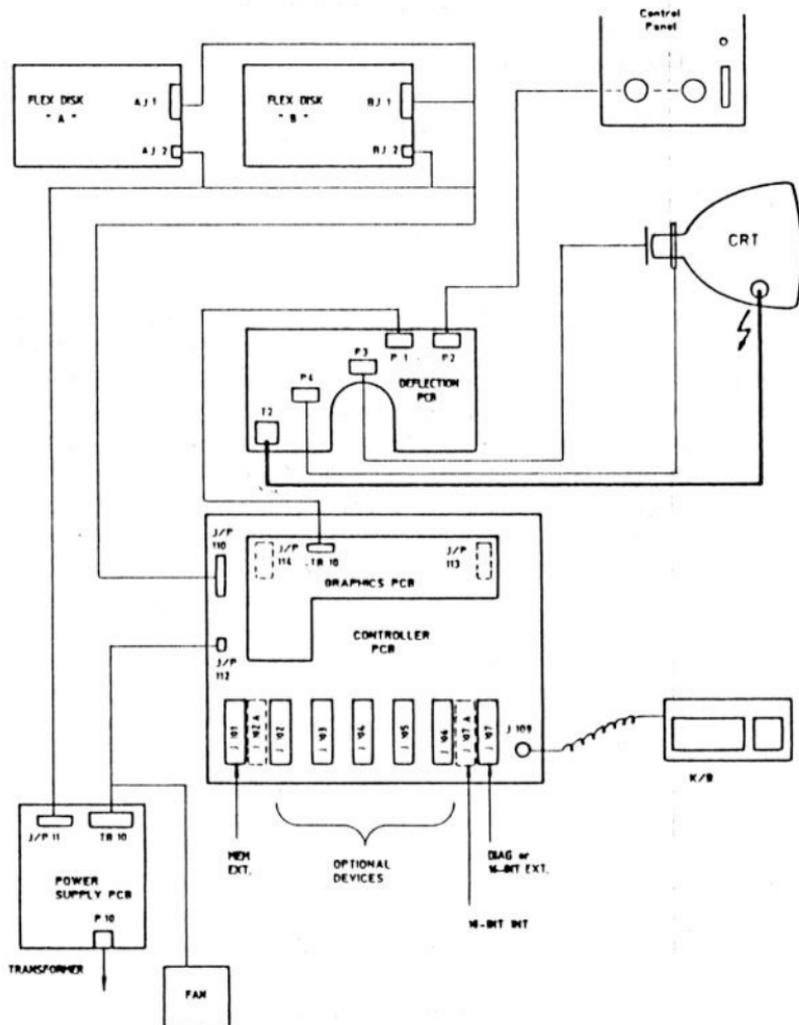
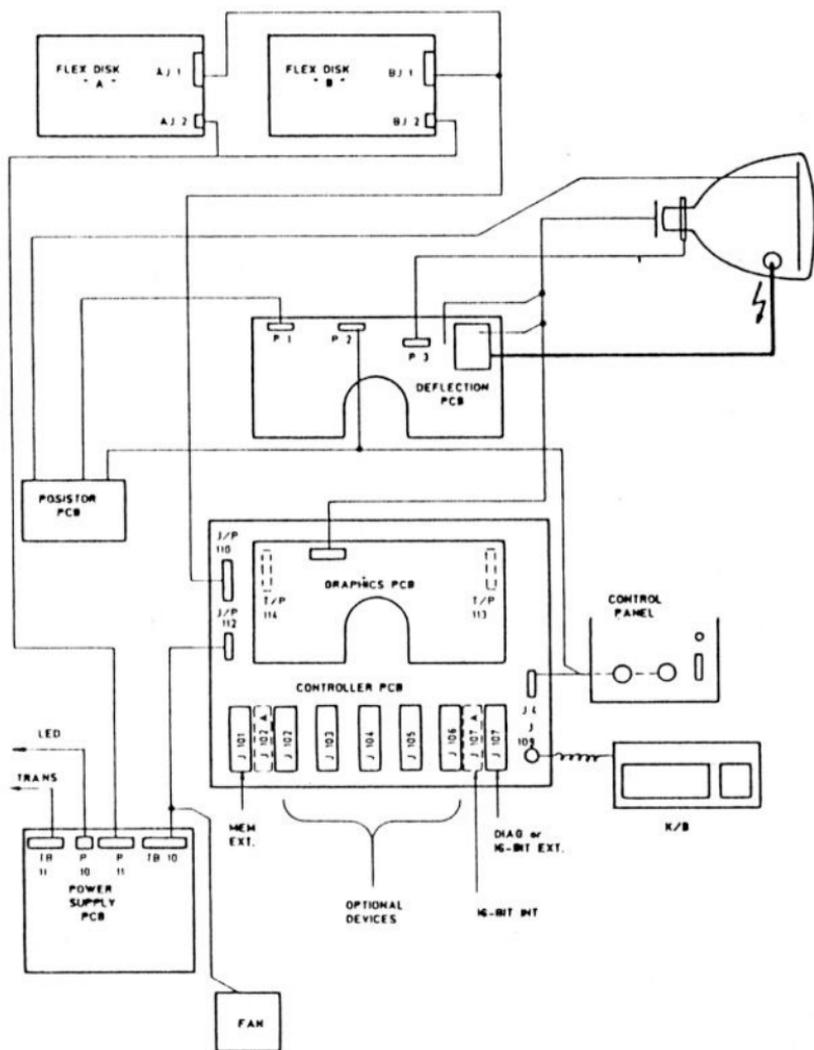
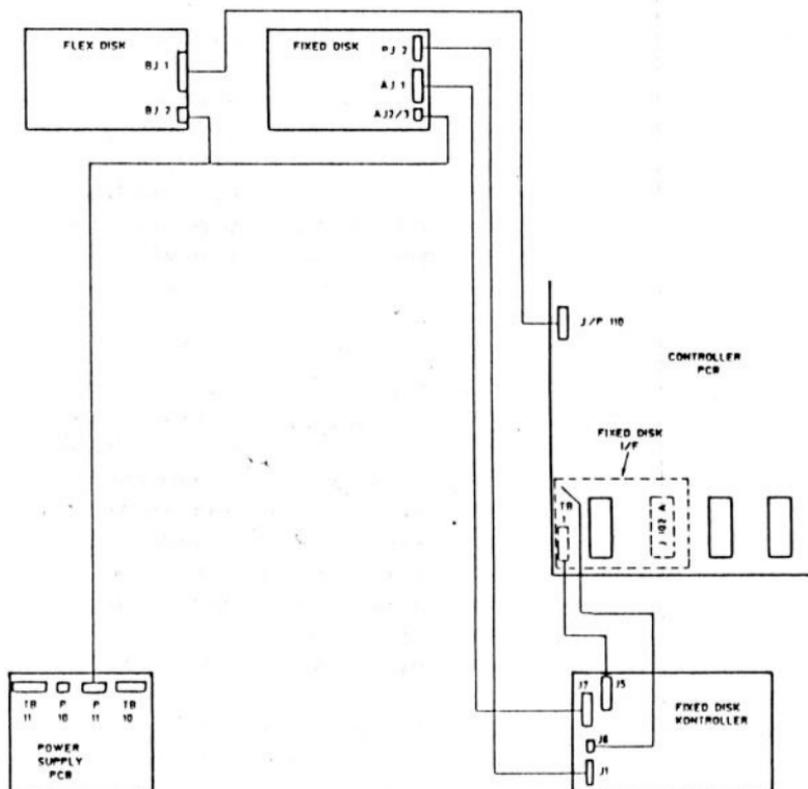


WIRING BLOCK DIAGRAM MONOCHROME DUAL FLEXIBLE DISK SYSTEM



WIRING BLOCK DIAGRAM COLOR DUAL FLEXIBLE DISK SYSTEM



WIRING BLOCK DIAGRAM
FLEXIBLE/FIXED DISKS

PCB AND SCHEMATIC COMPATIBILITY

Type	Number	Schematic
Controller (Mono)	017-0031966 A	017-0032012 A
	017-0032123 A	017-0032012 B
	017-0032124 A	017-0032012 B
	017-0032125 A	017-0032012 B
	017-0032126 A	017-0032012 B
	017-0032730 A	017-0032012 D
	017-0032731 A	017-0032012 D
	017-0032721 A	017-0032012 F
	017-0032721 B	017-0032012 G
	017-0032722 A	018-0032012 F
	017-0032722 B	017-0032012 G
	017-0032723 A	018-0032012 F
	017-0032723 B	017-0032012 G
	017-0032724 A	017-0032012 F
	017-0032724 B	017-0032012 G
	017-0033399 A	017-0032012 H
	017-0033399 B	018-0032012 H
	017-0033400 A	017-0032012 H
	017-0033401 A	017-0032012 H
	017-0033402 A	017-0032012 H
Controller (Color)	017-0032853 A	017-0032012 E
	017-0032854 A	018-0032012 E
	017-0032855 A	017-0032012 G
	017-0032856 A	018-0032012 G
	017-0033403 A	017-0032012 H
	017-0033404 A	017-0032012 H
Graphics (Mono)	017-0032002 A	017-0032010 A
	017-0032139 A	017-0032010 B
	017-0031151 A	017-0032010 C
	017-0032456 A	017-0032010 D
	017-0032140 A	017-0032010 E
	017-0033416 A	017-0032010 H
	017-0032850 A	017-0032010 G
	017-0033417 A	017-0032010 H

Type	Number	Schematic
Graphics (Color)	017-0032479 A	017-0032489 A
	017-0032851 A	017-0032489 A
	017-0032851 B	017-0032489 B
	017-0032903 A	017-0032489 C
	017-0033418 A	017-0032489 D
	017-0033470 A	017-0032489 D
	017-0033419 A	017-0032489 D
	017-0033471 A	017-0032489 D
Deflection (Mono)	998-0612283 A	017-0031978 B
	998-0612284 A	017-0031978 B
	998-0612285 A	017-0031978 B
	998-0612286 A	017-0031979 C
	998-0612287 A	017-0031979 C
	998-6012288 A	017-0031979 B
	998-0612289 A	017-0031979 B
	998-0612293 A	017-0031979 C
	998-0612294 A	017-0031979 C
	998-0612295 A	017-0031979 D
Deflection (Color)	017-0032152 A	017-0032158 A
	017-0032836 A	017-0032158 B
	017-0032925 A	017-0032158 B
	017-0032925 B	017-0032158 B
	017-0033552 A	017-0032158 D
	017-0033445 A	017-0032158 D
	017-0033496 A	017-0032158 E
	017-0033624 A	017-0032158 F
	017-0033627 A	017-0033627 F
HV Oscillator	017-0032437 A	017-0032158 A
	017-0032437 B	017-0032158 A
	017-0032859 A	017-0032158 B
	017-0032926 A	017-0032158 C
	017-0032926 A	017-0032158 D
Video Amp.	017-0032468 A	017-0032158 A
	017-0032849 A	017-0032158 B
	017-0032900 A	017-0032158 B
	017-0032900 A	017-0032158 C
	017-0033464 A	017-0032158 D
	017-0033464 A	017-0032158 E
	017-0033494 A	017-0032158 F

Video Pre-amp.	017-0032496	A	017-0032158	A	
	017-0032871	A	017-0032158	B	
	017-0032871	A	017-0032158	C	
	017-0032871	A	017-0032158	D	
	017-0033498	A	017-0032158	E	
	017-0033624	A	017-0032158	F	
Posistor (120 V)	017-0032526	A	017-0031570	B	
	(120 V)	017-0033361	A	017-0031570	B
	(220 V)	017-0032527	A	017-0031570	B
Hybrid 32KB	017-0032503	A	017-0032511	A	
	017-0033469	A	017-0032511	B	
	017-0033469	B	017-0032511	B	
Power Supply	017-0031939	A	017-0031601	B	
	017-0031939	B	017-0031601	B	
	017-0031939	C	017-0031601	B	
	017-0031939	C	017-0031601	C	
	017-0031939	D	017-0031601	C	
	017-0032514	A	017-0031601	E	
	017-0032432	A	017-0031601	F	
	017-0032432	B	017-0031601	F	
	017-0032432	C	017-0031601	F	
	017-0032432	D	017-0031601	F	
	P.S. (fixed disk)	017-0032099	A	017-0032115	A
017-0032099		B	017-0032115	A	
017-0032432		A	017-0031601	A	
P.S. Hybrid 12V	017-0031924	A	017-0031944	A	
	017-0032513	A	017-0031944	B	
	017-0032460	A	017-0031944	C	
	017-0032460	B	017-0031944	D	
	017-0032460	C	017-0031944	D	
P.S. Hybrid 5V	017-0031616	A	017-0031624	A	
	017-0032512	A	017-0031624	B	
	017-0032459	A	017-0031624	C	
	017-0032459	B	017-0031624	D	
Rectifier	017-0031925	A	017-0031601	B	
	017-0032114	A	017-0031601	C	
	017-0032120	A	017-0031601	D	

Fixed Disk Controller	008-0072621	A	not
	008-0072623	A	released
Fixed Disk Interface (3282)	017-0027021	A	017-0027022 A
	017-0027064	A	017-0027022 C
	017-0027102	A	017-0027022 D
	017-0027102	B	017-0027022 D
Fixed Disk Interface (3273)	017-0032087	A	017-0032095 A
	017-0032658	A	017-0032095 B
Memory Ext. 64 KB	017-0032550	A	017-0032558 A
Memory Ext. 192KB	017-0032130	A	017-0032138 A
	017-0032130	B	017-0032138 B
	017-0032130	C	017-0032138 C
	017-0032130	D	017-0032138 C
	017-0032130	E	017-0032138 D
	017-0032130	F	017-0032138 D
	017-0032130	G	017-0032138 D
Memory Ext.448KB	017-0032516	A	017-0032524 A
	017-0033449	A	017-0032524 B
	017-0033449	B	017-0032524 B
	017-0033449	C	017-0032524 B
Centronics	017-0031546	A	017-0031554 A
	017-0031546	B	017-0031554 A
	017-0031546	C	017-0031554 B
RS-232-C	017-0031857	A	017-0031865 A
	017-0031857	B	017-0031865 B
	017-0031857	C	017-0031865 B
	017-0031857	C	017-0031865 C
RS-232-C (K213)	017-0033415	A	017-0031865 C
RS-232-C (Buffered)	017-0032782	A	017-0032792 A
	017-0032782	B	017-0032792 A
	017-0032782	C	017-0032792 A
	017-0032782	D	017-0032792 B
	017-0032782	E	017-0032792 C
	017-0032782	F	017-0032792 C

SCC Comm. Cartridge	017-0033563 B	017-0033564 B
Diagnostic Module	017-0031866 A	017-0031874 A
	017-0031866 B	017-0031874 B
	017-0031866 C	017-0031874 B
DLC Inhouse Interface	017-0033962 A	017-0033972 C
16-Bit (External)	017-0032540 A	017-0032548 A
16-Bit (Internal)	017-0031993 A	017-0032001 A
	017-0031993 B	017-0032001 A
	017-0032649 A	017-0032001 B
	017-0032742 A	017-0032001 C
	017-0032742 B	017-0032001 D
Shared RAM Cartridge	017-0033581 A	017-0033582 A
	017-0033581 B	017-0033582 A
68008 Processor Board	017-0033572 A	017-0033573 A
	017-0033572 B	017-0033573 A
16-Bit Processor with PIC	017-0033501 A	017-0033502 A
Omni Net Controller	017-0032206 A	017-0032434 A
	017-0032206 B	017-0032434 B
Omni Net Interface	017-0032197 A	017-0032433 A
	017-0033441 A	017-0032433 B
	017-0033619 A	017-0032433 C
Omni Net Isolator	017-0032214 A	017-0032222 A
RS-232-C (Switchable)	017-0032711 A	017-0032712 A
	017-0032711 B	017-0032712 B
(Conv. Mod/Ptr)	017-0033008 A	017-0033007 A
(Conv. Plt/Blk)	018-0033312 A	017-0033319 A
Real-Time-Clock	018-0032702 A	017-0032703 A
	017-0032702 B	017-0032703 B
IEEE-488	017-0032640 A	017-0032641 A
	017-0032640 B	017-0032641 B

Mouse	017-0032816 A	017-0032824 A
	017-0032816 B	017-0032824 B
Ky'bd DIN	017-0031555 A	017-0031563 A
DIN	017-0032077 A	017-0031563 B
DIN	017-0032168 A	017-0031563 C
DIN	017-0032531 A	017-0031563 D
DIN	017-0032531 B	017-0031563 E
DIN	017-0032531 B	017-0031563 F
DIN	017-0032531 C	017-0031563 G
Lat Am I CAP	017-0032537 A	017-0031563 E
Lat BAS II CAP	017-0032538 A	017-0031563 E
Lat Bas II DIN	017-0032536 A	017-0031563 E
Lat Bas II DIN	017-0032536 A	017-0031563 F
Lat Bas II DIN	017-0032536 B	017-0021563 G
Non Lat BAS III	018-0033379 A	017-0031563 F
Non Lat Bas III	017-0033379 B	017-0031563 G
US Lang CAP	017-0032535 A	017-0031563 D
US Lang CAP	017-0032535 B	017-0031563 E
US Lang CAP	017-0032902 A	017-0031563 E
US Lang CAP	017-0032902 A	017-0031563 F
US Lang CAP	017-0032902 B	018-0031563 G
Lat Lang I typw	017-0033591 A	018-0031563 H
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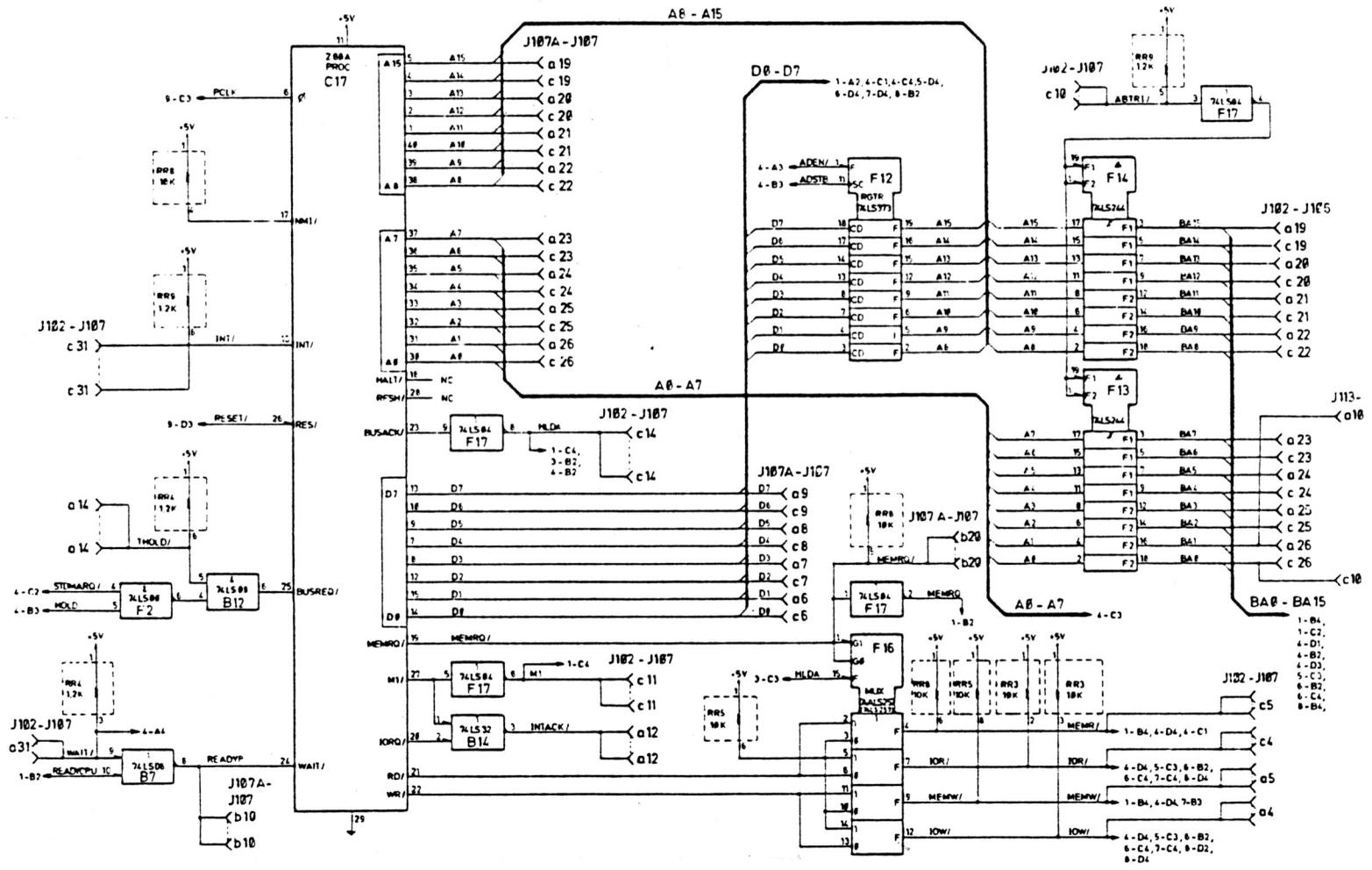
The following schematics have been chosen for inclusion in this manual to provide the broadest coverage for the various PCBs that are in the field.

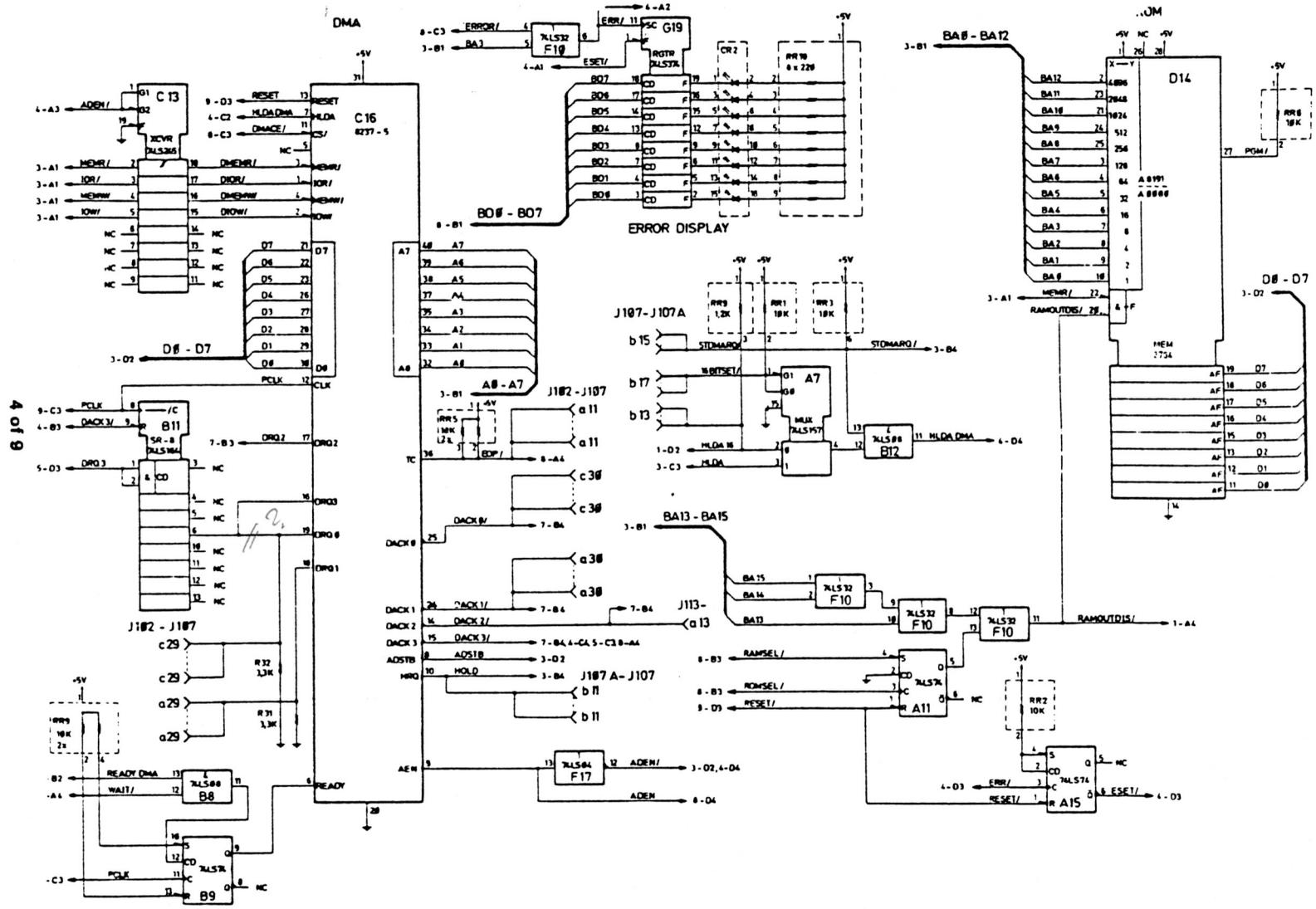
In many instances schematics are revised to show minor changes to components or their values: such information may be found in the Parts Identification Manual.

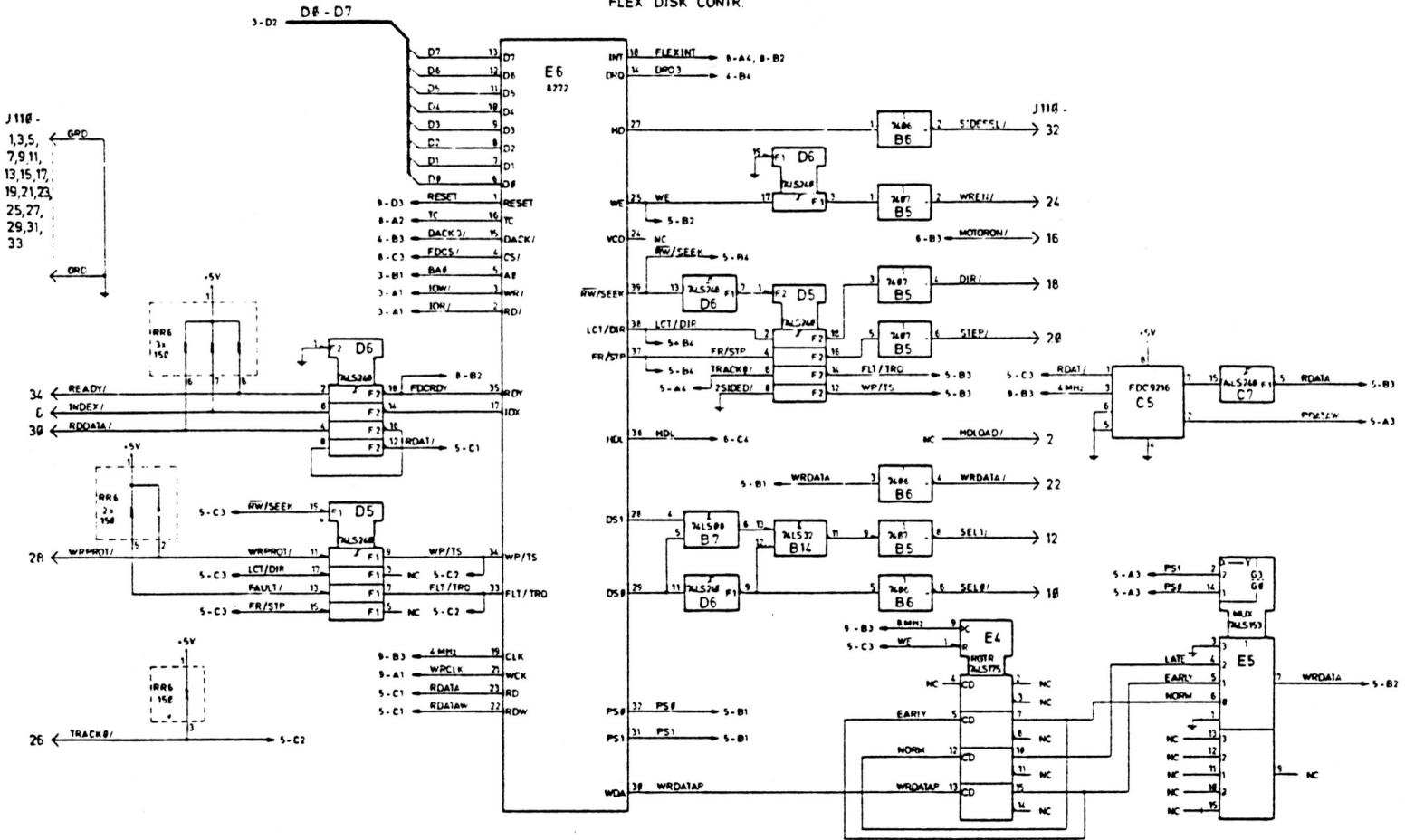
If a schematic with the correct revision level is not available, then use the schematic with the next higher revision level.

PCB Controller	017-0032012 Rev. C
	017-0032012 Rev. H
PCB Monochrome Graphics	017-0032010 Rev. D
	017-0032010 Rev. H
PCB Color Graphics	017-0032489 Rev. D
Deflection Monochrome	017-0031979 Rev. D
Video Deflection Color	017-0032158 Rev. F
Memory Hybrid 32K	017-0032511 Rev. B
+5V Hybrid	017-0031624 Rev. D
+12V Hybrid	017-0031944 Rev. D
Wiring	017-0031570 Rev. B
Power Supply	017-0031601 Rev. F
Integrated Fixed Disk Interface	017-0032095 Rev. B
Internal 16-Bit Processor	017-0032001 Rev. D
Keyboard	017-0031563 Rev. G
Memory Extension 64K (K200)	017-0032558 Rev. A
Memory Extension 192K (K202)	017-0032138 Rev. D
Memory Extension 448K (K208)	017-0032524 Rev. B
Centronics Interface (K210)	017-0031554 Rev. B
RS-232C Interface (K211/212/213)	017-0031865 Rev. C
Buffered Async/Bisync Interface (K215)	017-0032792 Rev. C
SCC Communication Interface (K216)	017-0033564 Rev. B
Diagnostic Module (K220)	017-0031874 Rev. B
DLC Inhouse Interface (K223)	017-0033972 Rev. C
External 16-Bit Processor (K231)	017-0032548 Rev. A
Shared RAM (K233)	017-0033582 Rev. A
68008 Processor Board (K234)	017-0033573 Rev. A
16-Bit Processor with PIC (K235)	017-0033502 Rev. A
Omninet Interface (K600)	017-0032433 Rev. C
Omninet Isolator (K600)	017-0032222 Rev. A
Omninet Controller (K600)	017-0032434 Rev. B
RS-232C Switchable Interface (K801)	017-0032712 Rev. B
Real Time Clock (K803)	017-0032703 Rev. B
IEEE-488 Interface (K804)	017-0032641 Rev. B
Mouse Interface (K806)	017-0032824 Rev. B
NCR 3282 Fixed Disk Interface	017-0027022 Rev. D

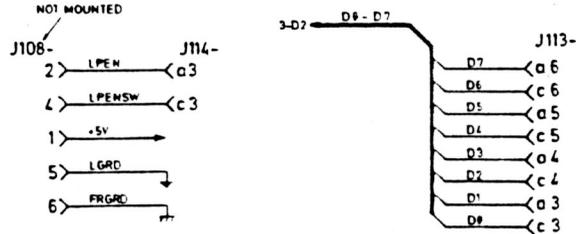
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TO GRAPHIC BOARD



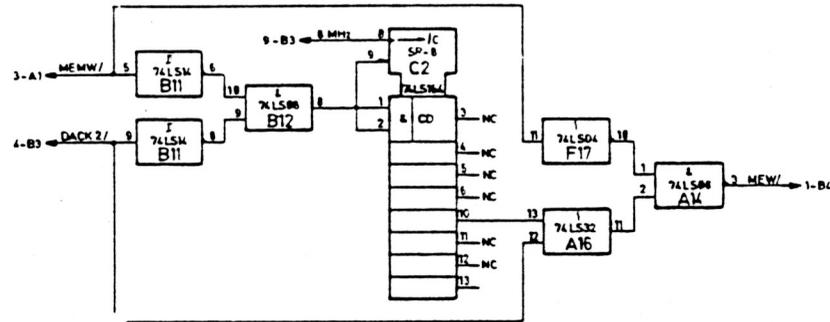
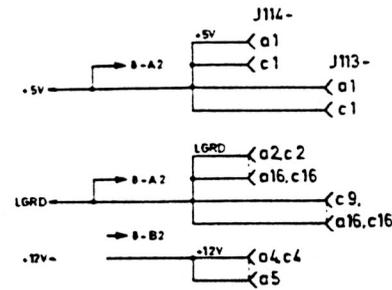
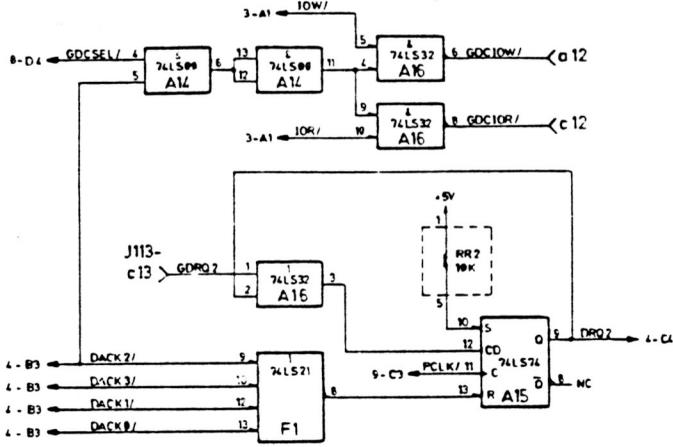
J114

e		c
+5V	1	+5V
LGRD	2	LGRD
LPEW	3	LPEWSW
+12V	4	+12V
-12V	5	NC
NC	6	NC
NC	7	NC
NC	8	NC
NC	9	NC
NC	10	NC
NC	11	NC
NC	12	NC
NC	13	NC
NC	14	NC
NC	15	LGRD
LGRD	16	LGRD

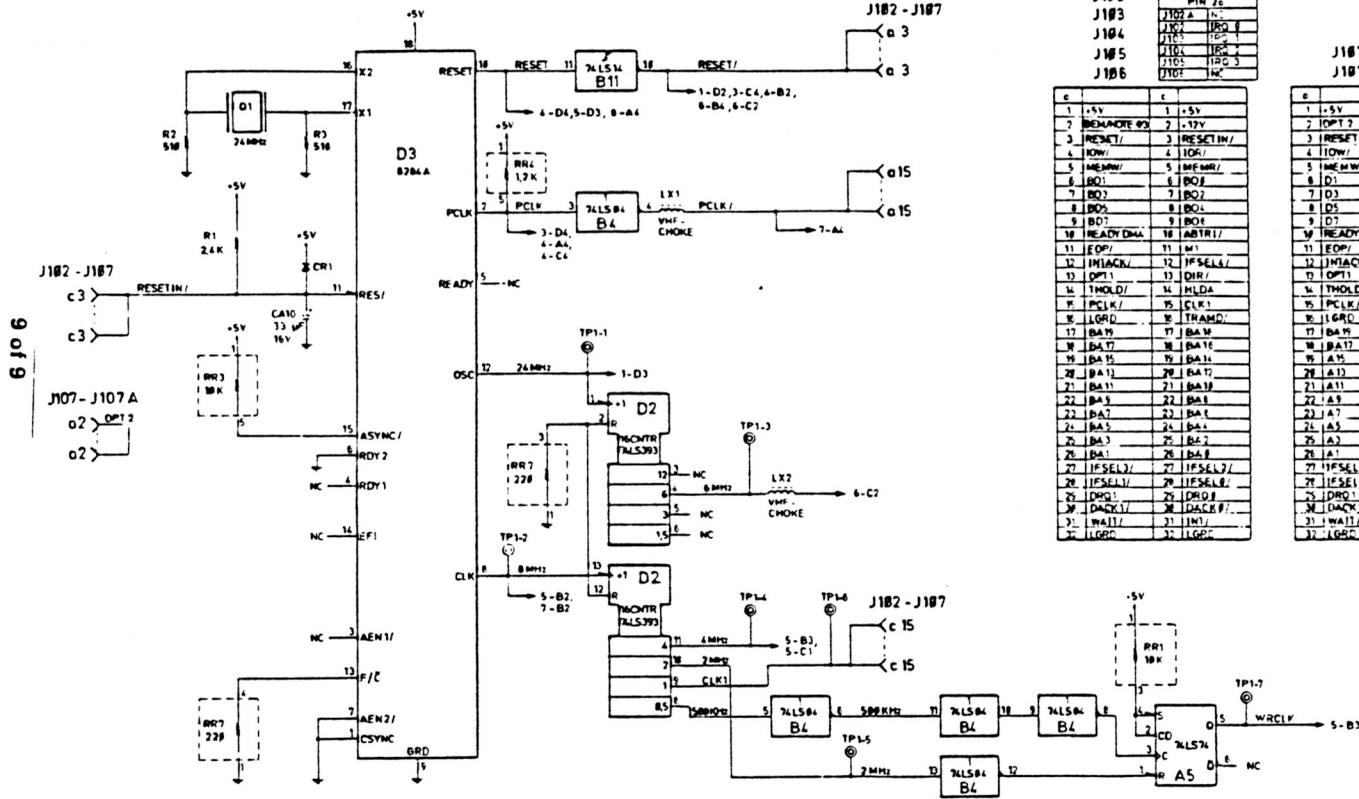
J113

e		c
+5V	1	+5V
NC	2	NC
D1	3	D0
D3	4	D2
D5	5	D4
D7	6	D6
NC	7	NC
HSYNEX	8	HSYN
VSYNEX	9	LGRD
BA1	10	BA0
BA1N	11	NC
GDCIOW/	12	GDCIOR/
DACK2/	13	SPDR2
NC	14	NC
NC	15	WCLK
LGRD	16	LGRD

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DMX - BUS



J102 A

ITEM	NOTE
J102	MIN 30
J103	J102A NC
J104	J102 DRO 1
J105	J102 DRO 2
J106	J102 DRO 3
J107	NC

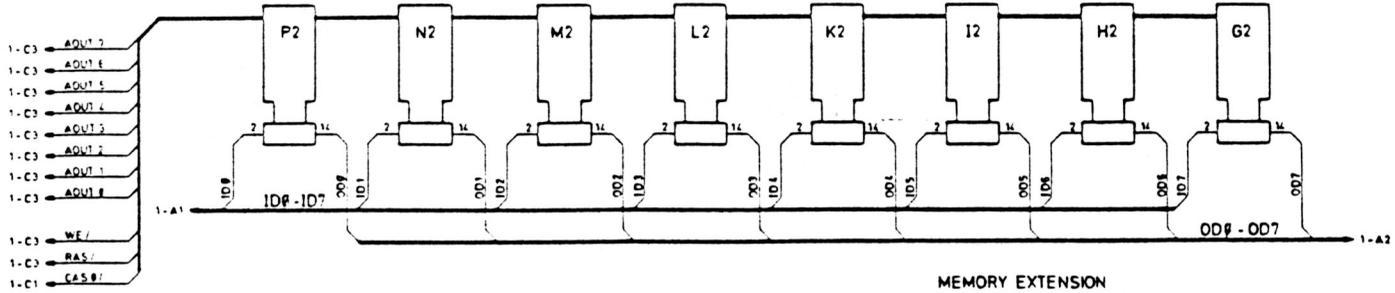
J187 DIAGNOSTIC - MODULE
J187 A 16 BIT - PROC

c	e
1	+5V
2	BEMARKER 2
3	RESET/
4	LOW/
5	MEMW/
6	RD/
7	RD2/
8	RD3/
9	BD/
10	READY DMA
11	EOP/
12	INTACK/
13	OPT1/
14	THOLD/
15	PCLK/
16	LORD/
17	BA15
18	BA17
19	BA15
20	BA17
21	BA15
22	BA17
23	BA15
24	BA17
25	BA15
26	BA17
27	FESEL1/
28	FESEL1/
29	DQ0/
30	DACK1/
31	WAIT/
32	LORD

a	b	c
1	+5V	1
2	OPT 2	2
3	RESET/	3
4	LOW/	4
5	MEMW/	5
6	RD/	6
7	RD2/	7
8	RD3/	8
9	BD/	9
10	READY DMA	10
11	EOP/	11
12	INTACK/	12
13	OPT1	13
14	THOLD/	14
15	PCLK/	15
16	LORD	16
17	BA15	17
18	BA17	18
19	BA15	19
20	BA17	20
21	BA15	21
22	BA17	22
23	BA15	23
24	BA17	24
25	BA15	25
26	BA17	26
27	FESEL1/	27
28	FESEL1/	28
29	DQ0/	29
30	DACK1/	30
31	WAIT/	31
32	LORD	32

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D RAM

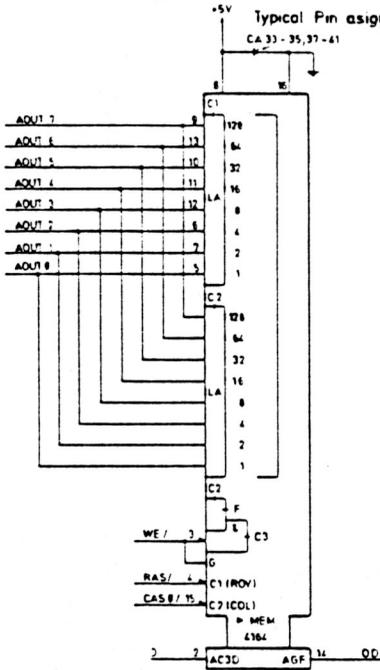


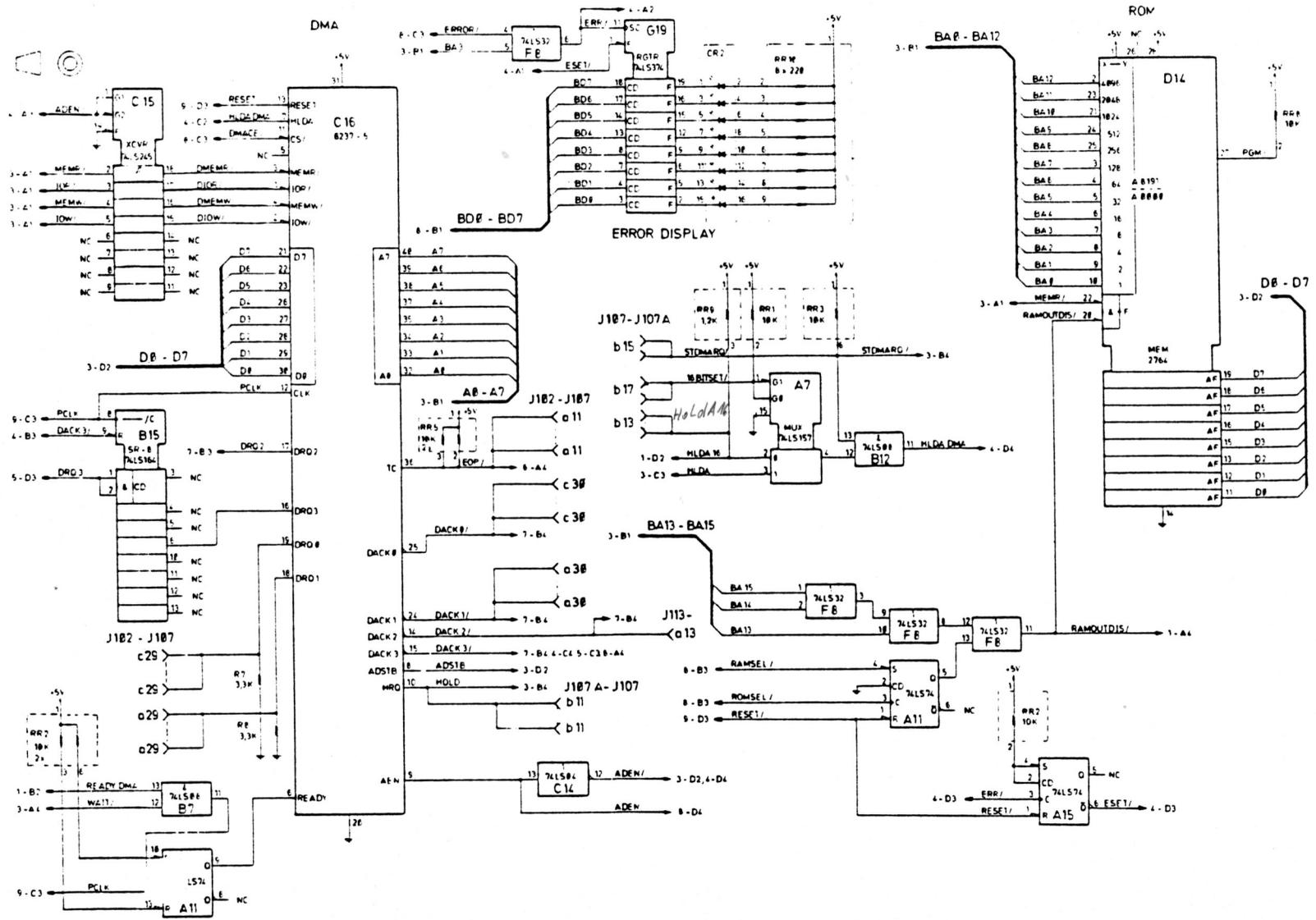
MEMORY EXTENSION

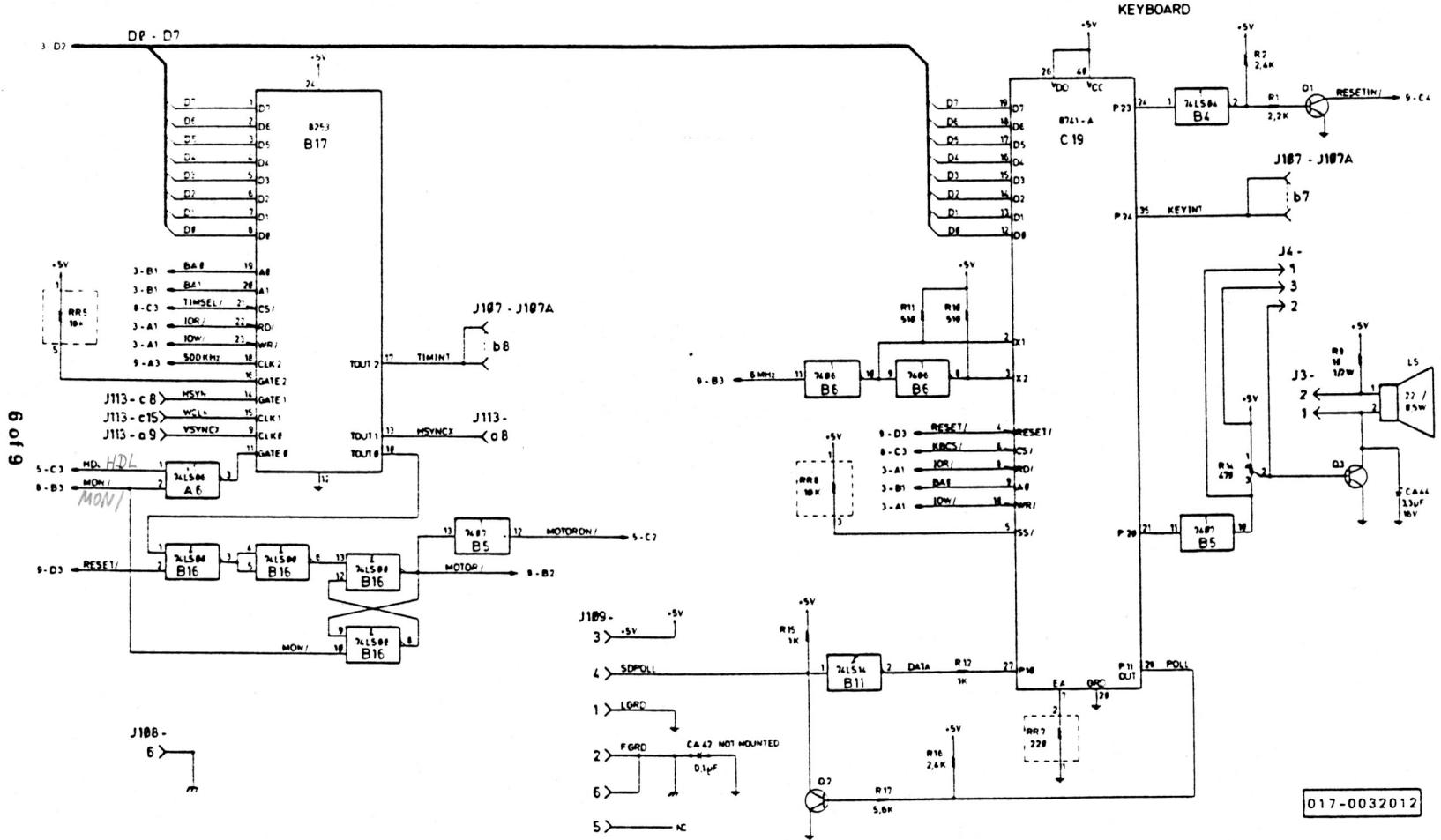
J101

0	1
1	2
2	3
3	4
4	5
5	6
6	7
7	8
8	9
9	10
10	11
11	12
12	13
13	14
14	15
15	16
16	17
17	18
18	19
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20	21
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30	31
31	32

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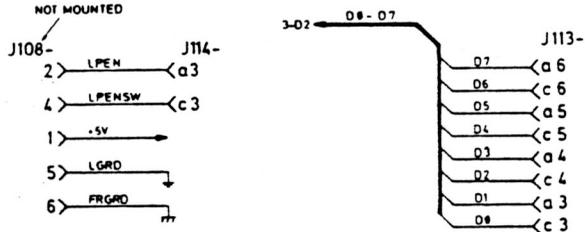




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017-0032012

TO GRAPHIC BOARD



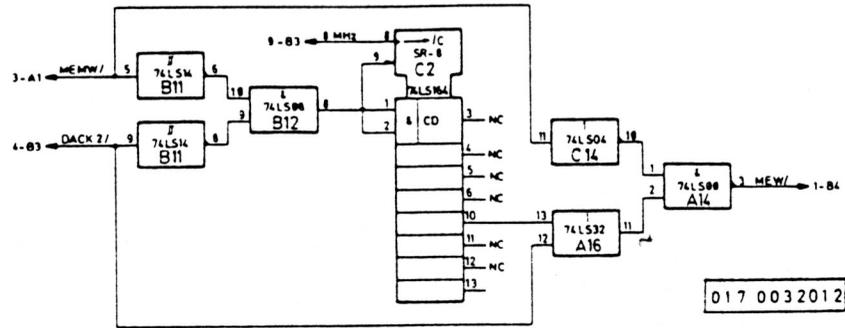
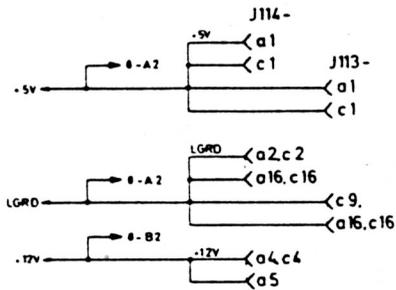
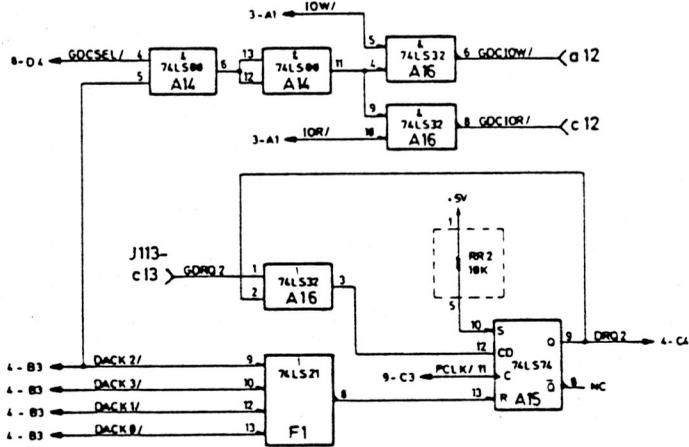
J114

a	b	c
.5V	1	.5V
LGRD	2	LGRD
LPEN	3	LPENSW
.17V	4	.17V
.17V	5	.17V
MC	6	MC
MC	7	MC
MC	8	MC
MC	9	MC
MC	10	MC
MC	11	MC
MC	12	MC
MC	13	MC
MC	14	MC
MC	15	LGRD
LGRD	16	LGRD

J113

a	b	c
.5V	1	.5V
MC	2	MC
D1	3	D0
D2	4	D2
D3	5	D4
D7	6	D8
MC	7	MC
HSYNCK	8	HSYTH
LSYNCK	9	LGRD
BA1	10	BA0
BLINK	11	MC
GOC10W/	12	GOC10W/
QACK 2/	13	QACK 2/
MC	14	MC
MC	15	WALK
LGRD	16	LGRD

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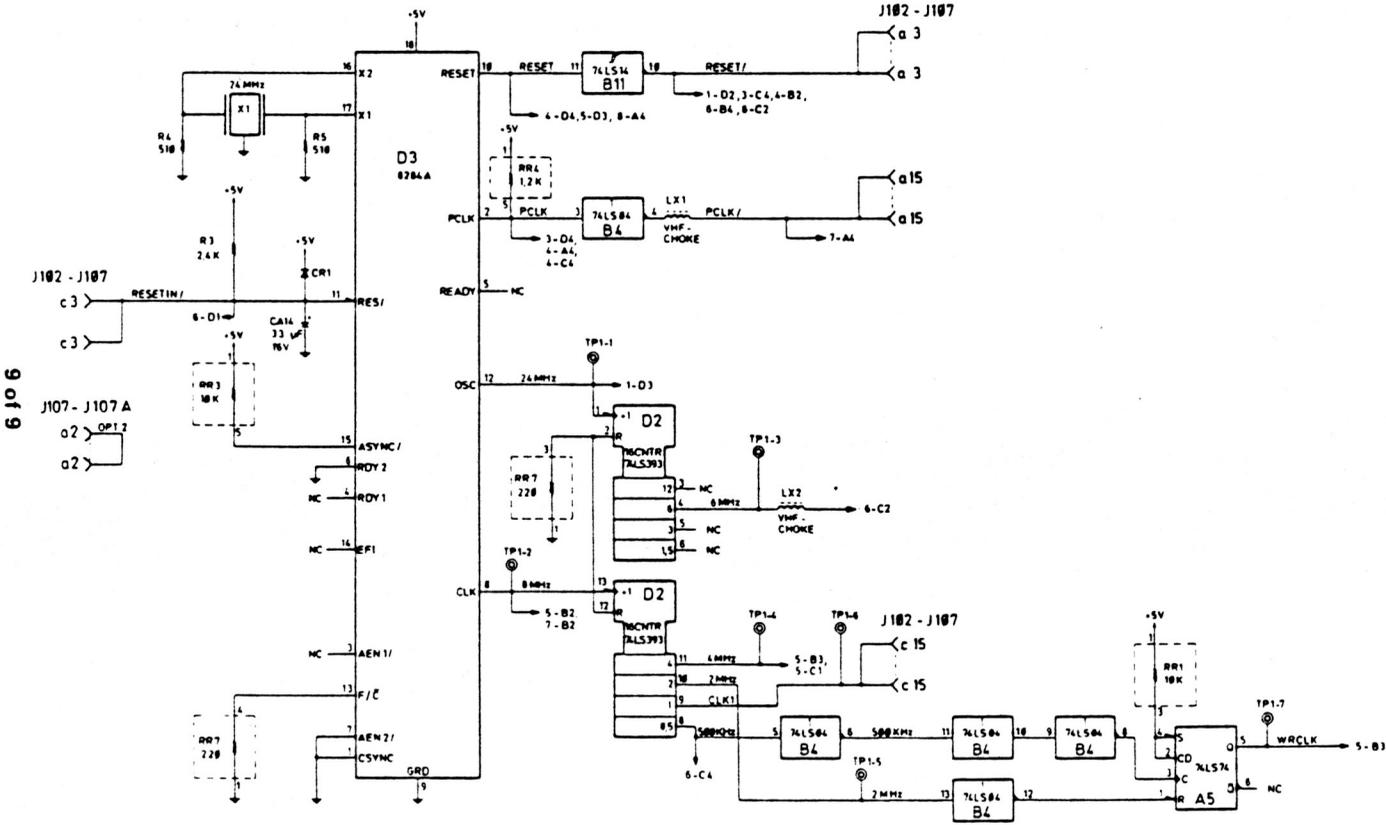


017 0032012

SERVICE MANUAL

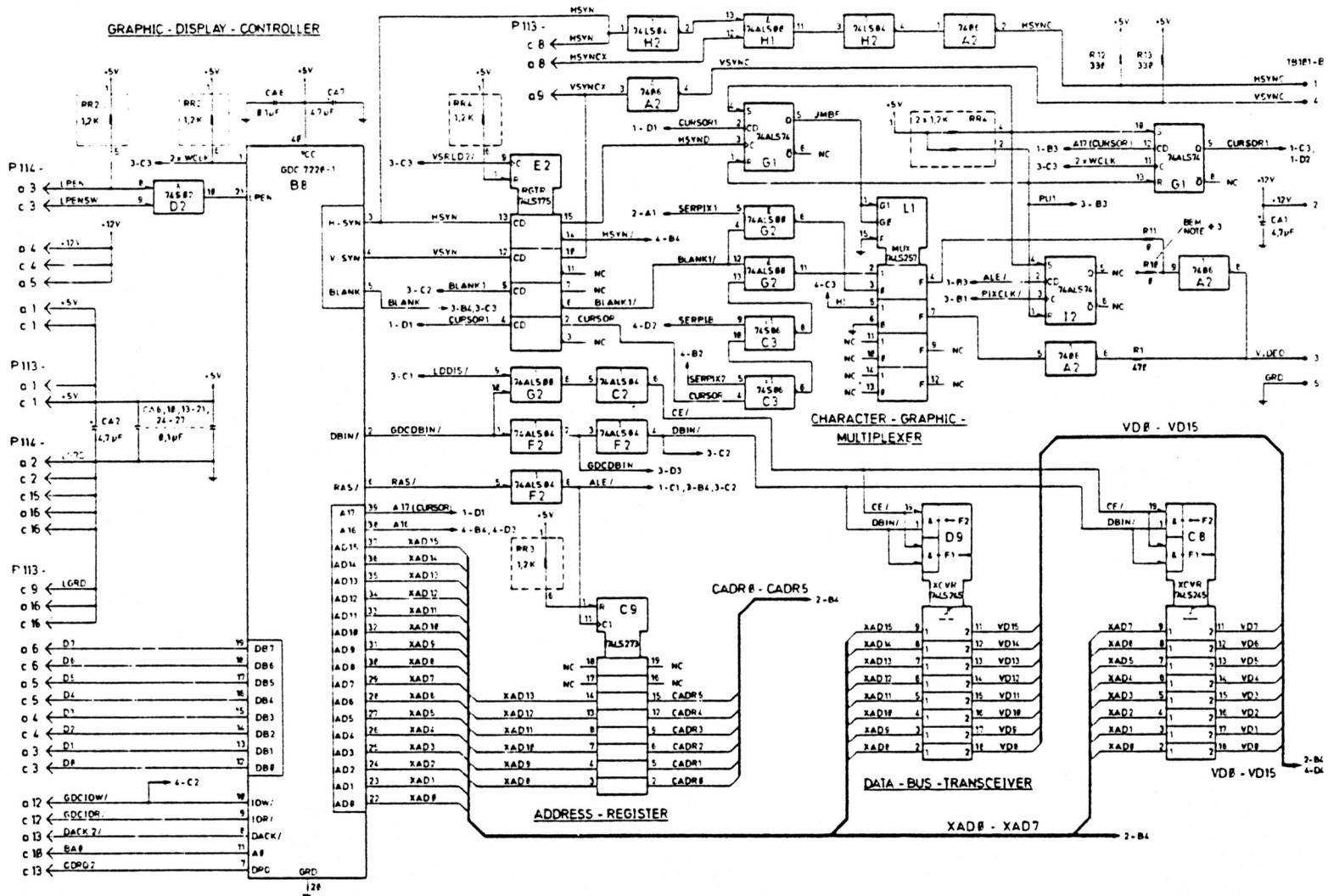
SCHEMATICS
Section 8

017 0032012



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GRAPHIC - DISPLAY - CONTROLLER



ADDRESS-REGISTER

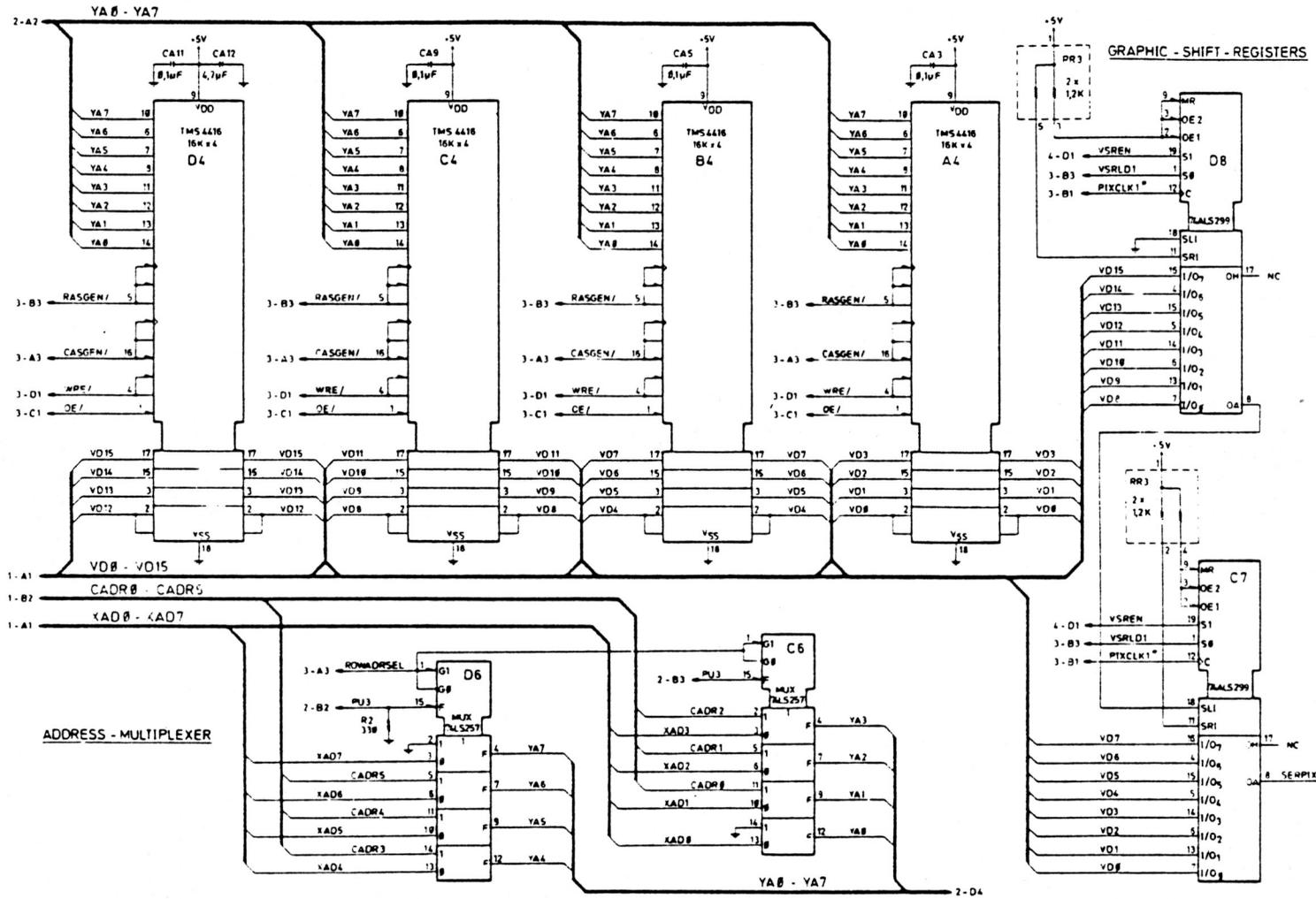
CHARACTER-GRAPHIC-MULTIPLEXER

DATA-BUS-TRANSCEIVER

VDB - VD15

XADB - XAD7

AKX

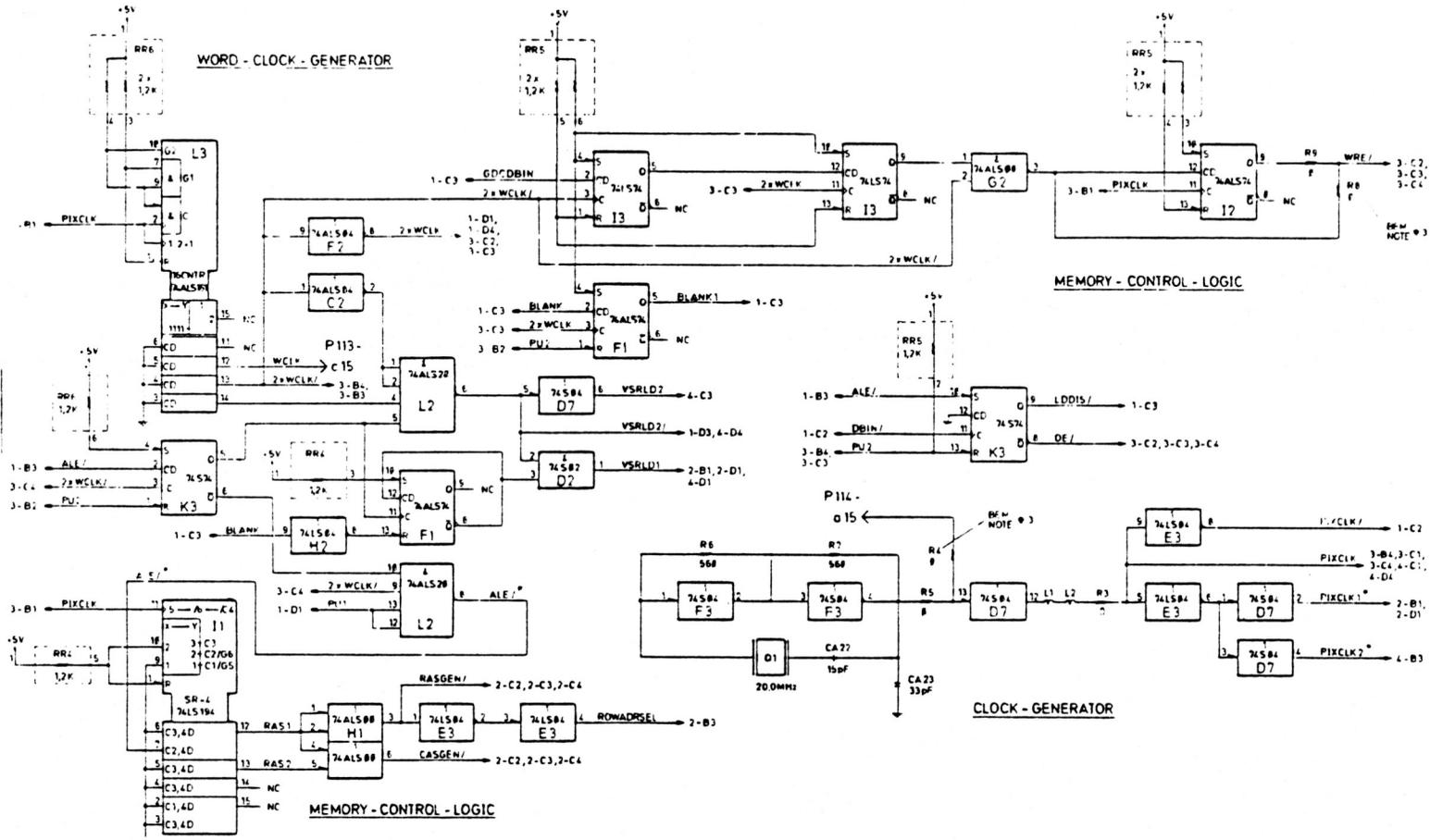


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8-31

AD

ADT



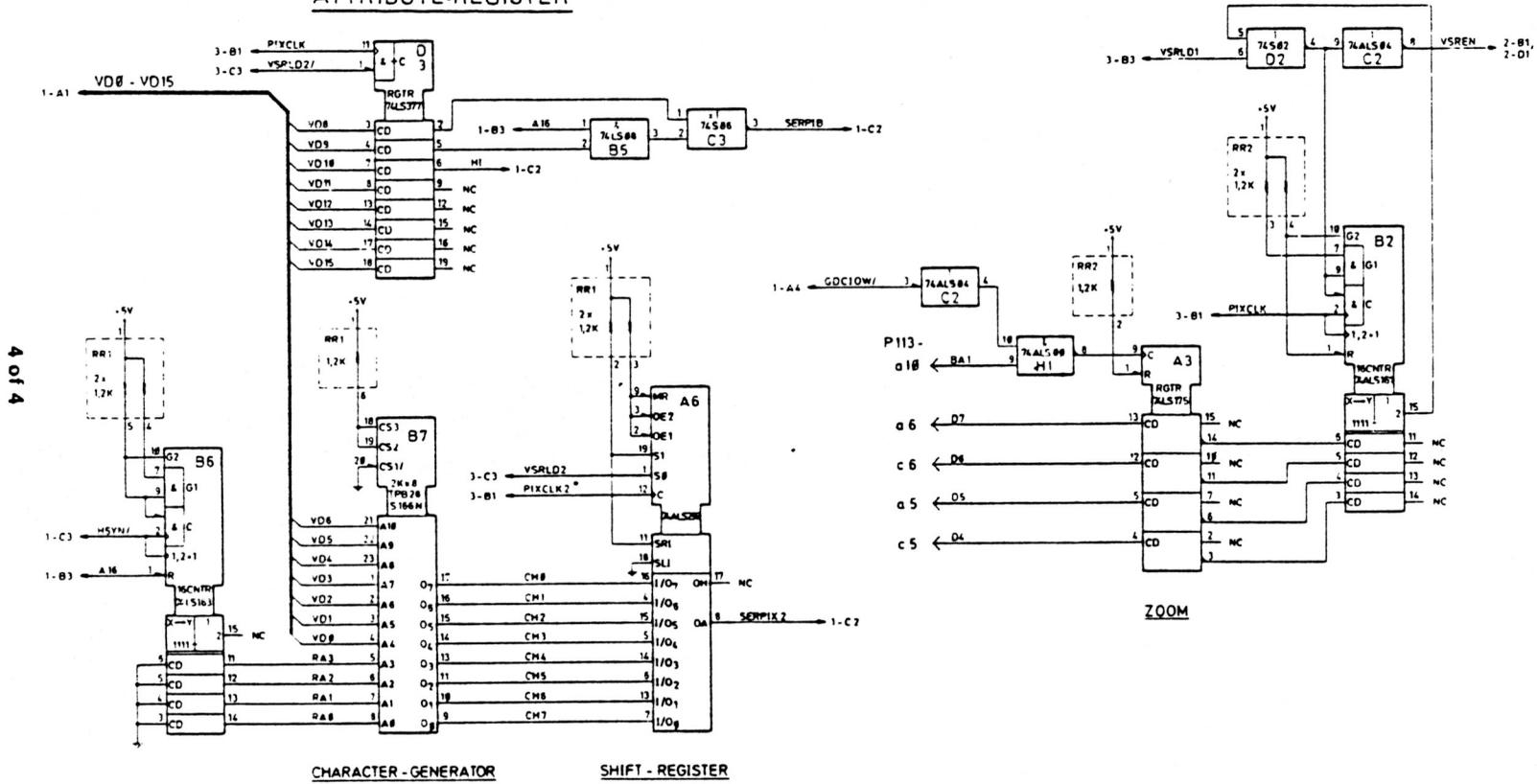
REF NOTE #3

MEMORY - CONTROL - LOGIC

CLOCK - GENERATOR

MEMORY - CONTROL - LOGIC

ATTRIBUTE-REGISTER

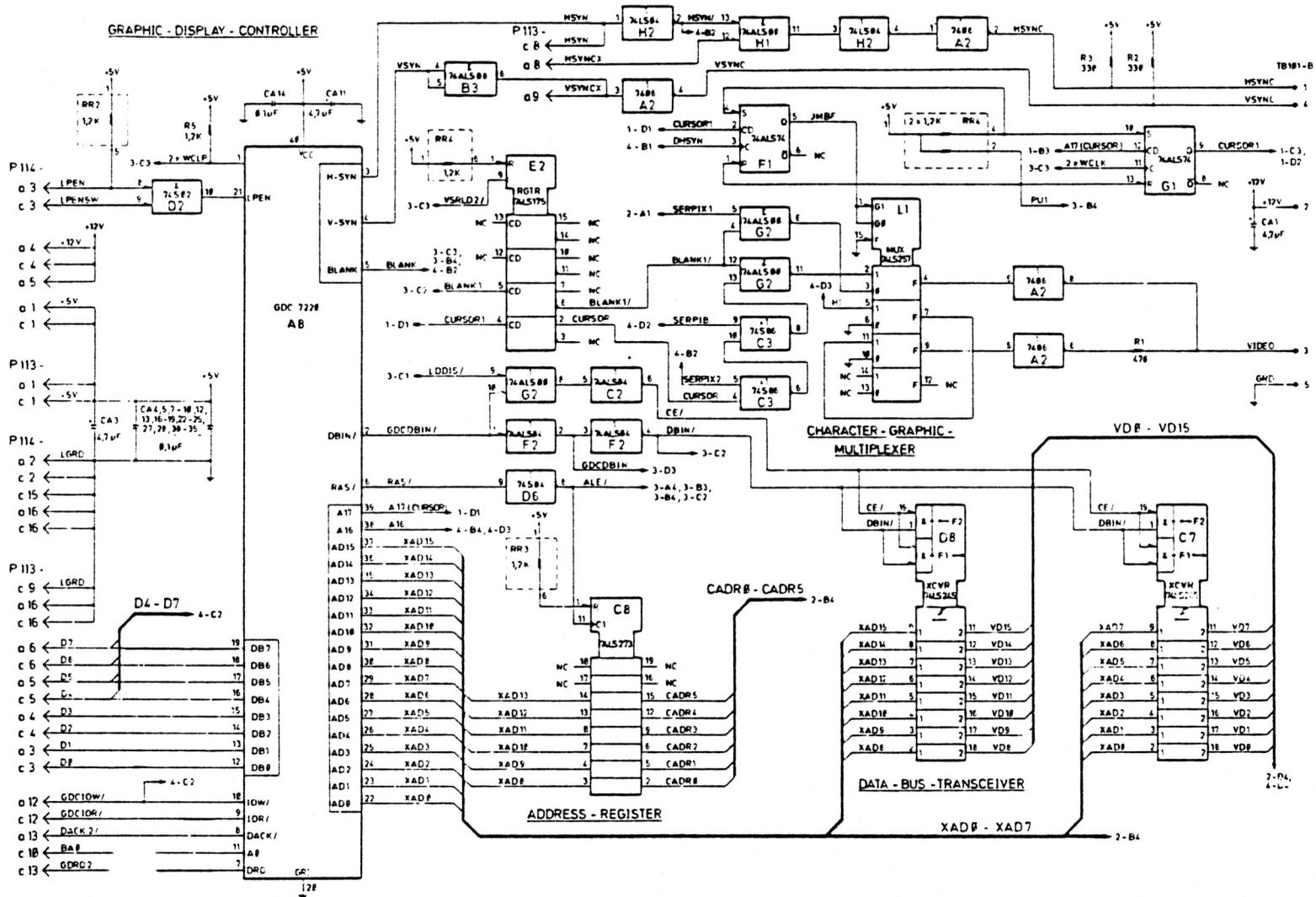


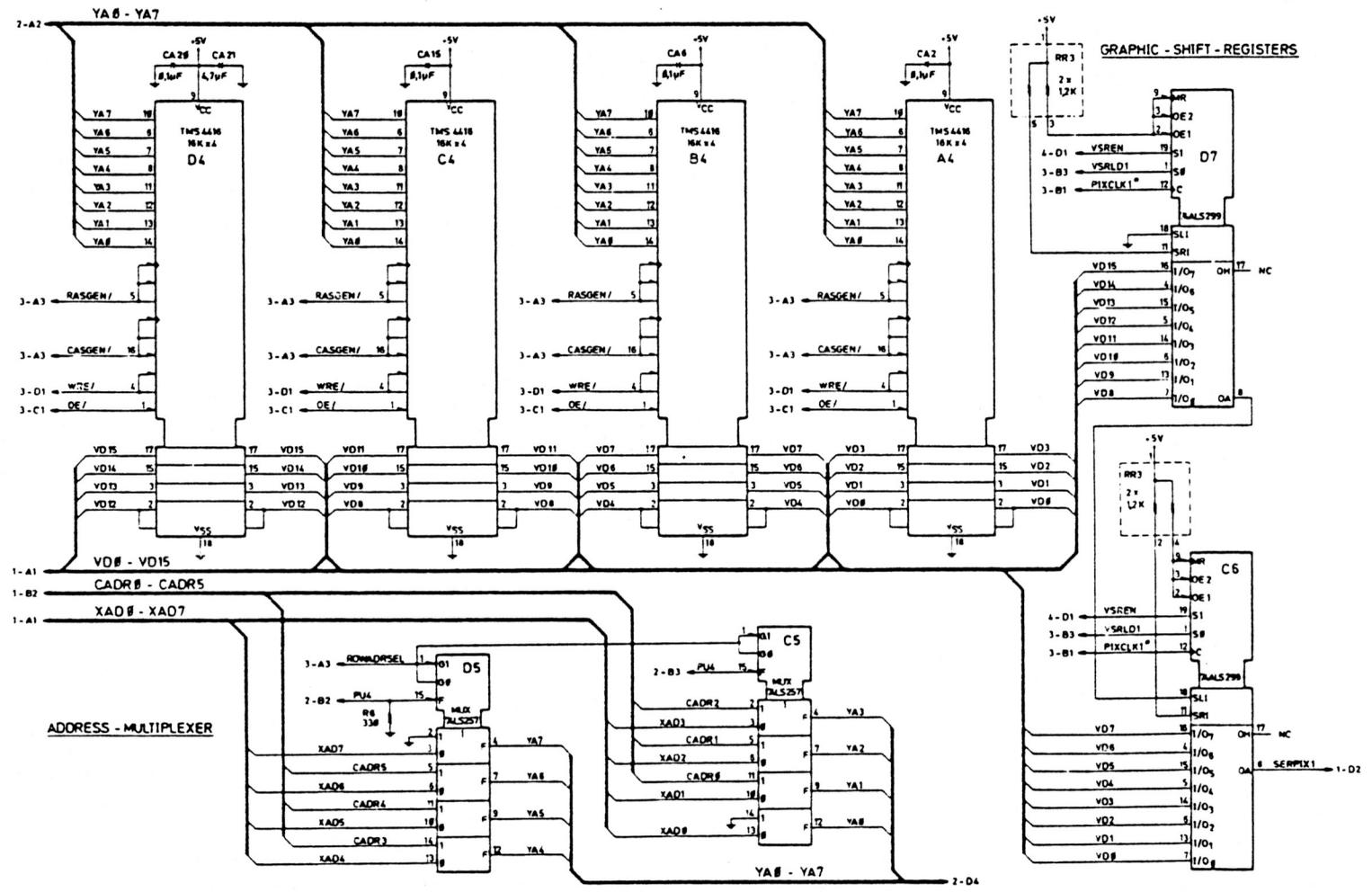
A of 4

CHARACTER - GENERATOR SHIFT - REGISTER

ZOOM

AP4





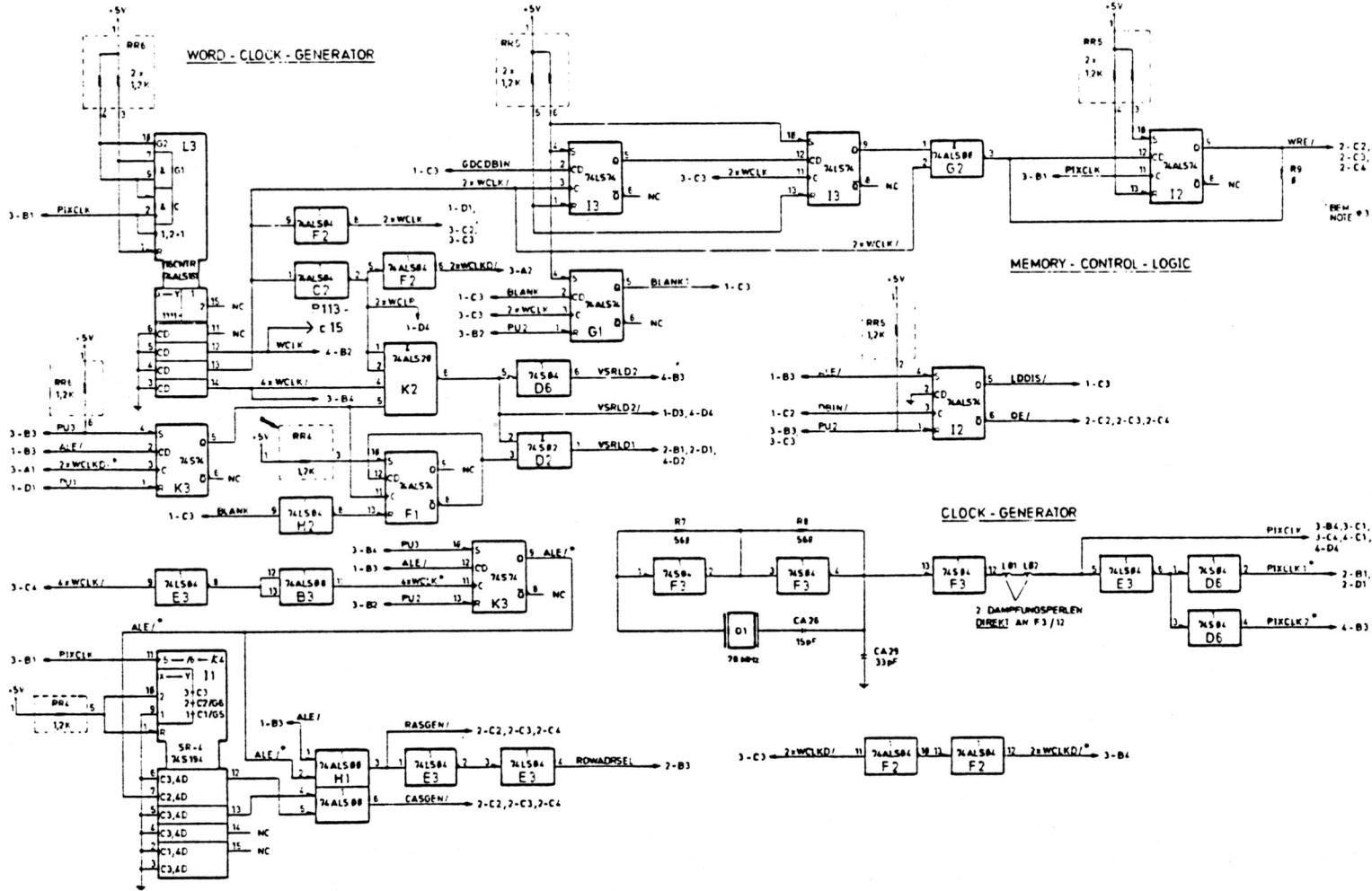
2 of 4

8-35

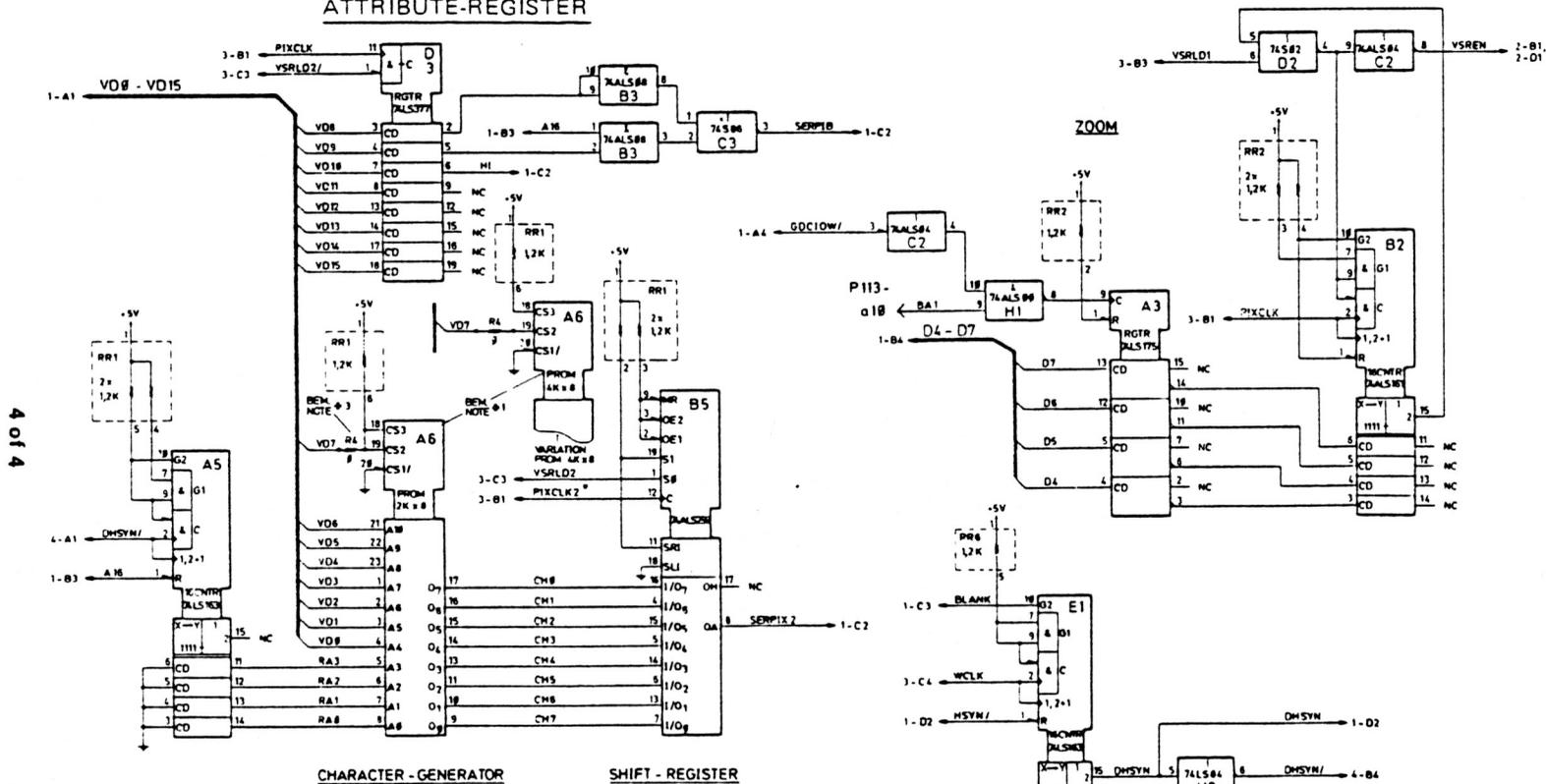
ADDRESS - MULTIPLEXER

GRAPHIC - SHIFT - REGISTERS

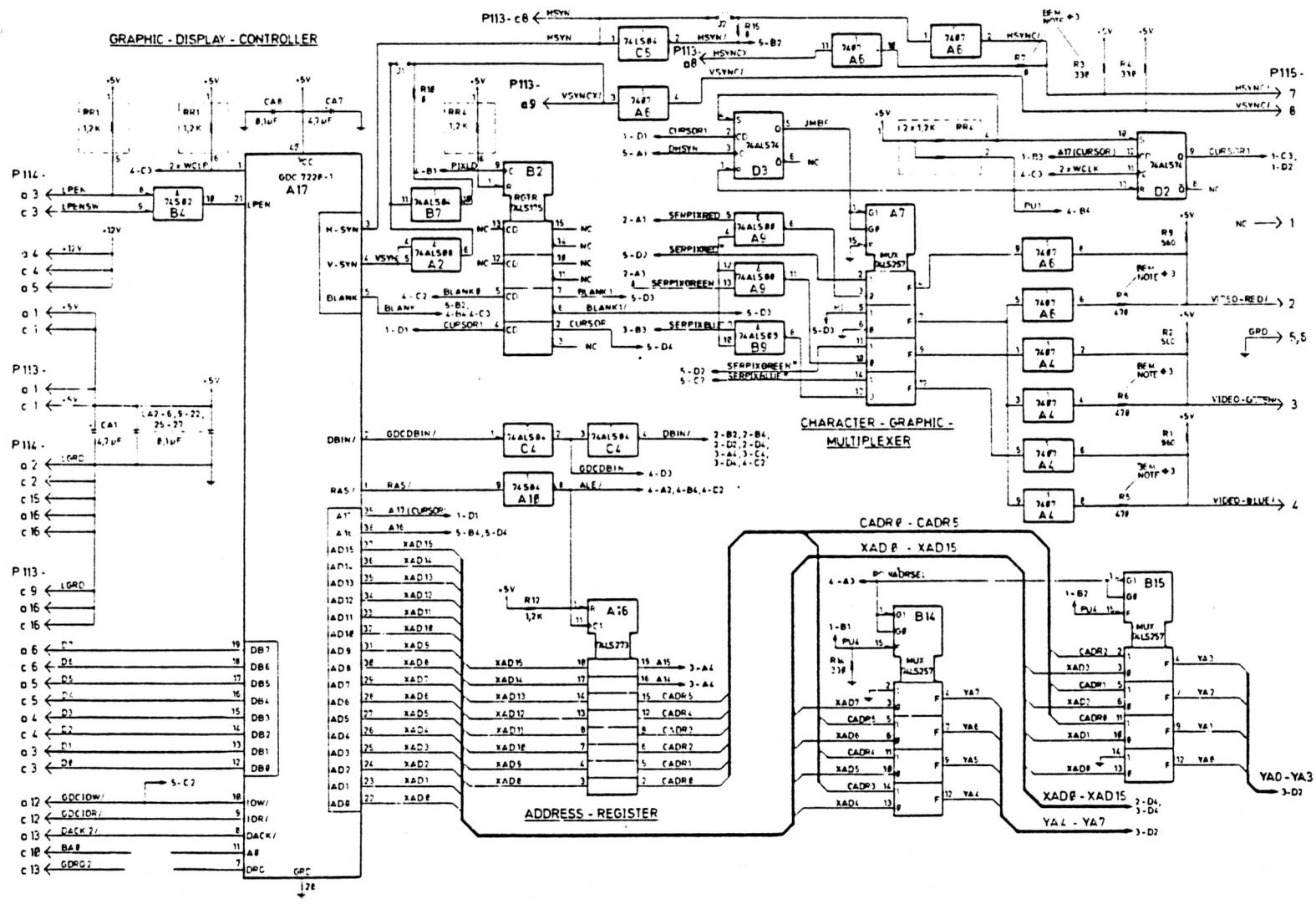
1-D2



ATTRIBUTE-REGISTER



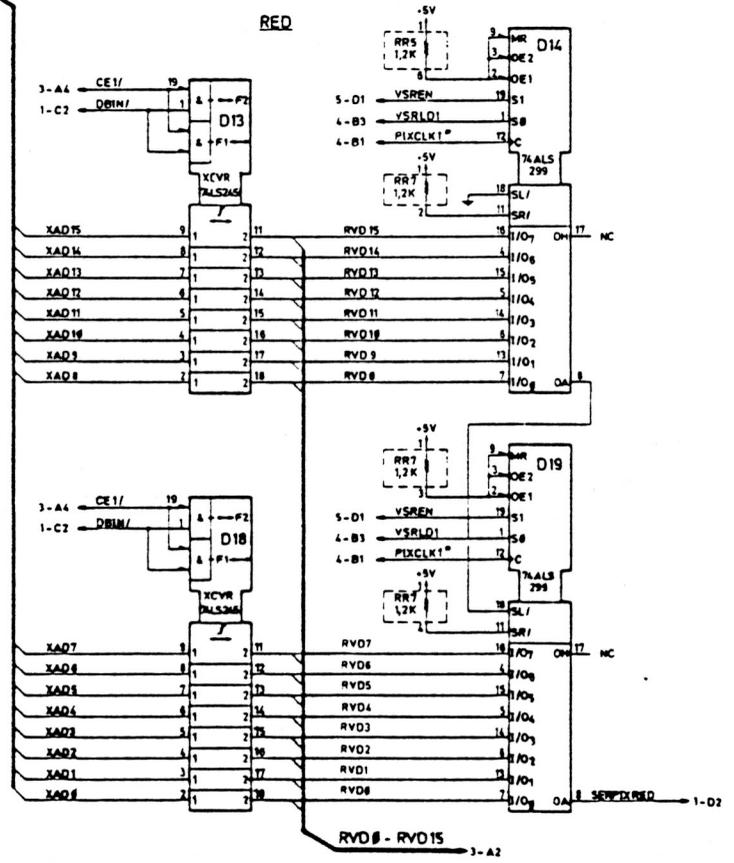
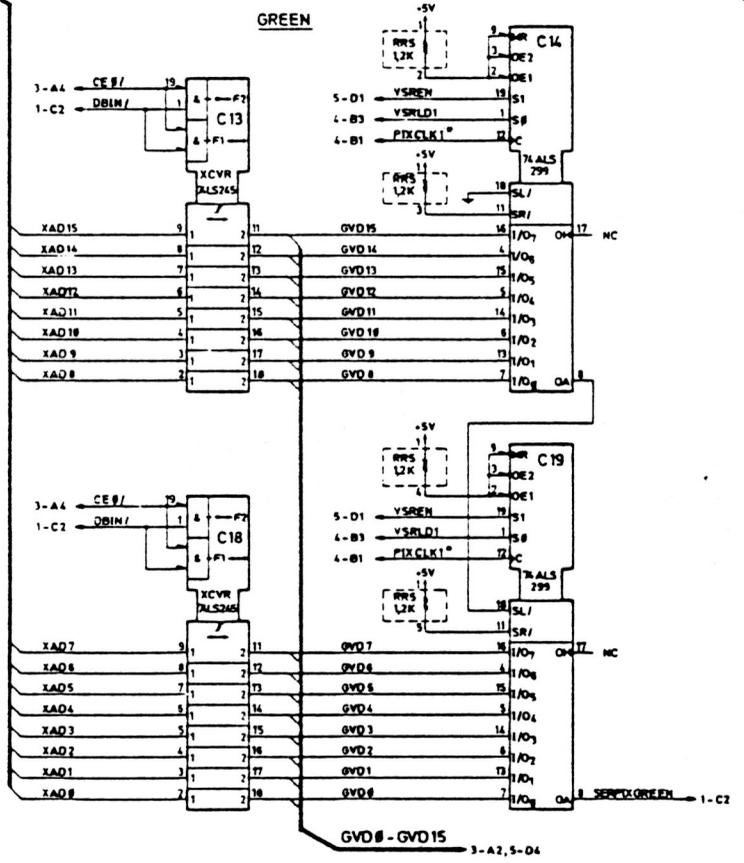
4 of 4

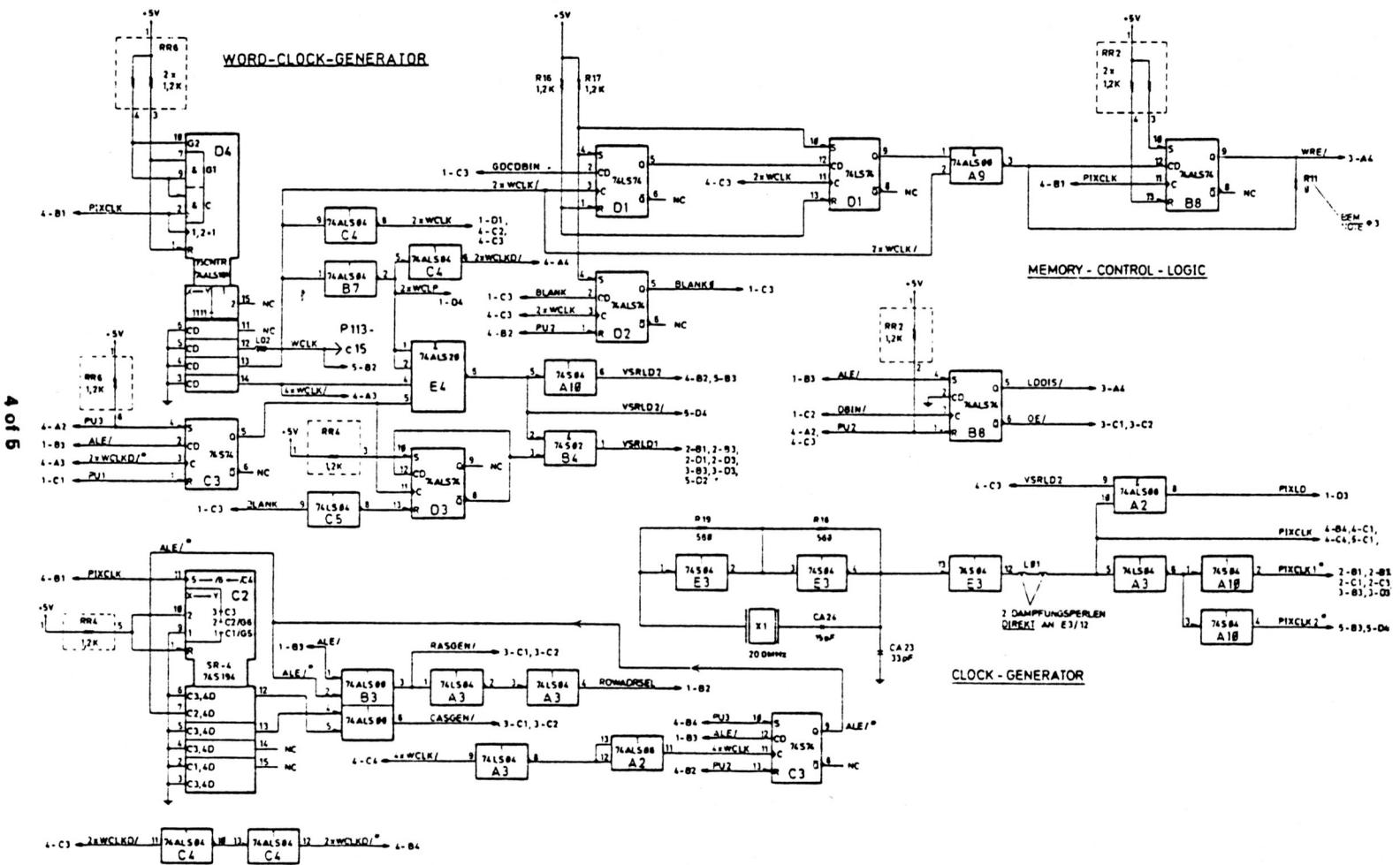


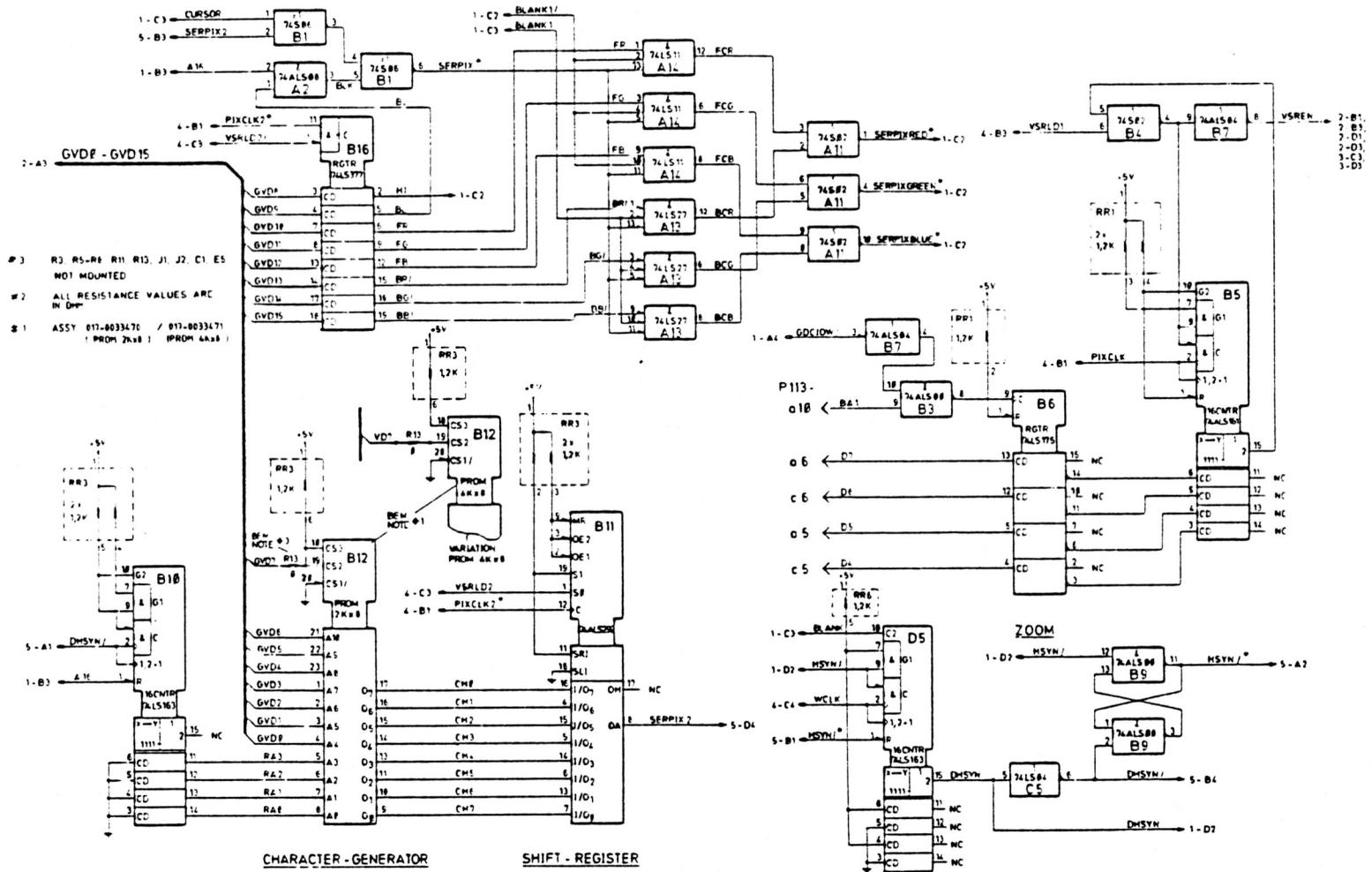
1-A1 XAD# - XAD15

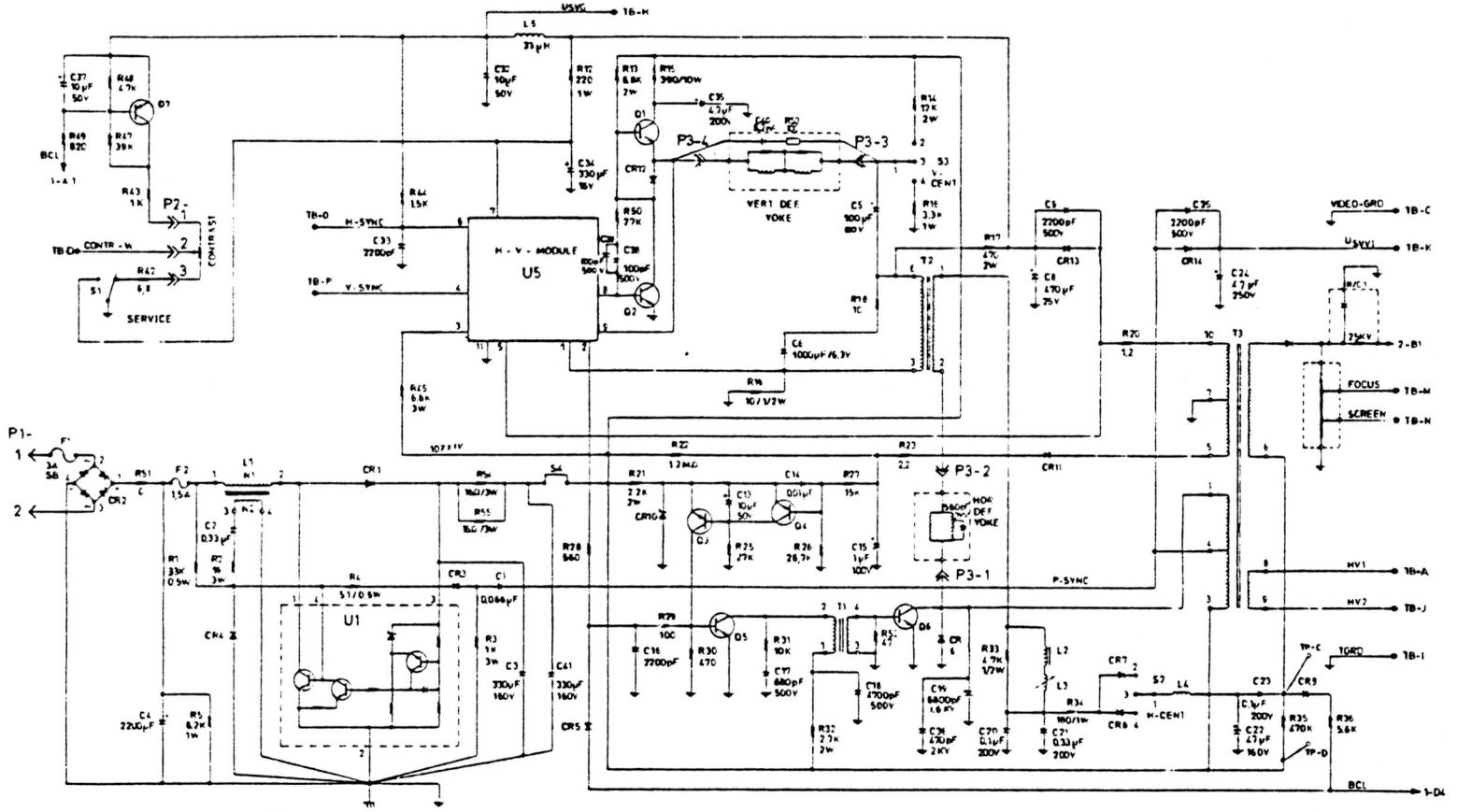
2 of 5

8-39



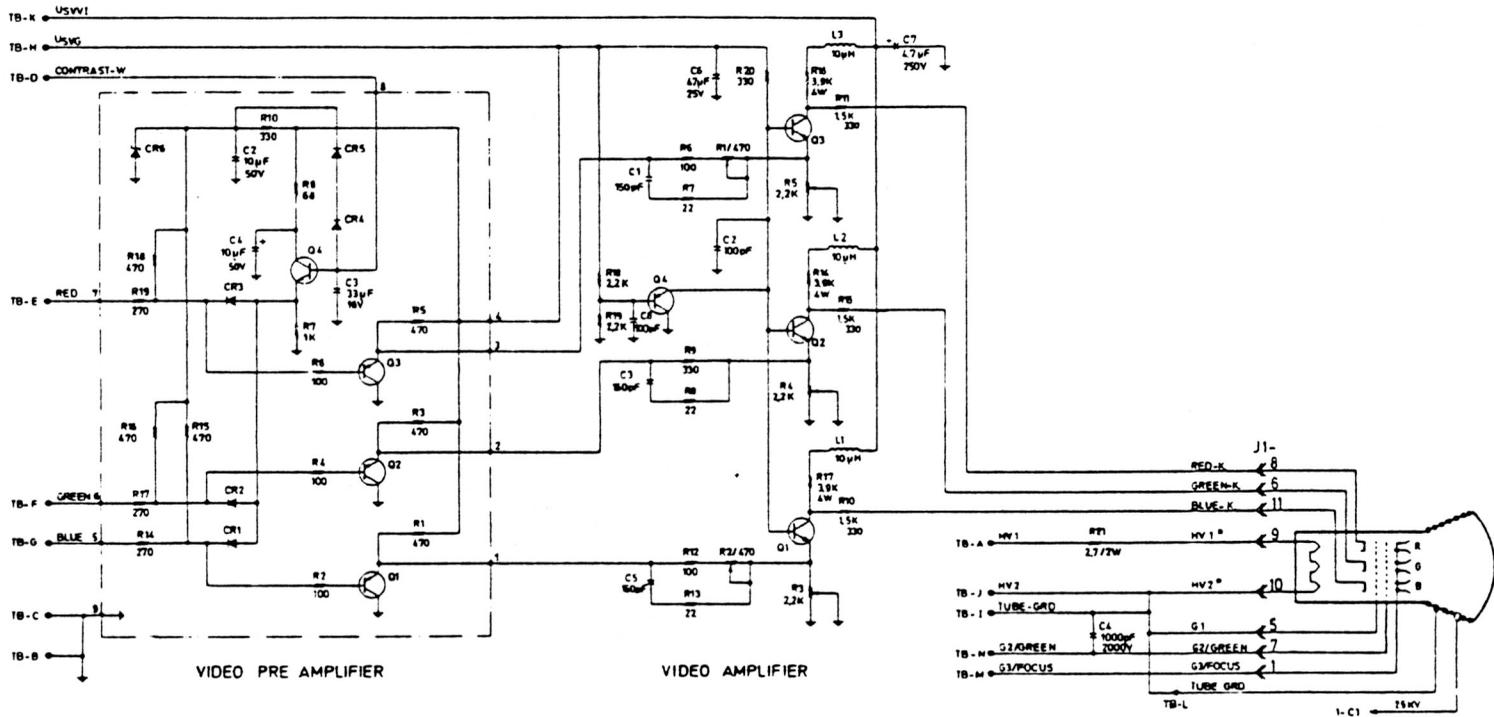




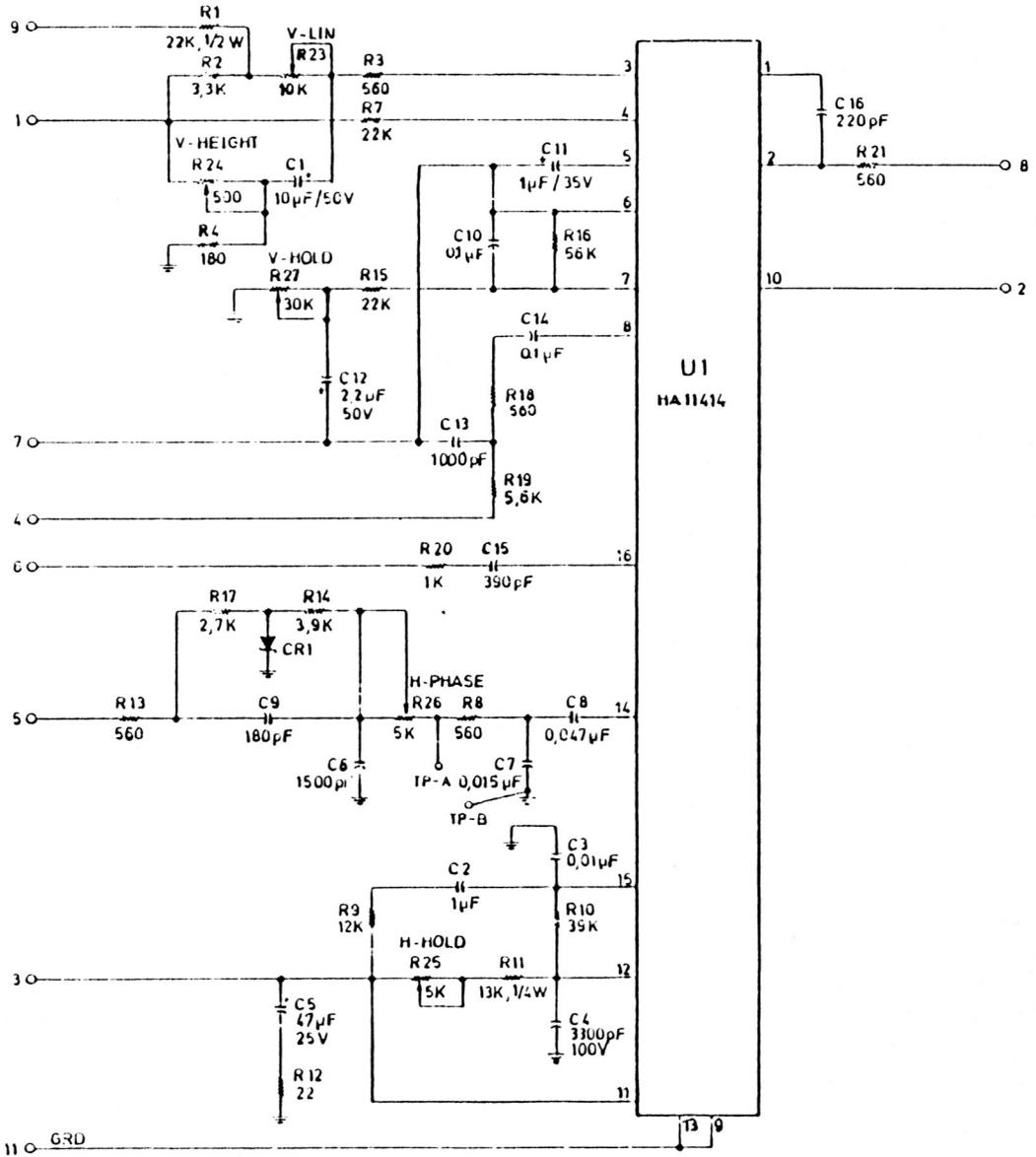


C-D ZUR STRAHLSTROMEJUSTIERUNG /
FOR BEAMCURRENT ADJUSTMENT

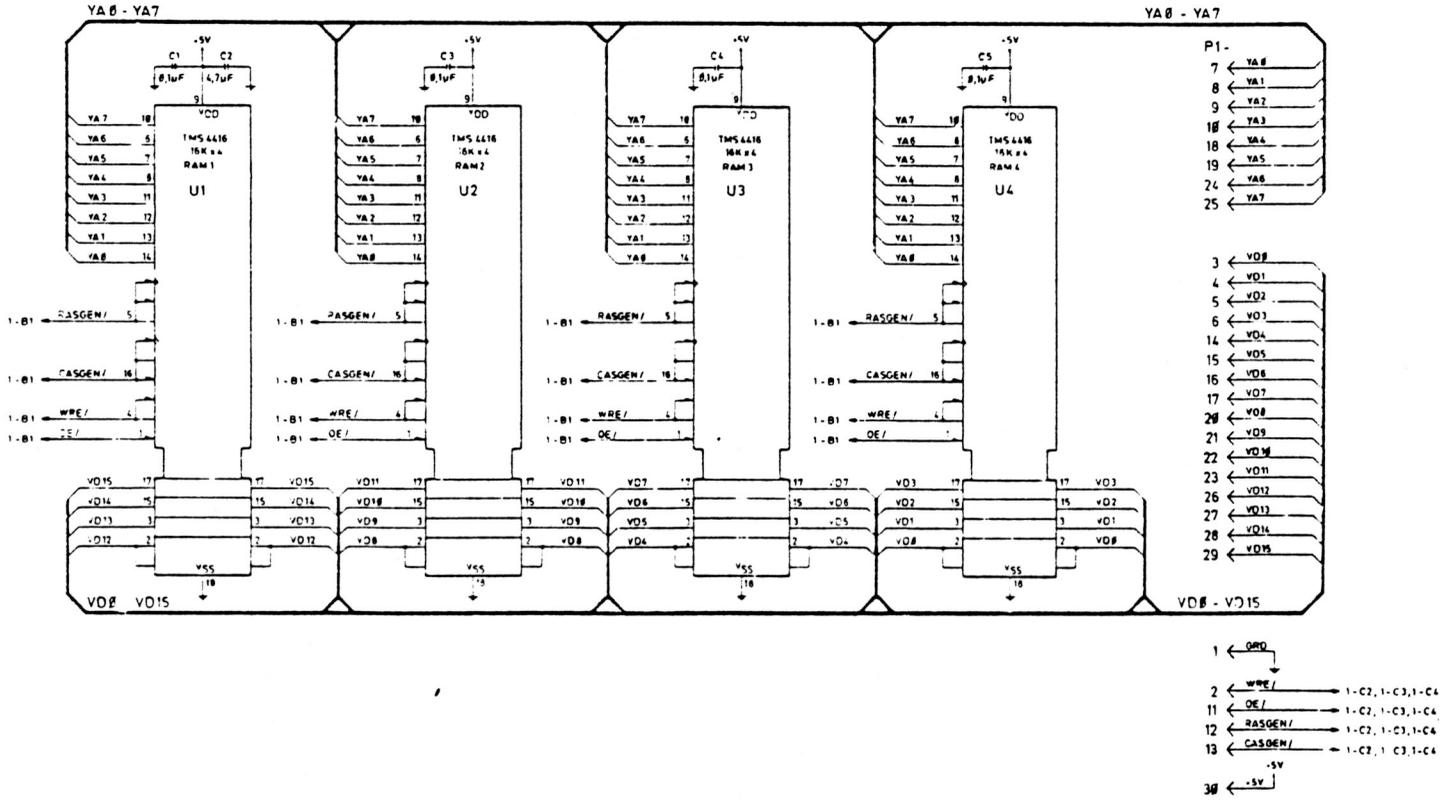
Video Deflection Color 2 of 3



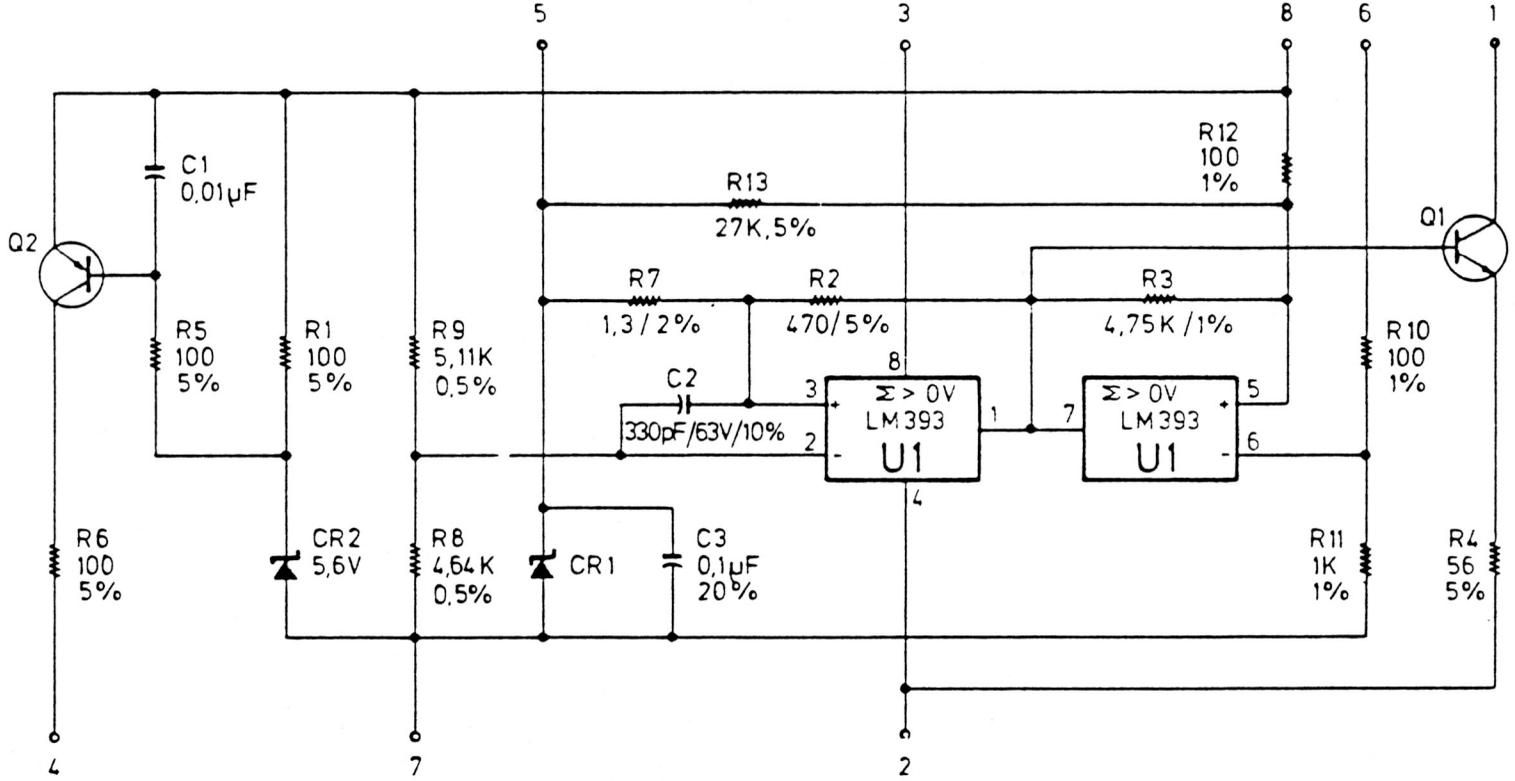
H - V - OSCILLATOR

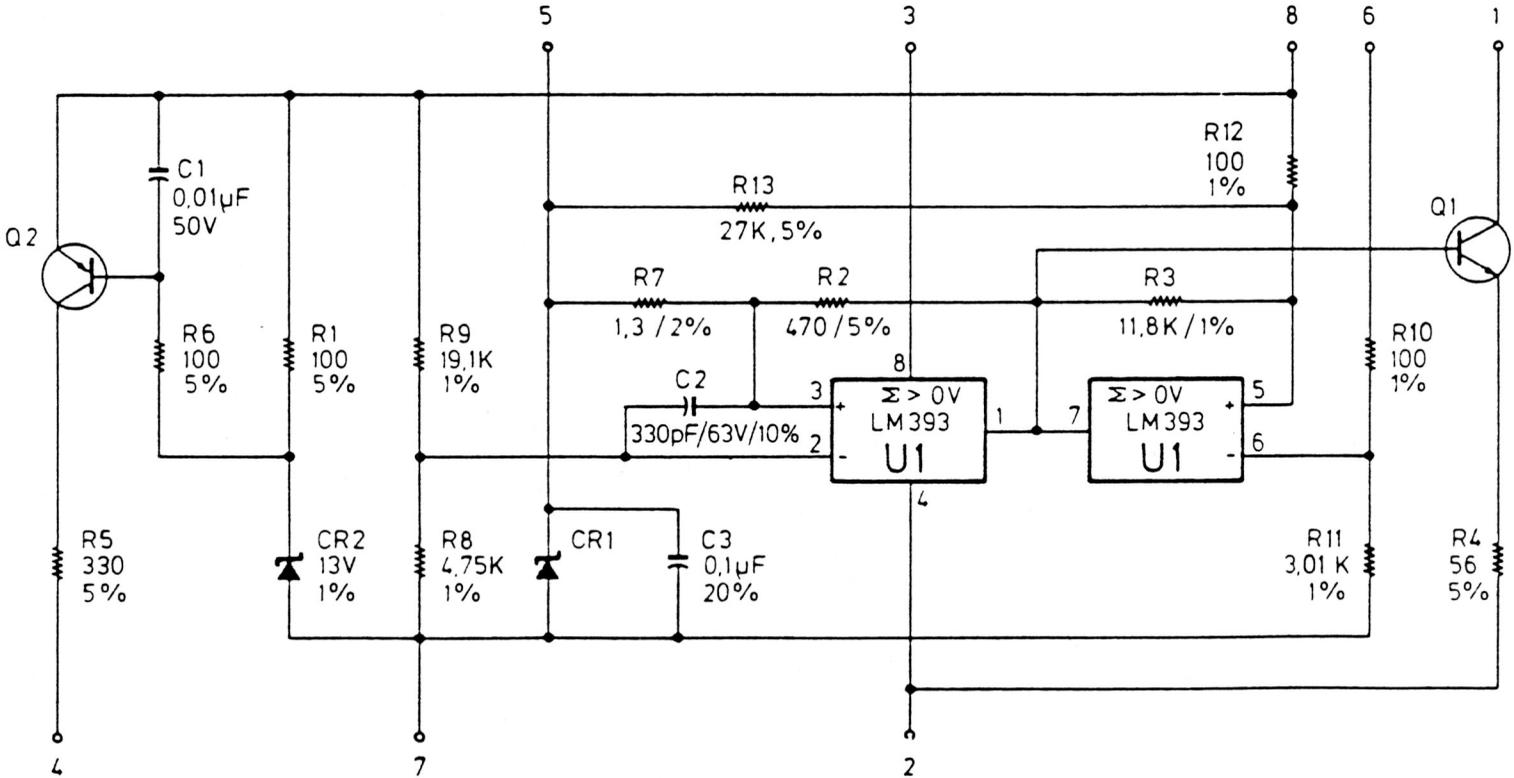


TP - A - B FÜR HORIZONTALÖSZILLATORABGICHT KURZSCHLIESSEN
 CONNECT TP - A - B FOR HORIZONTAL - OSCILLATOR - ADJUSTMENT

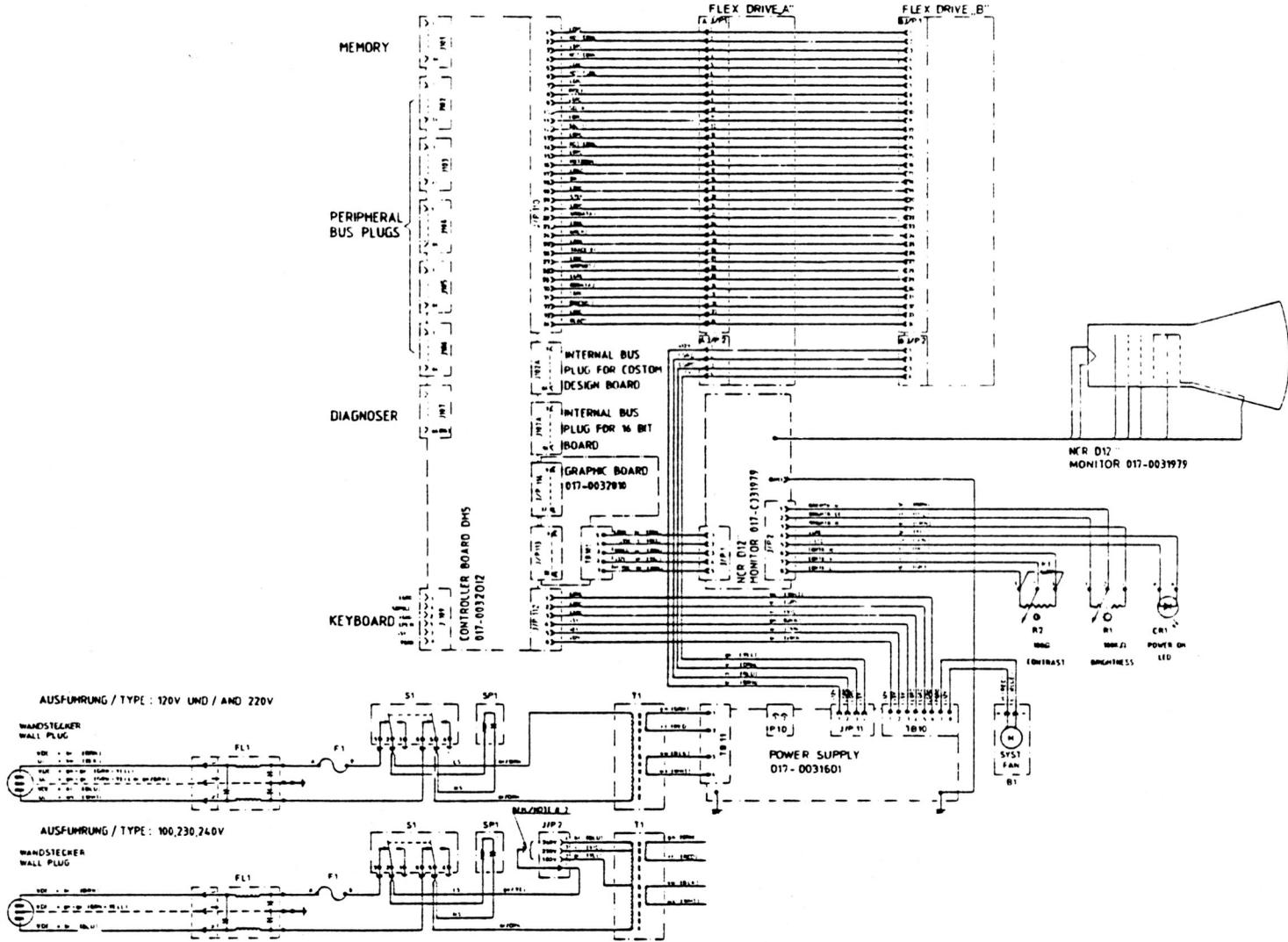


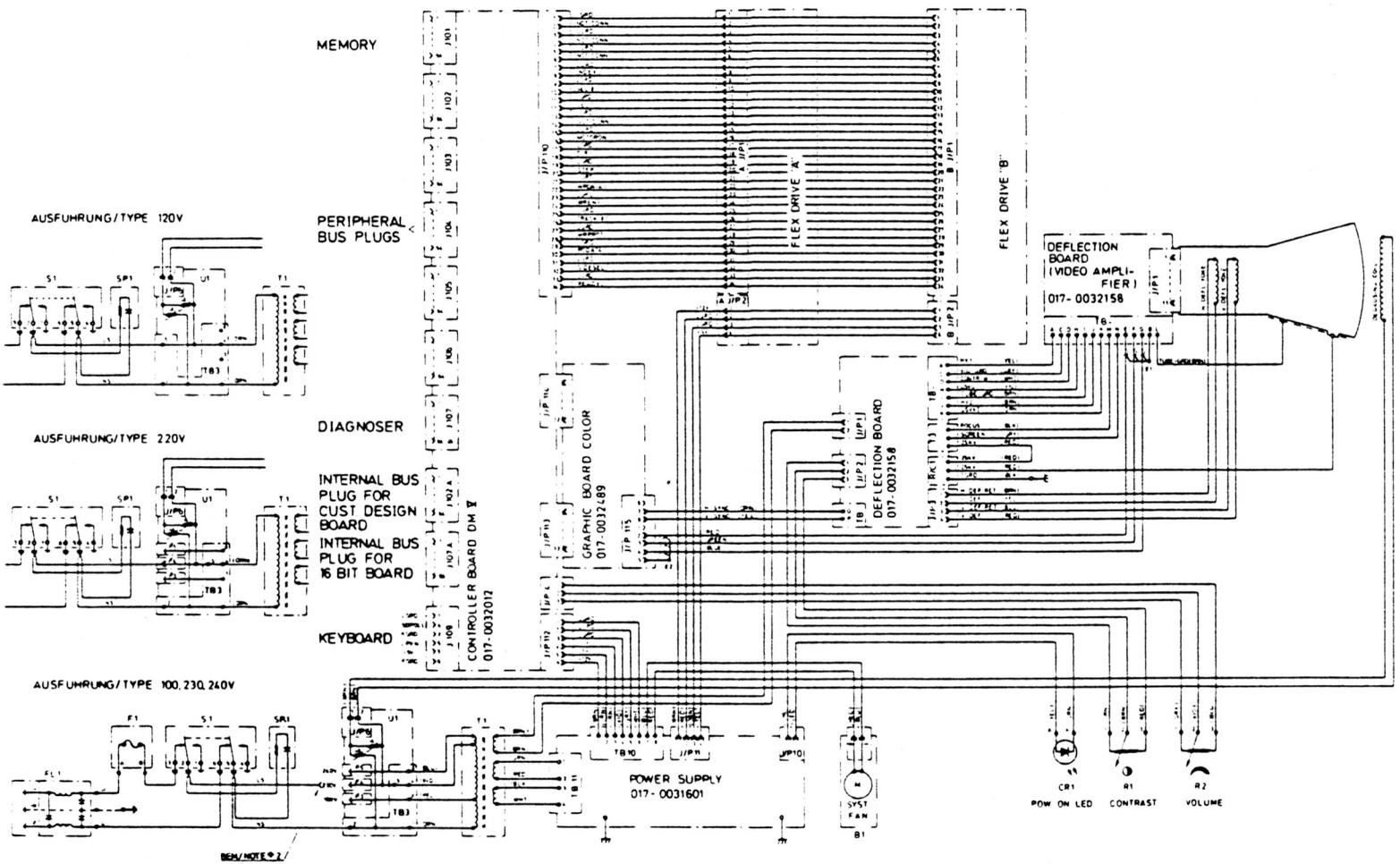
+5V Hybrid 017-0031624 Rev. D





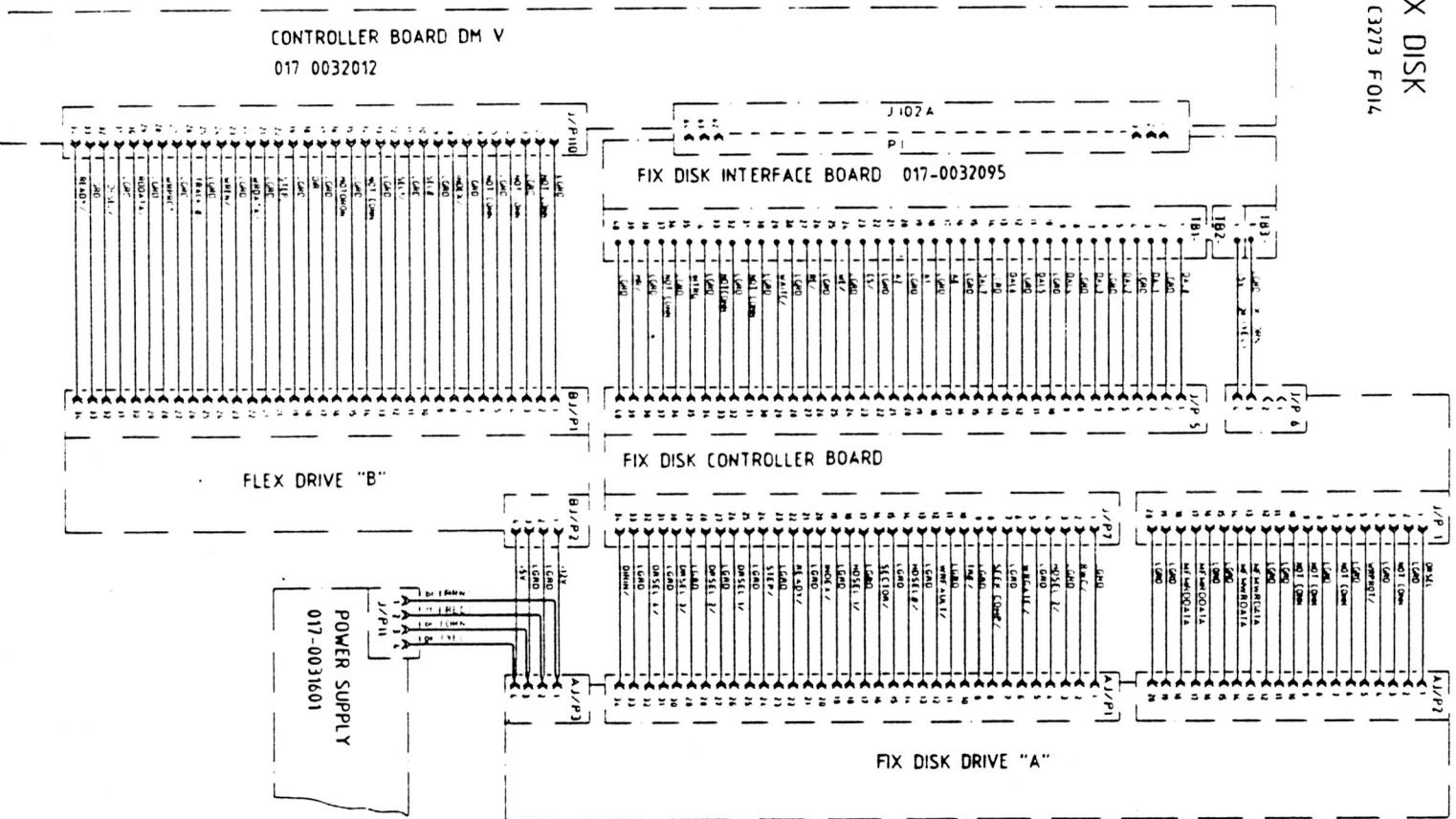
+12V Hybrid 017.0031944 Rev. D



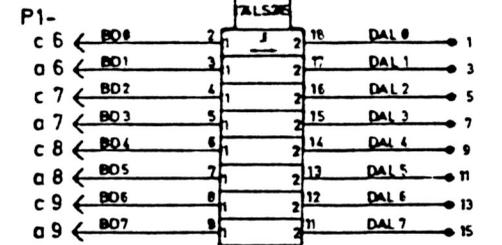
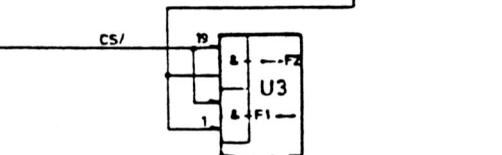
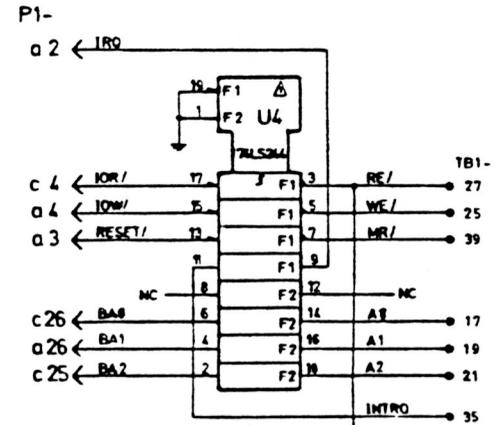
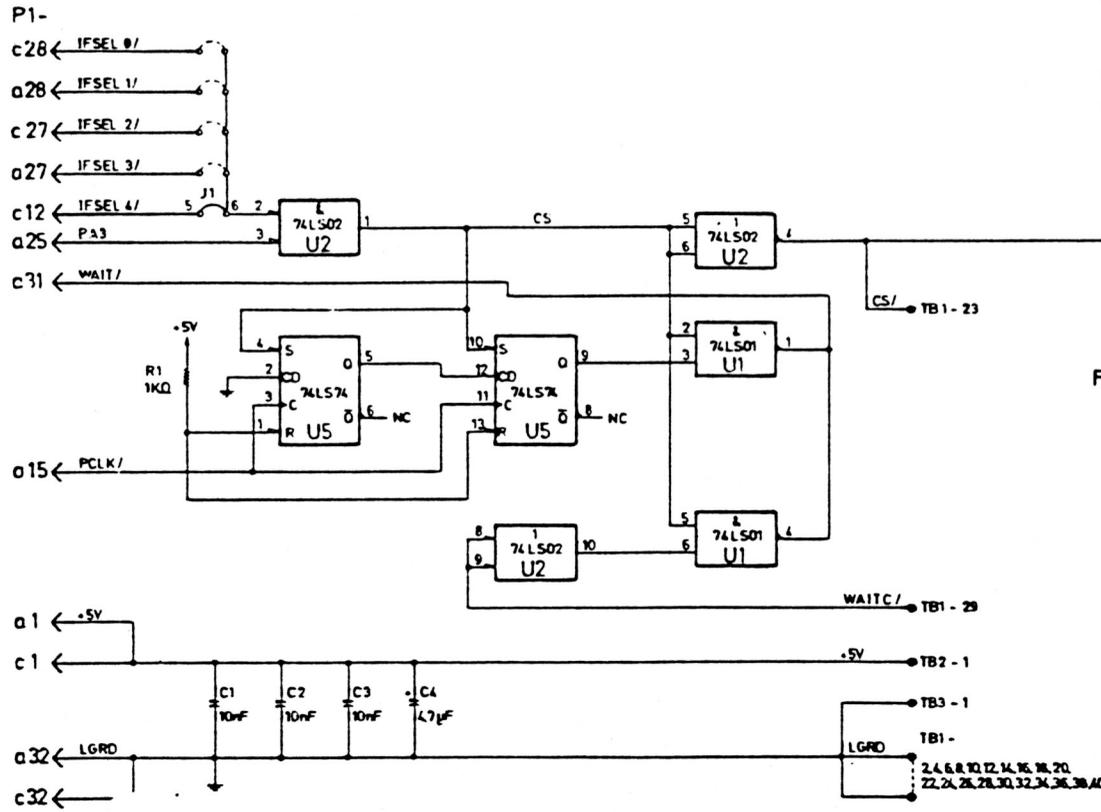


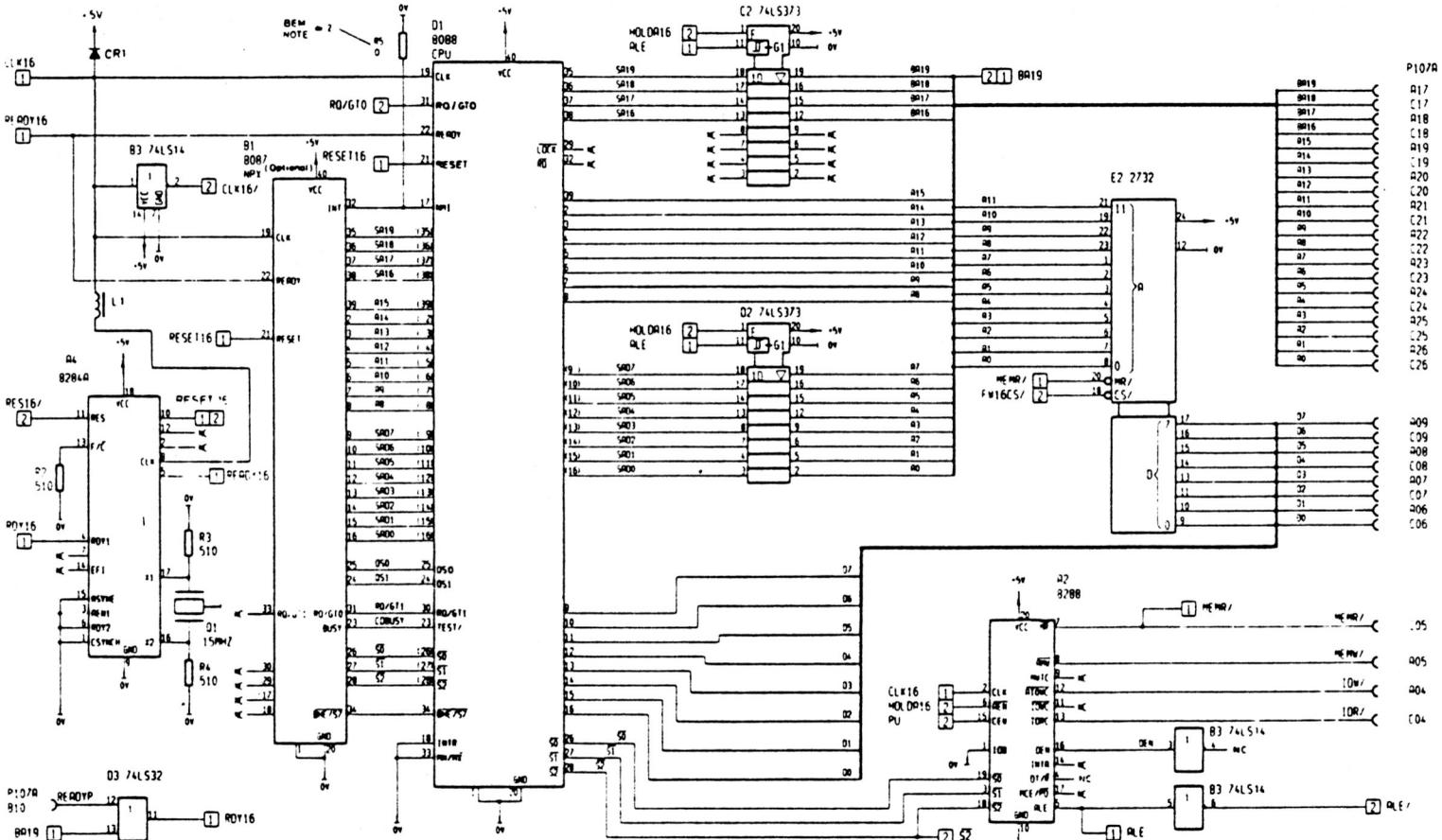
Wiring (color) 017-0031570 Rev. B 2 of 3

FIX DISK
C3273 FO14

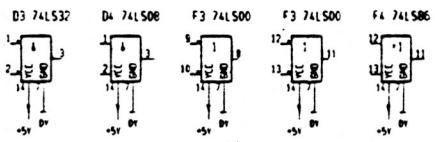
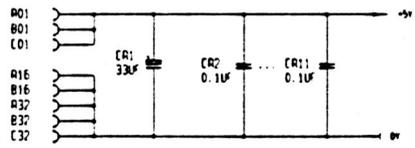
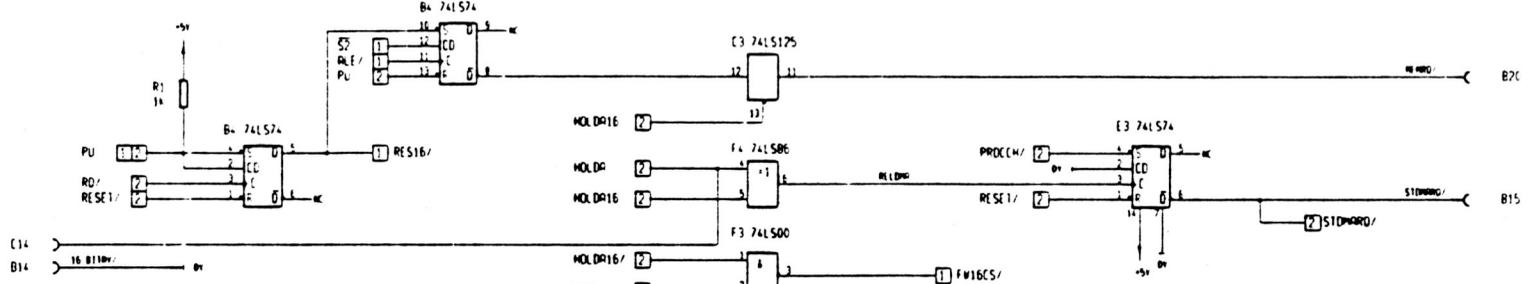
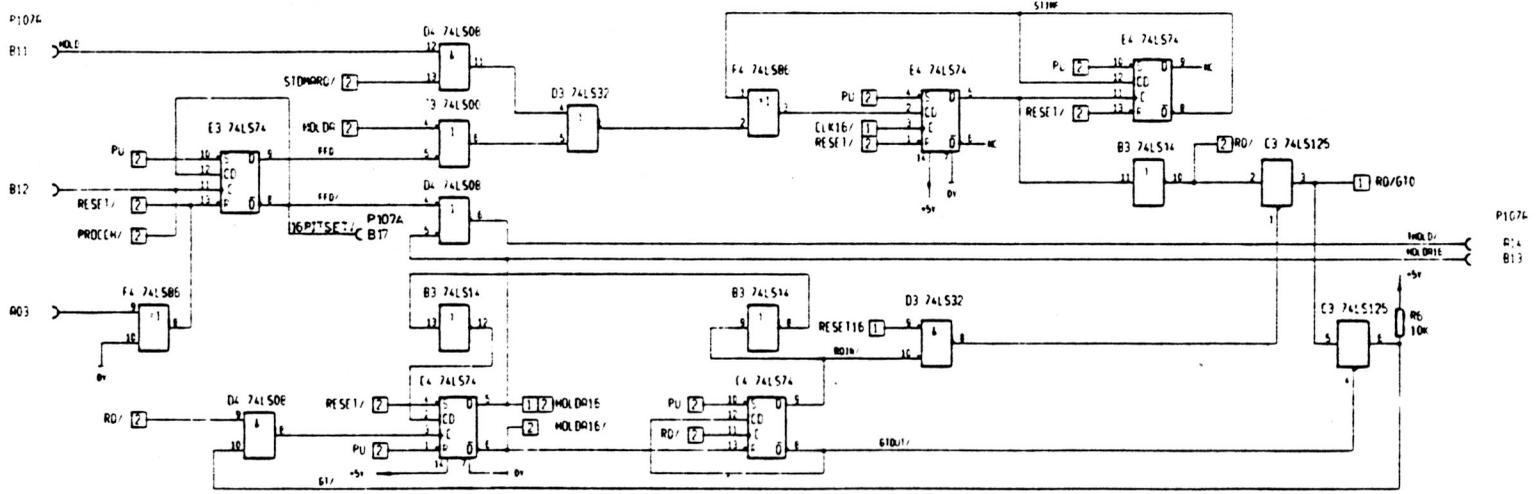


Integrated Fixed Disk Interface 017-0032095 Rev. B

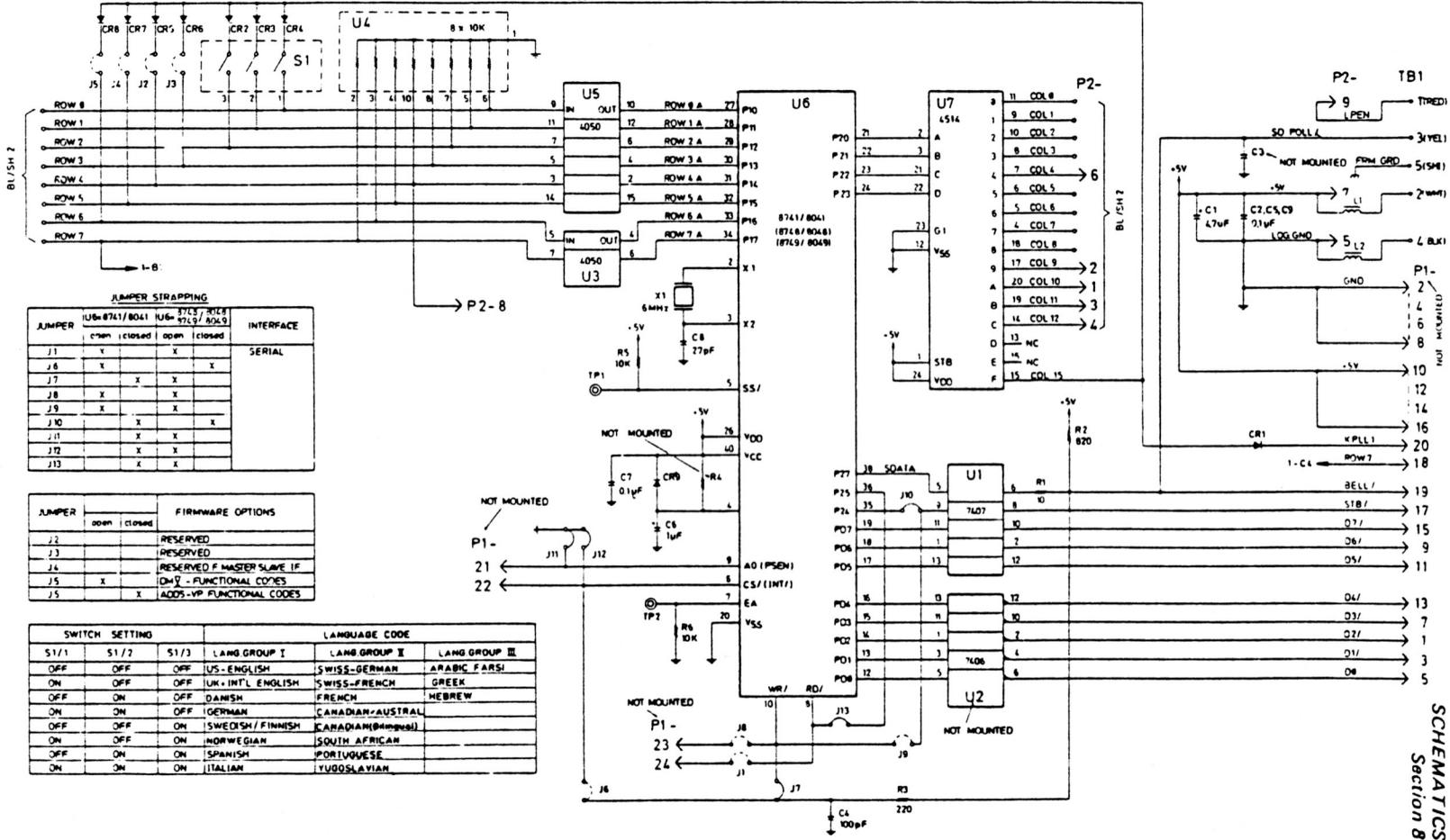




Internal 16-bit Processor 017-0032001 Rev. D 1 of 2



COL 15

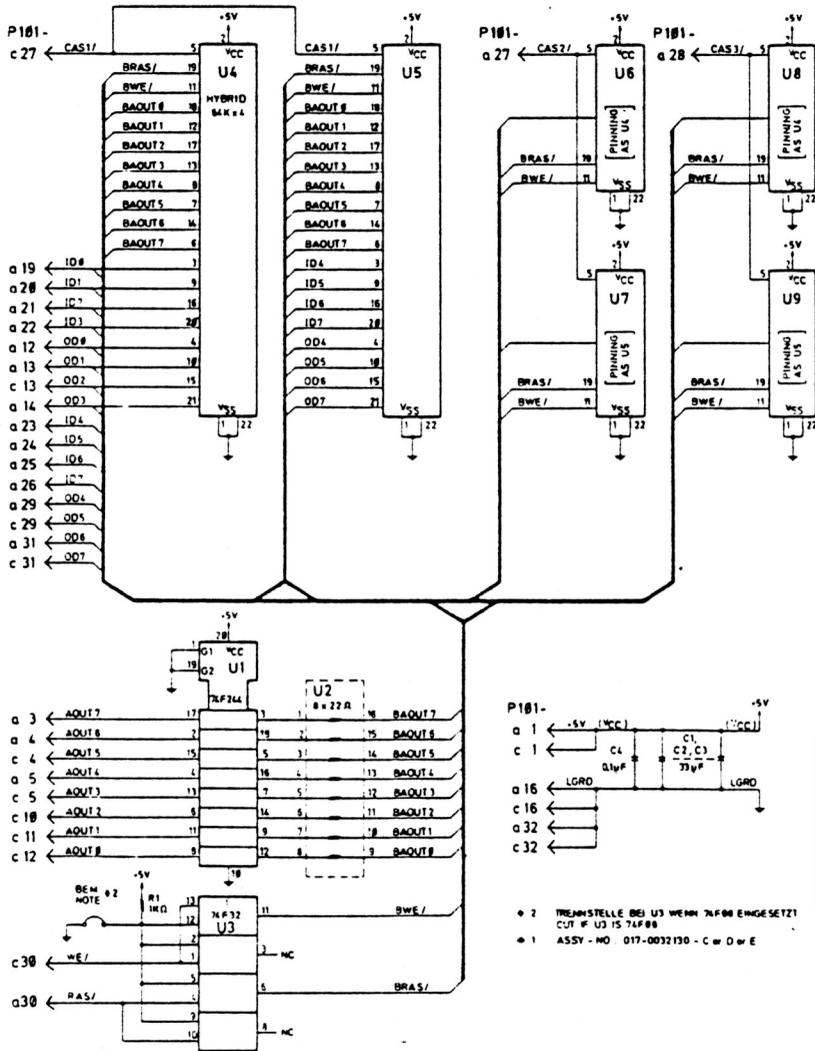


Keyboard 017-0031563 Rev. G

8-57

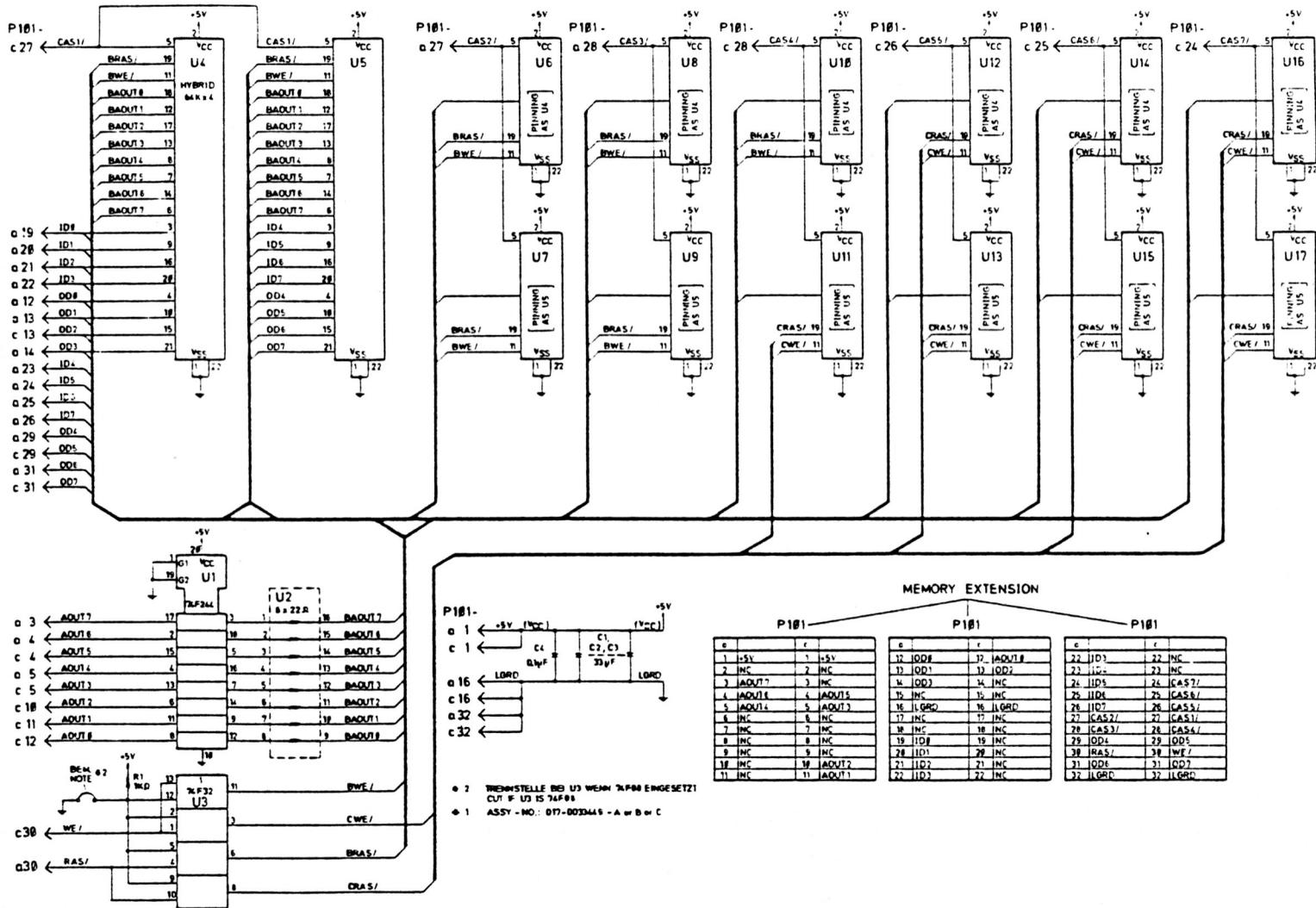
SCHEMATICS Section 8

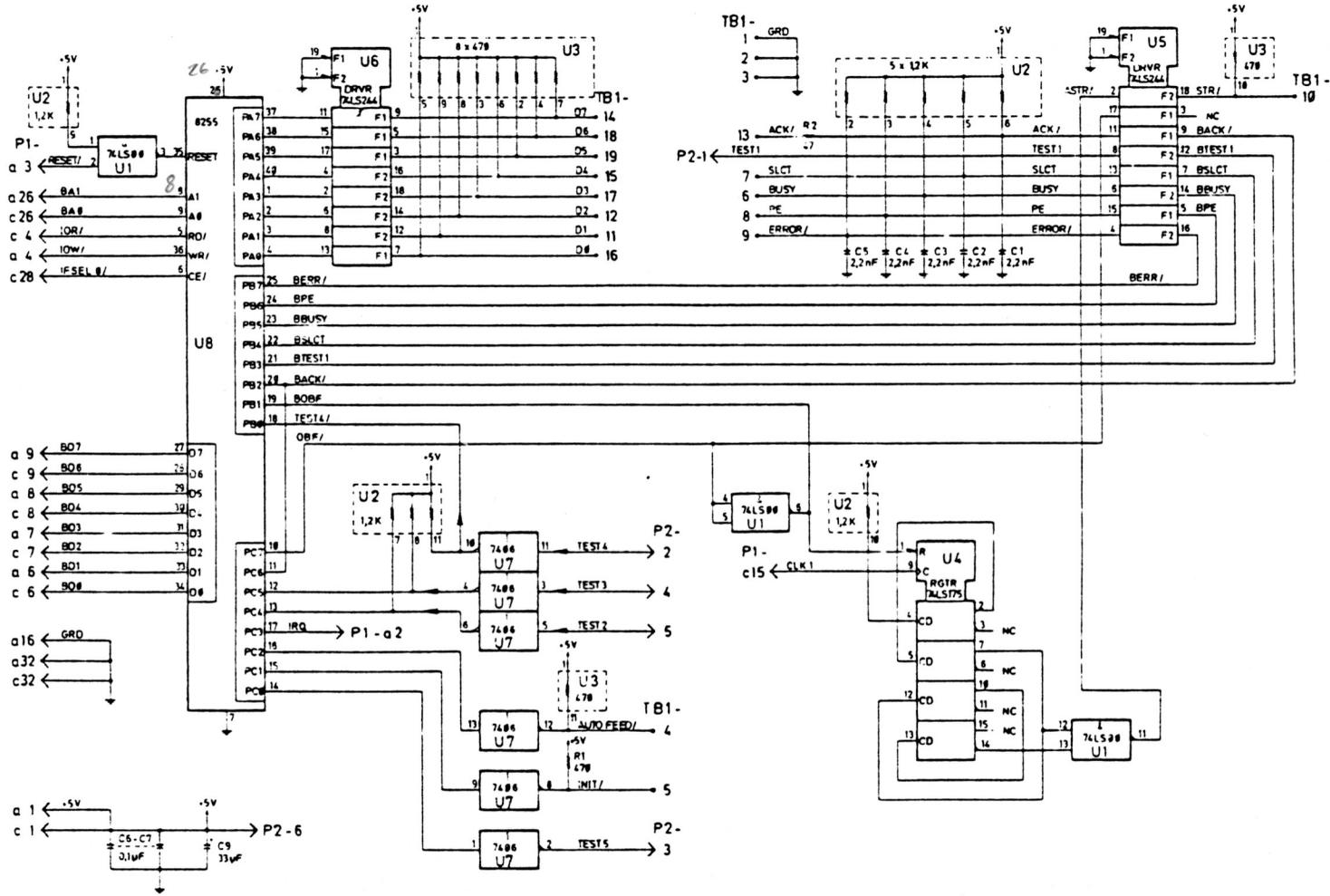
Memory Extension 192 K (K202) 017-0032138 Rev. D



MEMORY EXTENSION

P101			P101			P101			
a	b	c	a	b	c	a	b	c	
1	-5V	1	-5V	12	DD#	12	IAOUT#	22	INC
2	INC	2	INC	13	DD1	13	DD2	23	INC
3	AOUT7	3	INC	14	DD3	14	INC	24	CAS2/
4	AOUT6	4	INC	15	INC	15	INC	25	IO#
5	AOUT5	5	INC	16	LGRD	16	LGRD	26	IO7
6	INC	6	INC	17	INC	17	INC	27	CAS3/
7	INC	7	INC	18	INC	18	INC	28	CAS3/
8	INC	8	INC	19	IO#	19	INC	29	IO#
9	INC	9	INC	20	IO1	20	INC	30	BRAS/
10	INC	10	INC	21	IO2	21	INC	31	DD6
11	INC	11	AOUT7	22	IO3	22	INC	32	LGRD





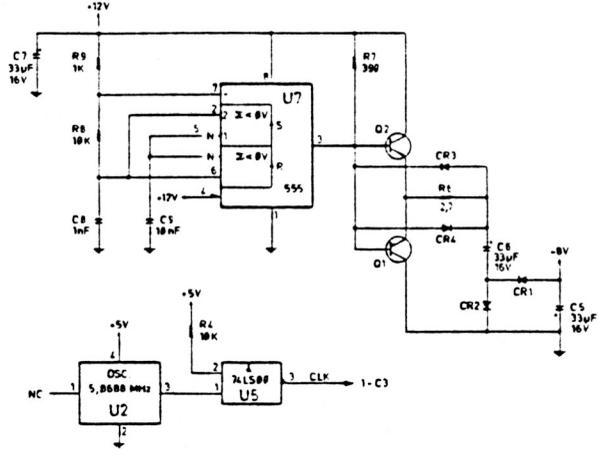
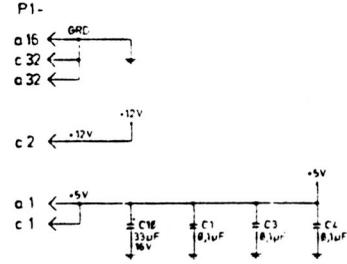
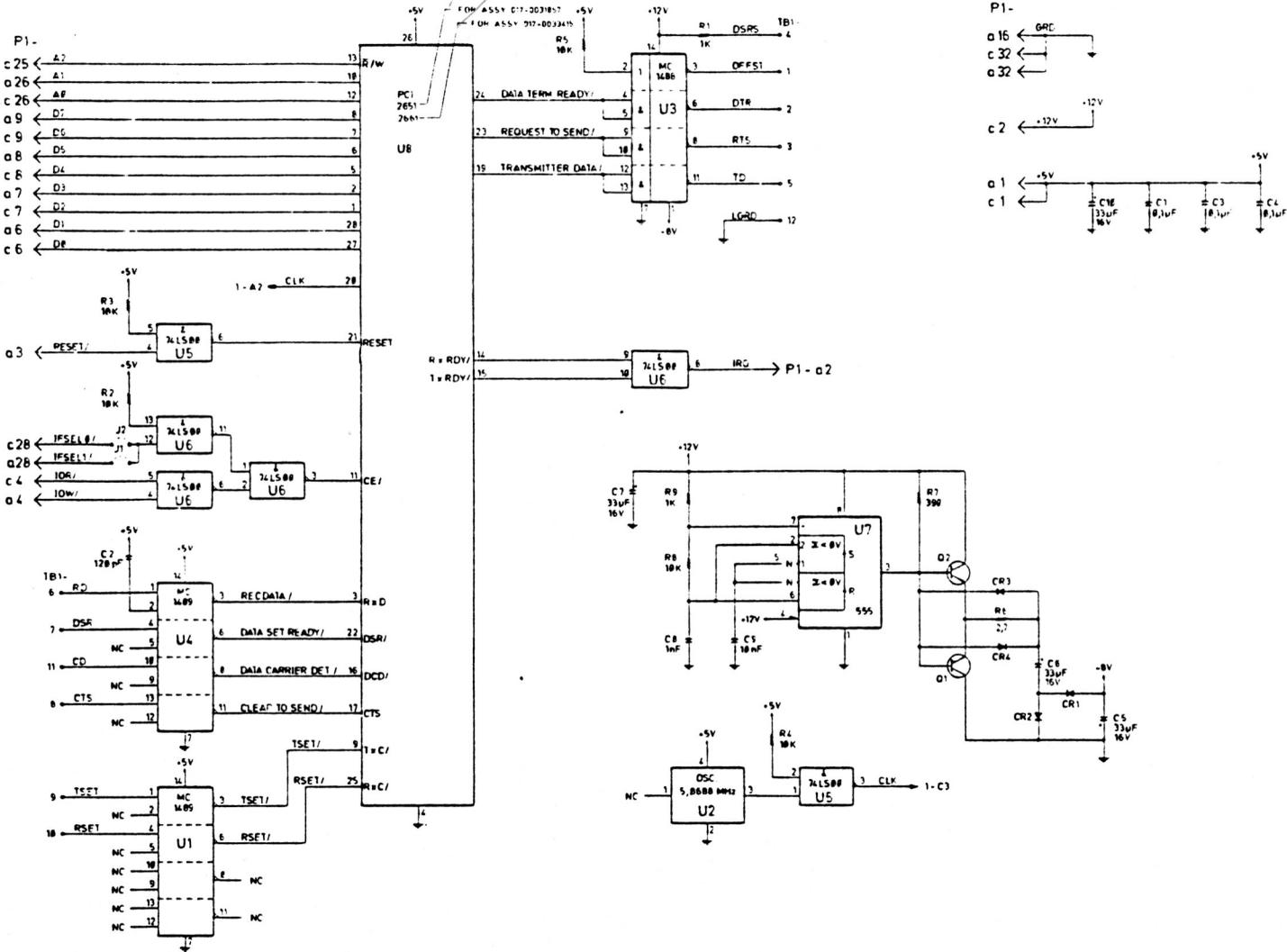
Centronics Interface (K210) 017-0031554 Rev. B

077-0031857

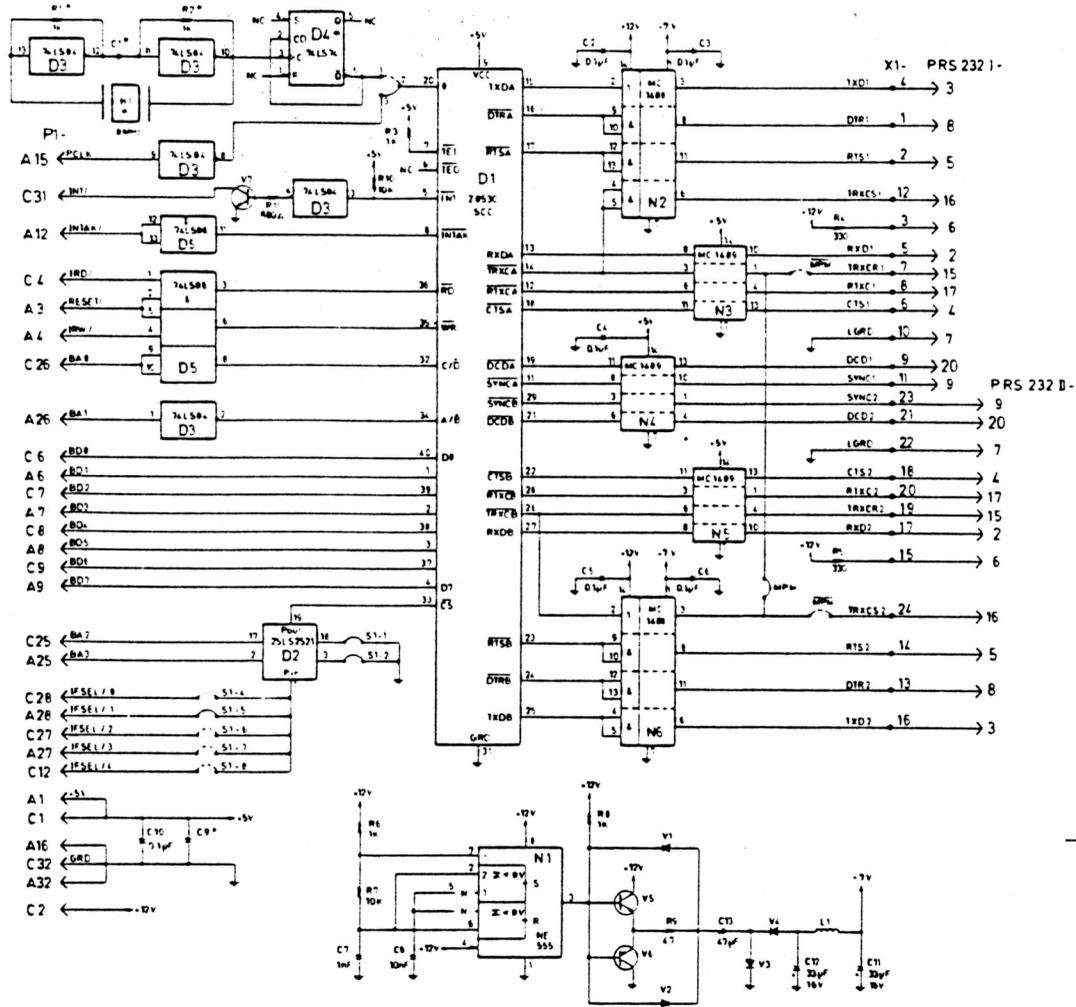
017-0033415

8-62

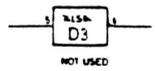
RS-232-C Interface (K211/212/213) 017-0031865 Rev. C

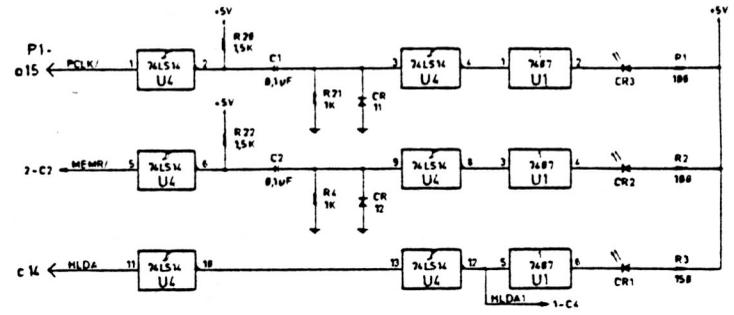
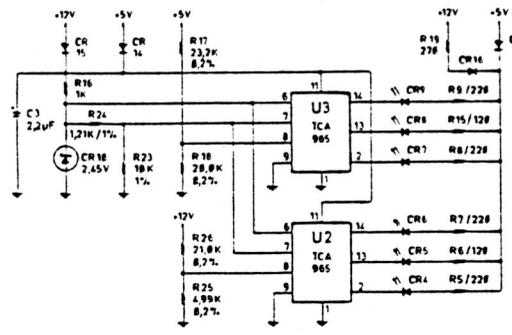
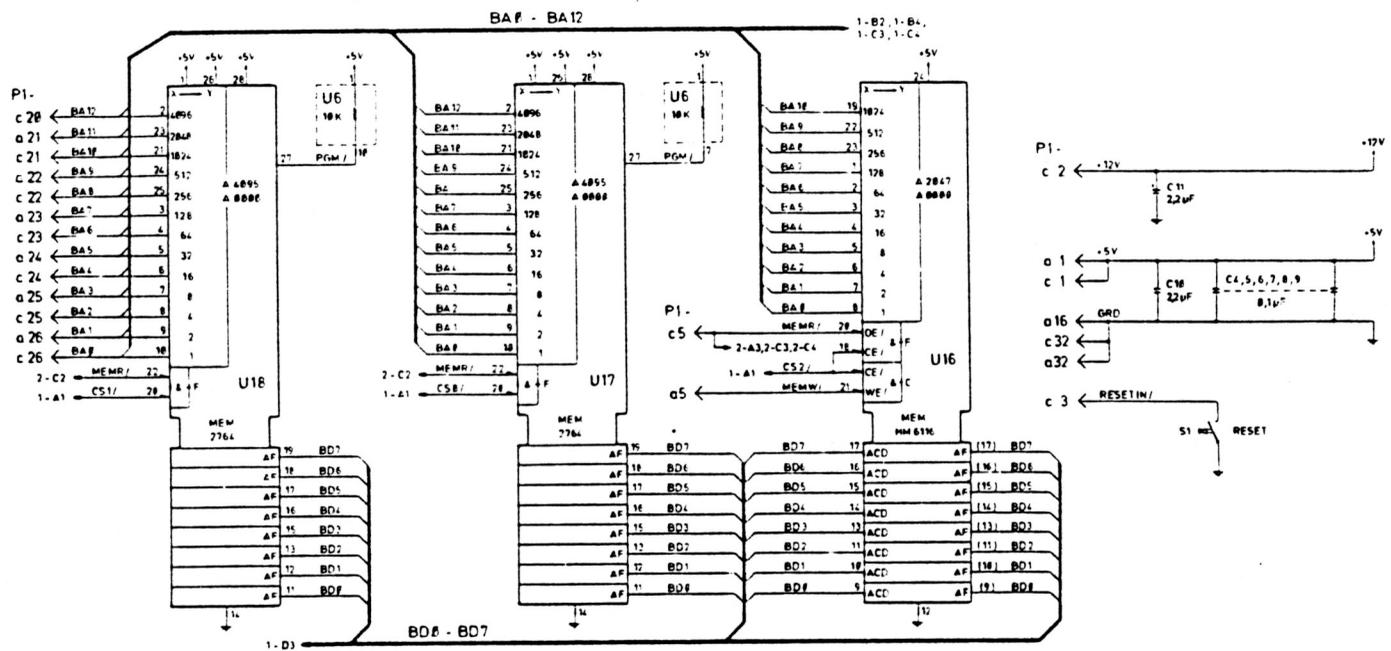


SCC Communication Interface (K216) 017-0033564 Rev. B

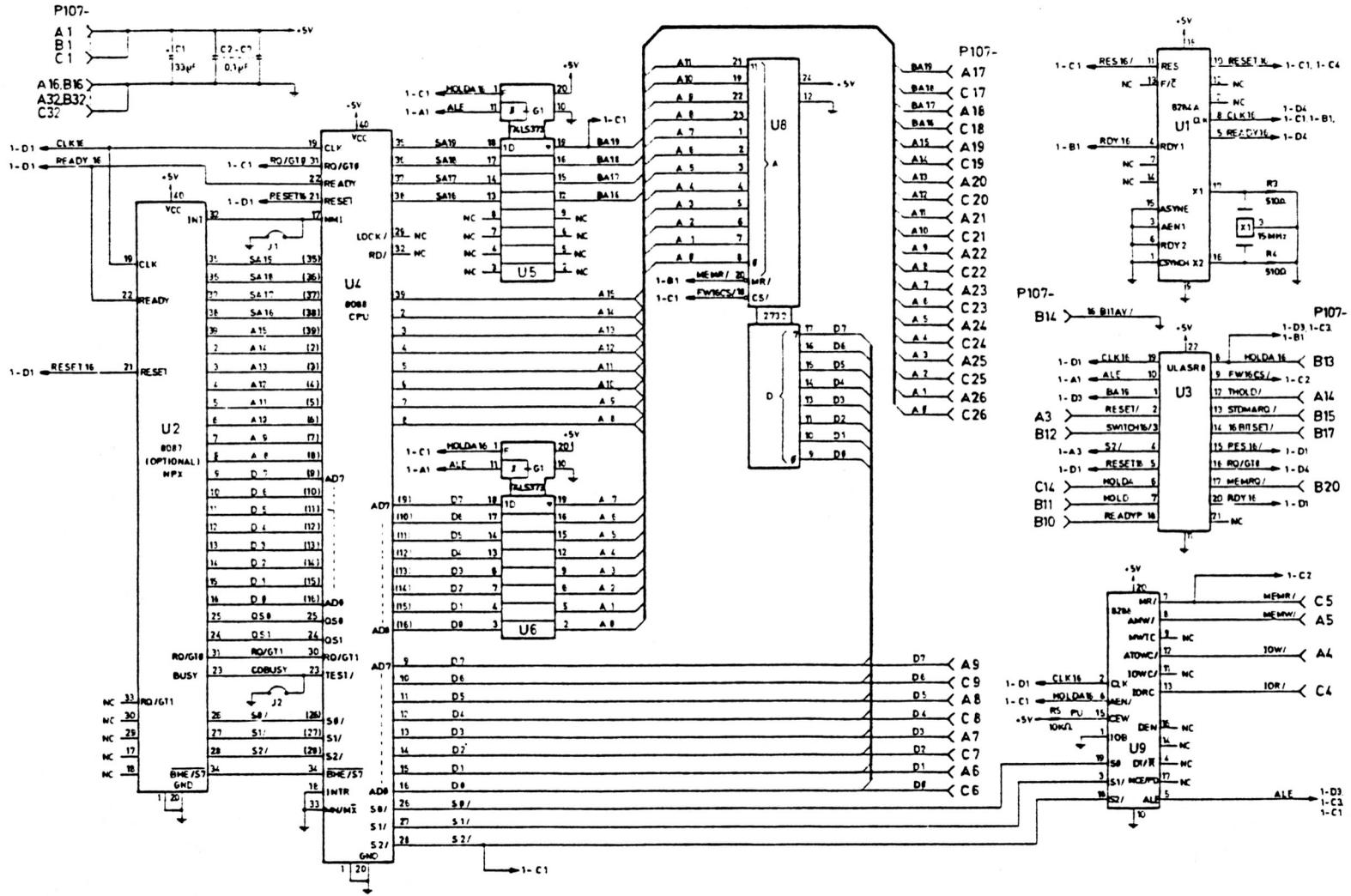


- = NICHT BESTUHT
- = NICHT MOUNTIERT
- = ALLE WIDERSTANDSWERTE SIND IN OHM
- = ALLE RESISTANZWERTE SIND IN OHM
- = ASSY-NO 017-0033563

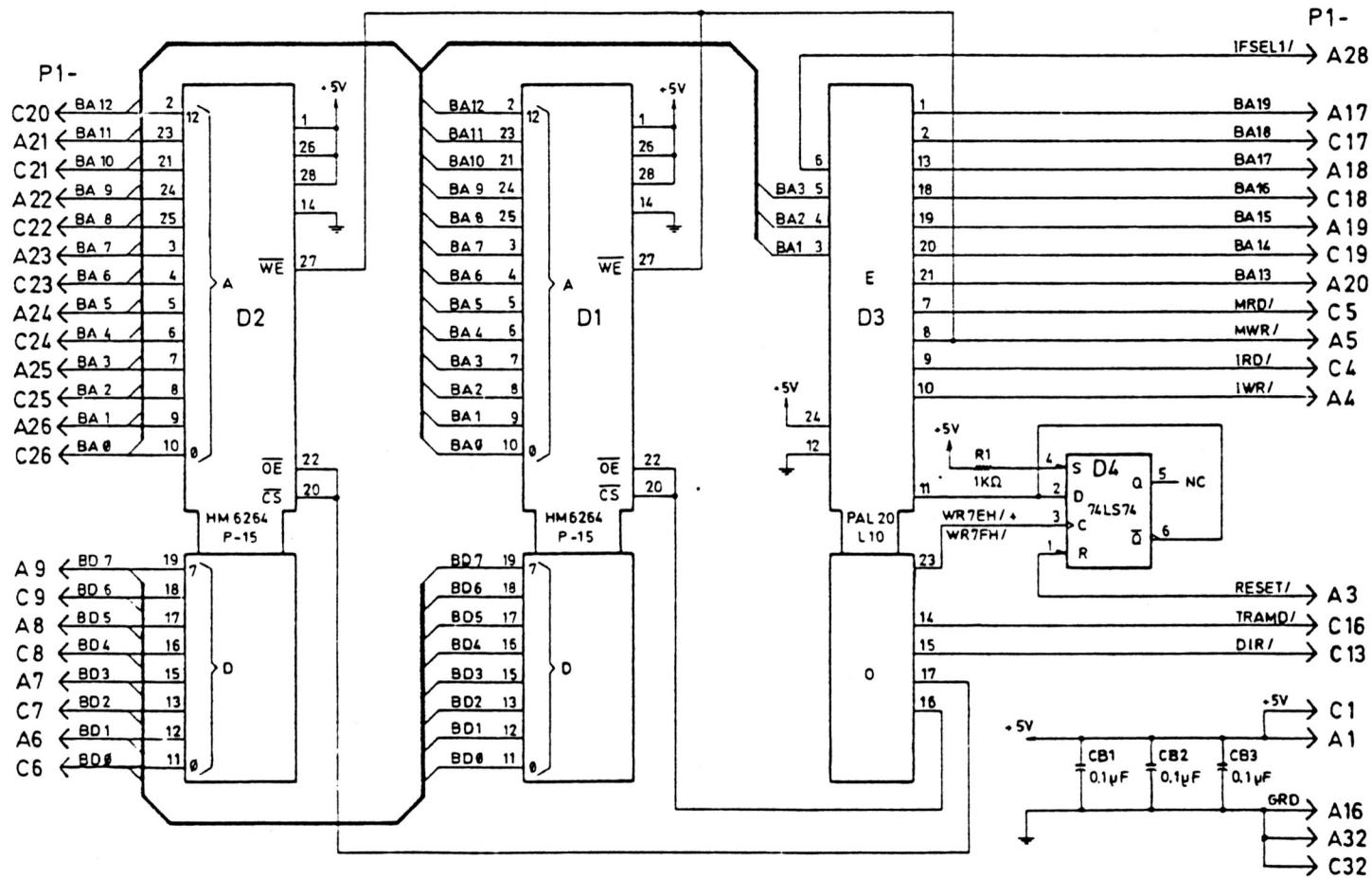


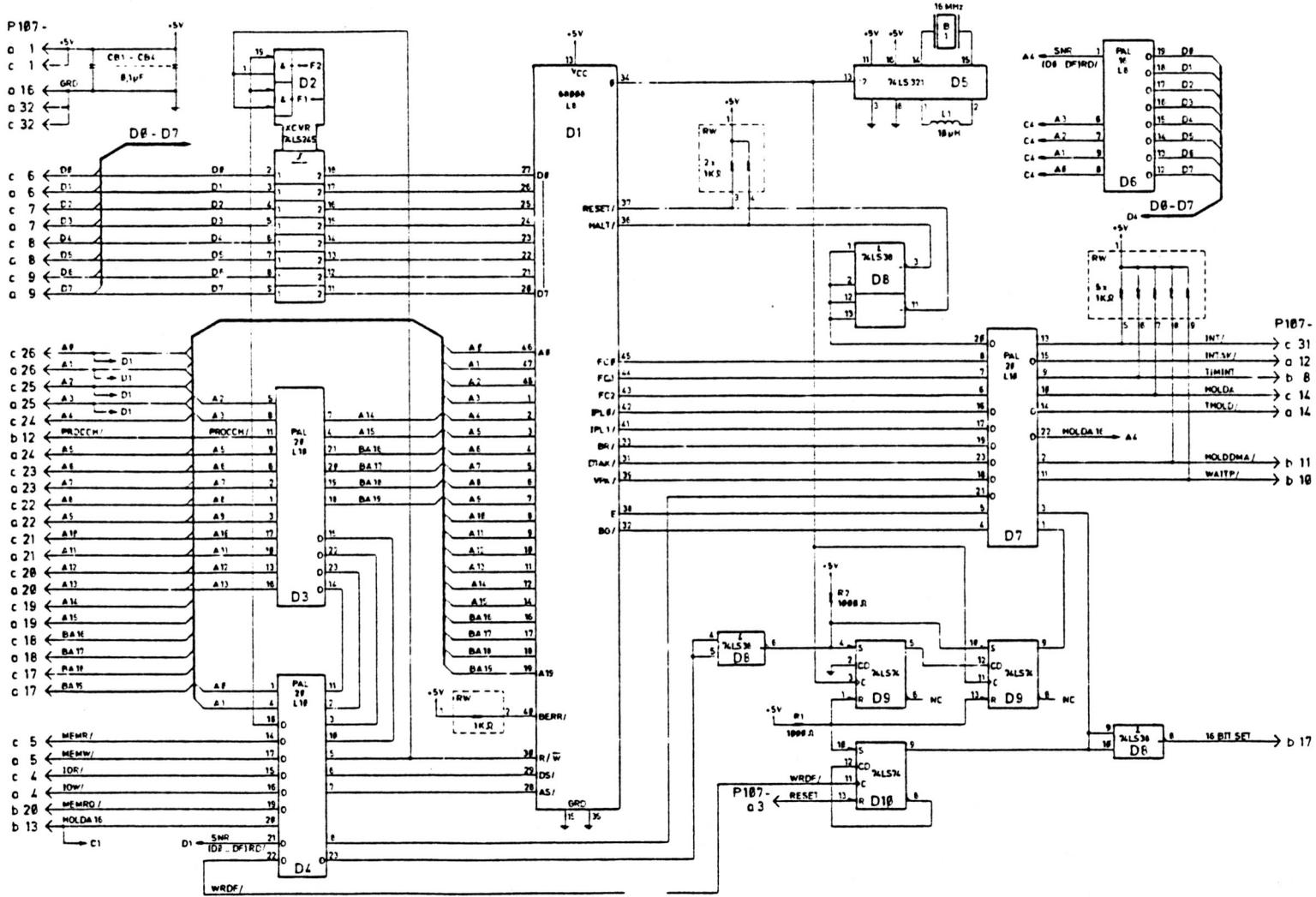


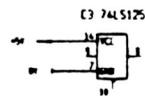
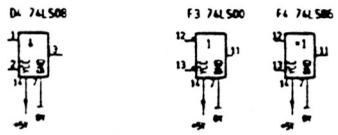
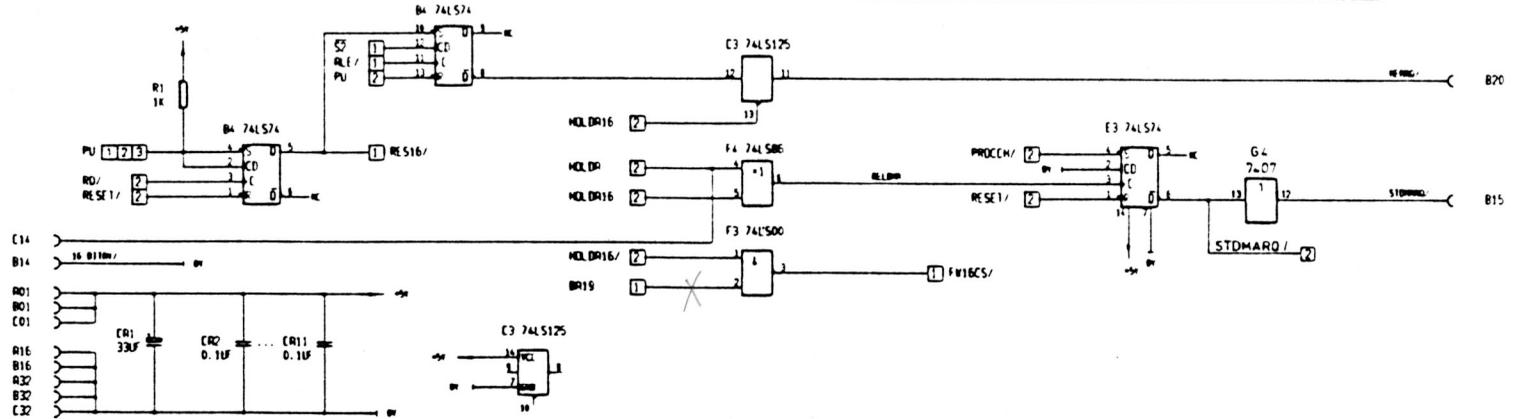
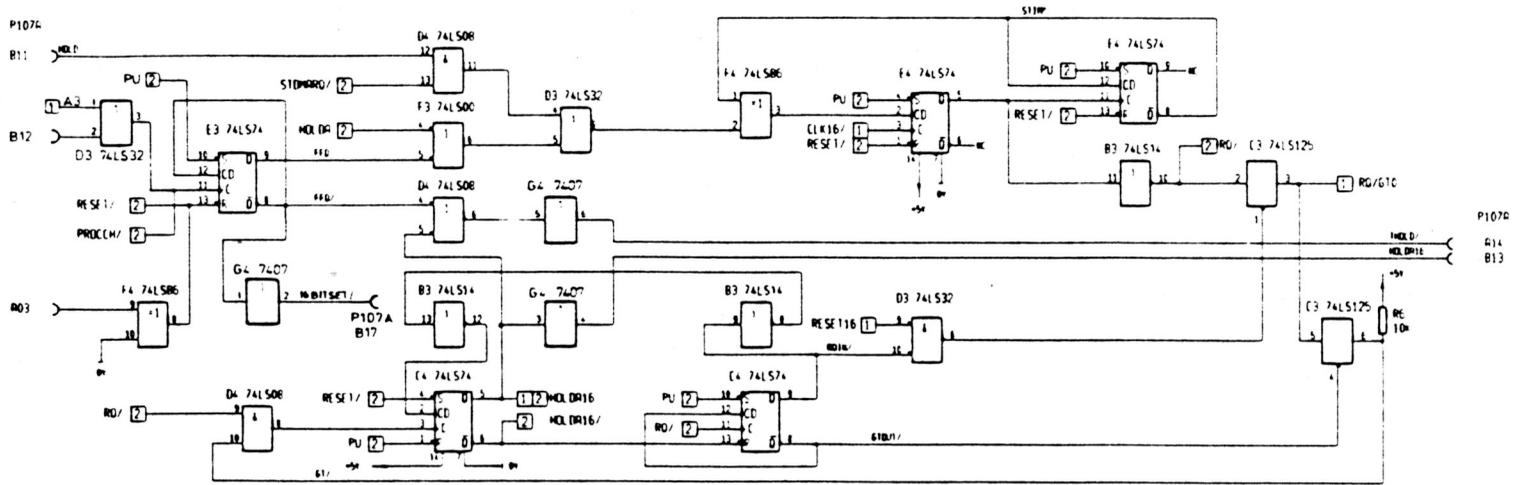
External 16-bit Processor (K231) 017-0032548 Rev. A



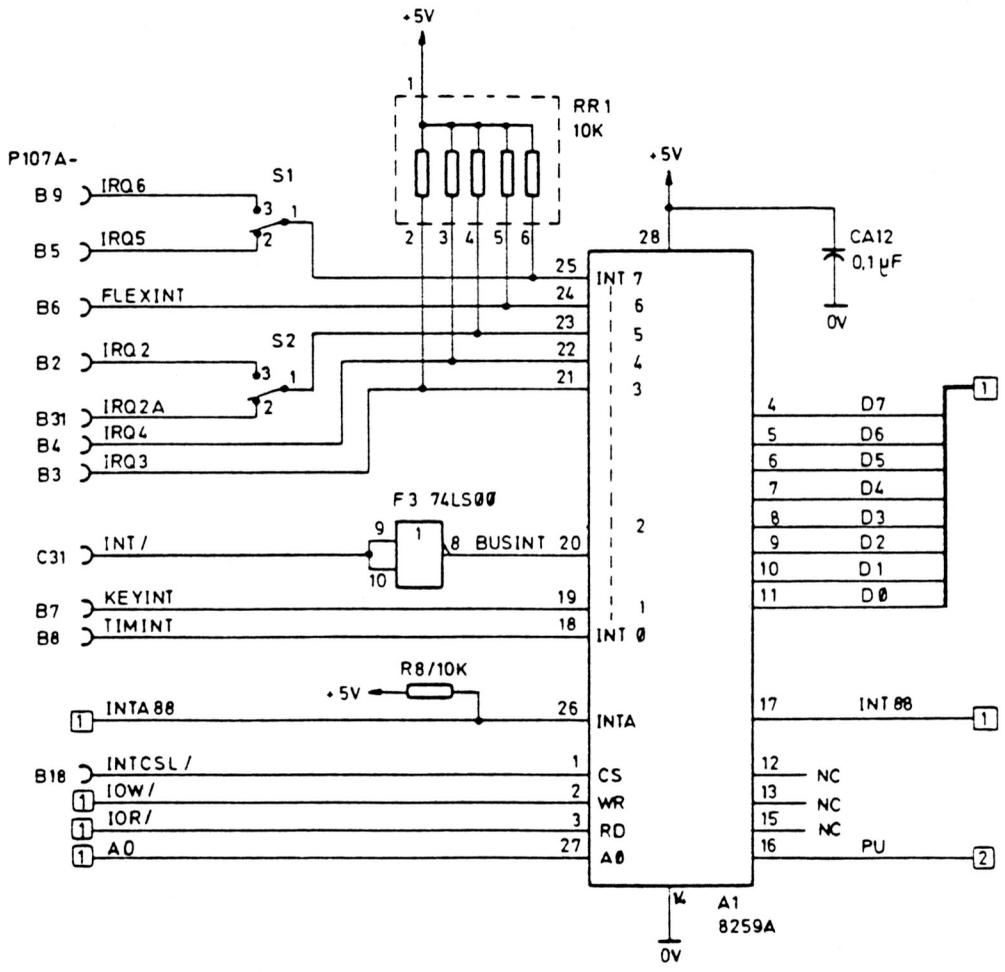
Shared RAM (K233) 017-0033582 Rev. A







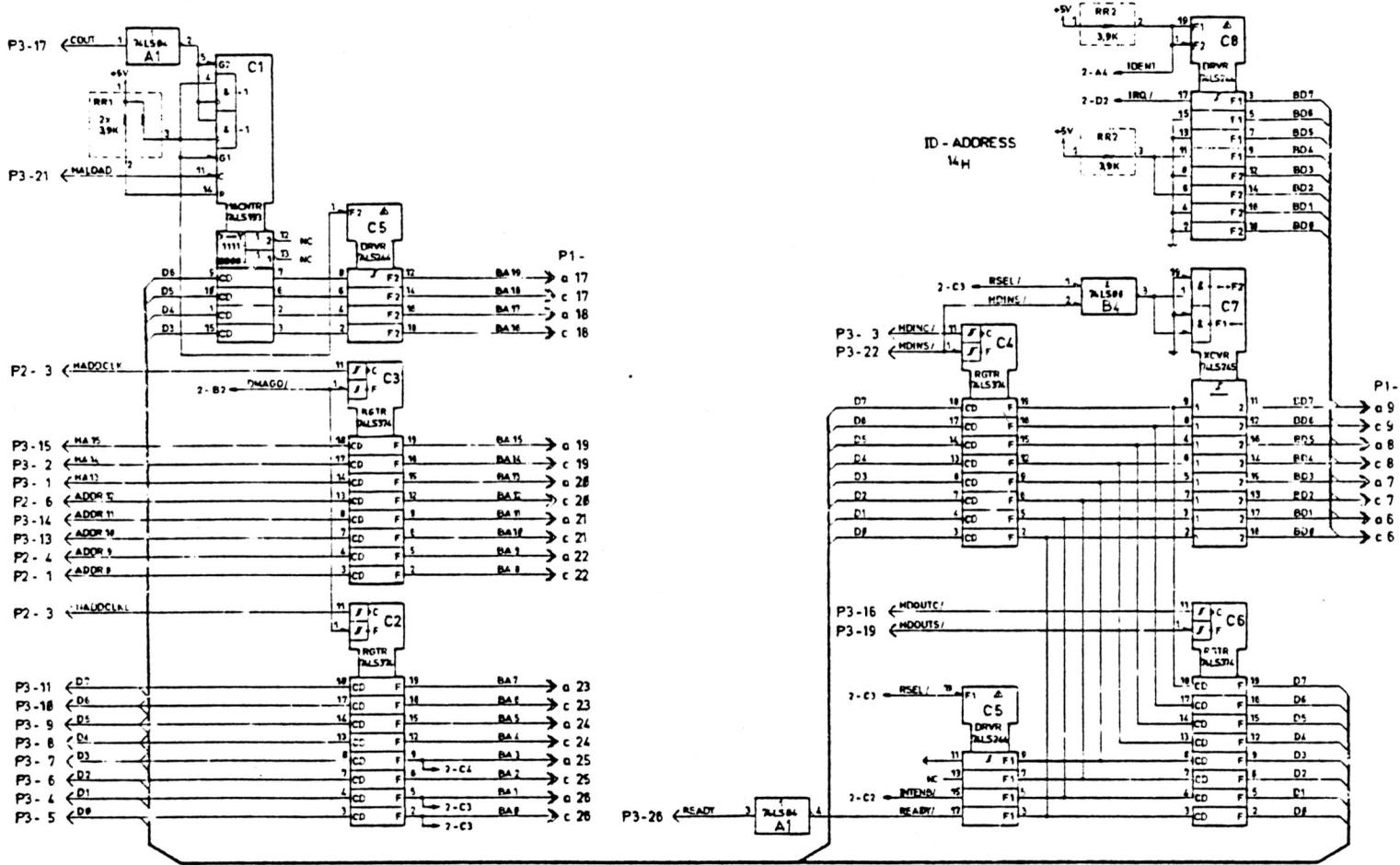
PIC



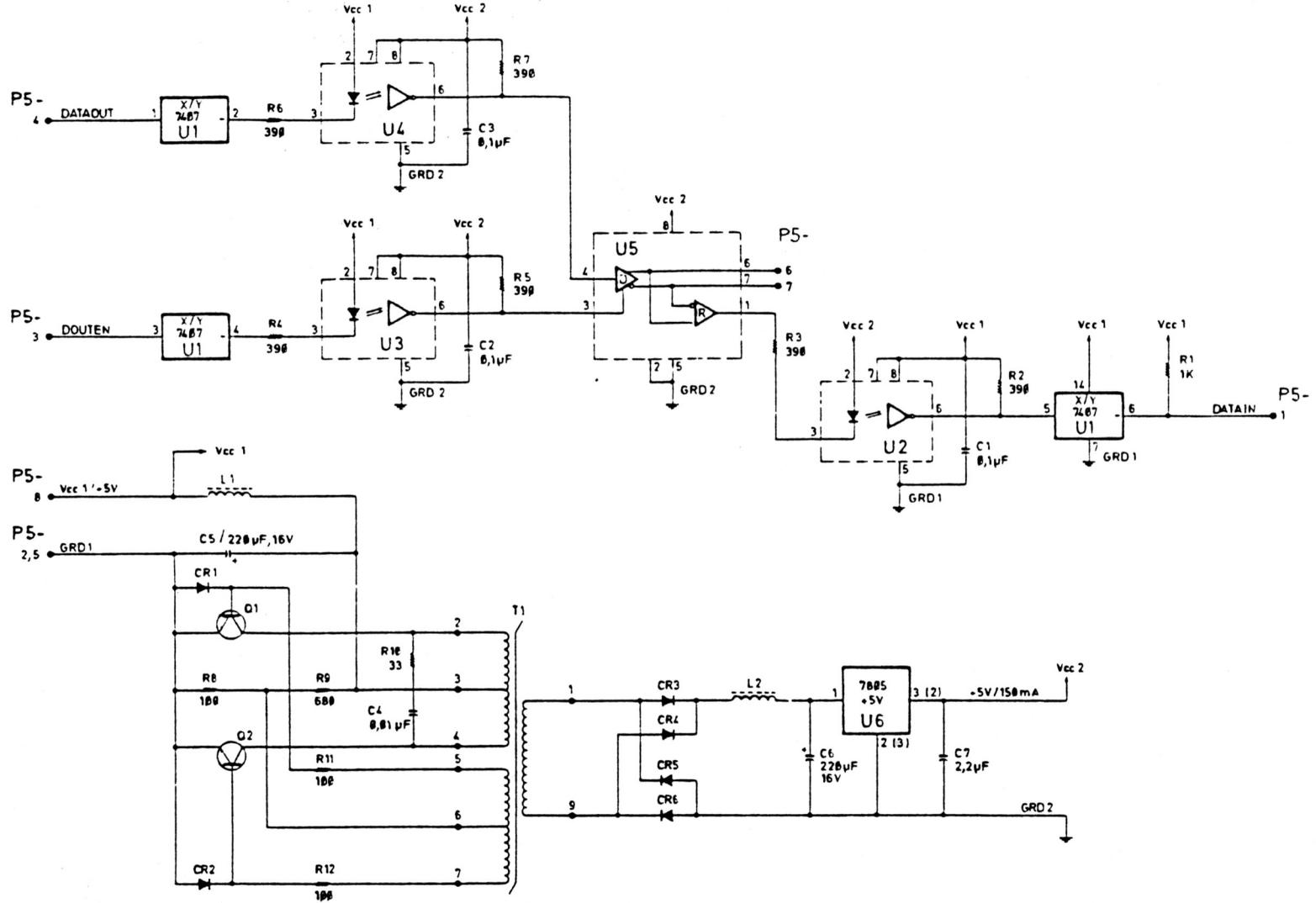
3 of 3

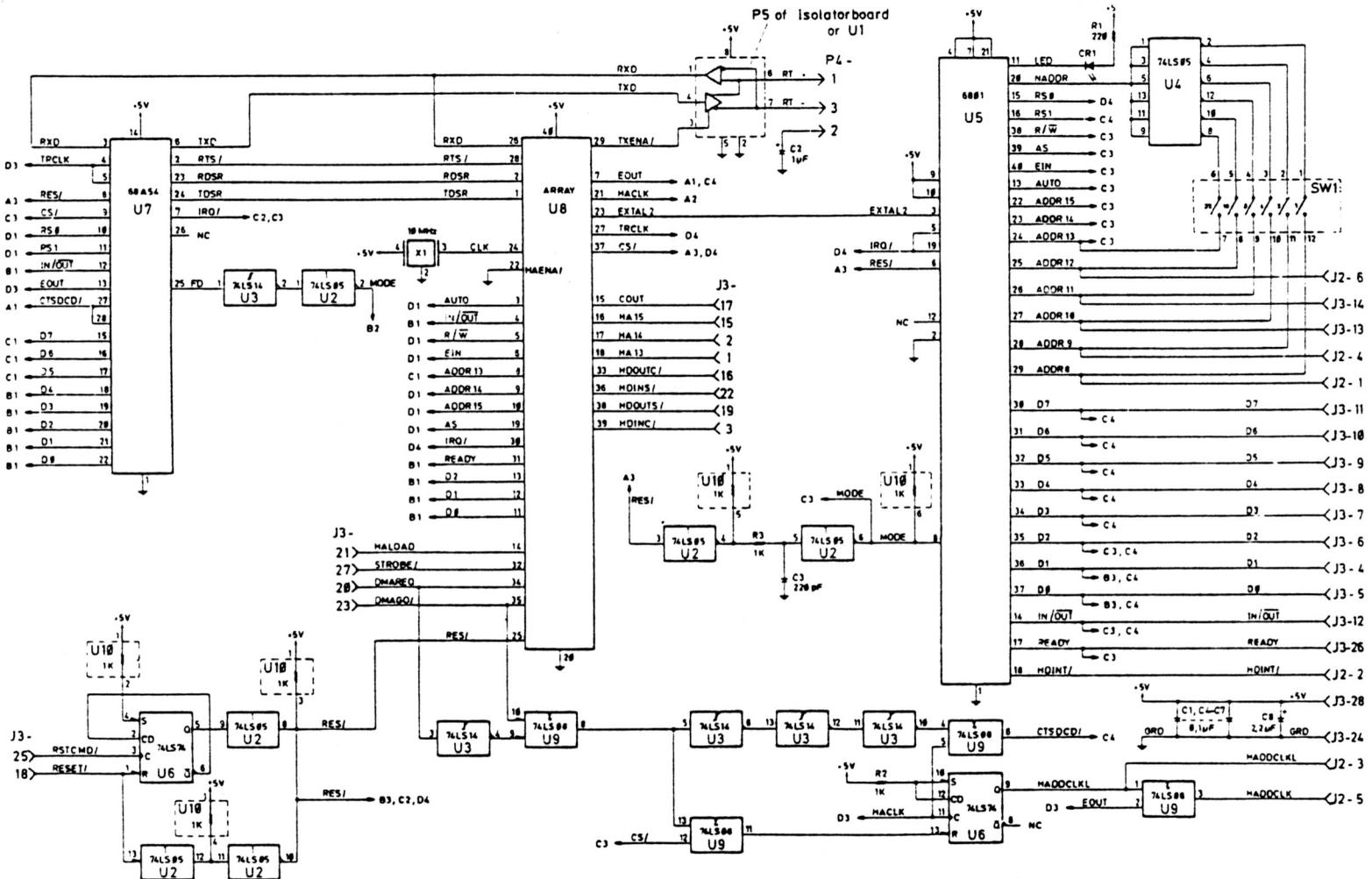
8-73

Omninet Interface (K600) 017-0032433 Rev. C
1 of 2



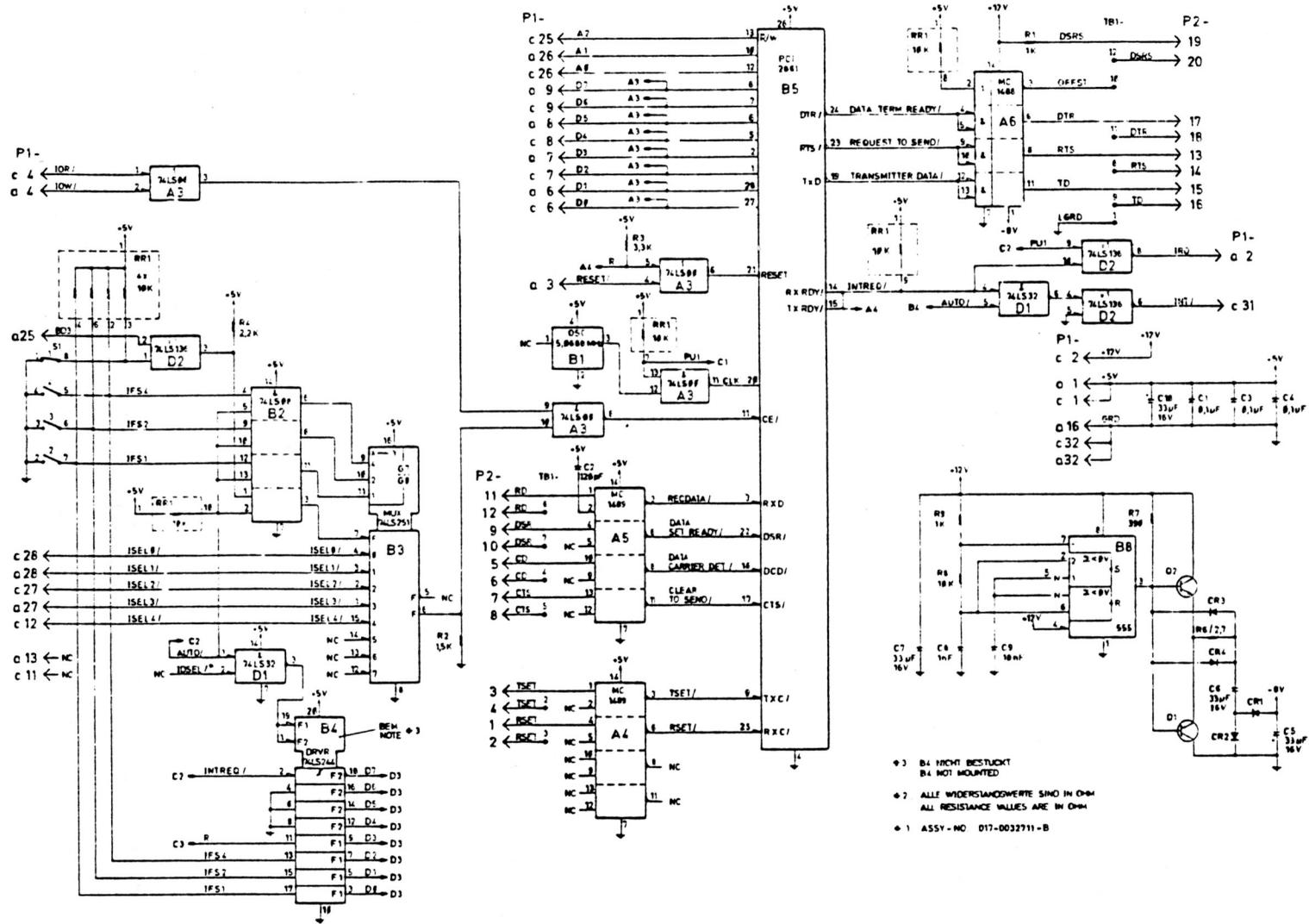
ID - ADDRESS
14H





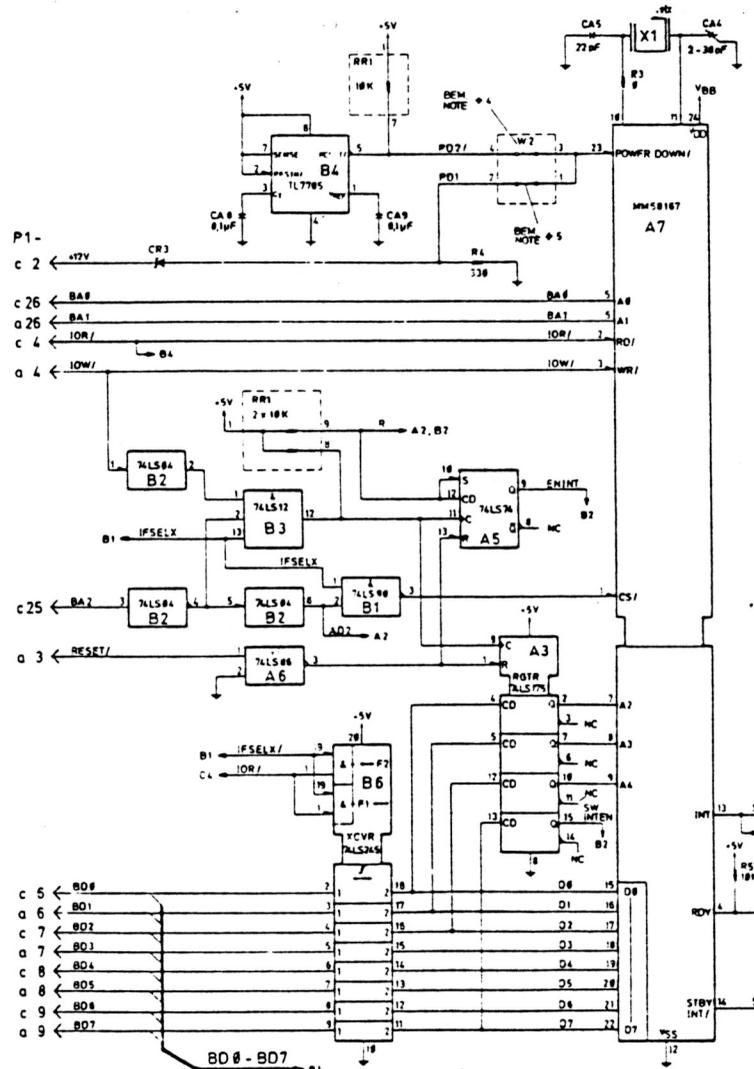
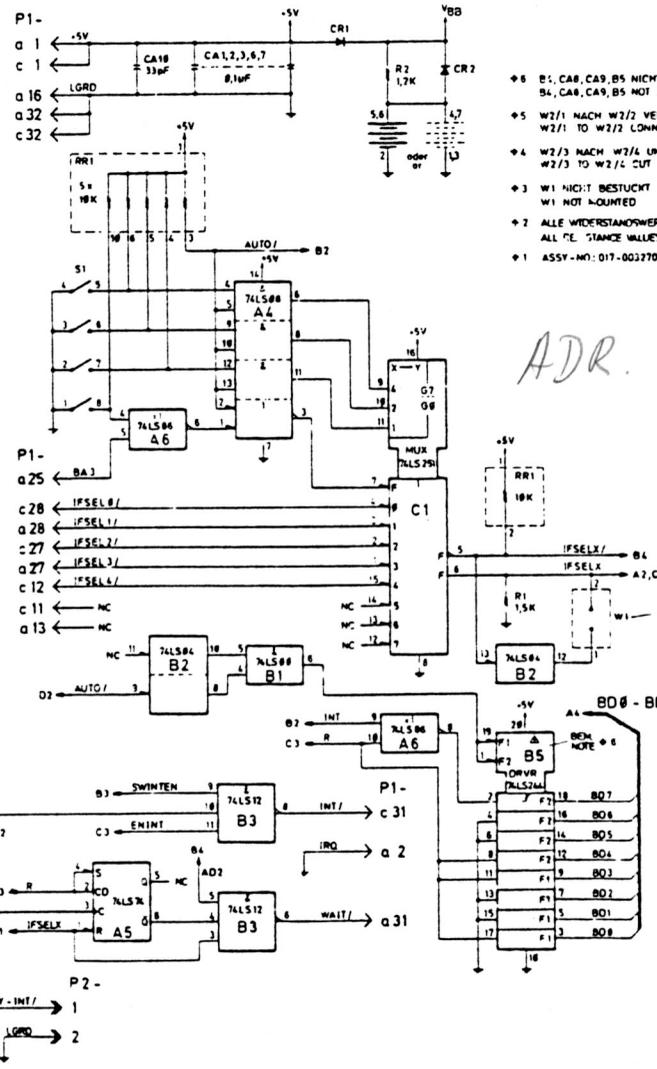
Omninet Controller (K600) 017-0032434 Rev. B

RS-232 C Switchable Interface (K801) 017-0032712 Rev. B



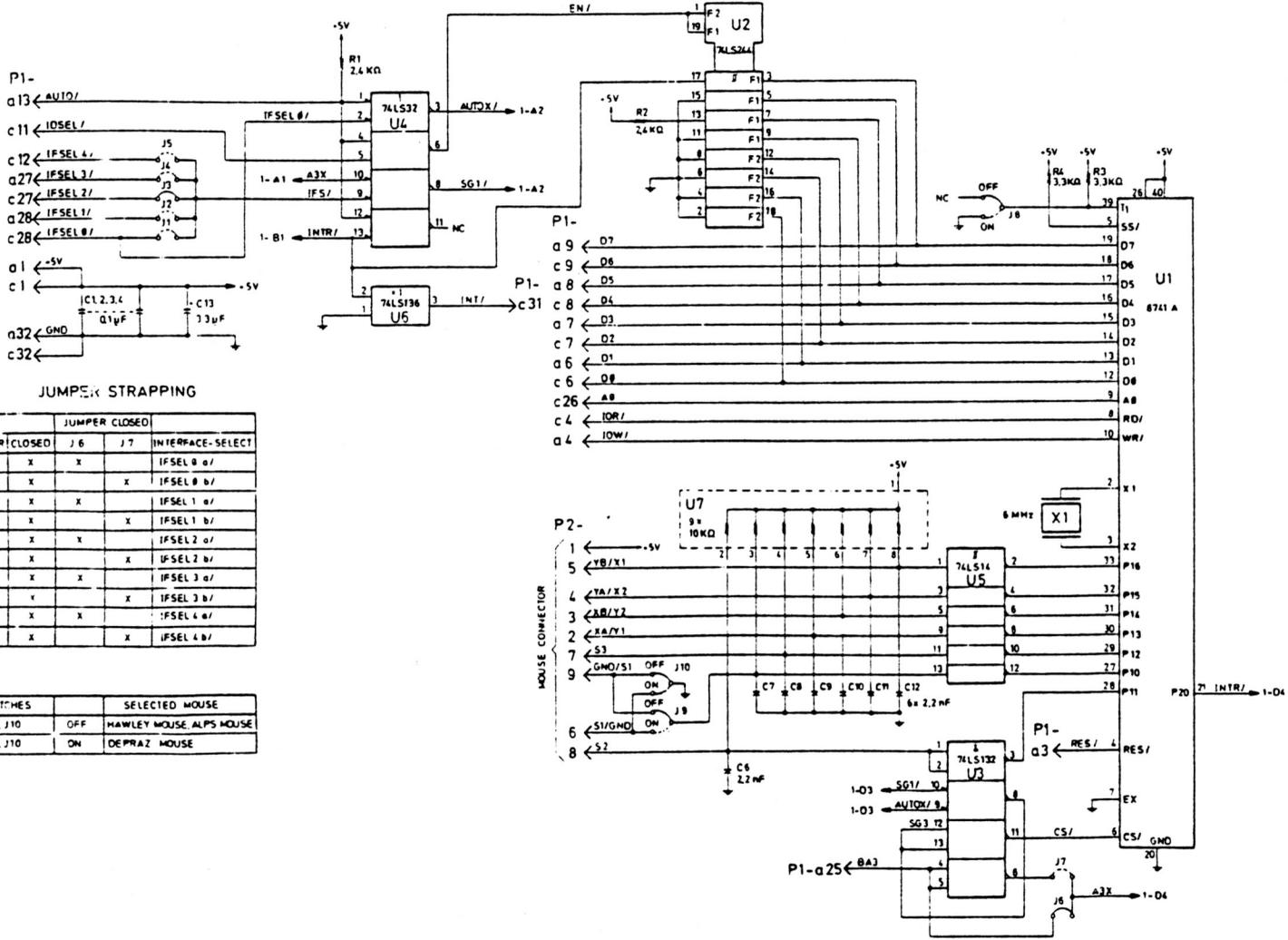
ADR. C8-CF 4

- 6 B1, CA8, CA9, B5 NICHT BESTÜCKT
B4, CA8, CA9, B5 NOT MOUNTED
- 5 W2/1 NACH W2/2 VERBINDEN
W2/1 TO W2/2 CONNECTION
- 4 W2/3 NACH W2/4 UNTERBROCHEN
W2/3 TO W2/4 CUT
- 3 W1 NICHT BESTÜCKT
W1 NOT MOUNTED
- 2 ALLE WIDERSTANDSWERTE SIND IN OHM
ALL RESISTANCE VALUES ARE IN OHM
- 1 ASSY-NR.: 017-0032702-B



Real Time Clock (K803) 017-0032703 Rev. B

Mouse Interface (K806) 017-0032824 Rev. B



JUMPER STRAPPING

JUMPER CLOSED				
JUMPER	CLOSED	J 6	J 7	INTERFACE-SELECT
J1	X	X		IFSEL 0 a/
J1	X		X	IFSEL 0 b/
J2	X	X		IFSEL 1 a/
J2	X		X	IFSEL 1 b/
J3	X	X		IFSEL 2 a/
J3	X		X	IFSEL 2 b/
J4	X	X		IFSEL 3 a/
J4	X		X	IFSEL 3 b/
J5	X	X		IFSEL 4 a/
J5	X		X	IFSEL 4 b/

SWITCHES	SELECTED MOUSE	
J8, J9, J10	OFF	HAWLEY MOUSE, ALPS MOUSE
J8, J9, J10	ON	DEPRAZ MOUSE

NCR 3282 Fixed Disk Interface 017-0027022 Rev. D

