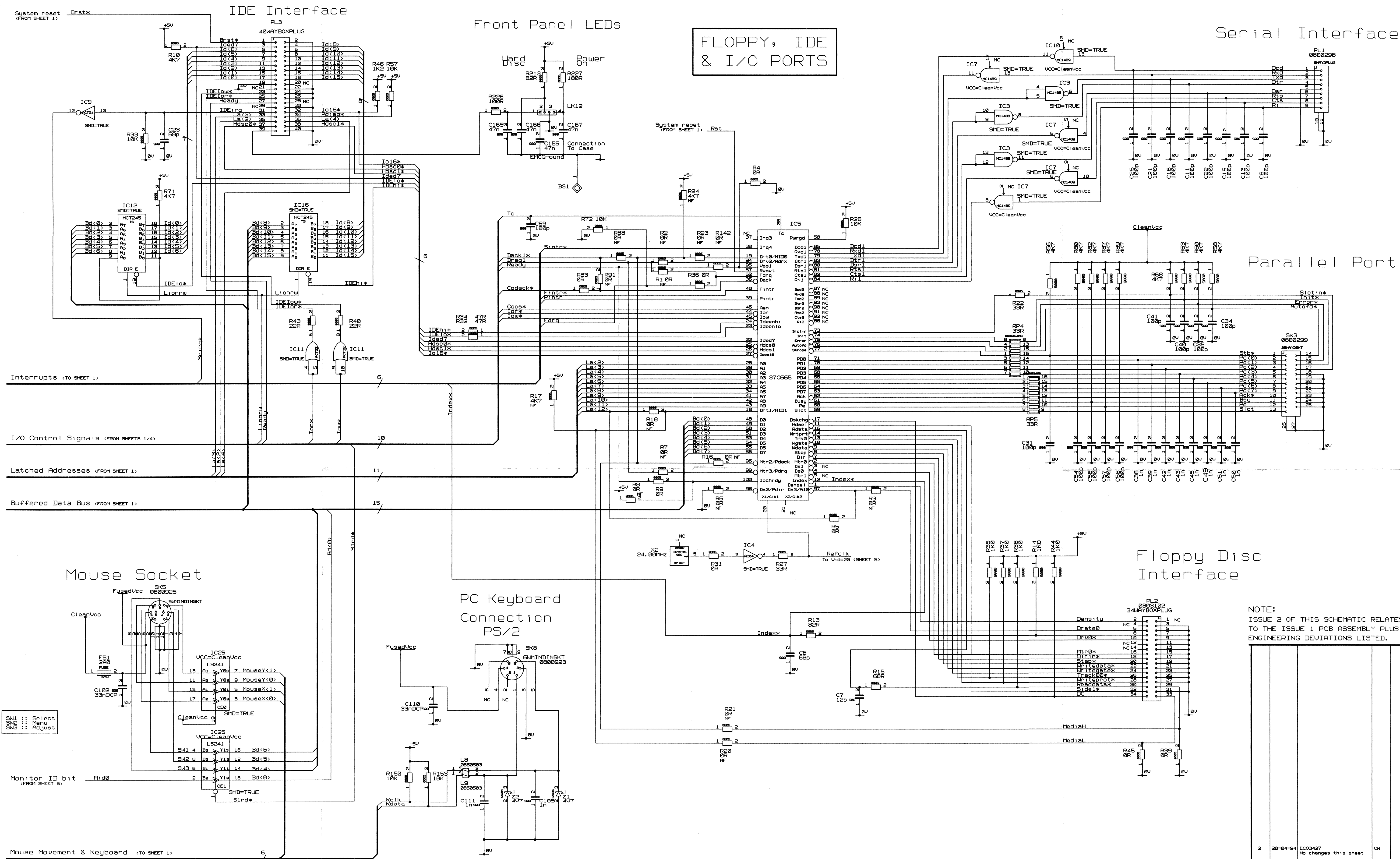


TITLE MEDUSA MAIN PCB			
CIRCUIT DIAGRAM Sht 1/7			
COMPUTERS Ltd	A1	DRG. No	0197,000 /C

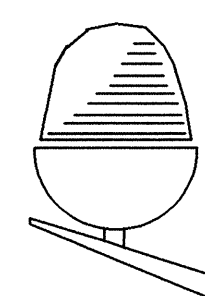


NOTE:
ISSUE 2 OF THIS SCHEMATIC RELATES
TO THE ISSUE 1 PCB ASSEMBLY PLUS
ENGINEERING DEVIATIONS LISTED.

2	20-04-94	EC03427 No changes this sheet	GW	
1	27-01-94	AWR 3984	BS	
ISS	DATE	DESC. OF CHANGE	ENG.	CHK

SCALE	_____	ALL DIMENSIONS IN mm UNLESS OTHERWISE STATED	
MATERIAL	_____		
FINISH	_____		
WHOLE NO. TOL. _____		DECIMAL NO. TOL. _____	ANGLE TOL. _____

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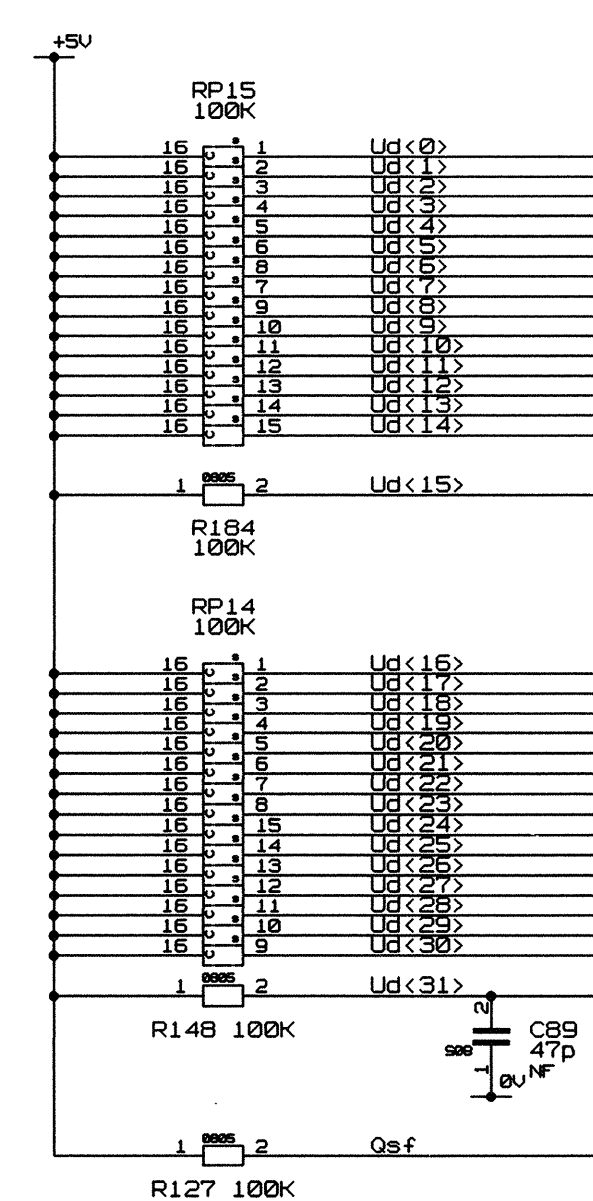
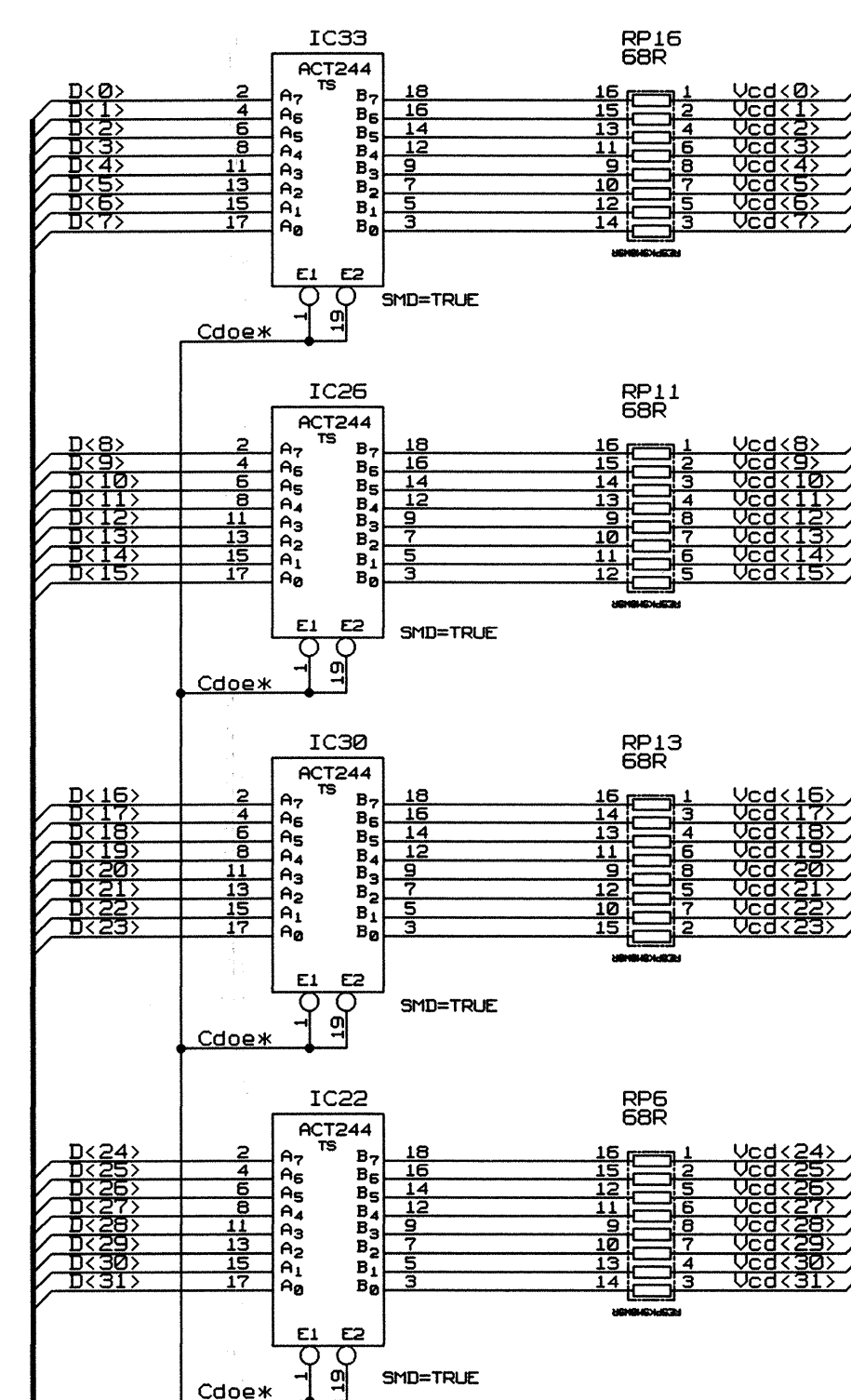


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ACORN HOUSE
VISION PARK
HISTON
CAMBRIDGE
CB4 4AF

TITLE	MEDUSA MAIN PCB
	CIRCUIT DIAGRAM Sht 2/7

ACORN COMPUTERS Ltd	A1	DRG. No	0197,000	/C
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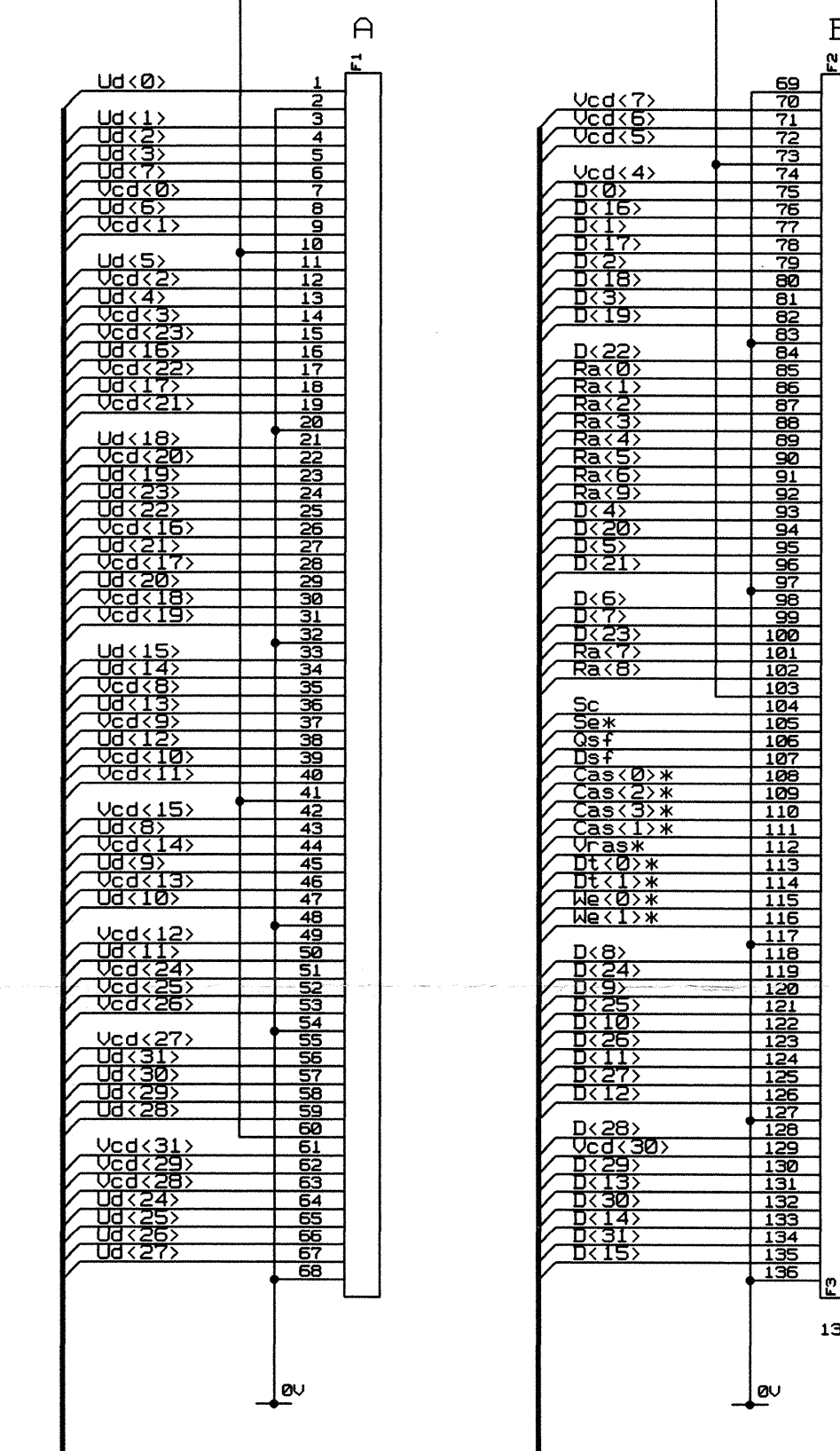
DRAM & VRAM



VIDC20 Lower 32 data bits (TO SHEET 5)

VIDC20 Upper 32 data bits (TO SHEET 5)

1MB/2MB VRAM Expansion Card



NOTE:
ISSUE 2 OF THIS SCHEMATIC RELATES
TO THE ISSUE 1 PCB ASSEMBLY PLUS
ENGINEERING DEVIATIONS LISTED.

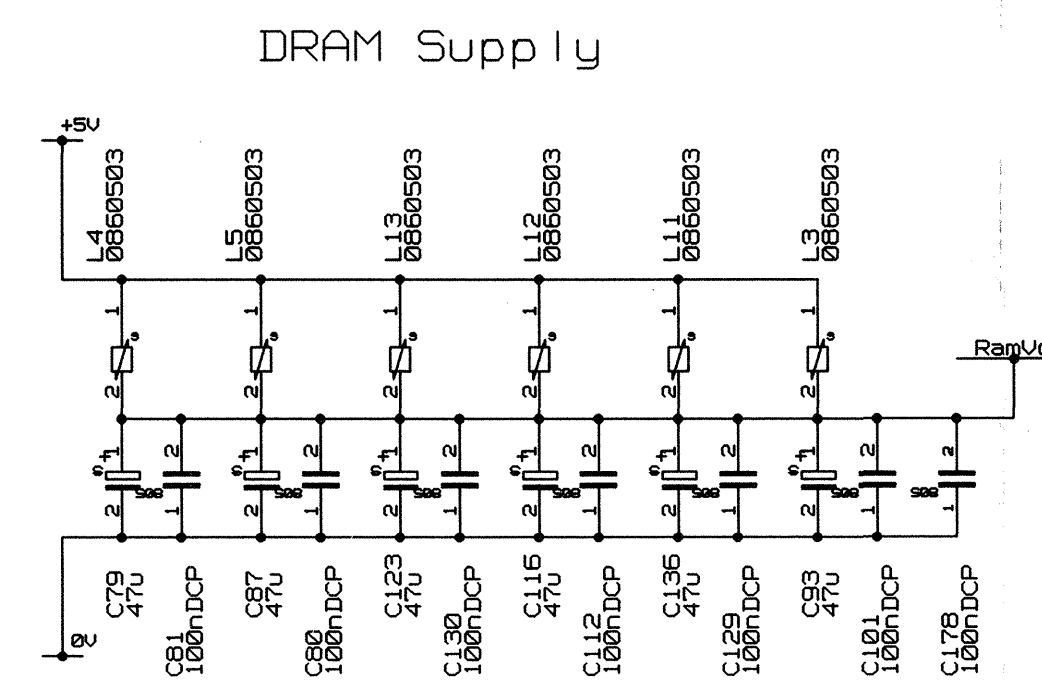
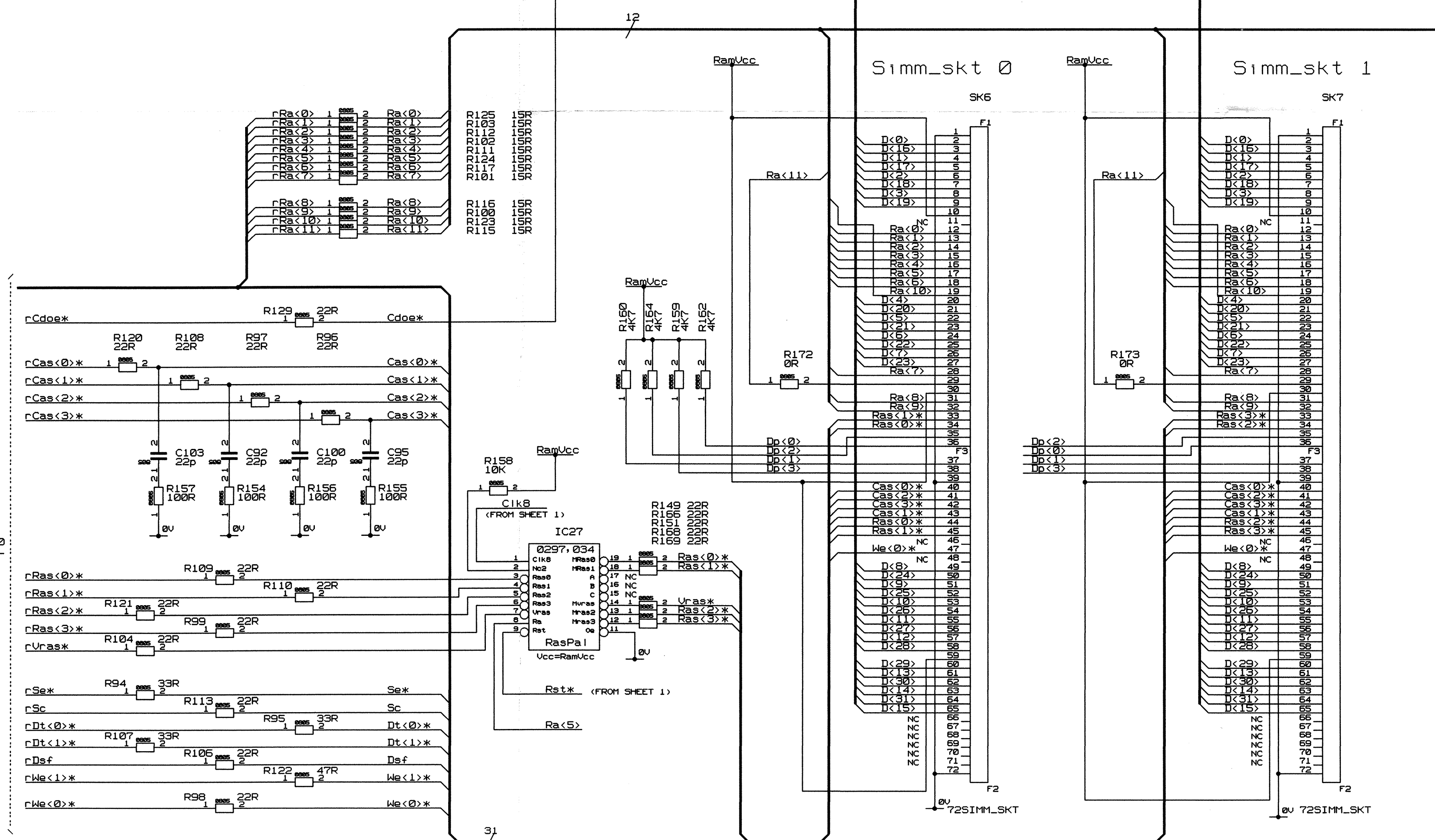
System Data Bus
(FROM SHEET 1)

VIDC20 Lower 32 data bits

System Data Bus

DRAM/VRAM Adresses

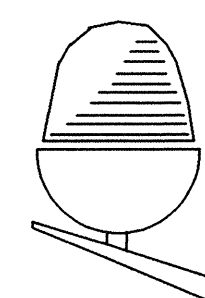
VRAM Control



DRAM/VRAM & VIDC20
Control (FROM SHEET 1) -

SCALE	_____	ALL DIMENSIONS IN mm UNLESS OTHERWISE STATED	
MATERIAL	_____		
FINISH	_____		
WHOLE No.	TOL. _____	DECIMAL No.	TOL. _____
		ANGLE TOL.	_____

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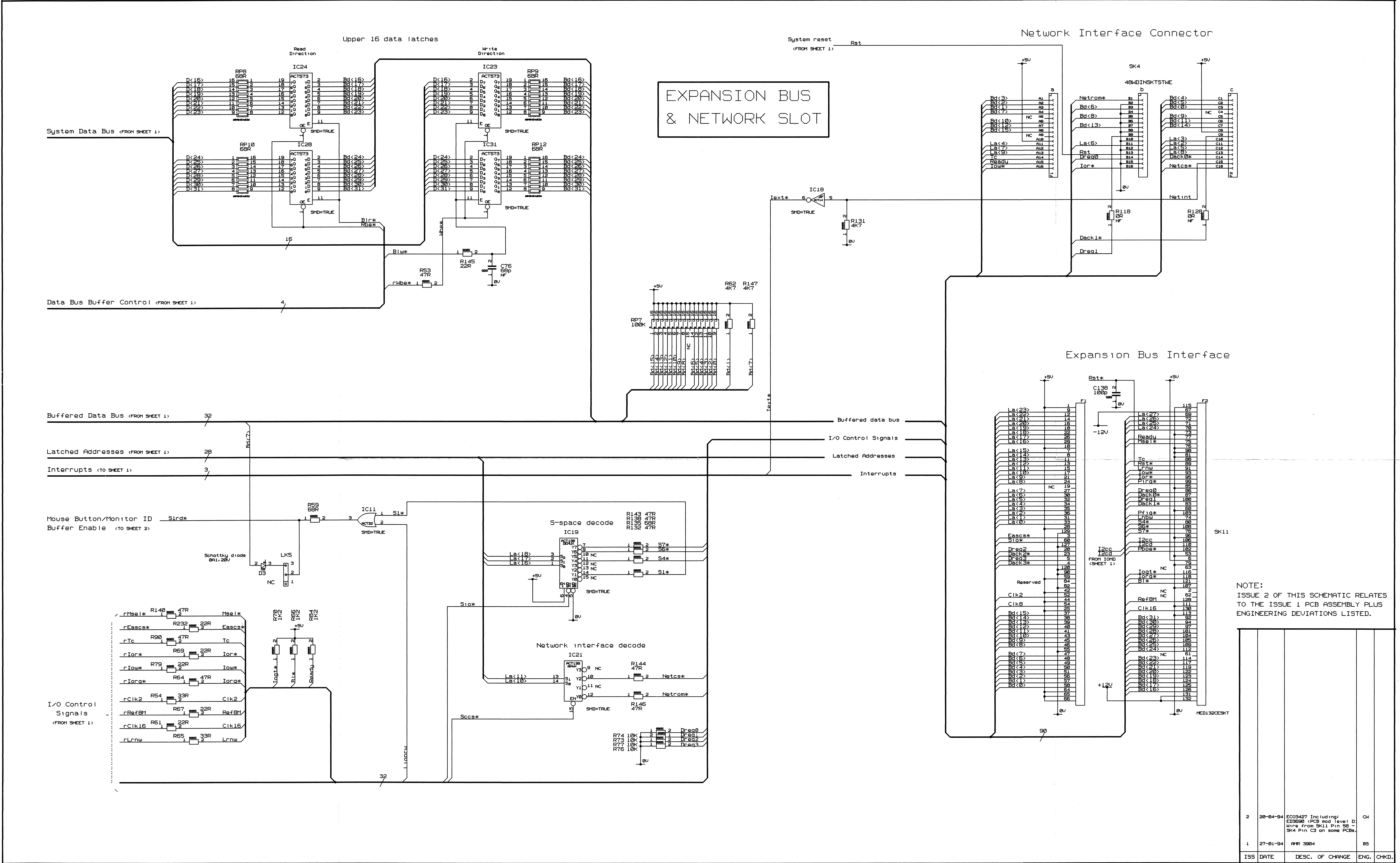
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HISTON
CAMBRIDGE
CB4 4AE

ACORN COMPUTERS Ltd

TITLE	MEDUSA MAIN PCB
	CIRCUIT DIAGRAM Sht 3/7

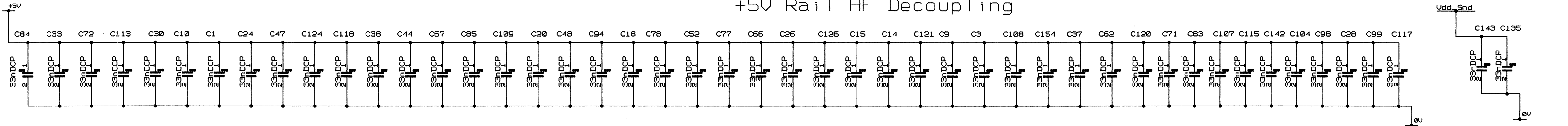
1	DRG. No	0197, 000	/C
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2	11-04-94	EC03427 No changes this sheet	CM
1	27-01-94	RR 3904	BS
ISS	DATE	DESC. OF CHANGE	ENG. CHK



0197,000 /C

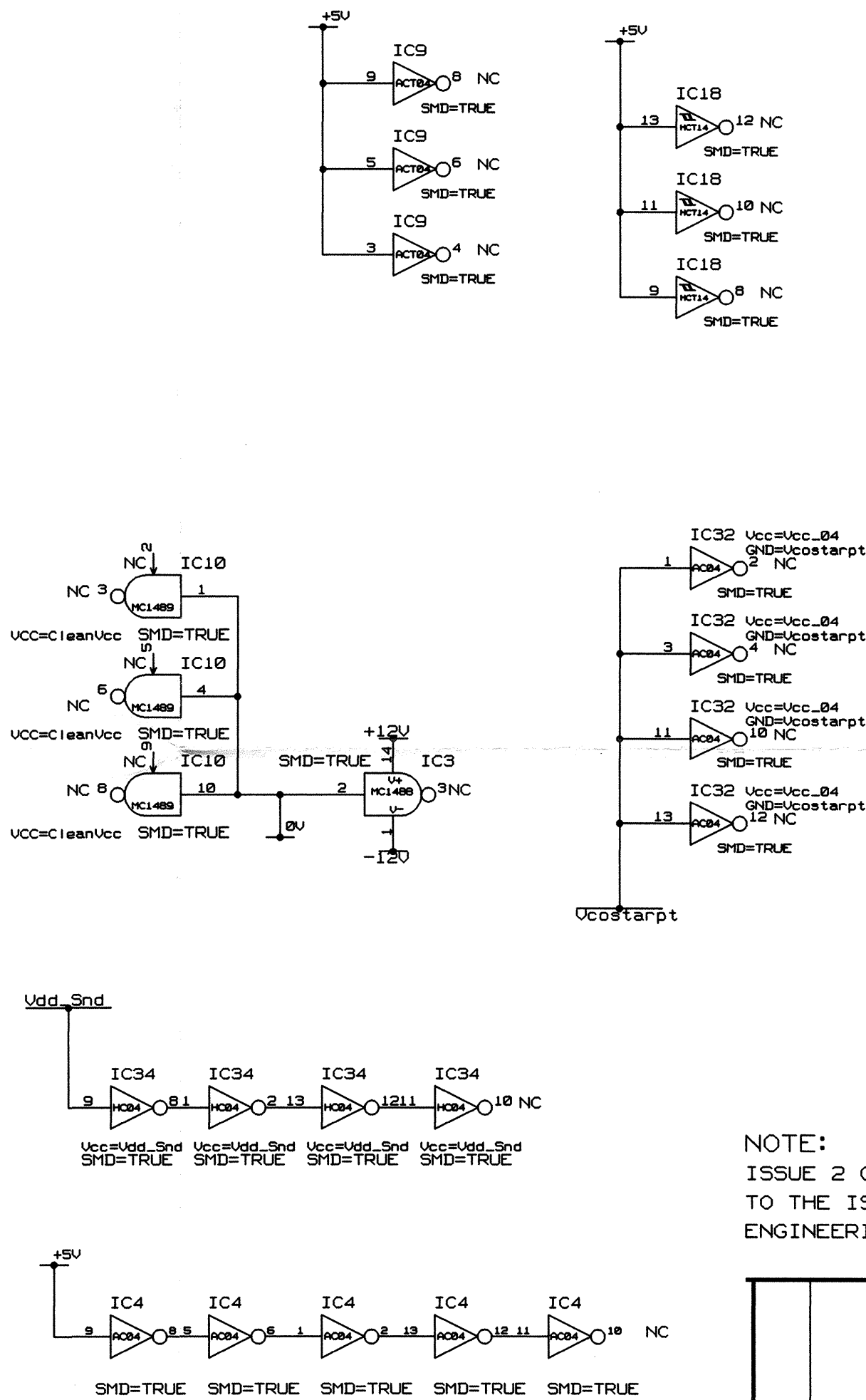
VOLTAGE RAILS & DECOUPLING



Power & Ground List

DESIGNATOR	PART TYPE	CLEAN VCC	GND	-12V	VCC	+12V
IC13	IOMD-0297030		4 17 36 55 69 88 99 108 121 130 140 160 173 192 206		18 35 70 87 122 139 174 191	
IC19	74ACT138-SMD		8		16	
IC9	74ACT04-SMD		7		14	
IC22	74ACT244-SMD		10		20	
IC26	74ACT244-SMD		10		20	
IC30	74ACT244-SMD		10		20	
IC33	74ACT244-SMD		10		20	
IC5	37C665		6 47 67		15 72	
IC11	74ACT32-SMD		7		14	
IC1	74ACT574-SMD		10		20	
IC2	74ACT574-SMD		10		20	
IC6	74ACT574-SMD		10		20	
IC8	74ACT574-SMD		10		20	
IC18	74HCT14-SMD		7		14	
IC36	LM386-SMD		4		6	
IC12	74HCT245-SMD		10		20	
IC16	74HCT245-SMD		10		20	
IC23	74ACT573-SMD		10		20	
IC24	74ACT573-SMD		10		20	
IC28	74ACT573-SMD		10		20	
IC31	74ACT573-SMD		10		20	
IC25	74LS241-SMD		10		20	
IC3	MC1488-SMD	20	7	1		14
IC7	MC1489A-SMD	14	7			
IC10	MC1489A-SMD	14	7			
IC29	VIDC20		11 15 24 30 43 52 66 77 79 95 99 122 128 137		8 10 21 23 44 45 59 78 87 98 102 116 129 131	
IC21	74ACT139-SMD		8		16	
IC14	8MMROM-SK		31, 12		22	
IC15	8MMROM-SK		31, 12		22	
X1	XTALOSC-64M00C		4		8	
X2	XTALOSC-24M00C		4		8	
IC35	LM324-SMD	see schematic		(sheet 5)		
IC20	PCF8583-SMD	see schematic		(sheet 1)		
IC17	D52401	see schematic		(sheet 1)		
IC32	74AC04-SMD	see schematic		(sheet 5)		
IC34	74HC04-SMD	see schematic		(sheet 5)		
IC4	74AC04-SMD		7		14	
IC27	RASPAL-0297034		10		20	

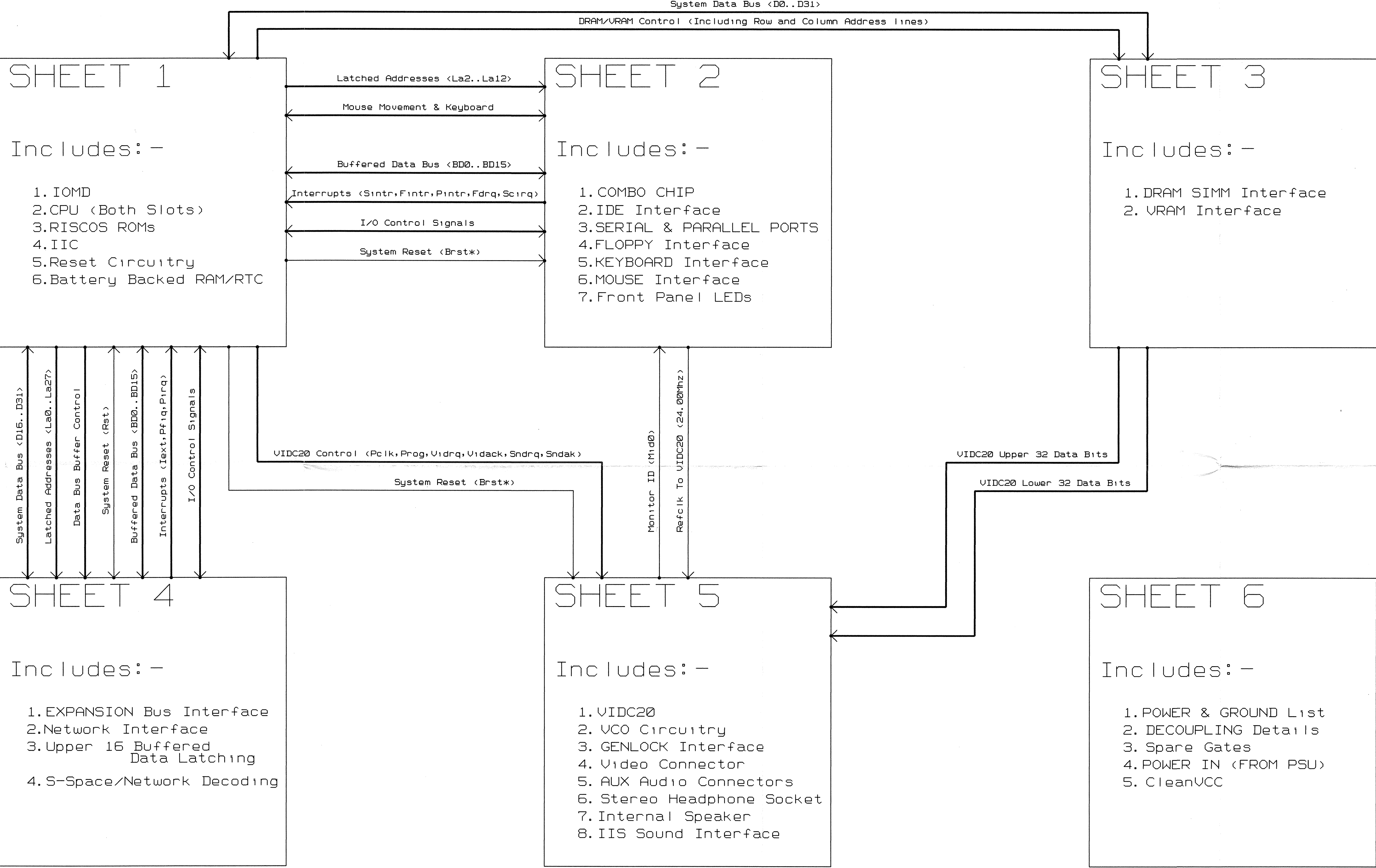
Spare Gates



NOTE:
ISSUE 2 OF THIS SCHEMATIC RELATES
TO THE ISSUE 1 PCB ASSEMBLY PLUS
ENGINEERING DEVIATIONS LISTED

2	20-04-94	ECO3427	No changes this sheet	CM
1	27-01-94	APR 3904		BS
ISS	DATE	DESC. OF CHANGE	ENG.	CHKD.

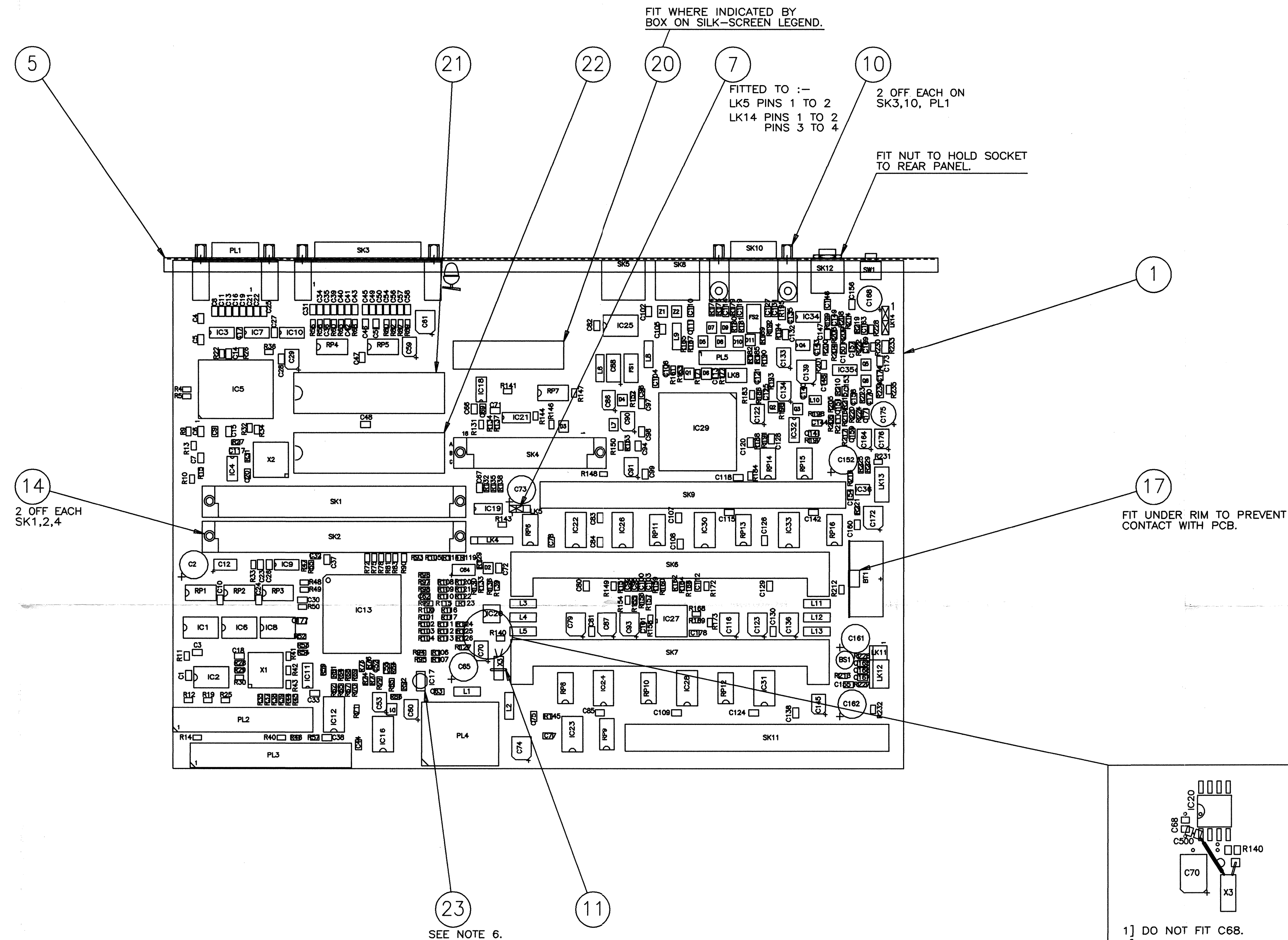
SHEET INTERCONNECTIONS SUMMARY



NOTE:
ISSUE 2 OF THIS SCHEMATIC RELATES
TO THE ISSUE 1 PCB ASSEMBLY PLUS
ENGINEERING DEVIATIONS LISTED

2	20-04-94	ECO3427 No changes this sheet	CH
1	27-01-94	APP3904	GDH
ISS	DATE	DESC. OF CHANGE	ENG. CHKD.

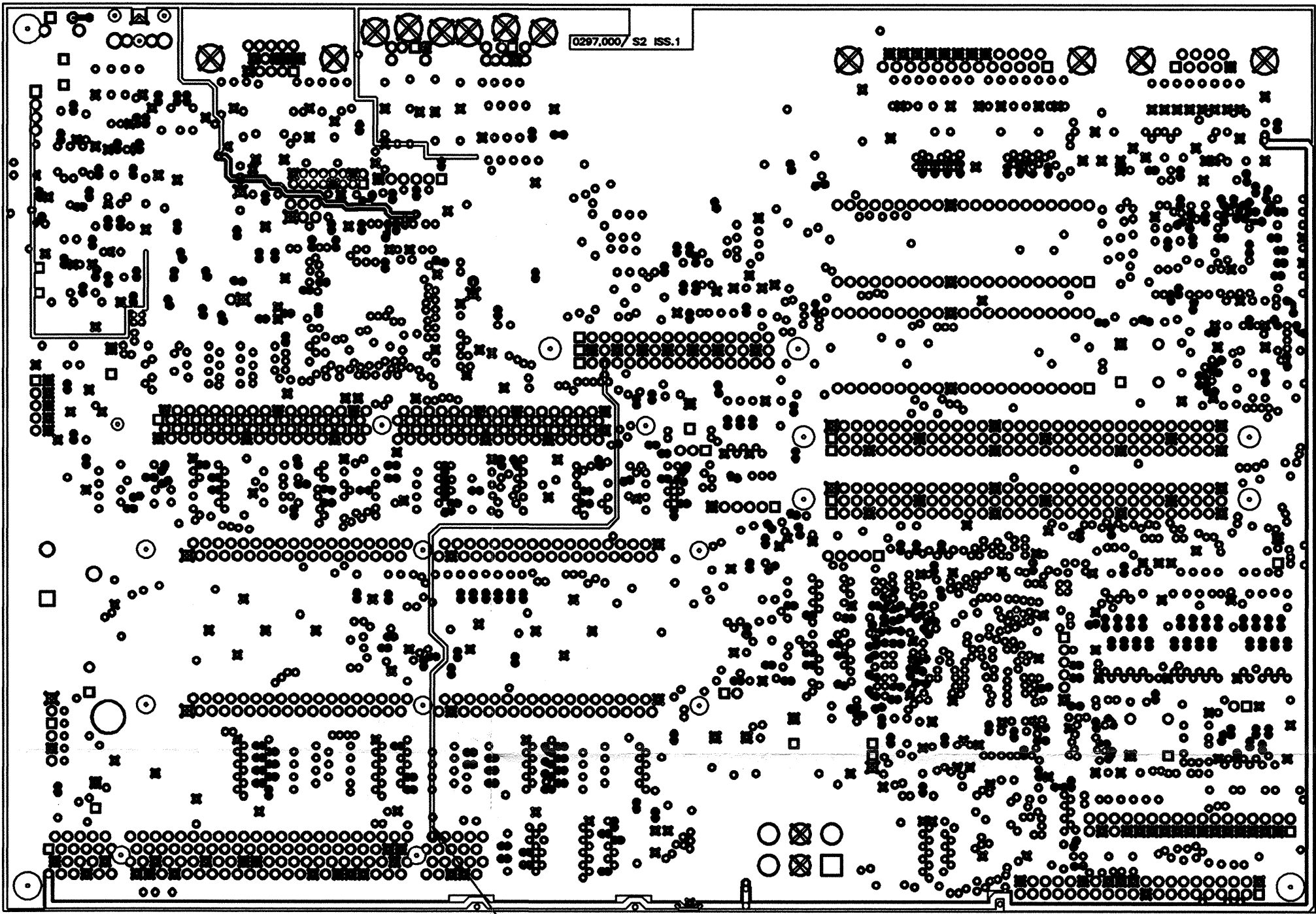
STRIKE MOD RECORD LABEL AS FOLLOWS:-
A- FOR REAL TIME CLOCK MOD. ED3647
B- FOR ESB 16-BIT SOUND CARD MOD. ED3669
C- FOR BATTERY INSULATOR MOD. ED3680
D- FOR WIRE LINK BETWEEN SK11 PIN 58 AND SK4 PIN C3 [SEE SHT.2] ED3690



- NOTE:-
- 1] SHUNTS ITEM 7 FITTED TO LINK LK5 PINS 1 AND 2 AND LK14 PINS 1 AND 2 AND PINS 3 AND 4 IN POSITIONS SHOWN THUS. 
 - 2] ALL CONNECTORS [SK, PL, LK, IC SOCKETS] TO BE MOUNTED FLUSH AND PERPENDICULAR TO THE PCB.
 - 3] UNLESS OTHERWISE SHOWN, ALL RADIAL LEADED COMPONENTS TO BE MOUNTED PERPENDICULAR TO THE PCB TO WITHIN +/-15°.
 - 4] ENSURE REAR PANEL ITEM 5 IS AT 90° TO THE PCB, AFTER ASSEMBLY.
 - 5] USE WIRE ITEM 11 TO HOLD DOWN CRYSTAL X3 DO NOT SOLDER WIRE TO CAN.
 - 6] CUT LEGS OF IC17 TO 9MM +/-1MM [REMOVE BURRS] BEFORE INSERTING INTO ITEM 23.

- 1] DO NOT FIT C68.
 - 2] GLUE CAPACITOR C500 IN POSITION SHOWN ON TOP SIDE OF PCB.
 - 3] SLEEVE LEG OF X3, USING ITEM 12.
 - 4] SOLDER SLEEVED LEG OF X3 AND ONE END OF C500 TO IC20 PIN1.
 - 5] SOLDER OTHER END OF C500 TO C68 SM PAD [SOUTH].
 - 6] CROSS-OUT MOD LEVEL A WHEN MODIFICATION IS COMPLETED AND INSPECTED.
- MOD LEVEL BOX
- | | | | | | |
|---|---|---|---|---|---|
| X | B | C | D | E | F |
| G | H | I | J | K | L |

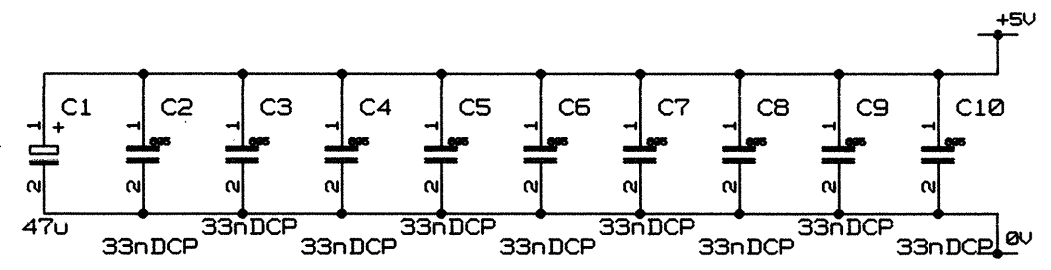
MOD RECORD
1] WIRE LINK SHOWN BELOW IS FITTED TO 500 PCB's ON SOLDER SIDE
BETWEEN SK11 PIN 58 AND SK4 PIN C3.
PCB's AFFECTED HAVE "D" CROSSED OUT IN THE MOD RECORD BOX.



WIRE LINK, SEE NOTE 1.

2	27/04/94	ECO 3427	BGH	
ISS	DATE	DESC OF CHANGE	DRN	CHKD

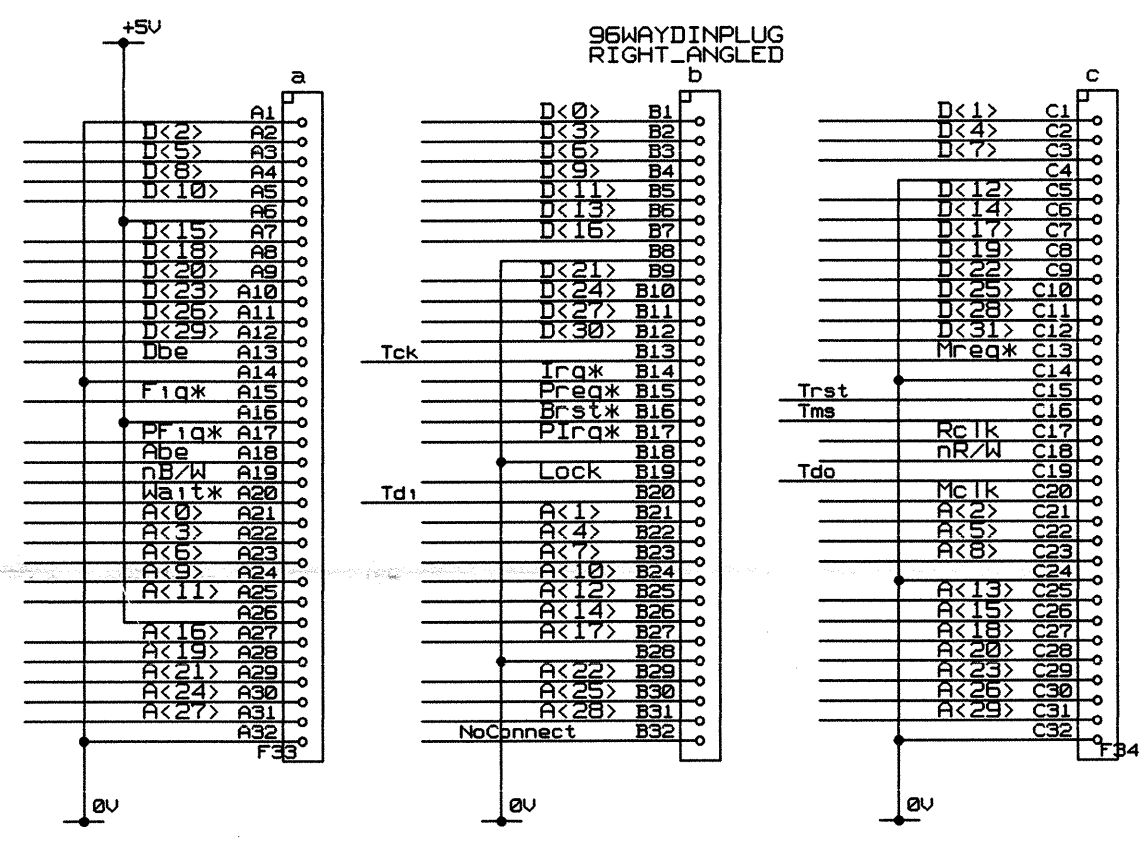
DECOUPLING



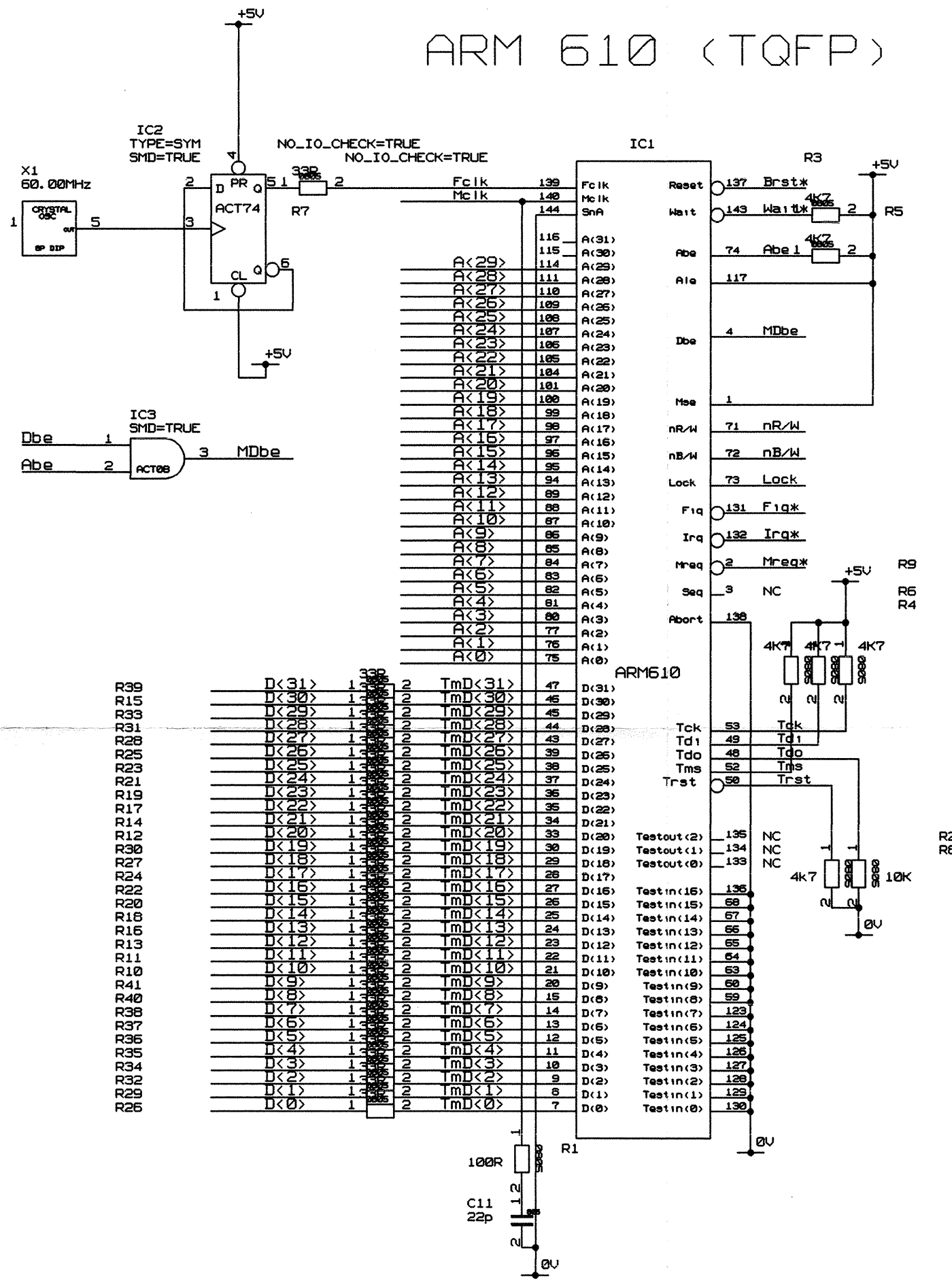
POWER AND GROUND LIST

DESIGNATOR	PART TYPE	GND	VCC
IC1	ARM610	5	6
		16	17
		18	19
		32	31
		40	42
		41	51
		62	61
		69	70
		78	79
		91	90
		93	92
		103	102
		113	112
		121	122
		142	141
IC2	74ACT74	7	14
IC3	74ACT08	7	14
X1	60MHz Can Osc	4	8

ProBUS Connector



ARM 610 (TQFP)



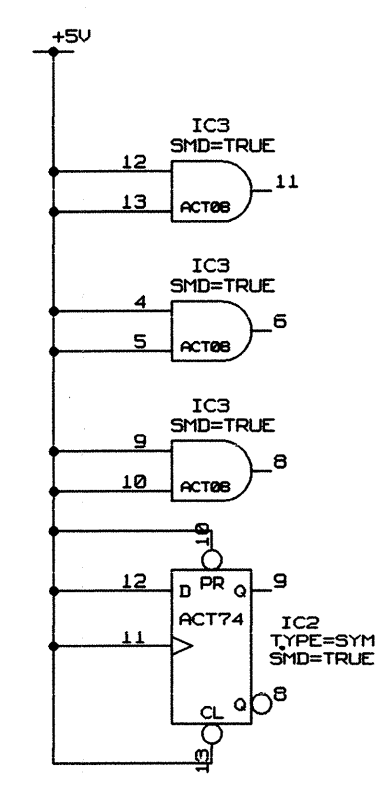
Unconnected Bus Signals

- PIrq*
- PFiq*
- Preq*
- Rclk

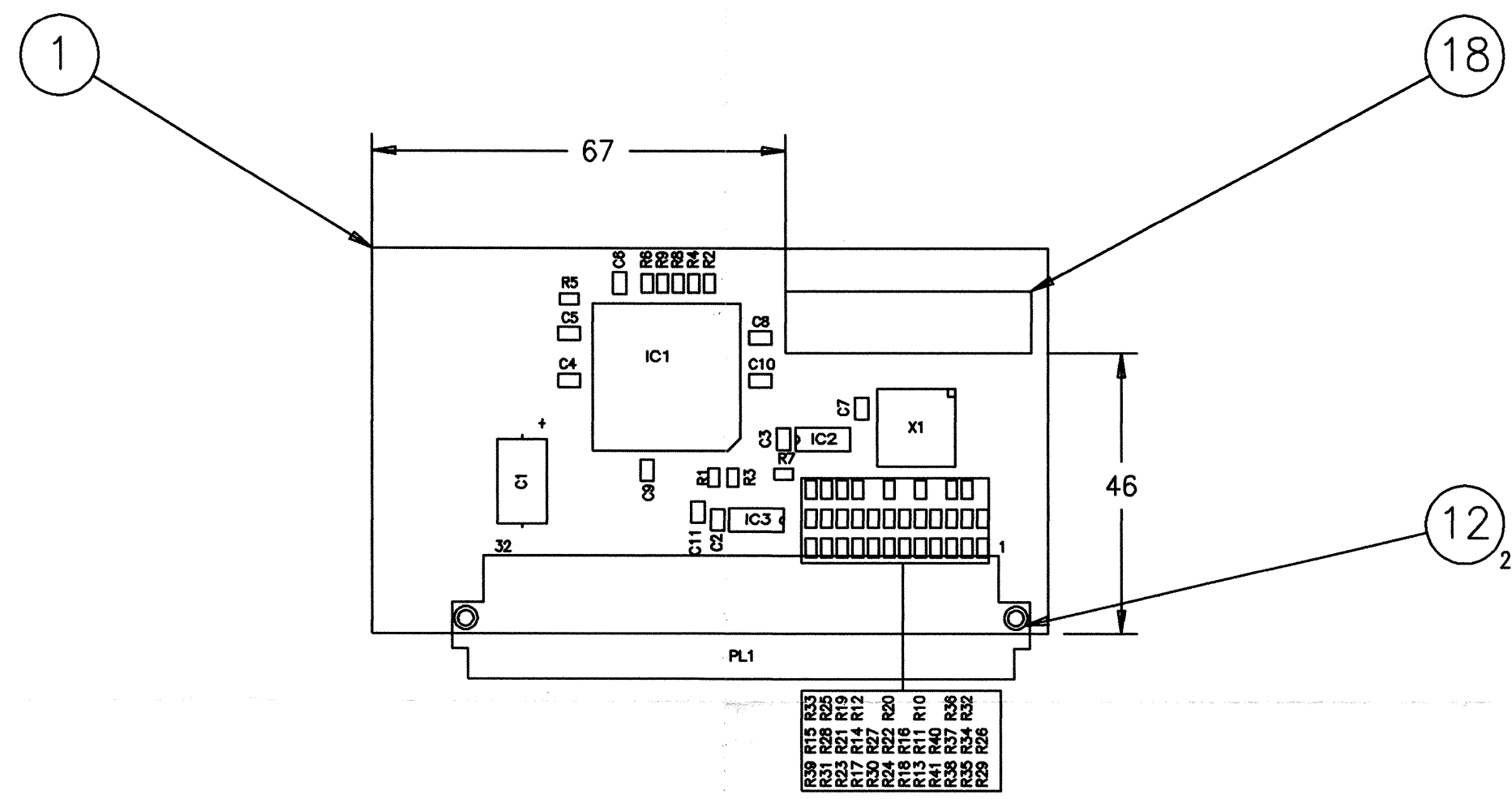
Connected only on this Card

- Tck
- Tdi
- Tdo :- ARM610 Boundary scan port
- Tms
- Trst

Unused Gates



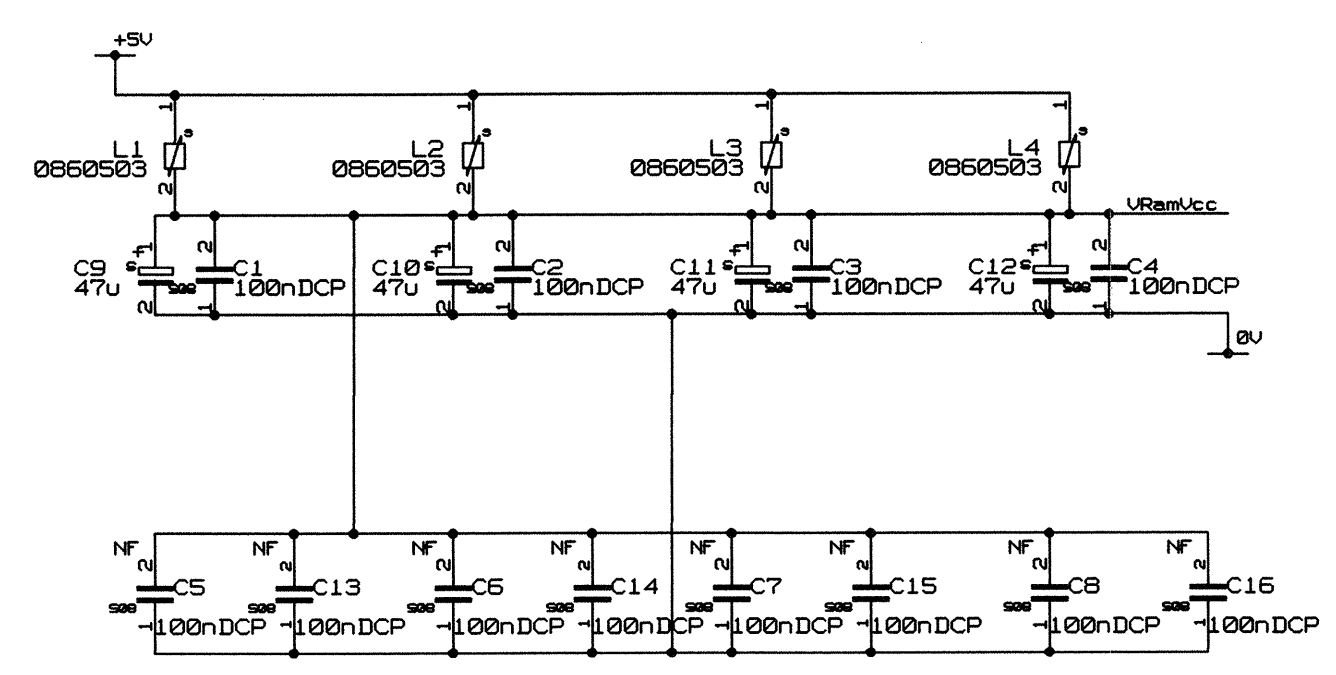
DRAWING
TITLE=0197208
ABBREV=0197208
LAST_MODIFIED=Fri Feb 4 14:45:52 1994



NOTE:-

- 1] SHUNTS ITEM FITTED TO LINKS IN POSITIONS SHOWN THUS 
- 2] ALL CONNECTORS [SK, PL, LK, IC SOCKETS] TO BE MOUNTED FLUSH AND PERPENDICULAR TO THE P.C.B.
- 3] UNLESS OTHERWISE SHOWN, ALL RADIAL LEADED COMPONENTS TO BE MOUNTED PERPENDICULAR TO THE P.C.B. TO WITHIN $\pm 15^\circ$
- 4] ENSURE REAR PANEL ITEM IS AT 90° TO THE P.C.B. AFTER ASSEMBLY
- 5] USE WIRE ITEM XX TO HOLD DOWN CRYSTALS DO NOT SOLDER WIRE TO CAN.

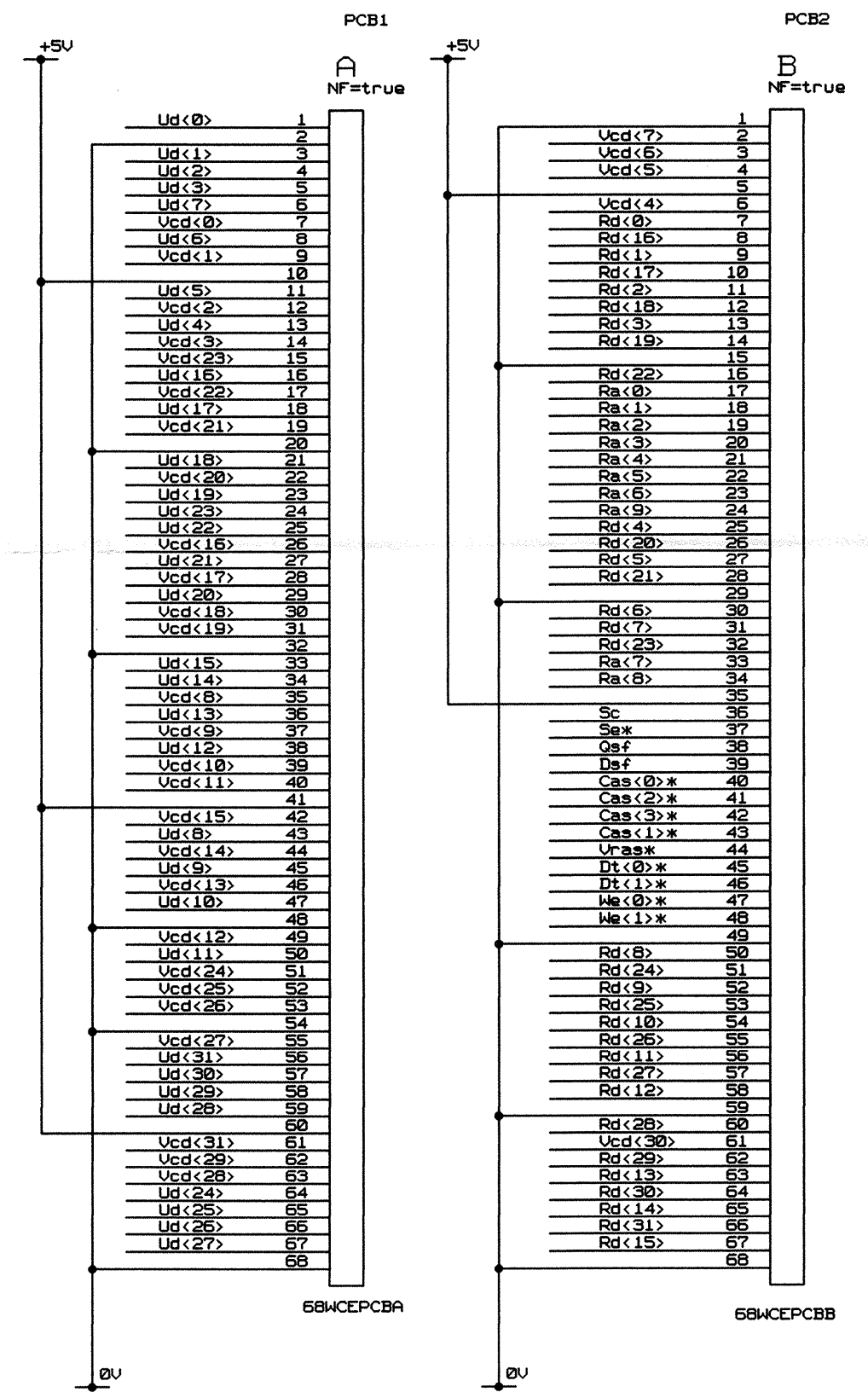
Supply Decoupling



POWER AND GROUND LIST

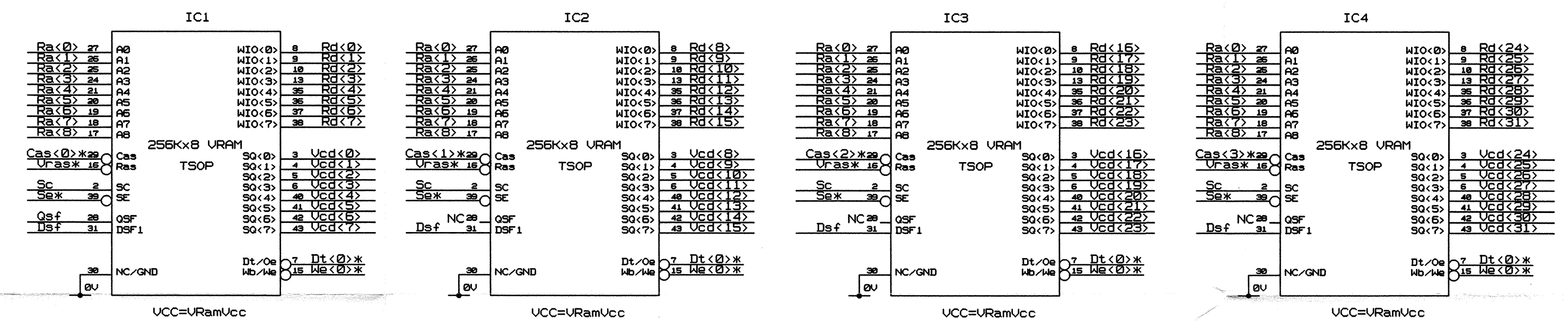
DESIGNATOR	PART TYPE	GND	VCC
IC1, IC2, IC3, IC4			
IC21, IC22, IC23, IC24	256K x 8 VRAM TSOP	14	1
		23	22
		32	
		44	

VRam Edge Connr

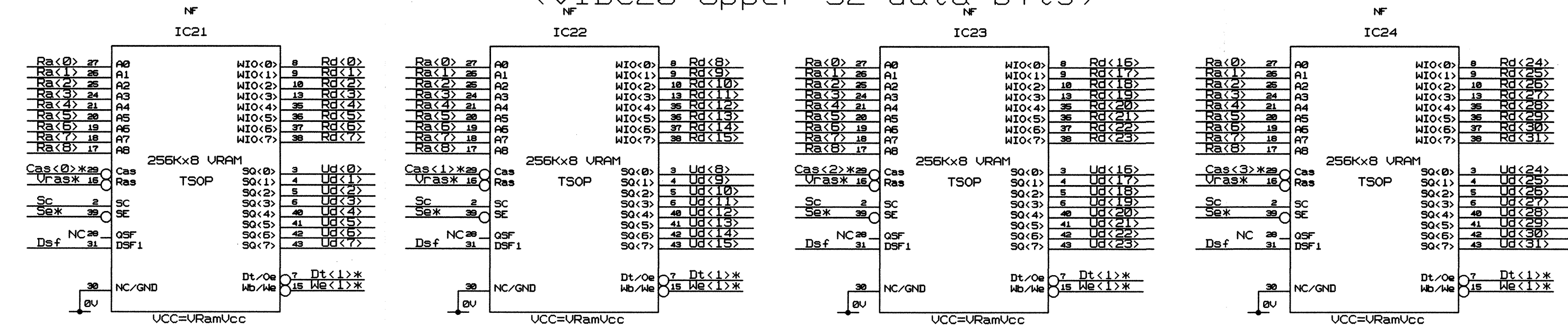


VRam Banks

1st MByte Vram
(VIDC20 Lower 32 data bits)



2nd MByte Vram
(VIDC20 Upper 32 data bits)

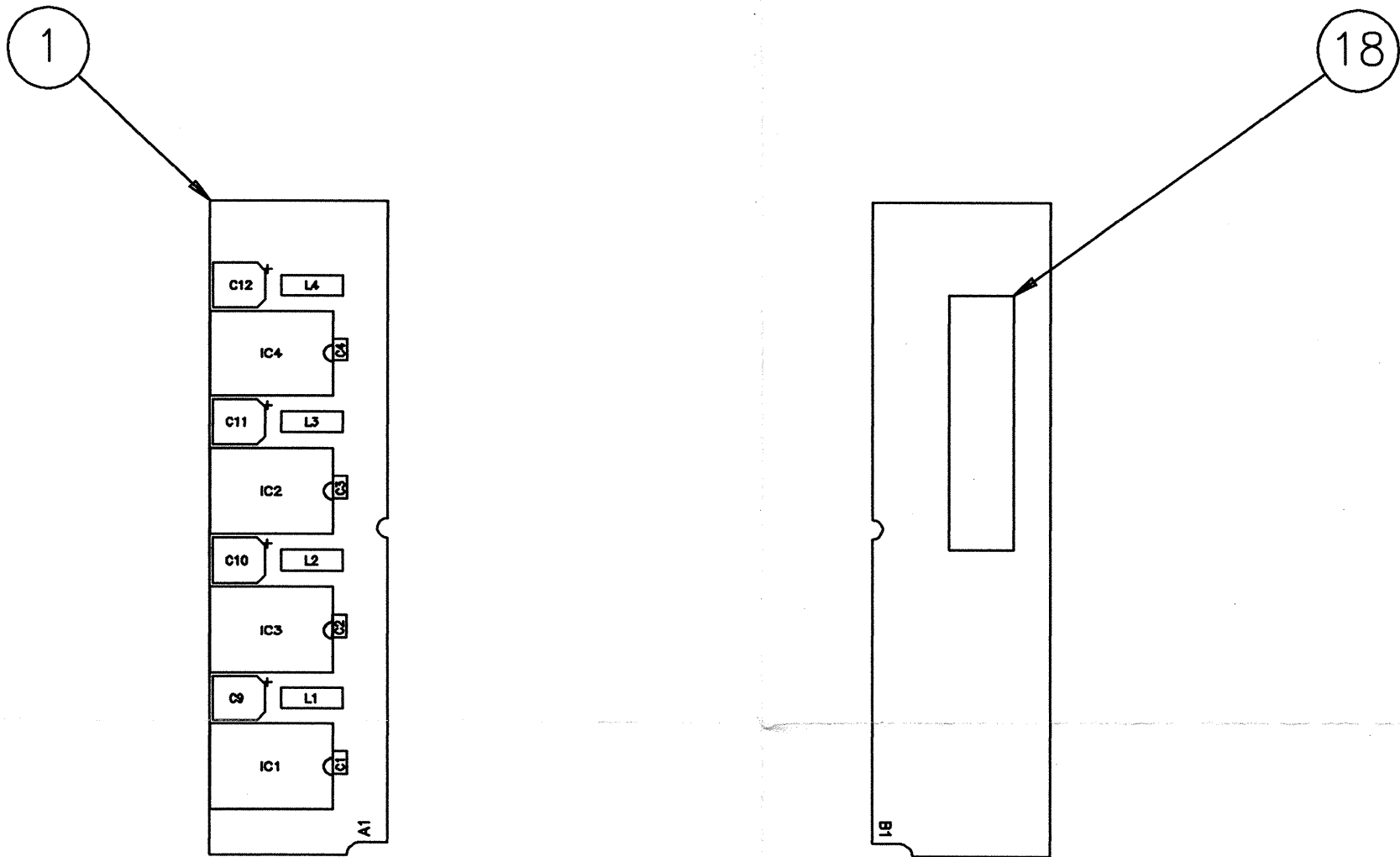


Unconnected signals

Ra<9>

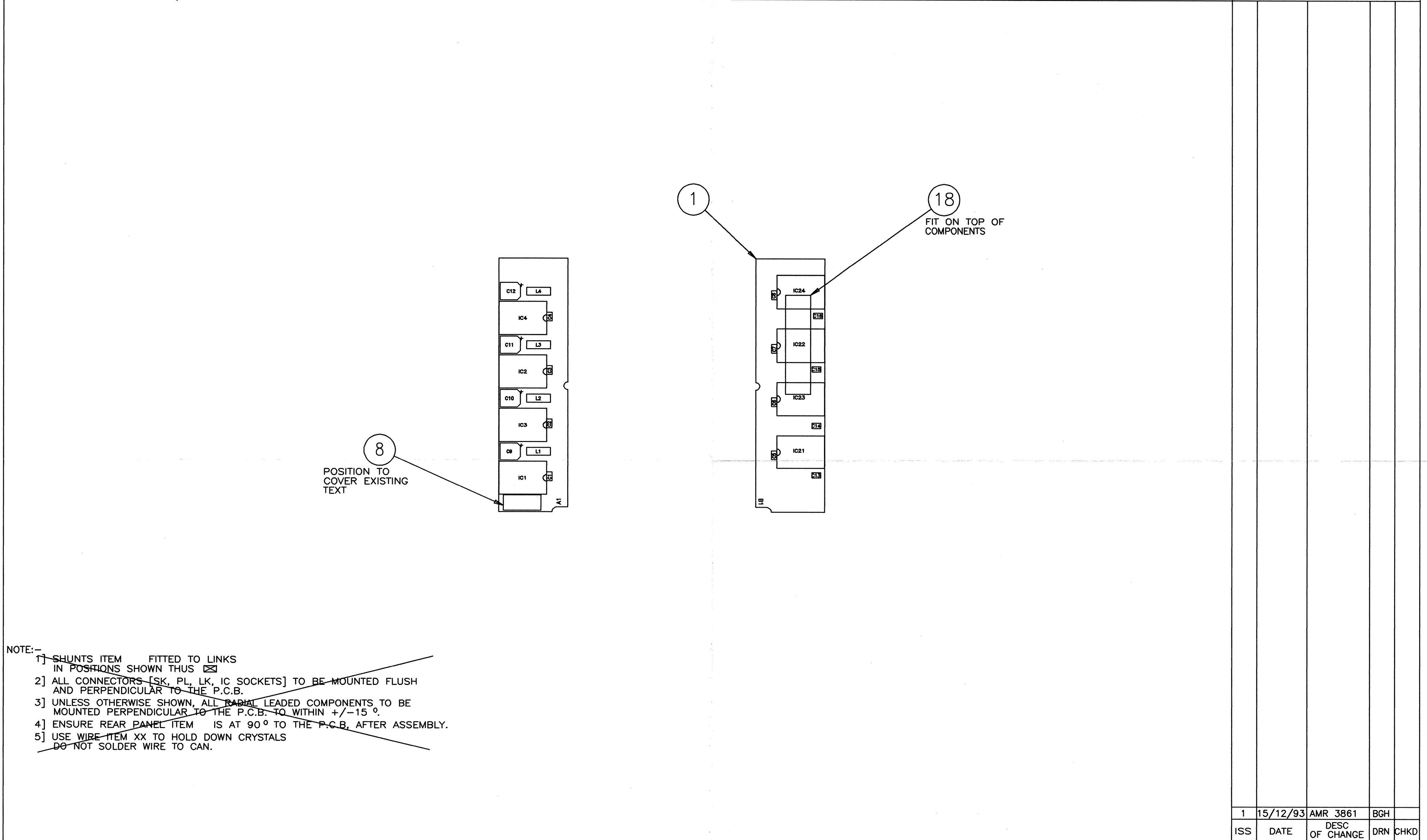
NB. Only a 1MB Config. is shown here
For 2MB, all parts marked NF must also be fitted
This means ICs 21, 22, 23 & 24
and Cs 5, 6, 7, 8, 13, 14, 15 & 16

DRAWING
0197003
0197003
LAST_MODIFIED=Wed Jan 19 09:10:46 1994



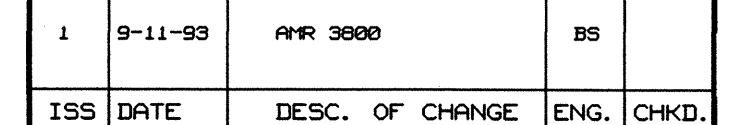
NOTE:-

- 1] SHUNTS ITEM FITTED TO LINKS IN POSITIONS SHOWN THUS ☒
- 2] ALL CONNECTORS [SK, PL, LK, IC SOCKETS] TO BE MOUNTED FLUSH AND PERPENDICULAR TO THE P.C.B.
- 3] UNLESS OTHERWISE SHOWN, ALL RADIAL LEADED COMPONENTS TO BE MOUNTED PERPENDICULAR TO THE P.C.B. TO WITHIN +/-15 °.
- 4] ENSURE REAR PANEL ITEM IS AT 90° TO THE P.C.B. AFTER ASSEMBLY.
- 5] USE WIRE ITEM XX TO HOLD DOWN CRYSTALS DO NOT SOLDER WIRE TO CAN.



NOTE:-

- 1] ~~SHUNTS ITEM~~ FITTED TO LINKS IN POSITIONS SHOWN THUS ☒
- 2] ALL CONNECTORS [SK, PL, LK, IC SOCKETS] TO BE MOUNTED FLUSH AND PERPENDICULAR TO THE P.C.B.
- 3] UNLESS OTHERWISE SHOWN, ALL ~~RADIAL~~ LEADED COMPONENTS TO BE MOUNTED PERPENDICULAR TO THE P.C.B. TO WITHIN $\pm 15^\circ$.
- 4] ENSURE REAR PANEL ITEM IS AT 90° TO THE P.C.B. AFTER ASSEMBLY.
- 5] USE WIRE ITEM XX TO HOLD DOWN CRYSTALS
~~DO NOT SOLDER WIRE TO CAN.~~

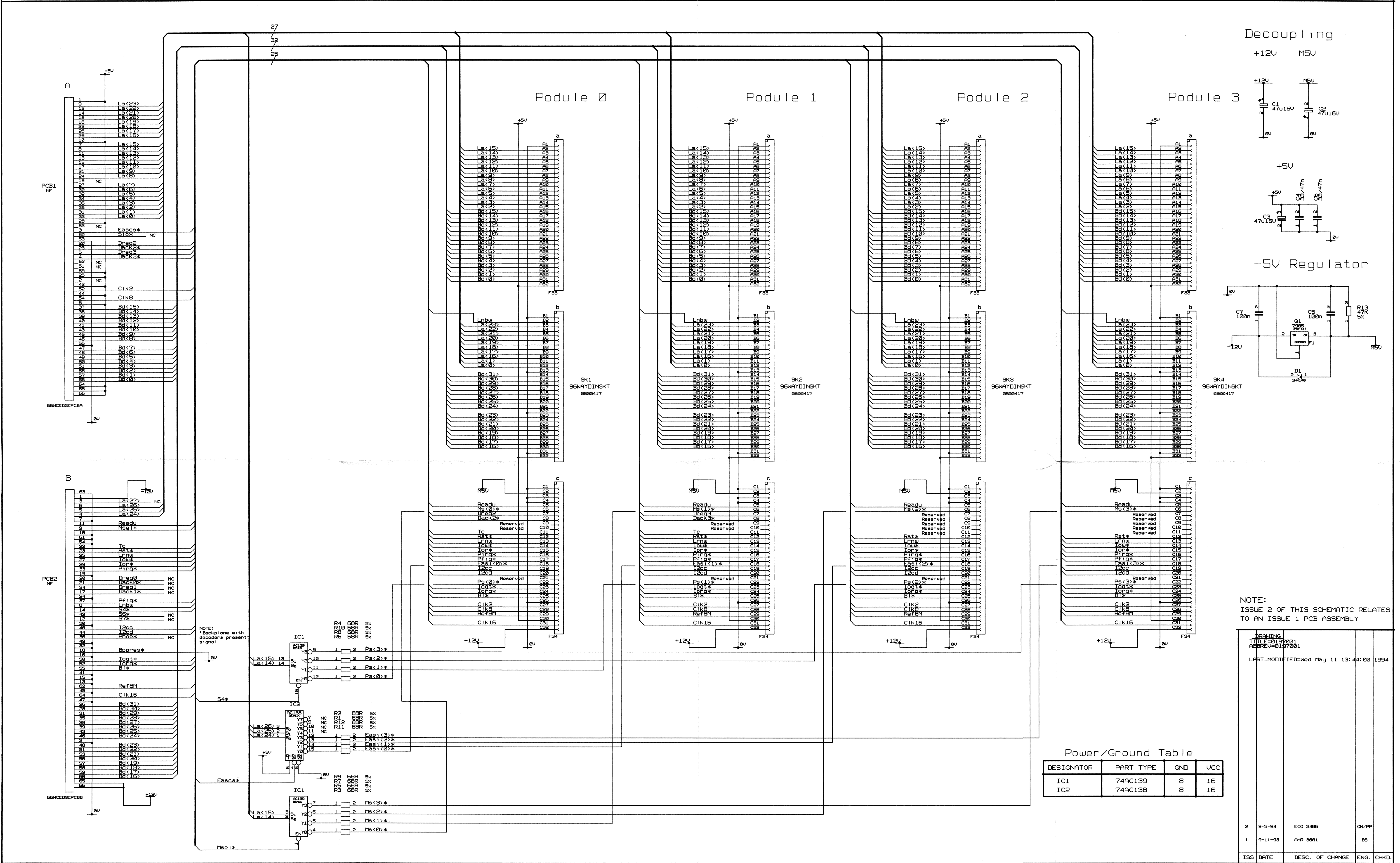


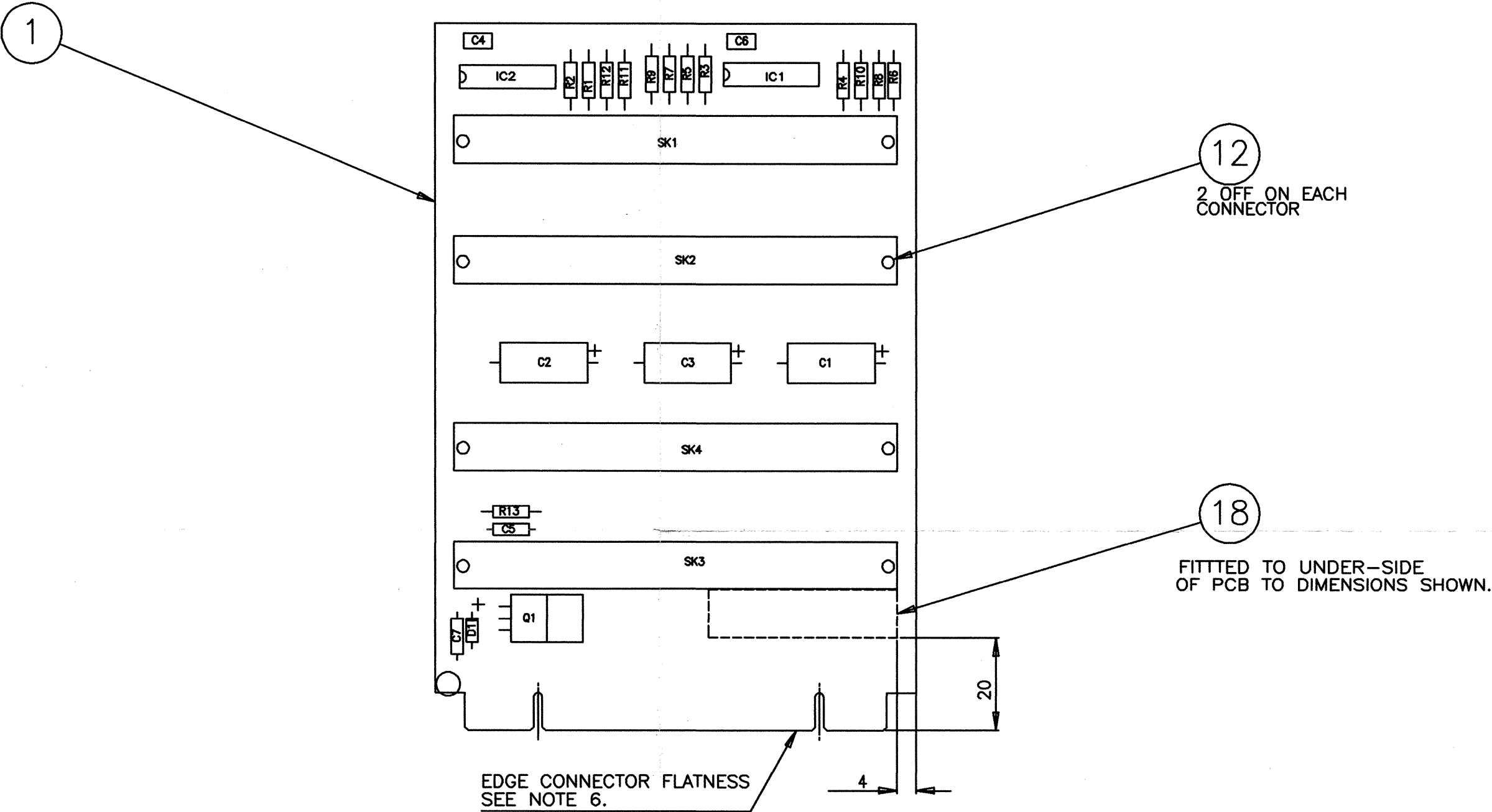
ACORN COMPUTERS Ltd	A1	DRG. No 0197, 101 /C
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- | | |
|----|-----------------------|
| A2 | DRG.No.
0197,101/A |
|----|-----------------------|

2	10/05/94	ECO 3486	BGH	
1	08/12/93	AMR 3800	BGH	
ISS	DATE	DESC OF CHANGE	DRN	CHK

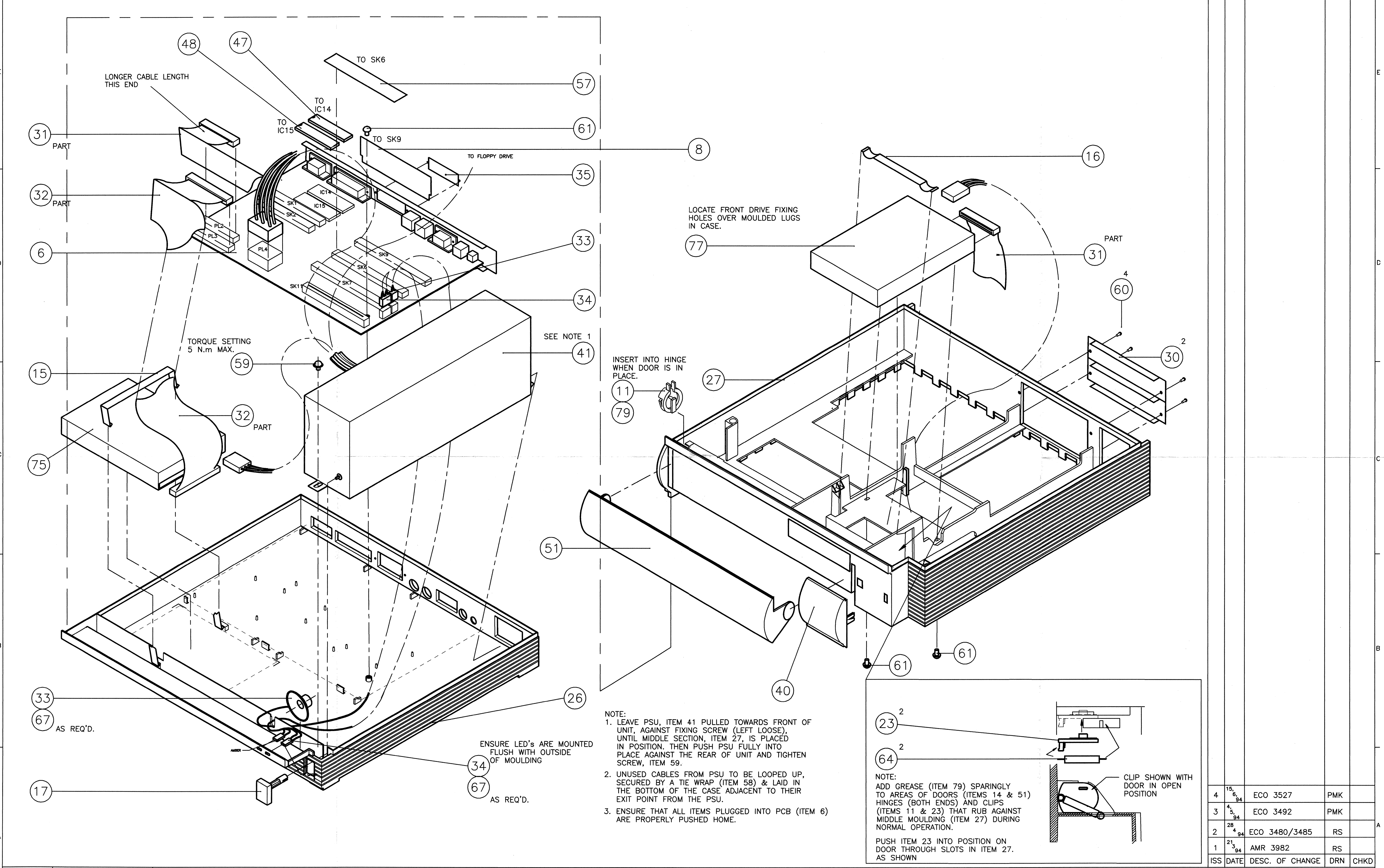


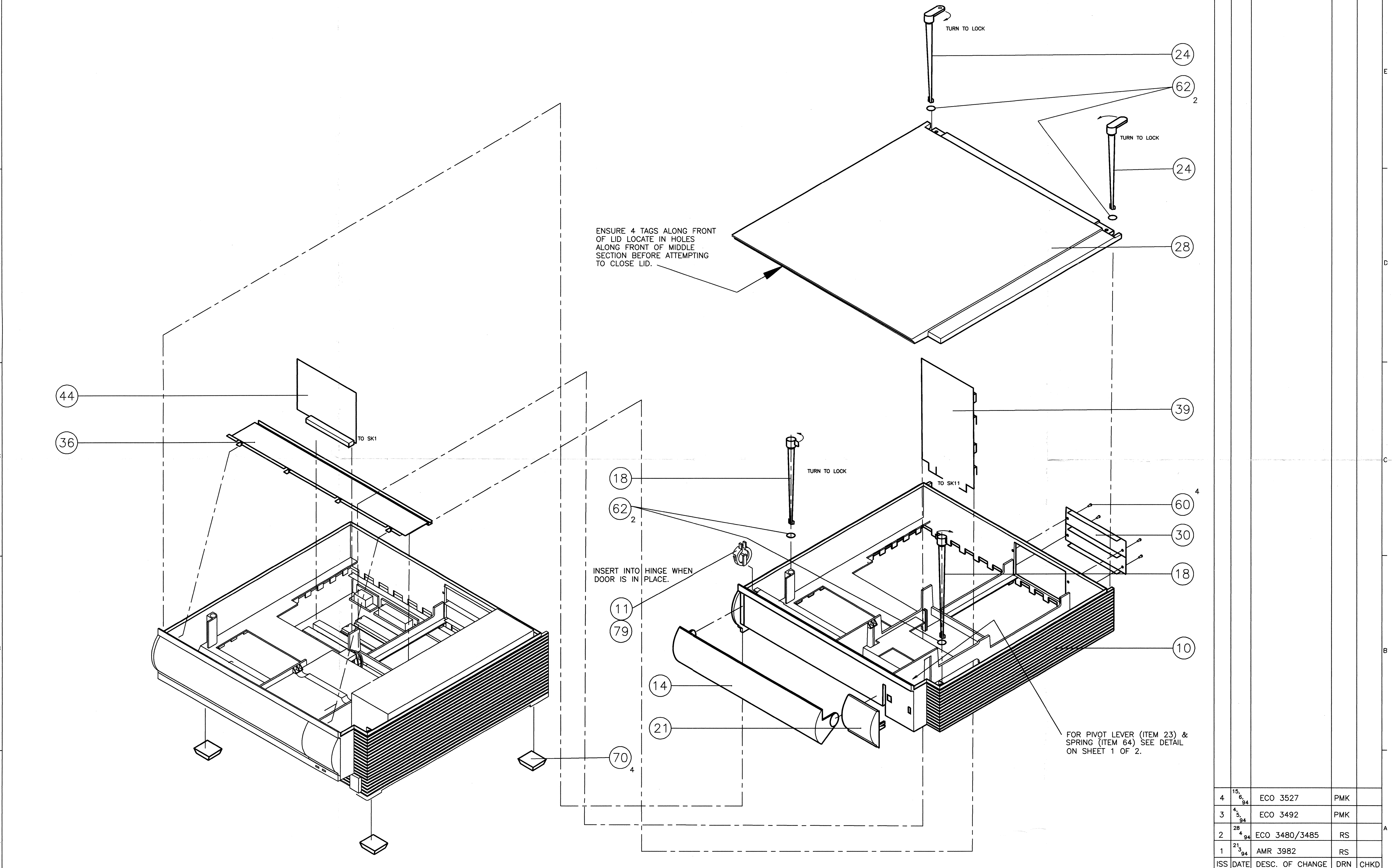


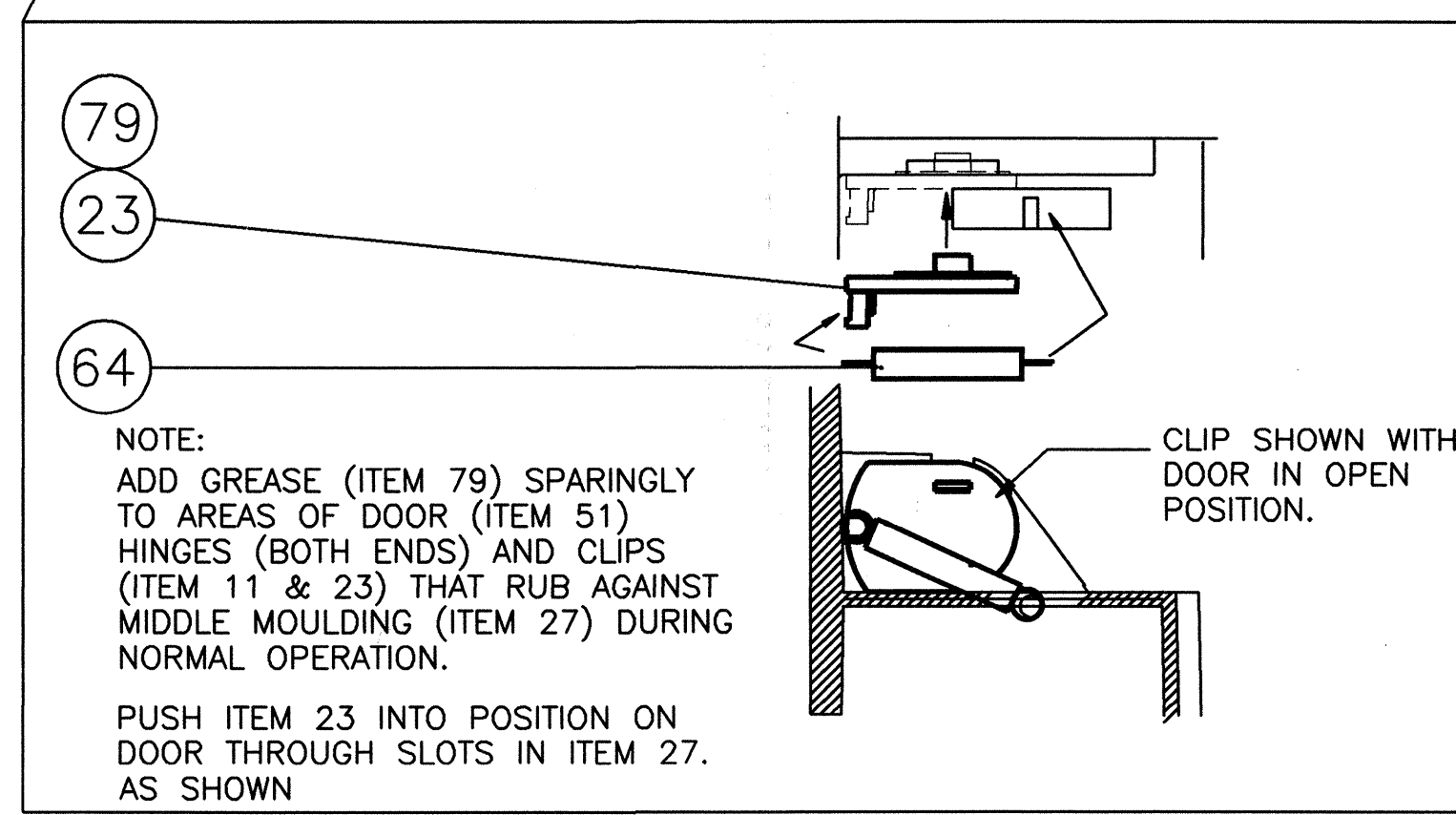
- NOTE:-
- ~~1] SHUNTS ITEM FITTED TO LINKS IN POSITIONS SHOWN THIS IS~~
 - 2] ALL CONNECTORS [SK, PL, LK, IC SOCKETS] TO BE MOUNTED FLUSH AND PERPENDICULAR TO THE P.C.B.
 - 3] UNLESS OTHERWISE SHOWN, ALL RADIAL LEADED COMPONENTS TO BE MOUNTED PERPENDICULAR TO THE P.C.B. TO WITHIN $\pm 15^\circ$.
 - ~~4] ENSURE REAR PANEL ITEM IS AT 90° TO THE P.C.B. AFTER ASSEMBLY.~~
 - ~~5] USE WIRE ITEM XX TO HOLD DOWN CRYSTALS DO NOT SOLDER WIRE TO CAN.~~
 - 6] MAXIMUM PERMITTED BOW ACROSS THE EDGE CONNECTOR, TO BE ± 0.25 MM AFTER FLOW SOLDER.

2	10/05/94	ECO 3486	BGH	
1	08/12/93	AMR 3801	BGH	
ISS	DATE	DESC OF CHANGE	DRN	CHKD

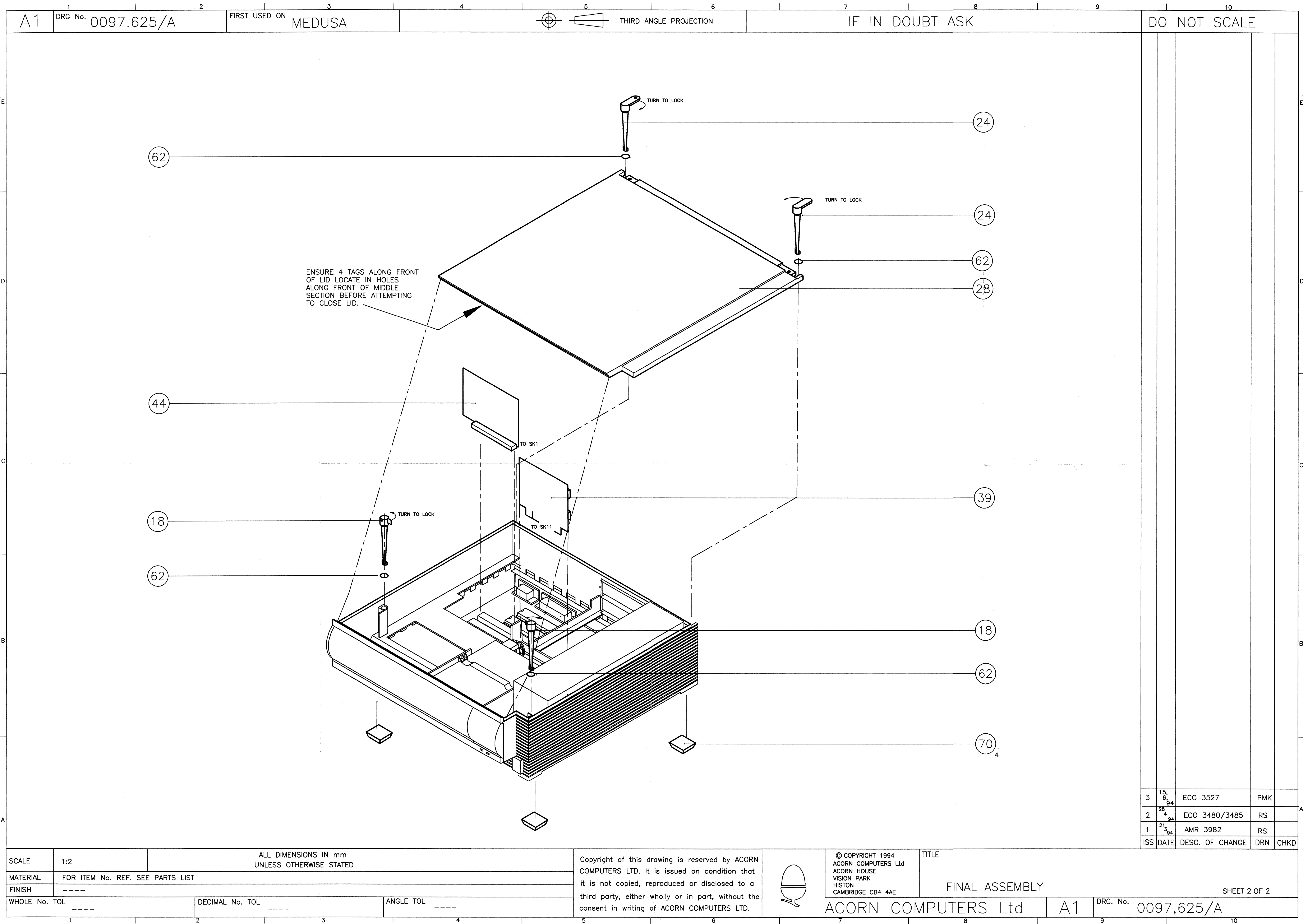
SCALE	1:1	ALL DIMENSIONS IN mm UNLESS OTHERWISE STATED		COPYRIGHT OF THIS DRAWING IS RESERVED BY ACORN COMPUTERS LTD. IT IS ISSUED ON CONDITION THAT IT IS NOT COPIED, REPRODUCED OR DISCLOSED TO A THIRD PARTY, EITHER WHOLLY OR IN PART, WITHOUT THE CONSENT OF ACORN COMPUTERS LTD.		© COPYRIGHT 1994 ACORN COMPUTERS LTD ACORN HOUSE VISION PARK HISTON CAMBRIDGE CB4 4AE ENGLAND	TITLE		
MATERIAL	SEE PARTSLIST						4 WAY BACKPLANE ASSEMBLY		
FINISH	SEE PARTSLIST								
WHOLE No.TOL	± 1MM	DECIMAL No.TOL	ANGLE TOL.				ACORN COMPUTERS LTD		A2







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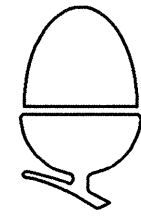


DO NOT SCALE

3	15.6.94	ECO 3527	PMK	
2	28.4.94	ECO 3480/3485	RS	
1	21.3.94	AMR 3982	RS	
ISS	DATE	DESC. OF CHANGE	DRN	CHKD

SCALE	1:2	ALL DIMENSIONS IN mm UNLESS OTHERWISE STATED		
MATERIAL	FOR ITEM No. REF. SEE PARTS LIST			
FINISH	----			
WHOLE No. TOL -----		DECIMAL No. TOL -----		ANGLE TOL -----

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TITLE	FINAL ASSEMBLY			
ACORN COMPUTERS Ltd		A1	DRG. No.	0097,625/A
		SHEET 2 OF 2		
6	7	8	9	10