

TLS 4000 MK II INTERFACE SONDOR LIBRA TC

10.27.1160

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PIN ASSIGNMENT OF SLAVE REMOTE CONNECTORS A AND B

SLAVE REMOTE CONNECTOR A :

PIN	SIGNAL NAME	FUNCTION	SIGNALTYPE
1	GND	Ground	0.0V
2	RI	Biphase Input R	
3	R	Biphase Output R	
4	GND	Ground	0.0V
5	VCC	Supply from synchronizer	+5V
6	GND	Ground	0.0V
7	GND	Ground	0.0V
8	IN1	Error Input (active low)	Switch in
9	REC OUT	Record Out (active low)	OC.out
10	REH OUT	Rehearse Out (active low)	OC.out
11			
12	IN2	Synchronizer enable	active → IN4
13	IN3	Coincidence	active → IN4
14	IN4	Active HIGH/LOW (high = high)	
15	SI	Biphase Input S	
16	S	Biphase Output S	
17	REMON+	Remote power on	+5V
18			
19	REMON+	Remote power on	+5V
20	INS	Film Format 16/35mm	Switch in
21	ING	Nom. Frequ. 35mm 50/100Hz OUT	Switch in
22			
23			
24			
25	IN7	Nom. Frequ. 35mm 50/100Hz IN	Switch in

Low = 35mm
Low = 50Hz

Low = 50Hz

OC. OUT = output with external pull-up resistor (+28V max.)

SWITCH IN = open collector or switch driving to ground

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PIN ASSIGNMENT OF SLAVE REMOTE CONNECTORS A AND B

SLAVE REMOTE CONNECTOR B :

PIN	SIGNAL NAME	FUNCTION	SIGNALTYPE
1	0.0 V	GND Synchronizer	
2	RECEN	Record enable signal	SWITCH IN
3	AUX 1	TC/BICODE (TC=Low)	SWITCH IN
4	AUX 2	FILM (24F/s) VIDEO (FILM=Low)	SWITCH IN
5			
6	REL 1	Relais contact 1	
7	REL 2	Relais contact 2	
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25	REMON +	Remote power on	+5V

OC.OUT = output with external pull-up resistor (+28V max.)

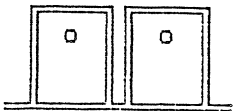
SWITCH IN = open collector or switch driving to ground

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STATUS DISPLAYS ON THE INTERFACE

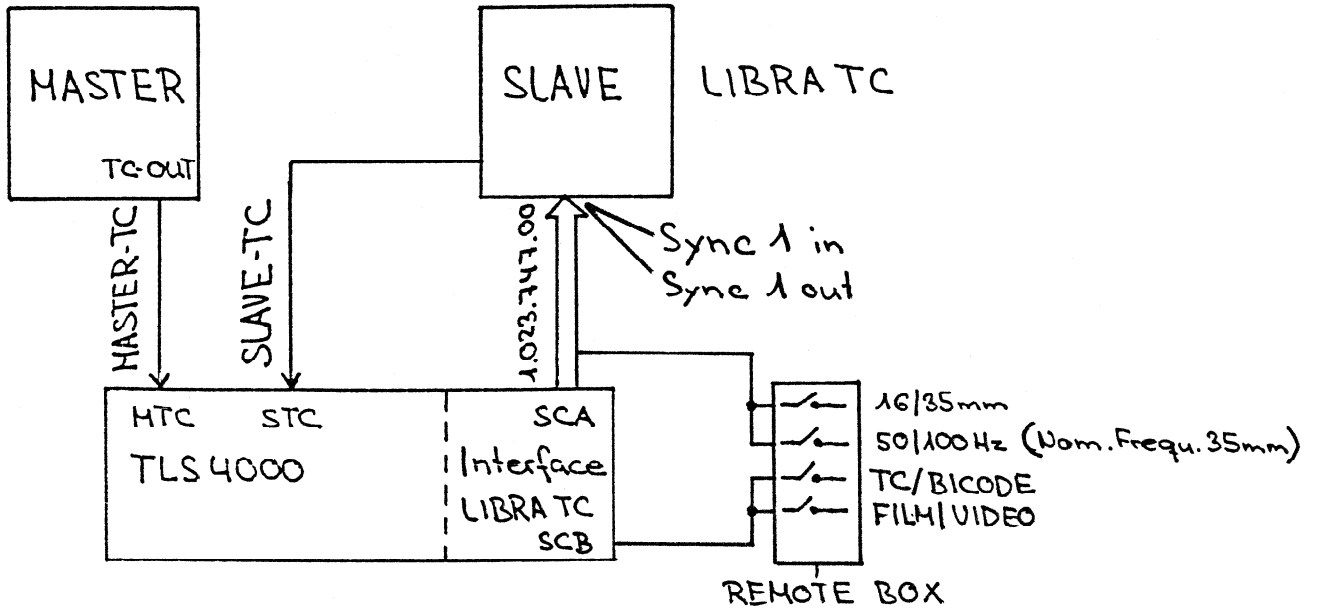
The two LED s on the interface **Libra TC** PCB serve as status indicators and for diagnosing possible problems.

DL1 DL2

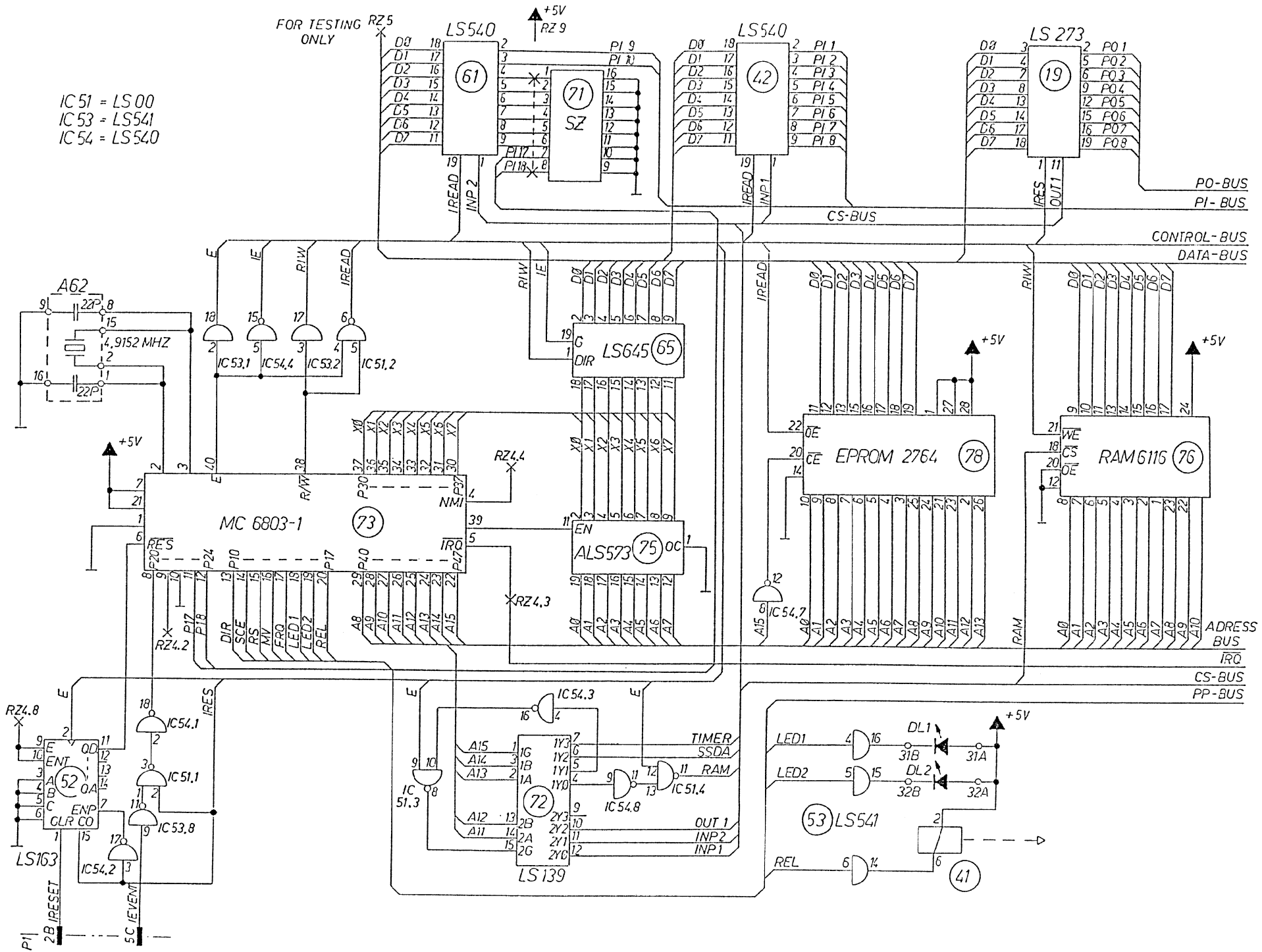


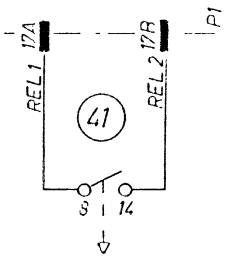
- | | | |
|---|---|---|
| | | after initialisation |
| - | - | no ERROR |
| - | * | EPROM error |
| * | - | RAM error |
| * | * | SSDA error (serial I/O) defectiv |
| | | during operation |
| - | - | no error |
| - | * | |
| * | - | no communication between interface and machine |
| * | * | no communication between interface and synchronizer board |

CABLING



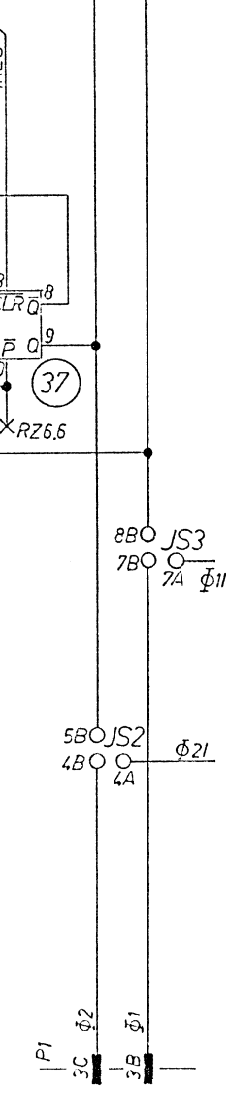
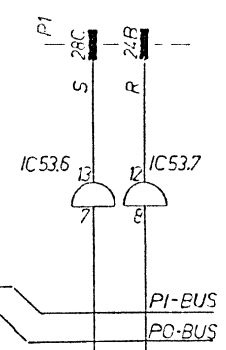
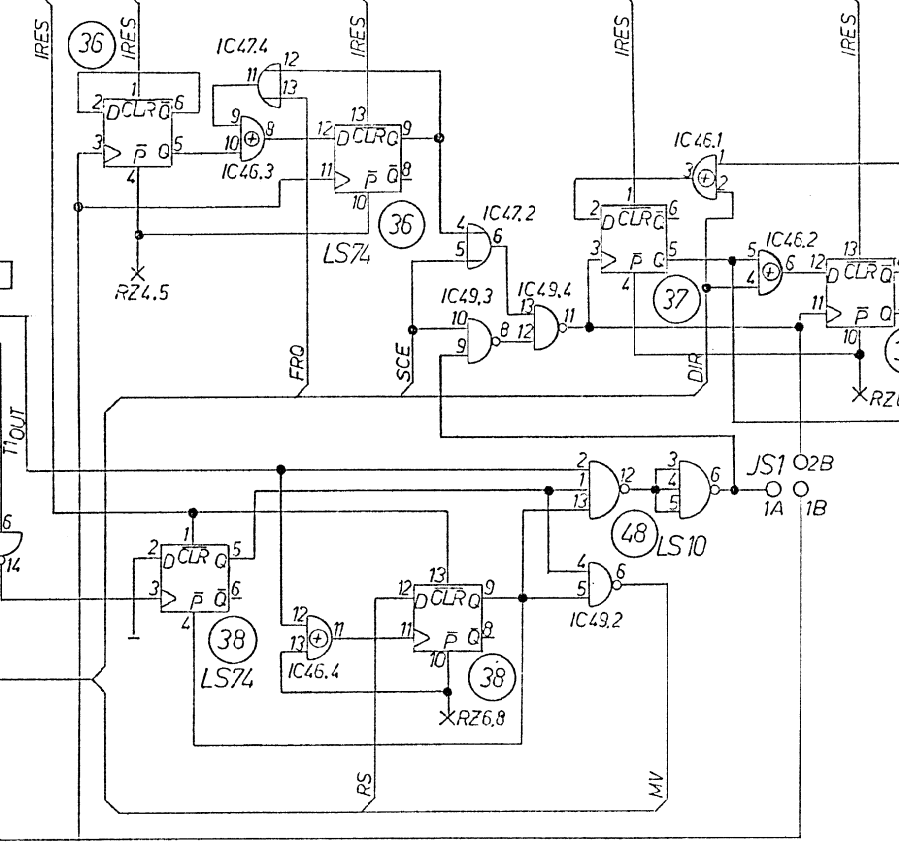
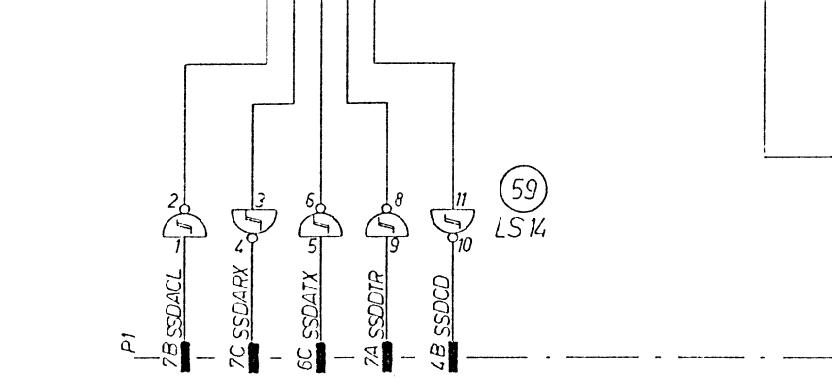
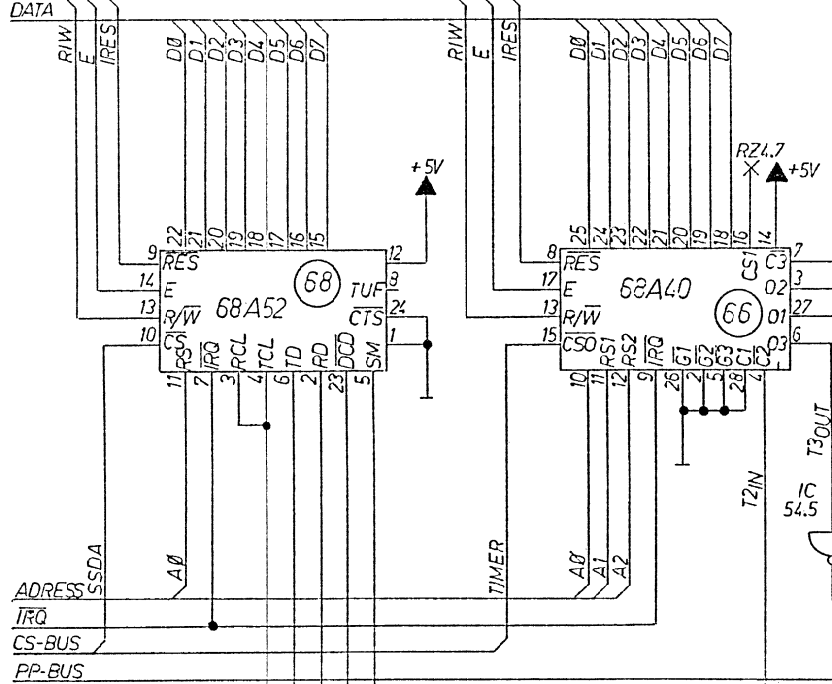
IC 51 = LS 00
 IC 53 = LS541
 IC 54 = LS540

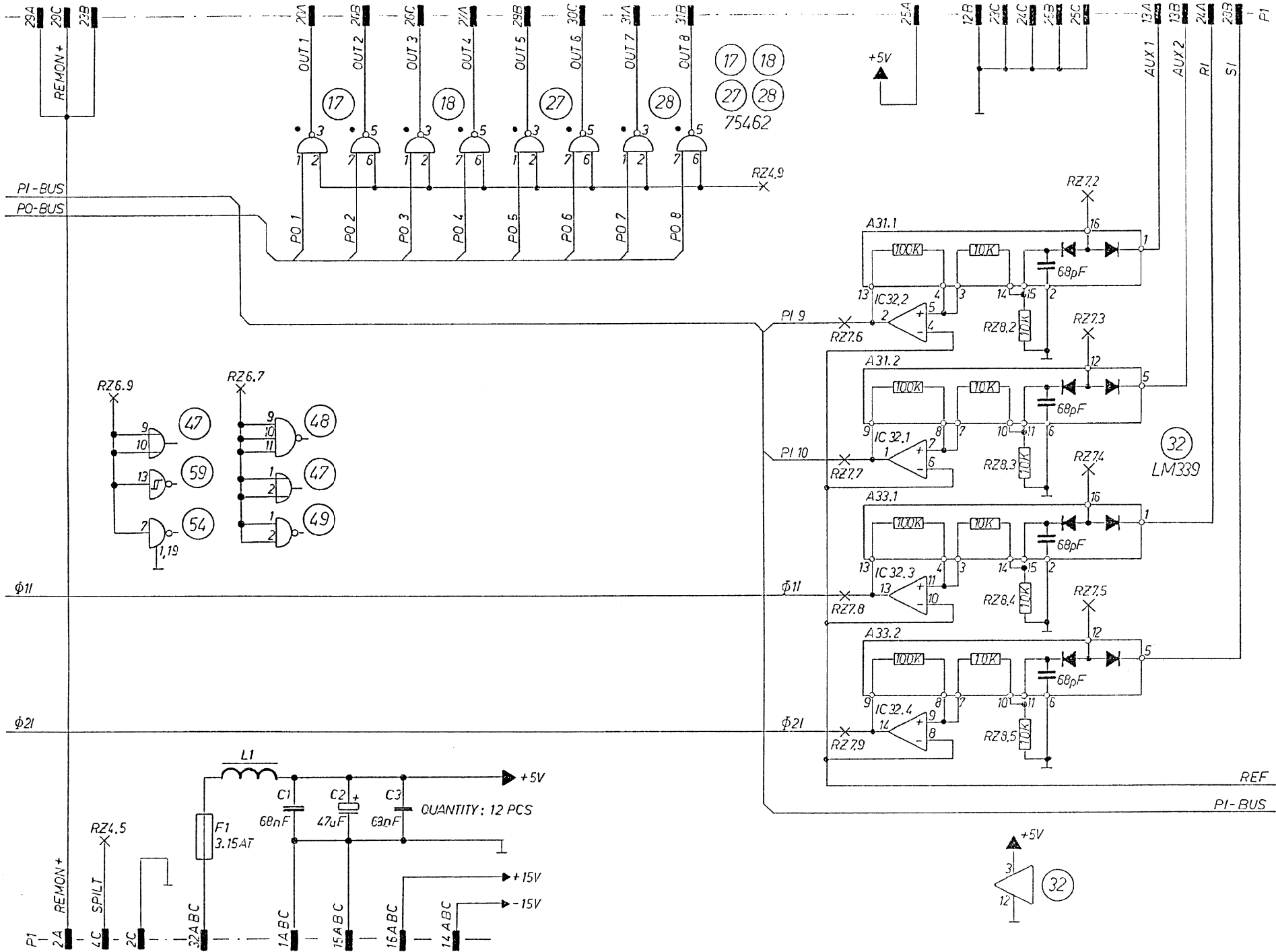


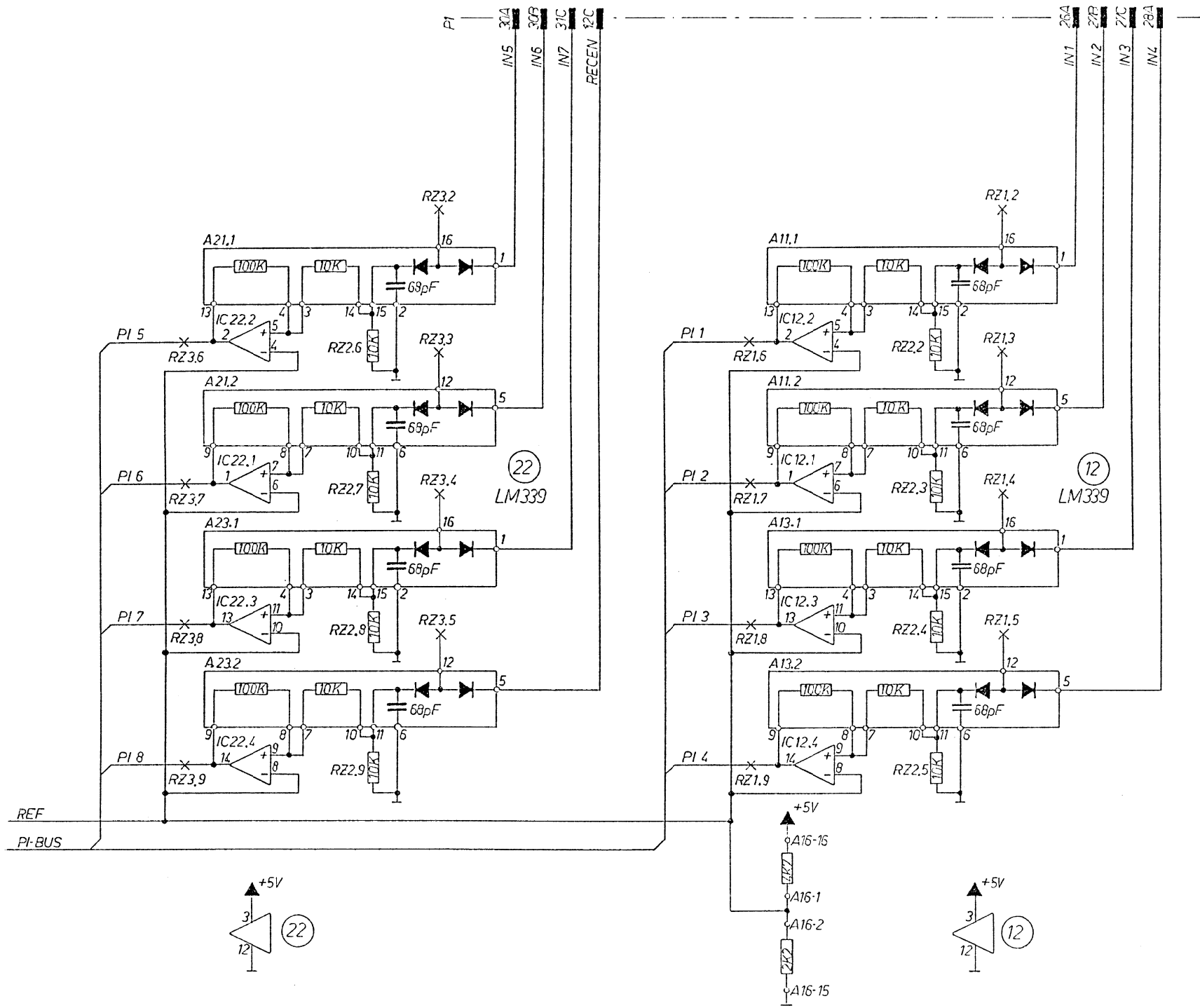


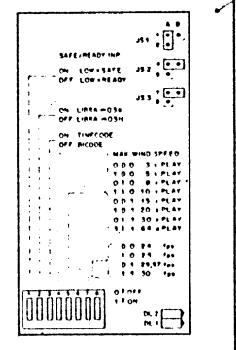
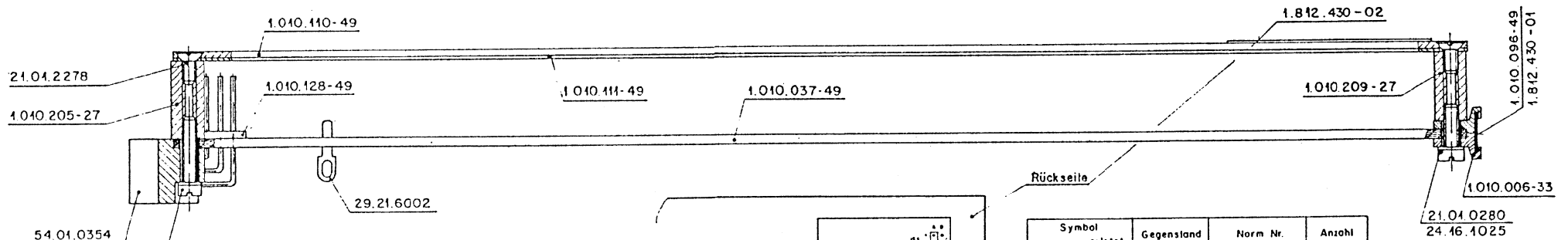
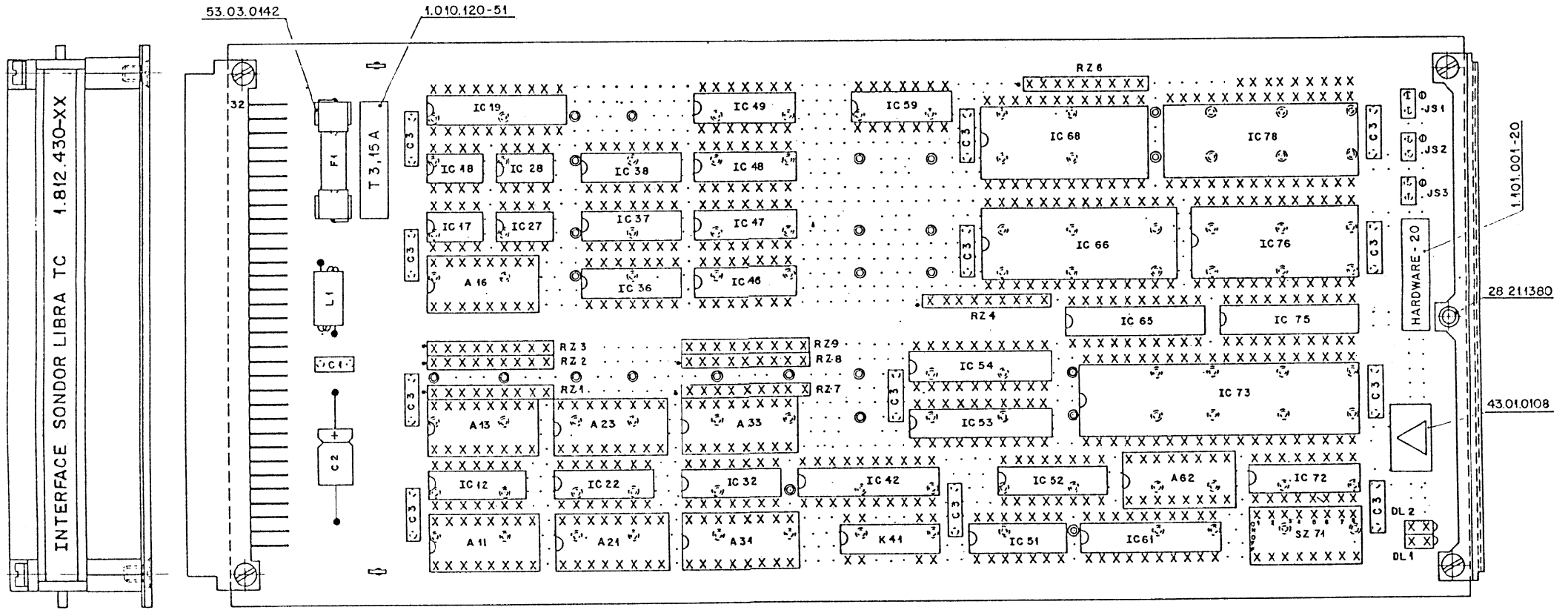
PI-BUS
PO-BUS

CONTRCL-BUS
DATA









Symbol	verletet	Gegenstand	Norm Nr.	Anzahl
Ø	⊙	Front Pin	1 010 027-54	9
X	○	Kontakt Pin	1 010 028-54	753
○	⊙	Dummy Pin	1 010 029-54	112

Norm Nr.	Umfeld	Luft	Abmessung	Abmessung	Abmessung
1.010.027-54	Ø	1.010.028-54	1.010.029-54	5.9.8	A.Ho.
Zugehörige Unterlagen	Fremdatoleranz	Maßstab	Datum		
PL		2:1	Gez	Gez	Gez
Ersatz für	Ersetzt durch	Kopie für			
STUDIEN REGENSDORF ZÜRICH		INTERFACE SONDOR LIBRA TC ESE		1.812.430-20	

IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
A....11		1.812.208.00		Assembly 406-11	St
A....13		1.812.208.00		Assembly 406-11	St
A....16		1.812.217.00		Assembly 416-16	St
A....21		1.812.208.00		Assembly 406-11	St
A....23		1.812.208.00		Assembly 406-11	St
A....31		1.812.208.00		Assembly 406-11	St
A....33		1.812.208.00		Assembly 406-11	St
A....62		1.812.201.00		Assembly 120-52	St
C....01		59.99.0205	68 N	-20%, 63V , CER	
C....02		59.25.3470	47 U	-20%, 16V , EL	
C....03		59.99.1200	.068U	20%, 63V , PE	Quantity: 12
DL...01		50.04.2107		Red ; 555-2007	
DL...02		50.04.2107		Red ; 555-2007	
F....01		51.01.0122	3.15AT	250V, 5 * 20	
IC...12		50.11.0104		LM 339 N	
IC...17		50.05.0227		SN 75 472 P, SN 75 462 JG	
IC...18		50.05.0227		SN 75 472 P, SN 75 462 JG	
IC...19		50.06.0273		SN 74 LS 273 N	
IC...22		50.11.0104		LM 339 N	
IC...27		50.05.0227		SN 75 472 P, SN 75 462 JG	
IC...28		50.05.0227		SN 75 472 P, SN 75 462 JG	
IC...32		50.11.0104		LM 339 N	
IC...36		50.06.0074		SN 74 LS 74 N	
IC...37		50.06.0074		SN 74 LS 74 N	
IC...38		50.06.0074		SN 74 LS 74 N	
IC...42		50.06.0540		SN 74 LS 540 N	
IC...46		50.06.0086		SN 74 LS 86 N	
IC...47		50.06.0032		SN 74 LS 32 N	
IC...48		50.06.0010		SN 74 LS 10 N	
IC...49		50.06.0000		SN 74 LS 00 N	
IC...51		50.06.0000		SN 74 LS 00 N	
IC...52		50.06.0163		SN 74 LS 163 AN	
IC...53		50.06.0541		SN 74 LS 541 N	

IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
IC...	54	50.06.0540		SN 74 LS 540 N	
IC...	59	50.06.0014		SN 74 LS 14 N	
IC...	61	50.06.0540		SN 74 LS 540 N	
IC...	65	50.06.0645		SN 74 LS 645 N	
IC...	66	50.16.0113		MC68 A40 HD68 A40	,A Mot,Hi
IC...	68	50.16.0114		MC68 A52 HD68 A52, S68A52	,A Mot,Hi,AMI
IC...	72	50.06.0139		SN 74 LS 139 N	
IC...	73	50.16.0107		MC 6803P-1, HD 6803P-1	,A Mot,Hi
IC...	75	50.06.1573		SN 74 ALS 573 N	TI
IC...	76	50.14.0107		HM 6116 LP-4, MSM 5128-15	,A Hi,OKI
IC...	78	50.14.0113	see Note	D 2764-3, HN 482764 G-3	,A It,Hi,TI,SGS
JS...	01	54.01.0021		Jumper	
JS...	02	54.01.0021		Jumper	
JS...	03	54.01.0021		Jumper	
K....	41	56.02.1003	5 V 1*A	100V/0.5A, Print	
L....	01	62.01.0115		Wide Band HF-Choke	
P....	01	54.01.0354		Card Connector 3 * 32 Euro Wrap	
RZ...	01	57.88.4332	8*3.3K	5%, Single Line	
RZ...	02	57.88.4103	8*10K	5%, Single Line	
RZ...	03	57.88.4332	8*3.3K	5%, Single Line	
RZ...	04	57.88.4332	8*3.3K	5%, Single Line	
RZ...	06	57.88.4332	8*3.3K	5%, Single Line	
RZ...	07	57.88.4332	8*3.3K	5%, Single Line	
RZ...	08	57.88.4103	8*10K	5%, Single Line	
RZ...	09	57.88.4332	8*3.3K	5%, Single Line	
SZ...	71	55.01.0168		8*A, DIL	

IND.	PGS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
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Note : Software release 1.812.972.20 (IC 78)

CER = Ceramic, EL = Electrolytic, PE = Met. Polyester

MANUFACTURERS : AMI = American Microsystem Inc.
Hi = Hitachi
It = Intel
Mot = Motorola
OKI = OKI Semiconductor
SGS = SGS/Ates
St = Studer
TI = Texas Instruments

ORIG 87/06/02

S T U D E R (00) 87/06/02 SC INTERFACE SONDROR LIBRA TC 1.812.430.20 PAGE 3

DIL-SWITCH

8	7	6	5	4	3	2	1	
								SAFE / READY input:
							off	---- low = ready
							on	---- low = safe
								Slave machine:
							off	----- m03tc
							on	----- m03a
								Slave mode:
							off	----- bicode
							on	----- timecode
								Max speed:
		off	off	off				----- 3 play
		off	off	on				----- 5 play
		off	on	off				----- 8 play
		off	on	on				----- 10 play
		on	off	off				----- 15 play
		on	off	on				----- 20 play
		on	on	off				----- 30 play
		on	on	on				----- 64 play
								Film format:
off	off							----- 24 fps
off	on							----- 25 fps
on	off							----- 29,97 fps
on	on							----- 30 fps

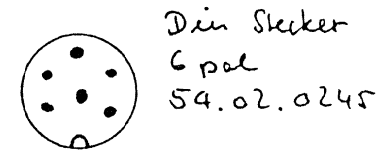
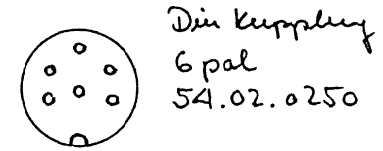
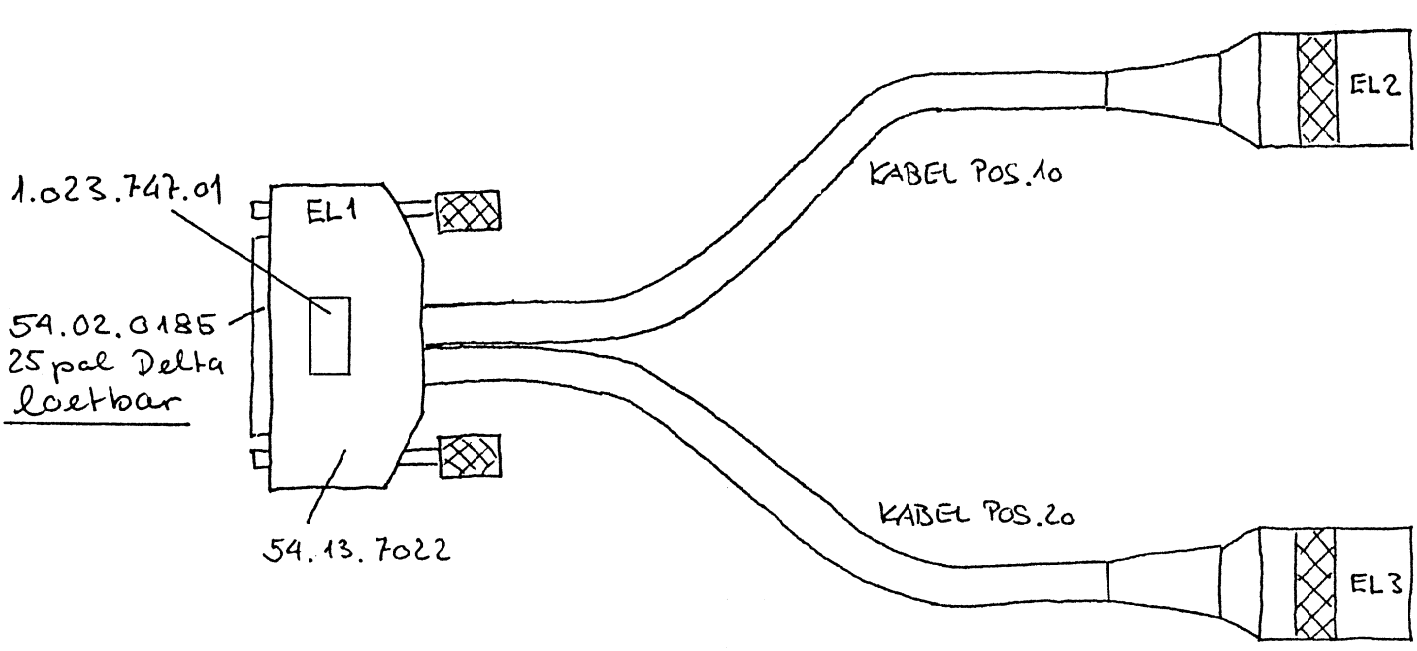
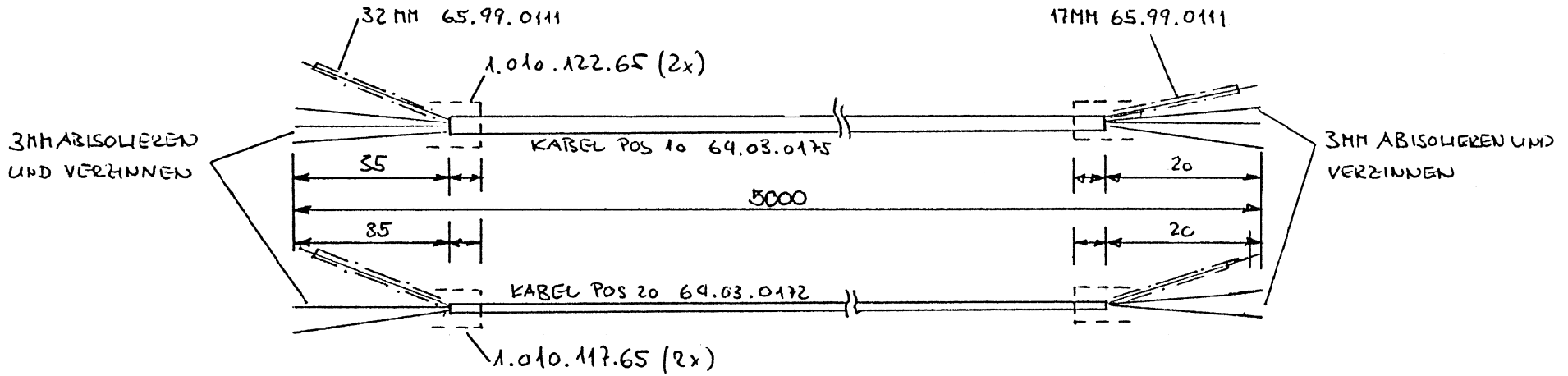
CONNECTOR B

- AUX 1 low = TIMECODE
high = SWITCH 3 activ
- AUX 2 low = 24 fps
high = SWITCH 7,8 activ

CONNECTOR A

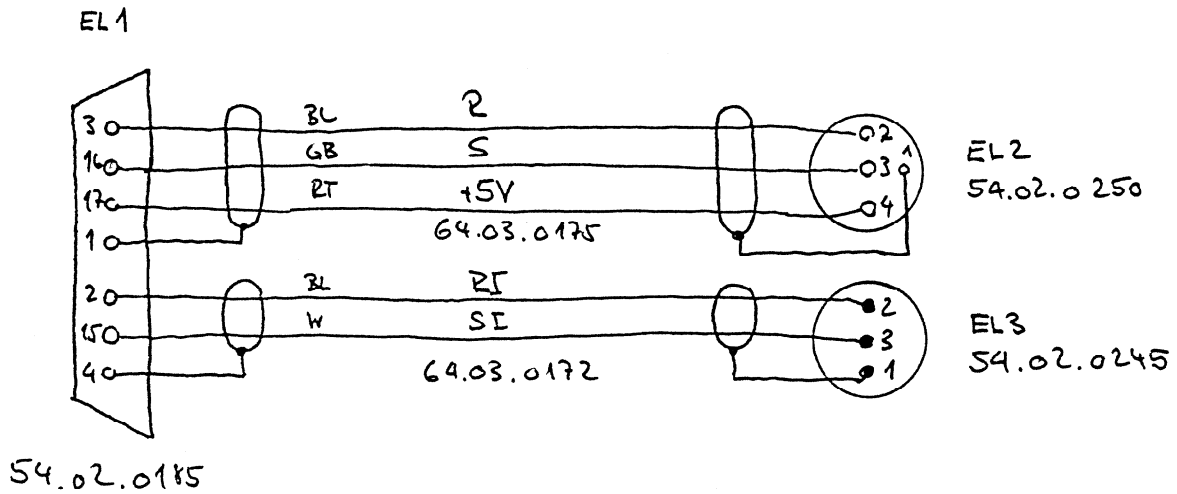
- IN 4 low = SYNCHRONIZER ENABLE, COINZIDENCE input's (IN 2,3) activ low
high = SYNCHRONIZER ENABLE, COINZIDENCE input's (IN 2,3) activ high
- IN 5 low = 35mm FILM
high = 16mm FILM
- IN 6 low = 35mm OUTPUT FREQUENCY nominal
high = 35mm OUTPUT FREQUENCY *2
- IN 7 low = 35mm INPUT FREQUENCY nominal
high = 35mm INPUT FREQUENCY *2

INTERFACE KABEL SONDOR LIBRA TC 1.023.747.00



INTERFACE KABEL SONDOR LIBRA TC 1.023.747.00

SCHEMA



PRODUKTIONS-VERDRÄHTUNGS-LISTE

*** 1.023.747.00 ***

AEND.DAT. 87/09/07-00

SFITF 1

IF-KABEL SENDOP LIERA TC 5M

PRGC.GAT. 87/09/08 * 14:02

TOTAL 1 SFITF

AN ALLEN STECKER SIND DIE LOETSTELLEN MIT SCHRUPPFSCHLAUCH
1.010.106.65 (14*) ZU ISOLIEREN

MOD IDX	BAUTEIL NR.	POS/A. NR.	FARBE	SIGNAL NAME	I-- A N F A N G --I				I--- A N Z A P F U N G ---I				I----- F N D E -----I				BEM			
					TYP	VERDRÄHTUNGSORT	LAENGE	TYP	VERDRÄHTUNGSORT	LAENGE	TYP	VERDRÄHTUNGSORT	LAENGE	TYP	VERDRÄHTUNGSORT	BEM				
					AS	GR	EL	PT	ANFANG	AS	GR	EL	PT	TOTAL	AS	GR	EL	PT		
	1.023.747.94	0010												5000						
		0010	SC	SCREEN	SN3	00	00	01	01						SN3	00	00	02	01	
		0020	BL	K	SN3	00	00	01	03						SN3	00	00	02	02	
		0020	GB	S	SN3	00	00	01	16						SN3	00	00	02	03	
		0040	KT	+5V	SN3	00	00	01	17						SN3	00	00	02	04	
	1.023.747.94	0020												5000						
		0020	BL	RI	SN3	00	00	01	02						SN3	00	00	03	02	
		0010	SC	SCREEN	SN3	00	00	01	04						SN3	00	00	03	01	
		0030	WS	SI	SN3	00	00	01	15						SN3	00	00	03	03	