transistor	2SC3281
T10	Transistor	BF471
T11	Transistor	2SC3281
T12	Transistor	2SC3281
T13	Transistor	2SC3281
T14	Transistor	2SC3281
T15	Transistor	2SA1302
T16	Transistor	BF472
T17	Transistor	2SA1302
T18	Transistor	2SA1302
T19	Transistor	2SA1302
T20	Transistor	2SA1302
T21	Transistor	2SA1302
T22	Transistor	BF472
T23	Transistor	2SA1302
T24	Transistor	2SA1302
T25	Transistor	2SC3281
T26	Transistor	2SC3281
T27	Transistor	2SC3281
T28	Transistor	2SA1302
T29	Transistor	2SA1302
T30	Transistor	2SA1302
T31	Transistor	2SA1302

A

B

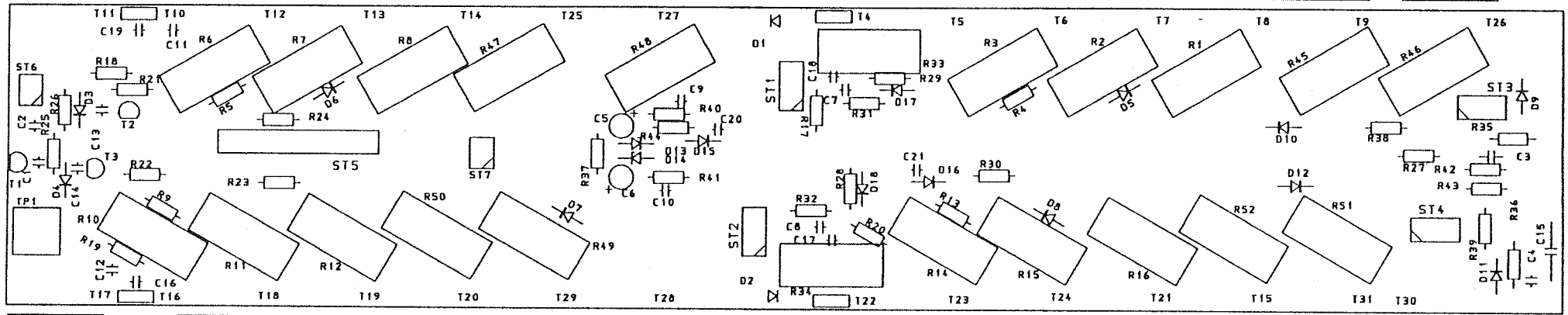
C

D

1



2



3



4

CAMCO Produktions- und Vertriebs-GmbH 57482 Wenden-Gevingen				Nr. 9602		Maßstab 1:1 DX24	
				Bearb.	7.96	Name	KK-Platine
				Gepr.			
				Norm			
Zust.	Änderung	Datum	Name				Blatt 1 von 1

A

B

C

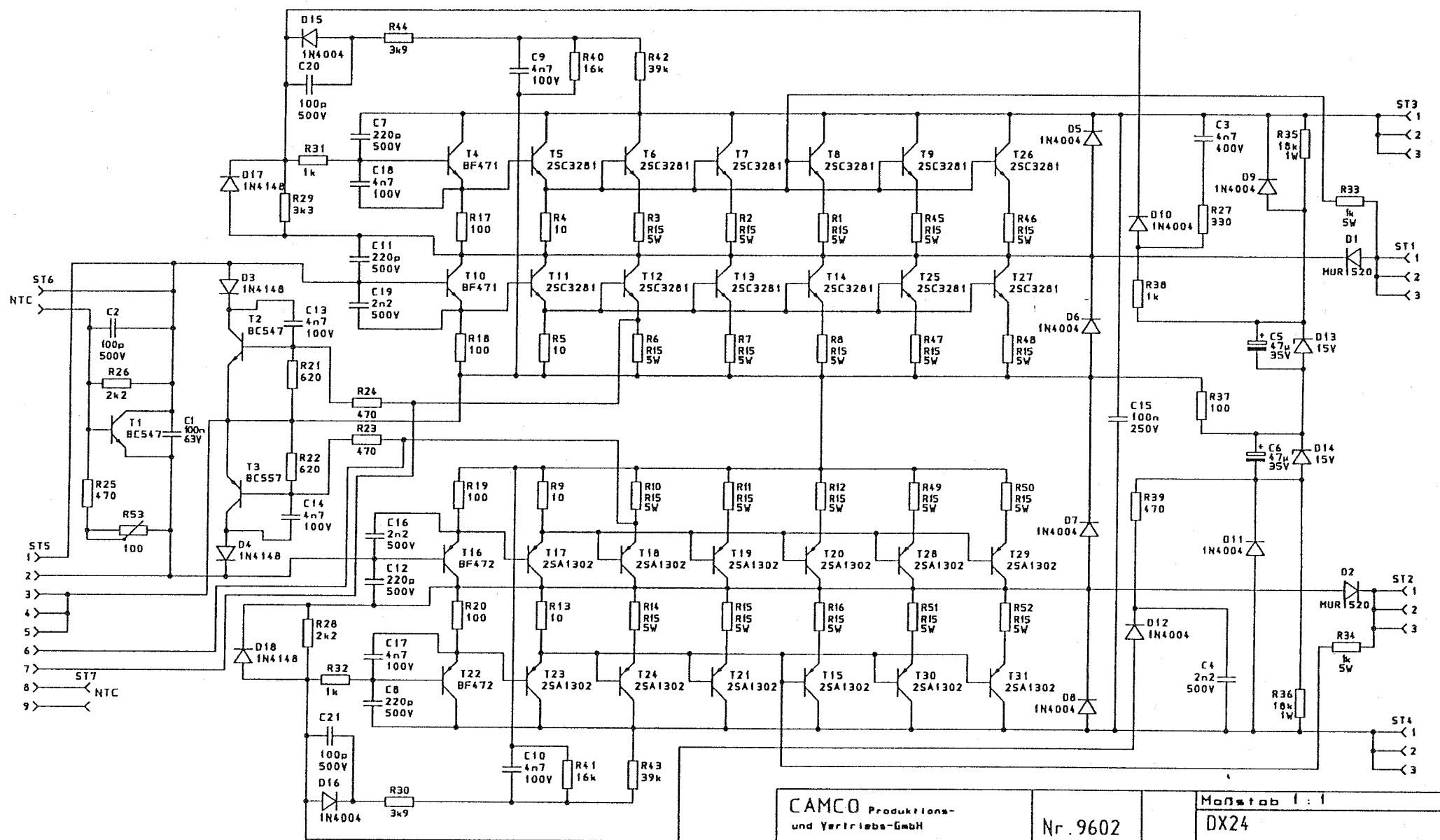
D

1

2

3

4



CAMCO Produktions- und Vertriebs-GmbH		Nr. 9602		Maßstab 1:1	
57482 Wenden-Geilingen				DX24	
	9.96	Bearb.		KK-Platine	
		Gepr.			
		Norm			
Zust.	Änderung	Datum	Name	Blatt	