

REVISION HISTORY

REV	DESCRIPTION	DATE	APPR	HANDWR
0	ENGINEERING PROTOTYPE	03/13/82	GRR	
1	ADVANCE ENGINEERING RELEASE	06/28/82	GRR	
A	*PILOT PRODUCTION RELEASE	09/09/82	GRR	
9	REVISED PER ECO 20245	11-73-72		

JUMPERS AND STUFF

REF	TYPE	DESCRIPTION	PAGE
R246	SMT	NTSC COLOR BURST	4
R202	SMT	PAL COLOR BURST	4
R625	SMT	KEYBOARD CPU CLOCK	9
R624	SMT	KEYBOARD/SYSTEM RESET	9

CONNECTORS

REF	TYPE	DESCRIPTION	PAGE
CN1	DB9P	MOUSE/JOYSTICK 1	5
CN2	DB9P	MOUSE/JOYSTICK 2	5
CN3	DB9P	RIGHT AUDIO OUTPUT	5
CN4	DB9P	LEFT AUDIO OUTPUT	5
CN5	DB25S	EXTERNAL FLOPPY	8
CN6	DB25P	RS232 SERIAL PORT	7
CN7	DB25S	PARALLEL PRINTER PORT	7
CN8	50 PIN	POWER SUPPLY CONNECTOR	3
CN9	DB25P	VIDEO OUTPUT	6
CN10	RCA-7	COMPOSITE VIDEO	4
CN11	DIL-34	INTERNAL FLOPPY SIGNALS	8
CN12	SIL-4	INTERNAL FLOPPY POWER	8
CN13	MEM-30	KEYBOARD MEMBRANE	9
CN14	SIL-4	INTERNAL FLOPPY POWER	8
CN15	MEM-30	KEYBOARD MEMBRANE	9
CN16	SIL-4	KEYBOARD STATUS LED'S	9
CN15	PCMCIA PC	*MEMORY CARD*	11
P9	EDGE-60	MEMORY BUS EXPANSION	12

SIGNAL GLOSSARY

SIGNAL	DESCRIPTION (AREA)	PAGES
28MHZ	28.63636 MHZ MASTER CLOCK	
7MHZ	7.15009 MHZ PROCESSOR CLOCK	
A[23:1]	PROCESSOR ADDRESS BUS (68000)	
ACK	DATA ACKNOWLEDGE (PARALLEL PORT)	
AS	ADDRESS STROBE (68000)	
AUDIN	AUDIO INPUT (RS232 PORT)	
AUDOUT	AUDIO OUTPUT (RS232 JACK)	
BEER	BUS ERROR (68000)	
BE	BUS GRANT (68000)	
ACKACK	BUS GRANT ACKNOWLEDGE (68000)	
BLISS	BLITTER SLOWDOWN (CHIPS)	
BLIT	CHIP MEMORY ACCESS (CHIPS)	
BR	BUS REQUEST (68000)	
BUSY	DEVICE BUSY (PARALLEL PORT)	
CASL/U	COLUMN ADDRESS STROBE (DRAM)	
CCK/CKMD	COLOR CLOCK / QUADRATURE (CHIPS)	
CDAC	7.15009 MHZ QUADRATURE CLOCK (CHIPS)	
CHNG	MEDIA CHANGE (FLOPPY)	
CLKRD/WR	READ/WRITE CLOCK READ / WRITE (RTC)	
COMP	MONOCHROME COMPOSITE VIDEO (VIDEO)	
CSYNC	COMPOSITE SYNC (VIDEO)	
CYS	CLEAR TO SEND (RS232 PORT)	
D[15:0]	PROCESSOR DATA BUS (68000)	
DIR	STEP DIRECTION (FLOPPY)	
DKRD	DISK READ DATA (FLOPPY)	
DKWD	DISK WRITE DATA (FLOPPY)	
DKWE	DISK WRITE ENABLE (FLOPPY)	
DMR	CHIP DRG REQUEST LINE (CHIPS)	
DRAM[8:0]	DRAM ADDRESS BUS (DRAM)	
DRD[15:0]	DRAM DATA BUS (DRAM)	
DSR	DATA SET READY (RS232 PORT)	
DTACK	DATA TRANSFER ACKNOWLEDGE (68000)	
DTR	DATA TERMINAL READY (RS232 PORT)	
E	PERIPHERAL ENABLE CLOCK (68000)	
EXTICK	EXPANSION PRESENT / RTC TICK	
FC[2:0]	FUNCTION CODE (68000)	
FREQ/O	FIRE BUTTON O/I (JOYSTICKS)	
HLE	PROCESSOR WAIT (68000)	
HSYNC	HORIZONTAL SYNC (VIDEO)	
INDEX	INDEX PULSE (FLOPPY)	
INT[2,3,6]	INTERRUPT REQUEST (CHIPS)	
IORESET	I/O RESET	
IPL[2:0]	INTERRUPT PRIORITY LEVEL (68000)	
KBCLK	KEYBOARD CLOCK (KEYBOARD)	
KBDATA	KEYBOARD DATA (KEYBOARD)	
KBRESET	KEYBOARD RESET (KEYBOARD)	
LDS/UDS	UPPER / LOWER DATA STROBES (68000)	
LED	POWER ON LED / AUDIO FILTER DISABLE	
LEFT/RIGHT	LEFT RIGHT AUDIO (AUDIO)	

SIGNAL	DESCRIPTION (AREA)	PAGES
LFEM	LIGHT PFM TRIGGER (JOYSTICKS)	
MIR	MOTOR ON (FLOPPY)	
MRO	MOTOR ON - DRIVE 0 (FLOPPY)	
MOY/HOH	MOUSE 0 QUADRATURE V/H (JOYSTICKS)	
MIY/HIH	MOUSE 1 QUADRATURE V/H (JOYSTICKS)	
OV	OVERLAY ROM OVER RAM	
OVR	OVERRIDE SYSTEM DECODING	
PIXELSW	GENLOCK PIXEL SWITCH (VIDEO)	
PCTX/OY	POT LINES 0 X/Y (JOYSTICKS)	
PCTX/IY	POT LINES 1 X/Y (JOYSTICKS)	
PCUT	PAPER OUT (PARALLEL PORT)	
PPD[7:0]	PARALLEL PORT DATA (PARALLEL PORT)	
RAMEN	RAM ENABLE (CHIPS)	
REGEN	CHIP REGISTER ENABLE (CHIPS)	
RSO[7]	ROW ADDRESS STROBE (DRAM)	
RTY	DRIVE READY (FLOPPY)	
RESET	GENERAL RESET	
RGA[8:1]	REGISTER ADDRESS BUS (CHIPS)	
R/G/B	RED / GREEN / BLUE (VIDEO)	
R	RING INDICATOR (RS232 PORT)	
RMEM	ROM ENABLE (ROM)	
R/S	REQUEST TO SEND (RS232 PORT)	
RST	PROCESSOR RESET (68000)	
R/D	RECEIVE DATA (RS232 PORT)	
RW	PROCESSOR READ/WRITE (68000)	
SEL	SELECT (PARALLEL PORT)	
SEL[3:0]	DRIVE SELECT (FLOPPY)	
SIDE	SIDE SELECT (FLOPPY)	
STEP	STEP IN/OUT COMMAND (FLOPPY)	
TRKO	TRACK ZERO SENSE (FLOPPY)	
T/D	TRANSMIT DATA (RS232 PORT)	
VHA	VALID MEMORY ADDRESS (68000)	
VPA	VALID PERIPHERAL ADDRESS (68000)	
VSYNC	VERTICAL SYNC (VIDEO)	
WE	WRITE ENABLE (DRAM)	
WPROY	WRITE PROTECT SENSE (FLOPPY)	
XCLOCK	EXTERNAL GENLOCK CLOCK (VIDEO)	
XCLKEN	EXTERNAL CLOCK ENABLE (VIDEO)	
XRDY	EXTERNAL DATA READY	
== CREDIT CARD AND IDE STUFF? ==		

KEY COMPONENTS

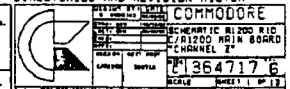
REF	CHIP	DESCRIPTION	PAGE
U1	68000	68000 PROCESSOR 16MHZ	2
U2	8374	RAM (16K 68000)	2
U3	8364	RAM (16K 68000)	5
U4	4209	LISA (RAM DENISE)	4
U5	702A	RAM (16K 68000)	2, 5, 11
U6	6857	RAM (16K 68000)	10
U7-8	8520	RAM (16K 68000)	7
U10-11	28F10	FLASH MEMORY 128KB	10
U12	CXA14550N	VIDEO ENCODER	4
U13	68HC05	RAM (16K 68000)	9
U49	PS1516	LOW VOLTAGE SENSE IC	9
U15	LF347	OP-AMP	5
U10A3	LF347	OP-AMP	5
U16-17	ASST	DRAM 256KB X 16	3
U18-19	ASST	DRAM 256KB X 16 OPTIONAL	3
U20	38722	BUDDIE (ASIC)	2
U28	1488	EIA LINE DRIVER	7
U29	1489	EIA LINE RECEIVER	7
U30	RT101	TRIPLE 8-BIT VIDEO DAC	4
X1	05C	111 28.63636 MHZ PNL	2
Y451	X7AL	4.43619MHZ PAL BURST	4
Y621	X7AL	3MHZ CERAMIC RESONATOR	9
X2	ASST	PAL VIDEO MODULATOR	4
	ASST	NTSC VIDEO MODULATOR	4

DIRECTORIES AND REVISION HISTORY

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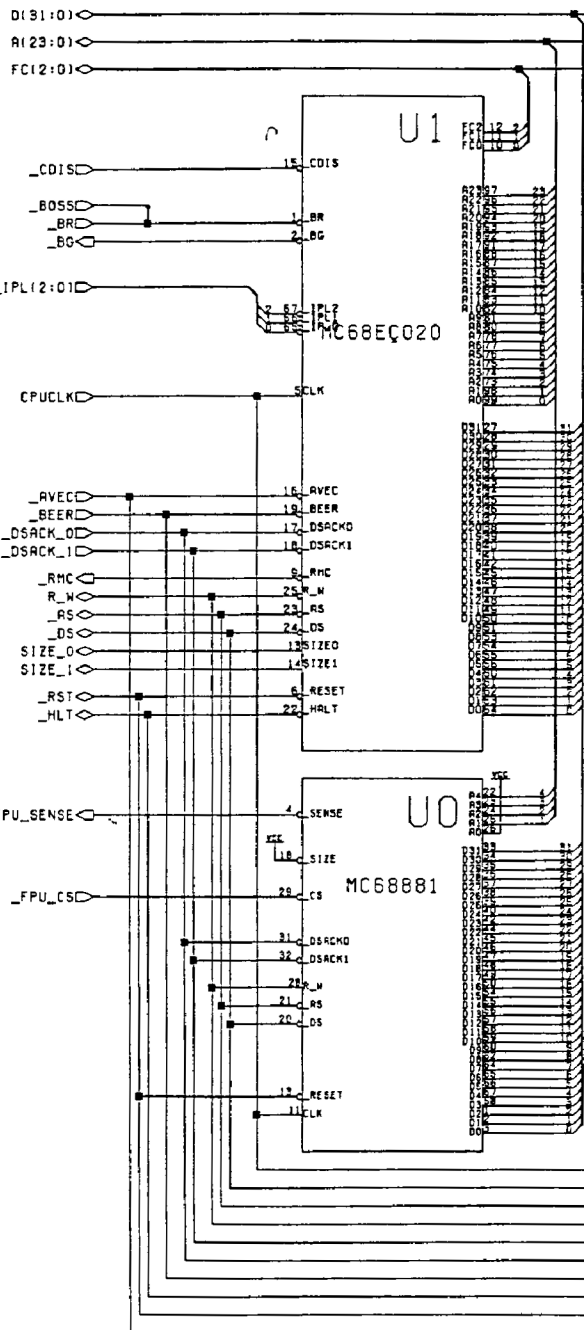
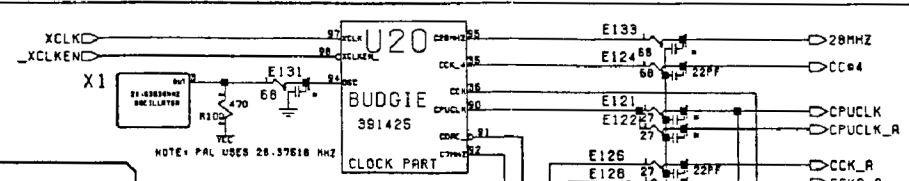
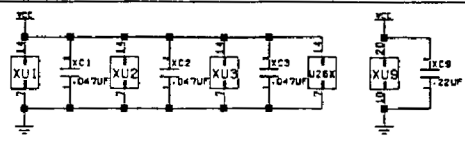
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C.A.S. GENERATED



CHANNEL Z

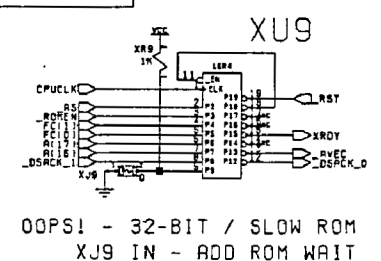
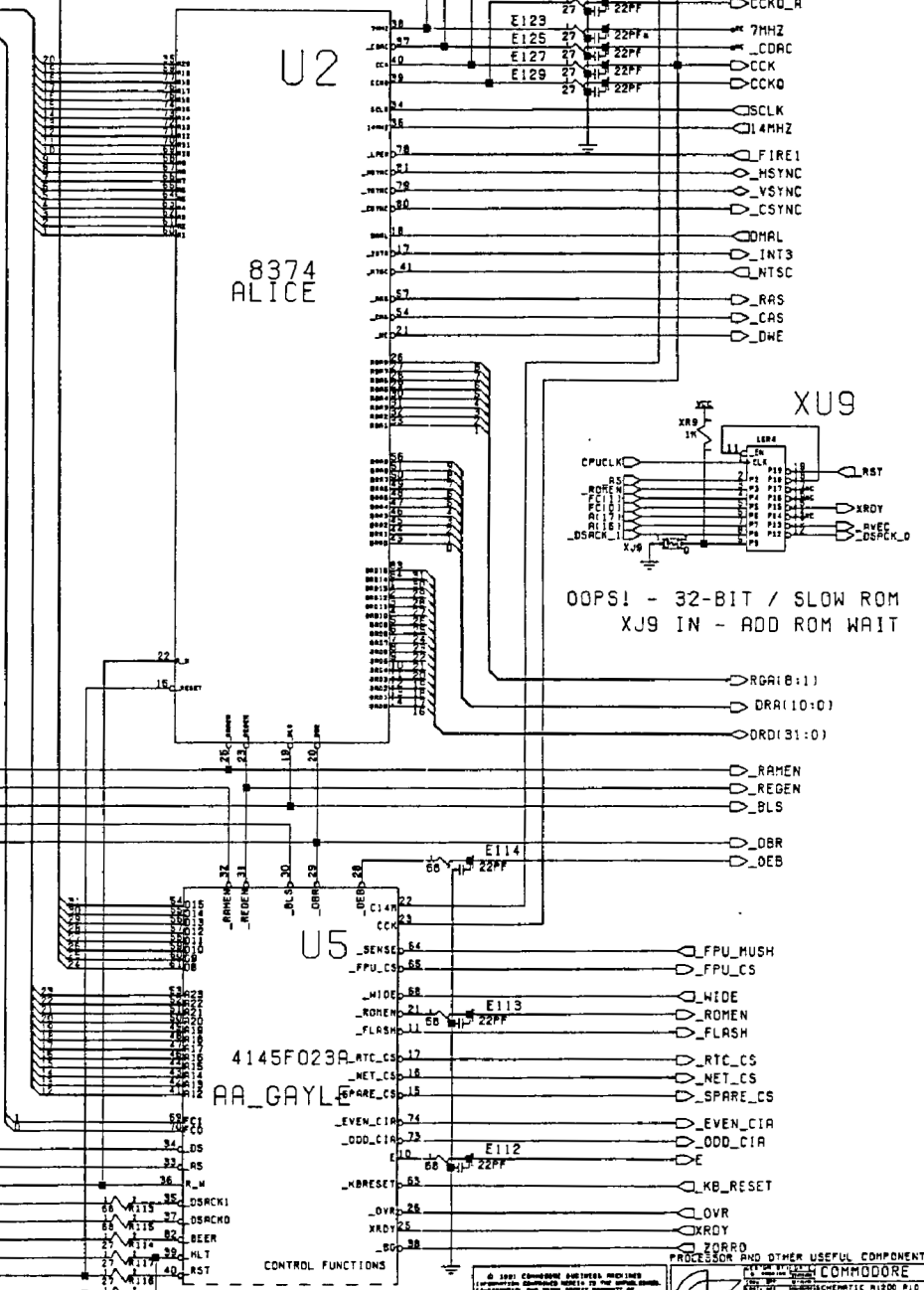
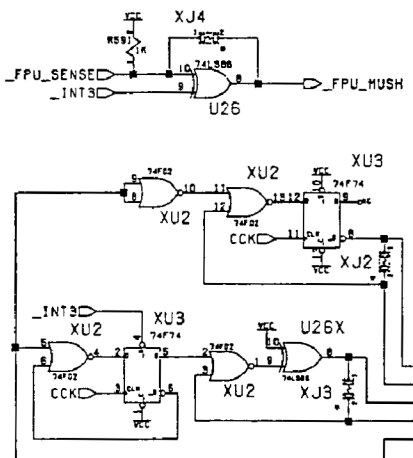
10/10/92

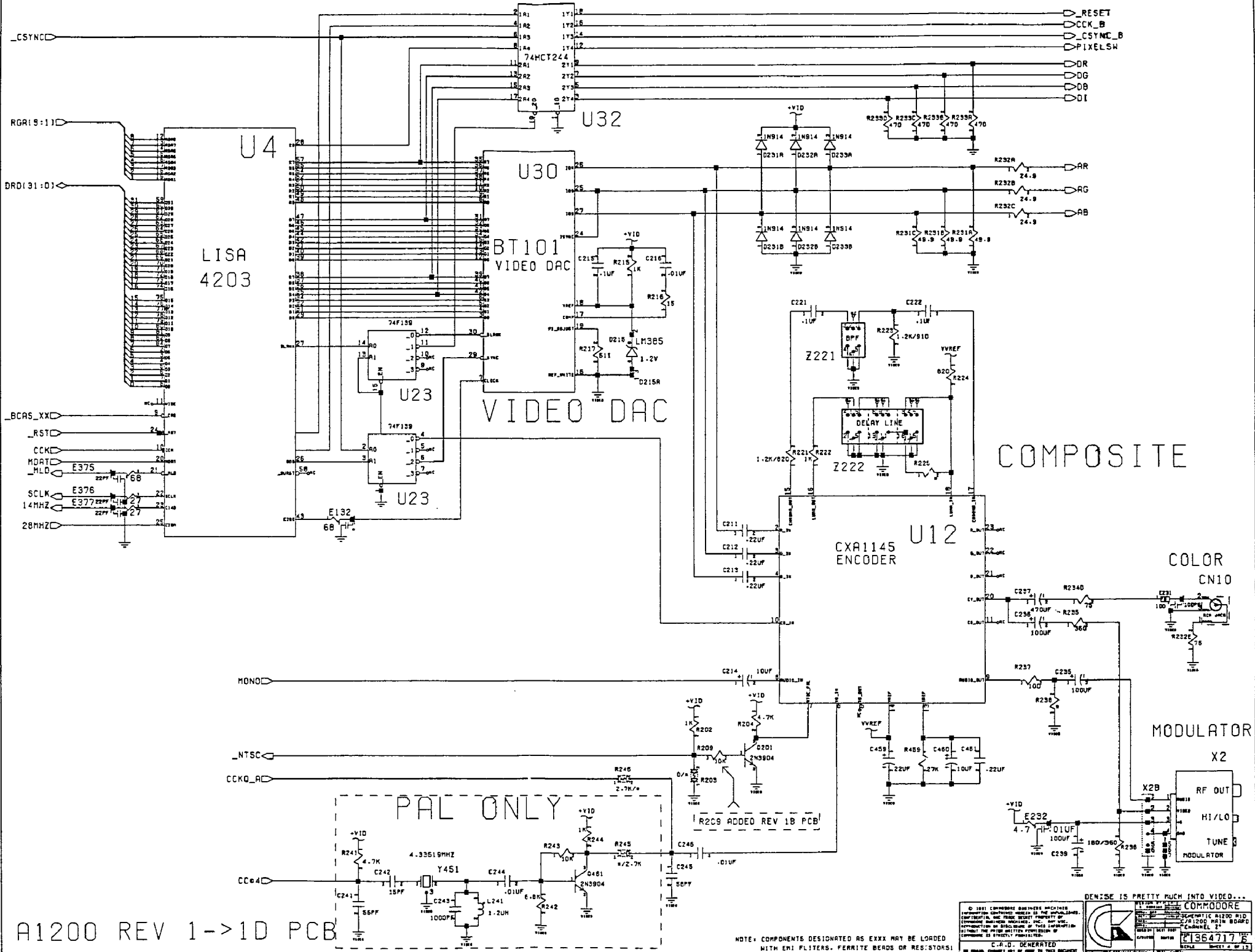


OOOPS!

ALL THIS STUFF SERVES TO CORRECT ONE MINOR GAYLE BUG AND A NUMBER OF ALICE DEFICIENCIES NOT YET CORRECTED. ASSURING THE CHANGES ARE IMPLEMENTED IN THE PRODUCTION GAULE CM17, THEN ALL THIS SILLINESS IS BEST ERASED...

REFERENCE	OLD GAYLE	NEW GAYLE
XU1	74F74	NONE
XU2	74F02	NONE
XU3	74F74	NONE
U26X	74F86	NONE
XJ4	0 OHM	OUT
XJ1	OUT	0 OHM
XJ2	OUT	0 OHM
XJ3	OUT	0 OHM
U26	NOTE	74LS86





A1200 REV 1->1D PCB

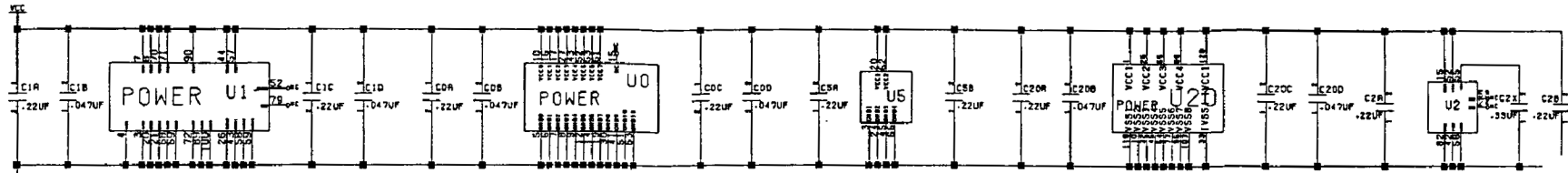
DENISE IS PRETTY MUCH INTO VIDEO...

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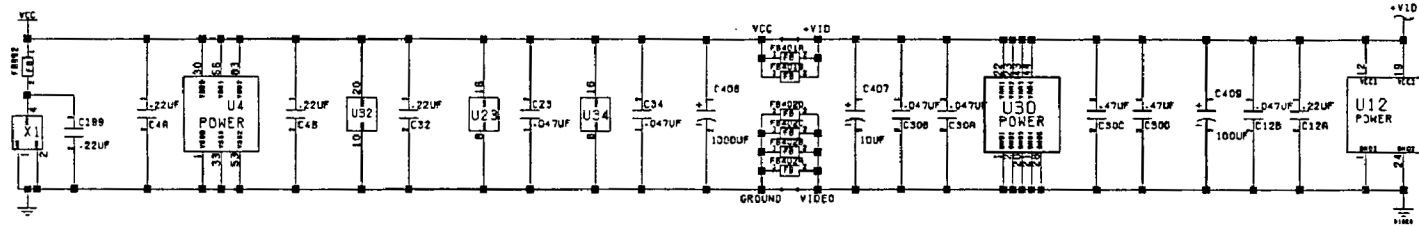
COMMODORE
 153647176
 SCALE SHEET 4 OF 15

NOTE: COMPONENTS DESIGNATED AS EXXX MAY BE LOADED WITH ENI FILTERS, FERRITE BEADS OR RESISTORS!

GENERAL DECOUPLING

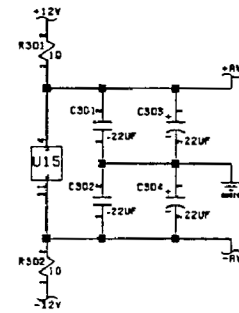


VIDEO DECOUPLING

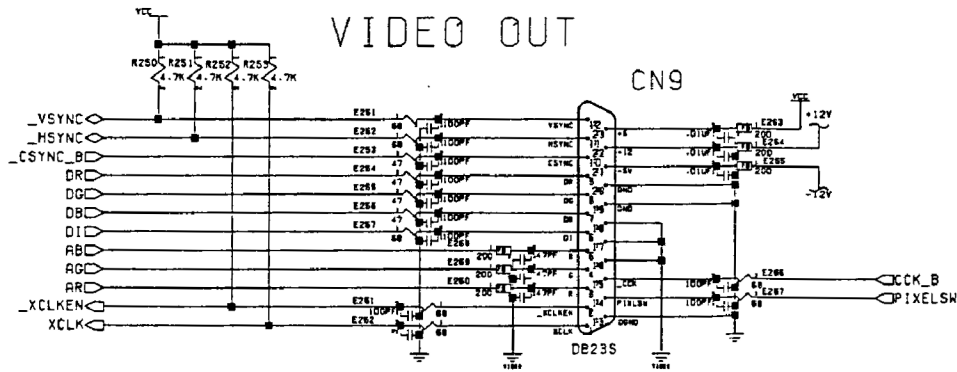


NOTE: AS OF REV IC, LOGIC AND VIDEO GROUND AND POWER ARE THE SAME NET, BUT ROUTED DISCRETELY EXCEPT AT DAC1
 ALSO ADDED C30C AND C30D FOR OVERKILL DAC DECOUPLING.

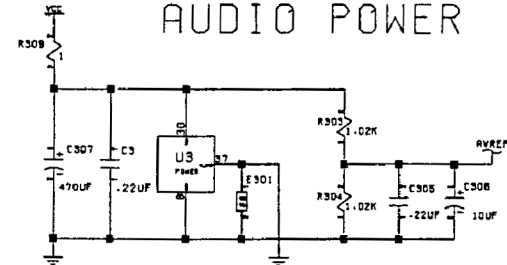
AUDIO DECOUPLING



VIDEO OUT



AUDIO POWER



NOTE: GROUND INTERCONNECTION NEAR AUDIO JACKS.

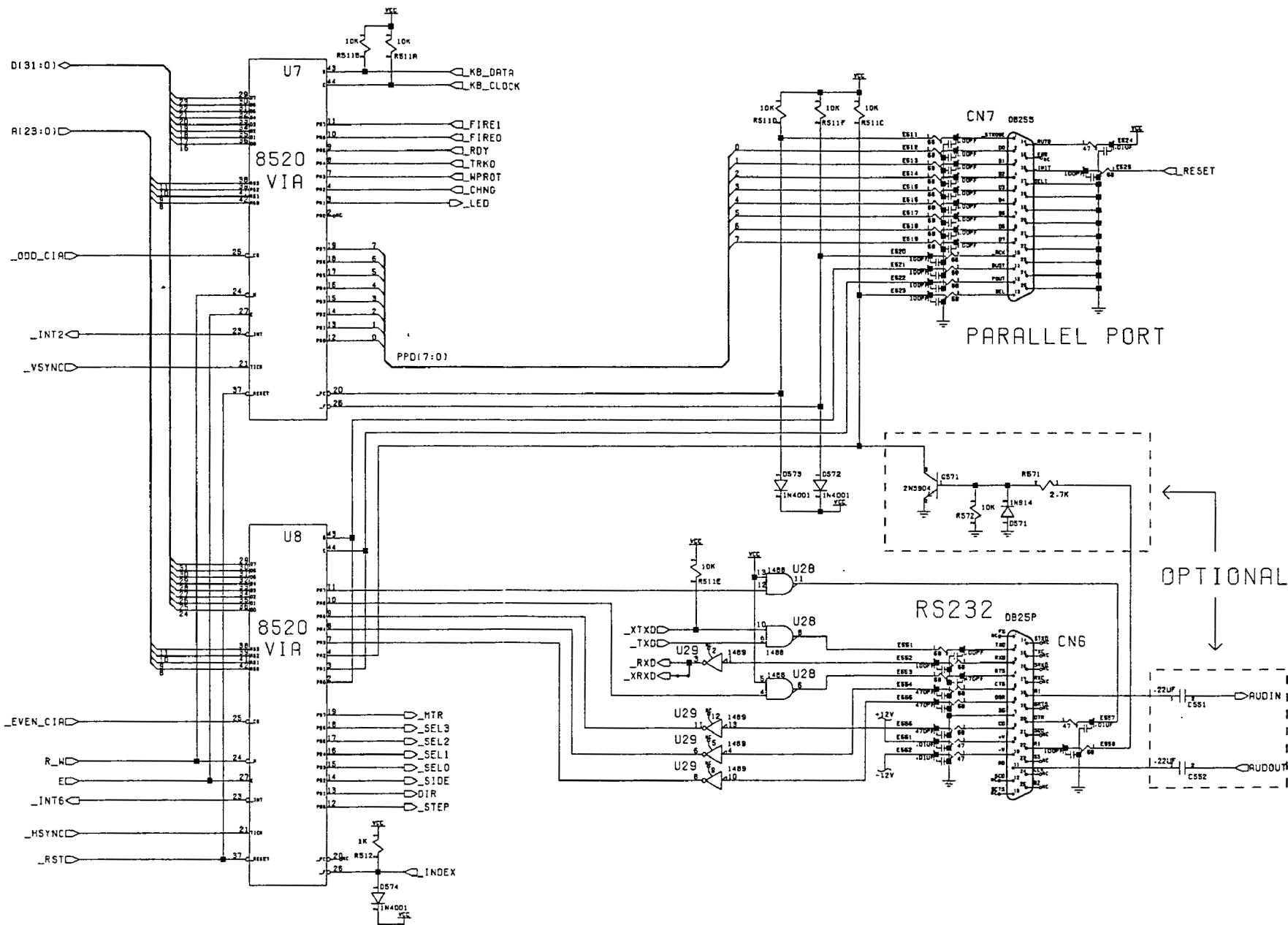
A1200 REV 1->1D PCB

PARTY OUT OF BOUNDS. WHAT A MESS...

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 15355 SHAWNEE DRIVE
 FORT COLLINS, CO 80525

COMMODORE A1200 VIDEO BOARD
 CHANNEL 2
 C1364717 B

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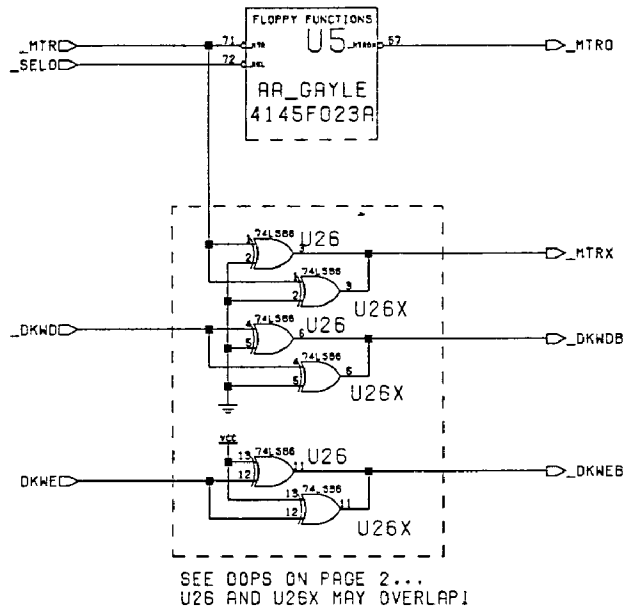


A1200 REV 1->1D PCB

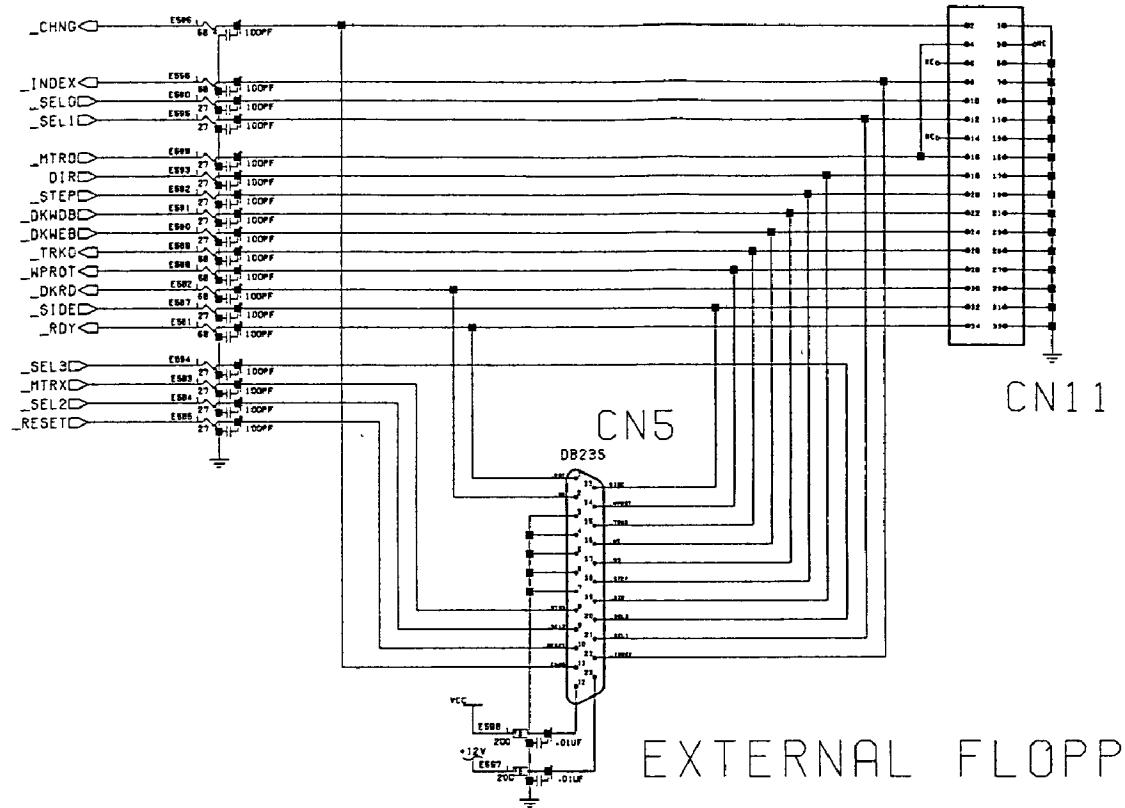
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SERIAL AND PARALLEL PORTS
 COMMODORE
 SCHEMATIC: A1200 VCR
 CHANNEL 2
 1364717
 SCALE: SHEET 7 OF 12

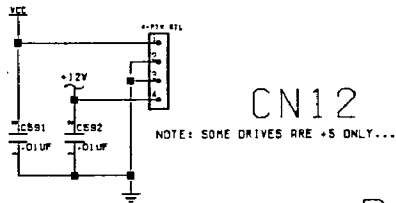
FLOPPY LOGIC



INTERNAL FLOPPY

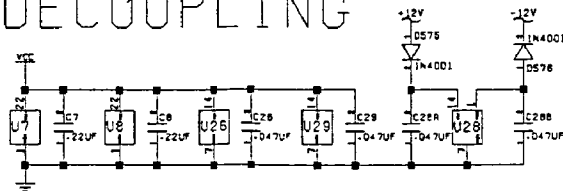


FLOPPY POWER



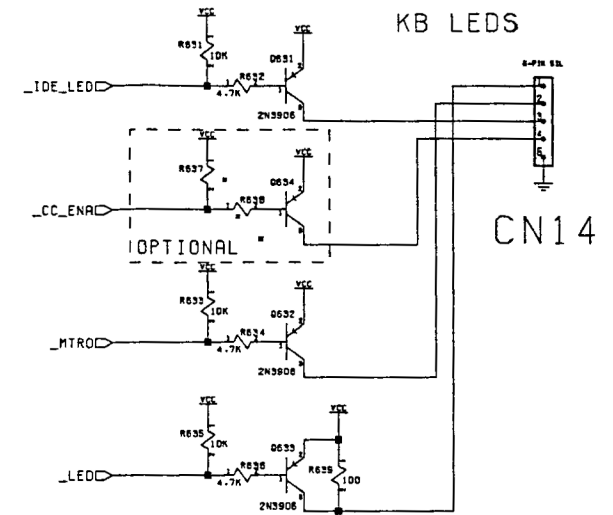
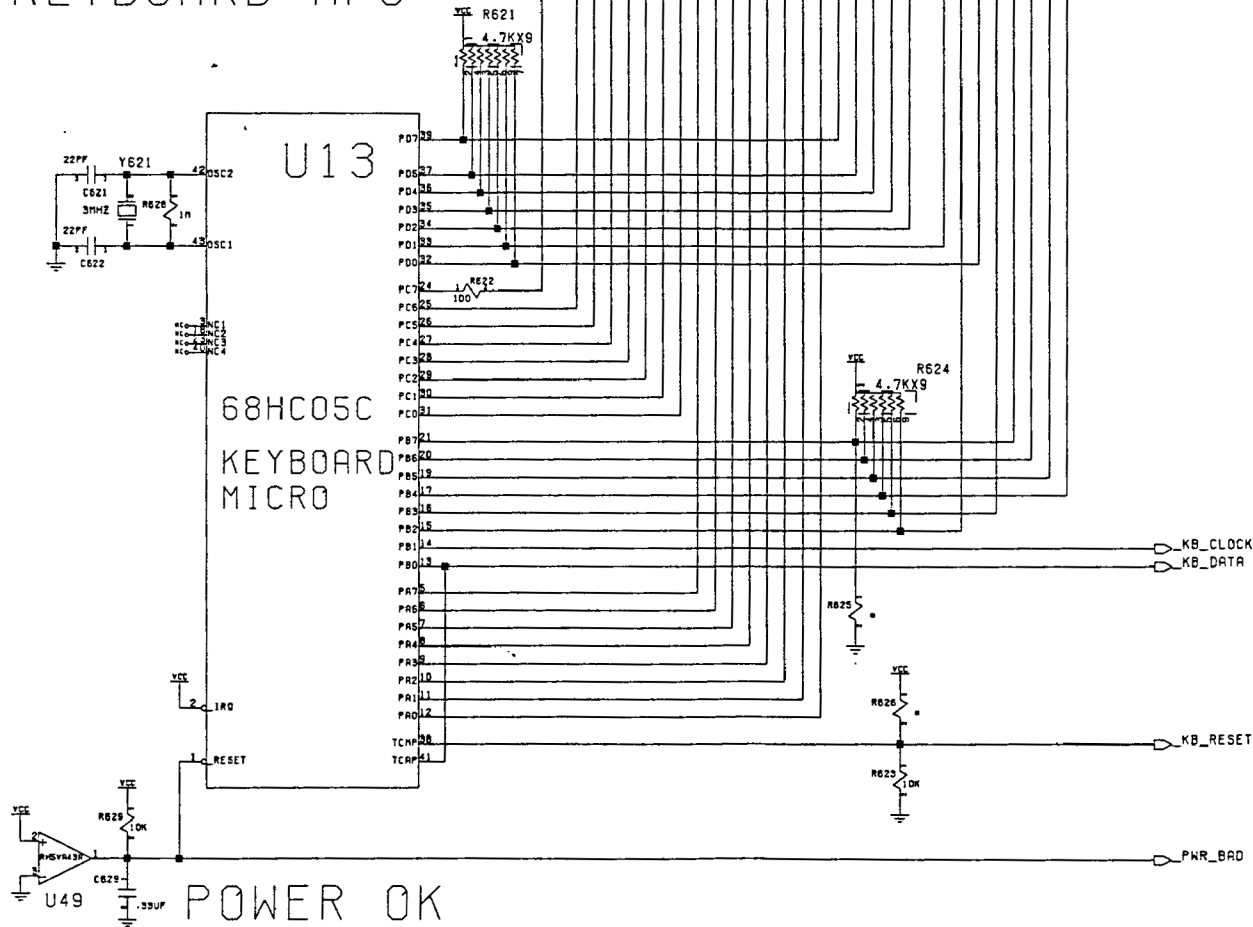
EXTERNAL FLOPPY

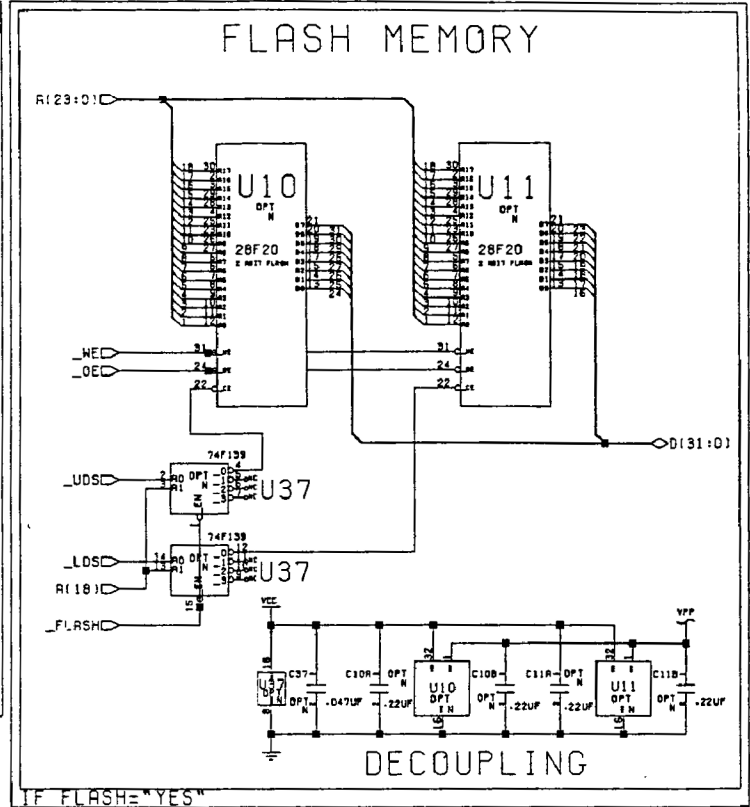
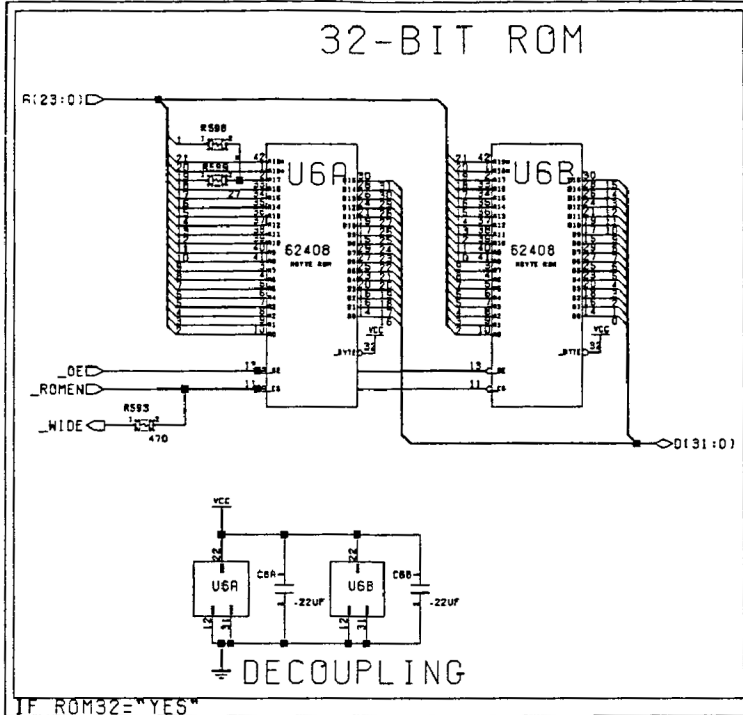
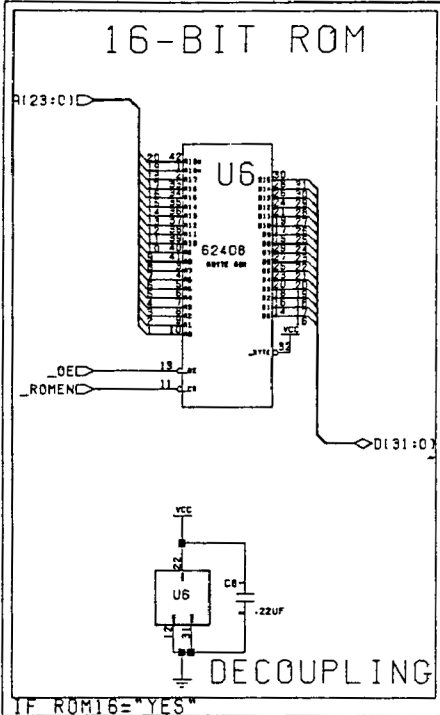
DECOUPLING



KEYBOARD TAIL CN13

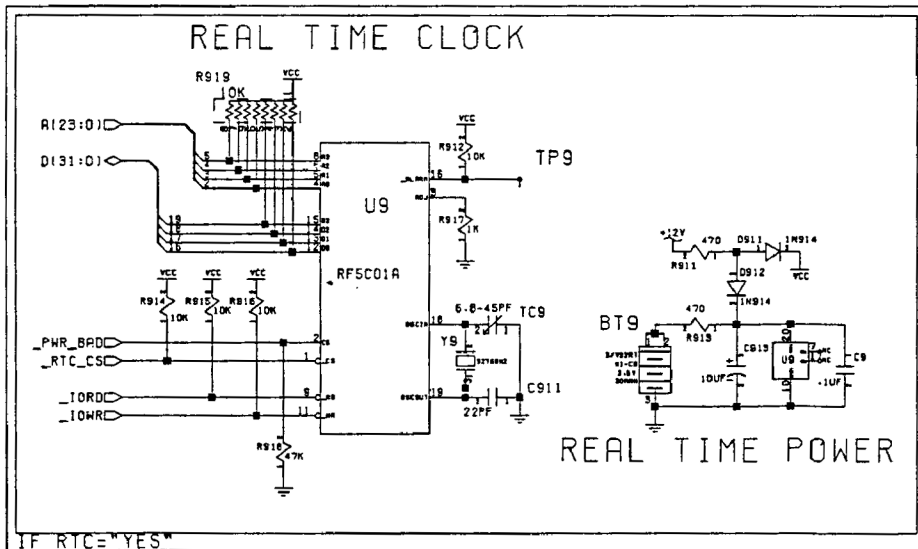
KEYBOARD MPU



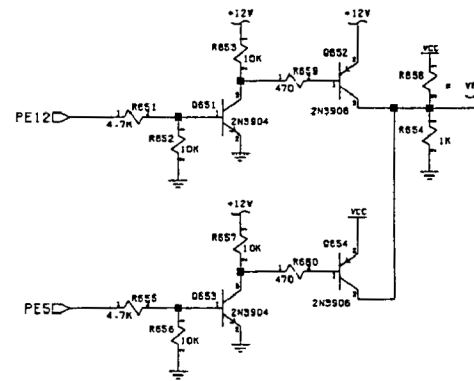


16 AND 32-BIT SOCKETS MAY OVERLAP!

OPTIONAL FLASH MEMORY



PROGRAMMING VOLTAGE

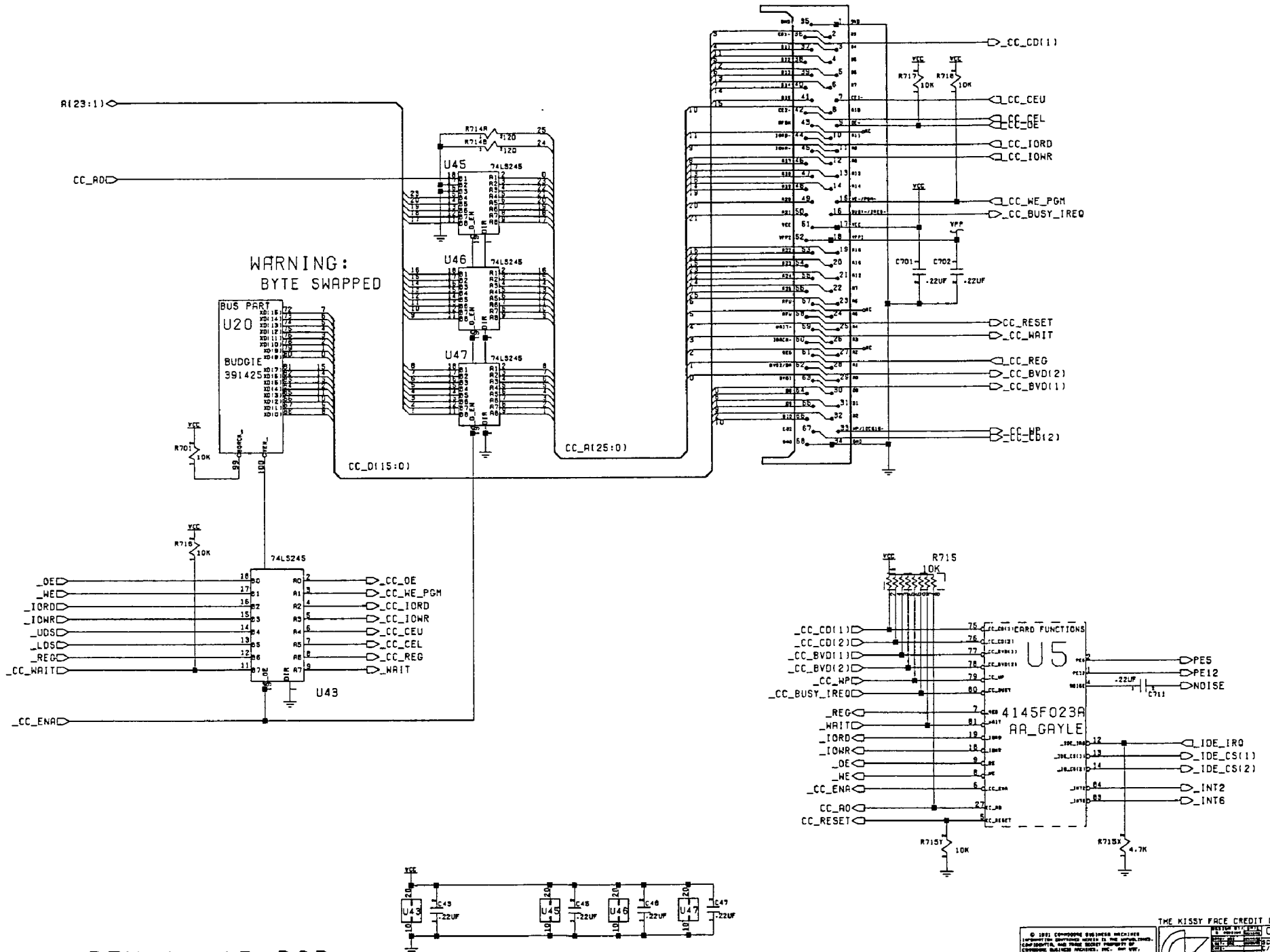


OPTIONAL REAL-TIME CLOCK/CALENDAR

A1200 RFV 1->1D PCB

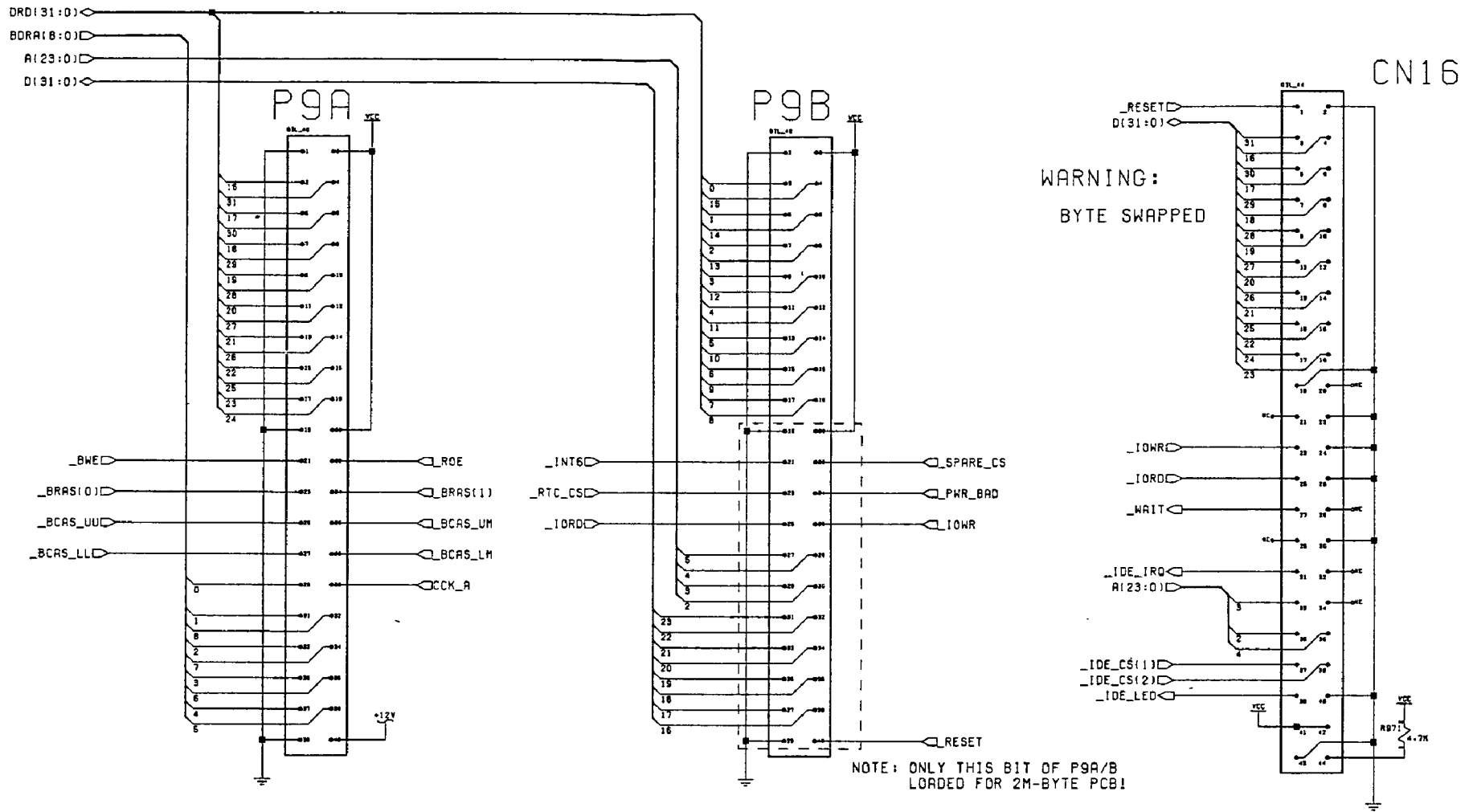
MEMORY CARD

CN15

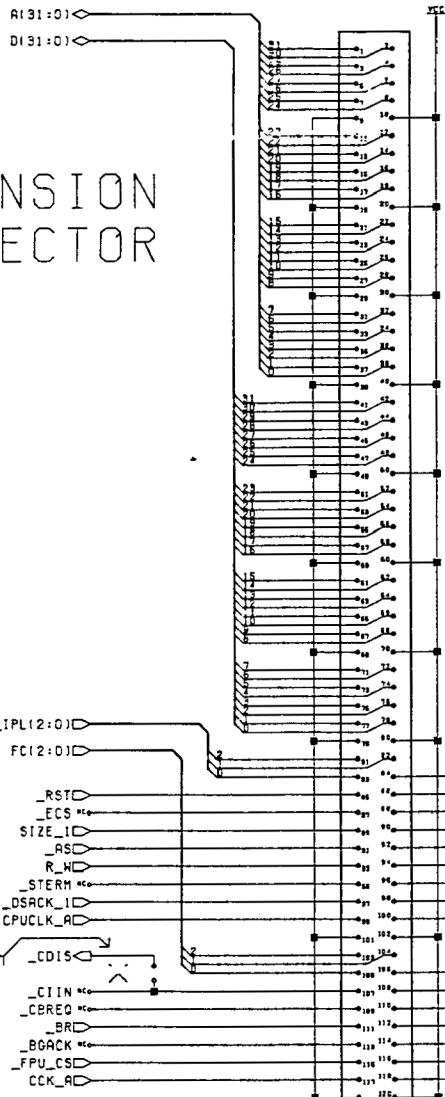


MEMORY EXPANSION

IDE DRIVE

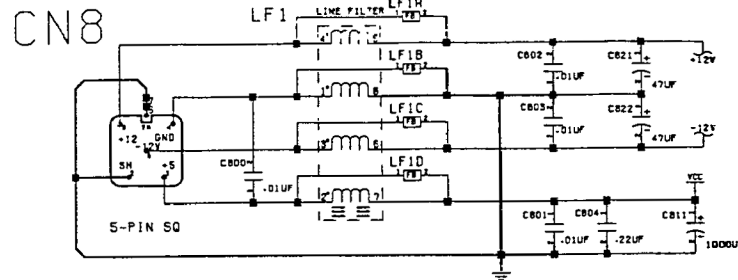


EXPANSION CONNECTOR



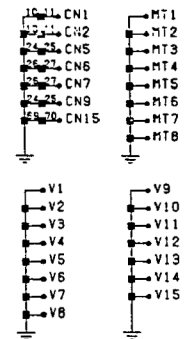
P1

POWER INPUT

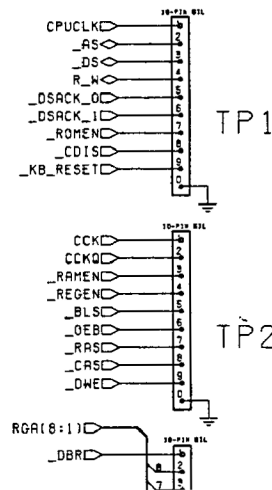


NOTE: HEAVY LINES INDICATE A SINGLE POINT CONNECTION

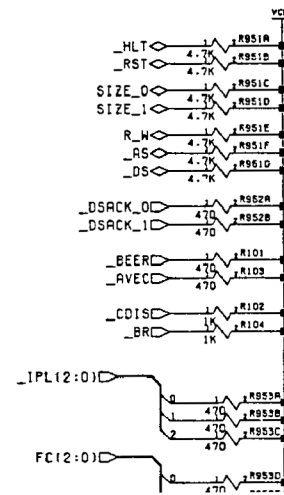
HOLES & C.



TEST ACCESS



TERMINATION



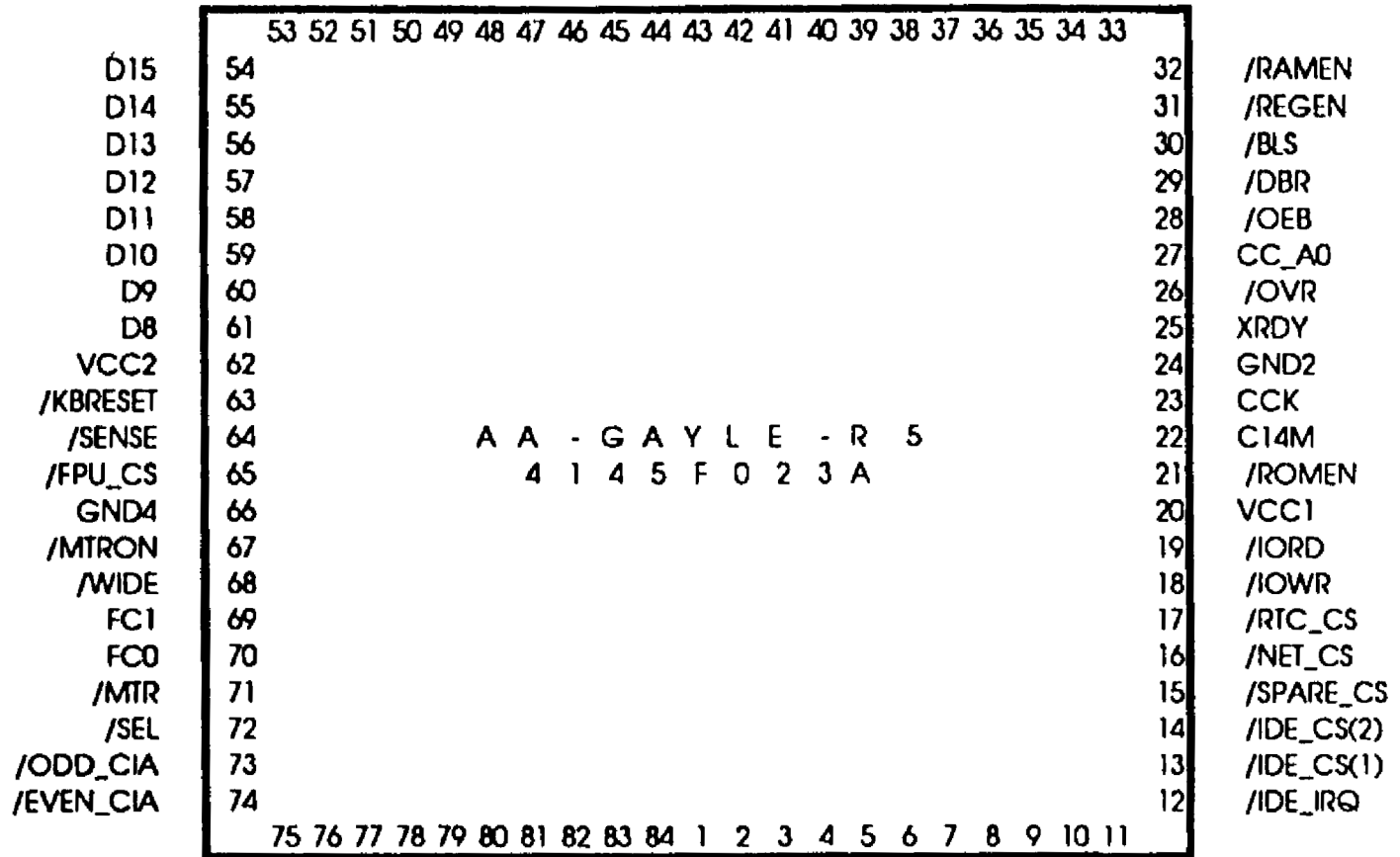
DELETED R1B PCB

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                /    /
                D    D
                S    S
                A    A
          G      /    /
A A A A A A A N A A A A R H / C R C / /
2 2 2 2 1 1 1 1 D 1 1 1 1 S L B K / K D A
3 2 1 0 9 8 7 6 3 5 4 3 2 T T G O W I S S

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Figure 5-5. AA-GAYLE



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C C C C C C W B I I E E N O C C R W O F
C C C C C C A E N N 1 5 D I _ C E E E L
- - - - - I R T T 2 1 S R _ G A
C C B B W B T R 6 2 E E E S
D D V V P U S N H
1 2 D D S E A
    1 2 Y T

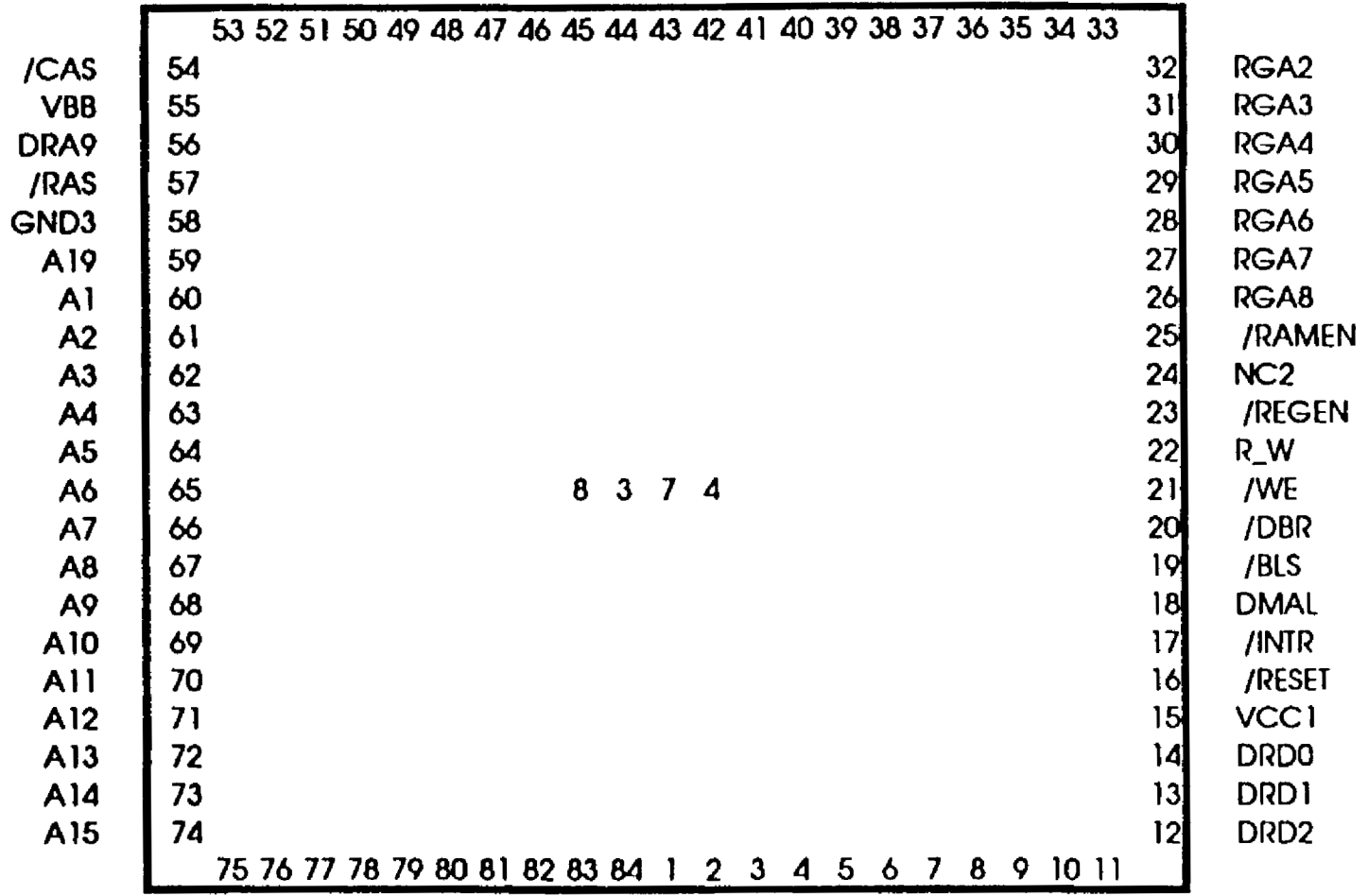
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N C R R R R R R R R R R N T C C M D M A C G
C C A A A A A A A A A D S C K H A H 2 L A
1 2 8 7 6 5 4 3 2 1 0 2 C K Q z C z 0 K 1

```

Figure 5-3. ALICE

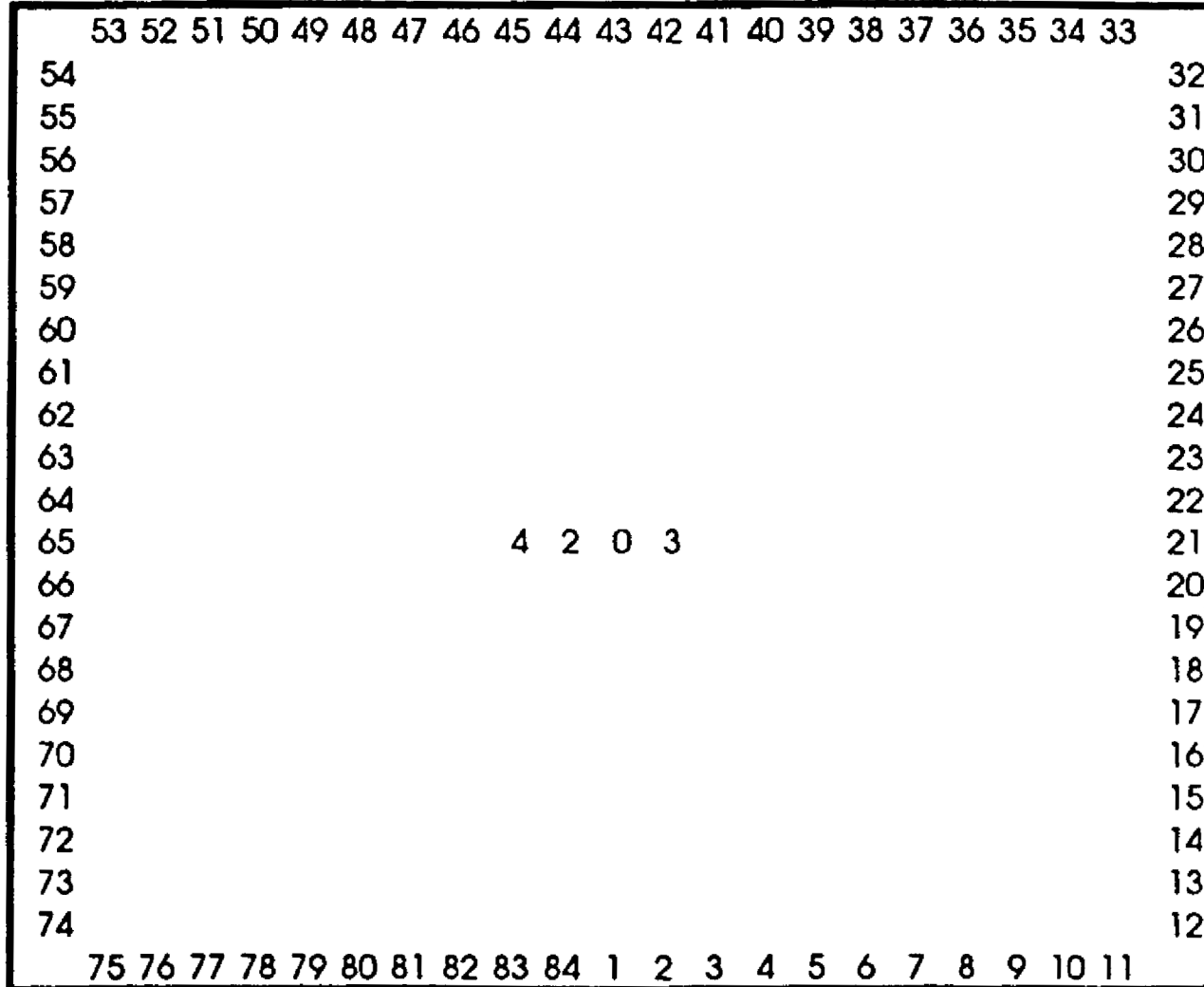


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A A A / / / / G D D D D D D D D D D D D D D D D D
1 1 1 L V C H N R R R R R R R R R R R R R R R R R
6 7 8 P S S S D D D D D D D D D D D D D D D D D
      E Y Y Y 1 1 1 1 1 1 1 1 9 8 7 6 5 4 3
      N N N N   5 4 3 2 1 0
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G C G
 N 2 N
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 3 4 3 2 1 0 7 6 5 4 0 3 2 1 0 7 6 5 4 3 2



D D D D D D D D V D G D D D D D D / C W
 1 1 1 1 1 1 9 8 C 7 N 6 5 4 3 2 1 0 C C I
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Figure 5-6. LISA

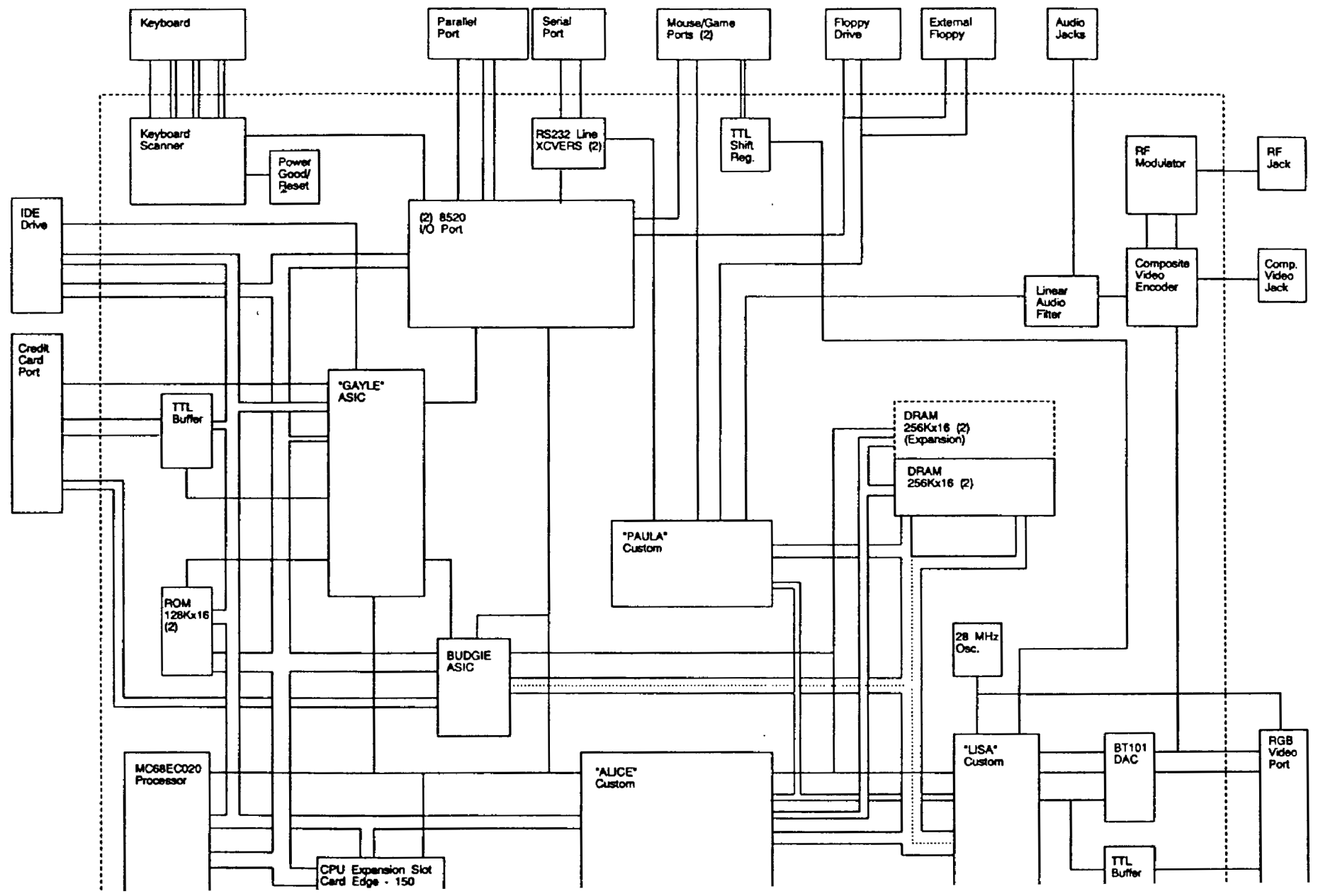


Figure 5-1. System Block Diagram