

JUMPERS AND STUFF

CONNECTORS

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CN1	DB9P	MOUSE/JOYSTICK 1	5
CN2	DB9P	MOUSE/JOYSTICK 2	5
CN3	RCA-J	RIGHT AUDIO OUTPUT	5
CN4	RCA-J	LEFT AUDIO OUTPUT	5
CNS	DB23S	EXTERNAL FLOPPY	8
CN6	DB25P	RS232 SERIAL PORT	7
CN7	DB25S	PARALLEL PRINTER PORT	7
CN8	SD-DIN	POWER SUPPLY CONNECTOR	13
CN9	DB23P	VIDEO OUTPUT	6
CN10	RCA-J	COMPOSITE VIDEO	4
CN11	DIL-34	INTERNAL FLOPPY SIGNAL	8
CN12	SIL-4	INTERNAL FLOPPY POWER	8
CN13	MEM-30	KEYBOARD MEMBRANE	19
CN14	SIL-4	INTERNAL FLOPPY POWER	8
CN13	MEM-30	KEYBOARD MEMBRANE	9
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CN15	PCMCIA	PC "MEMORY CARD"	11
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REVISION HISTORY

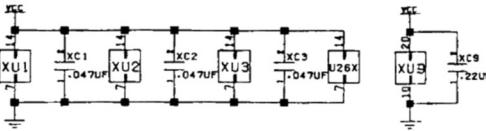
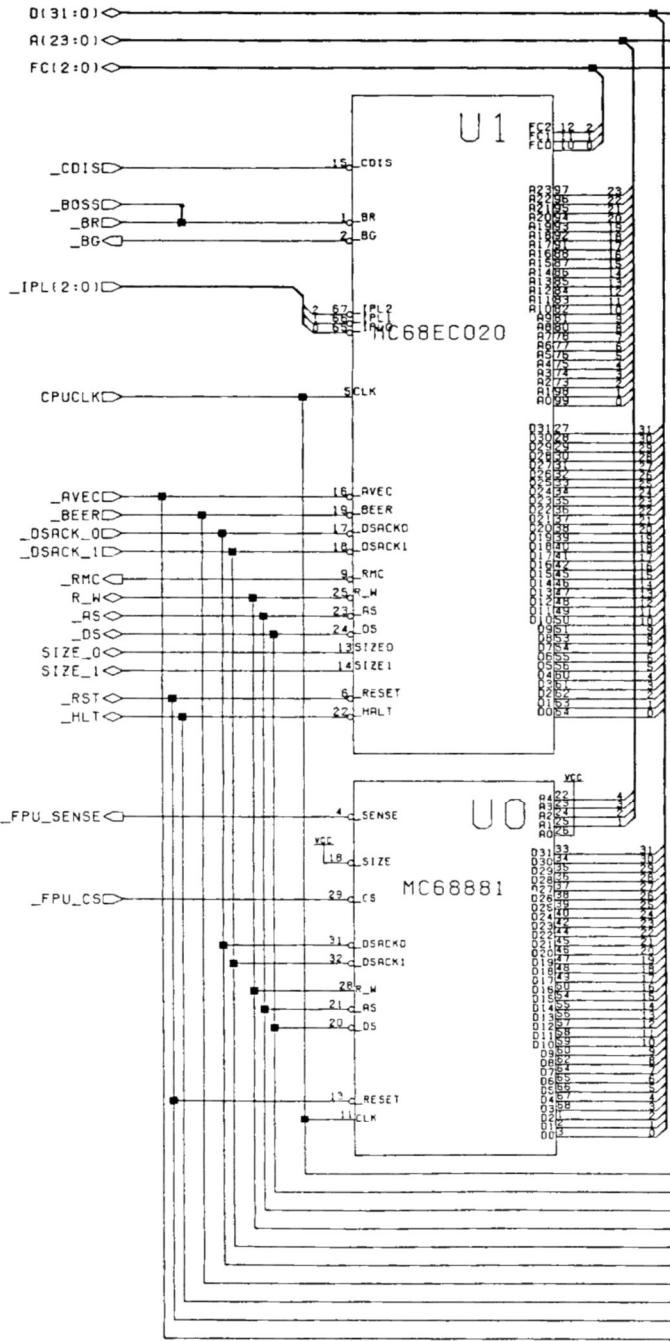
SIGNAL GLOSSARY

SIGNAL	DESCRIPTION (ARER)	PAGES
28MHz	28.63636 MHZ MASTER CLOCK	
7MHz	7.15909 MHZ PROCESSOR CLOCK	
A[23:1]	PROCESSOR ADDRESS BUS (68000)	
ACK	DATA ACKNOWLEDGE (PARALLEL PORT)	
AS	ADDRESS STROBE (68000)	
RUDIN	AUDIO INPUT (RS232 PORT)	
RUDOUT	AUDIO OUTPUT (RS232 JACK)	
BEER	BUS ERROR (68000)	
BG	BUS GRANT (68000)	
BGACK	BUS GRANT ACKNOWLEDGE (68000)	
BLISS	BLITTER SLOWDOWN (CHIPS)	
BLIT	CHIP MEMORY ACCESS (CHIPS)	
BR	BUS REQUEST (68000)	
BUSY	DEVICE BUSY (PARALLEL PORT)	
CASL/ZU	COLUMN ADDRESS STROBE (DRAM)	
CCK/CCKQ	COLOR CLOCK / QUADRATURE (CHIPS)	
CDAC	7.15909 MHZ QUADRATURE CLOCK (CHIPS)	
CHNG	MEDIA CHANGE (FLOPPY)	
CLKRD/WR	READ-TIME CLOCK READ / WRITE (RTC)	
COMP	MONOCHROME COMPOSITE VIDEO (VIDEO)	
CSYNC	COMPOSITE SYNC (VIDEO)	
CTS	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)	
DMAL	CHIP DMA REQUEST LINE (CHIPS)	
DRA[8:0]	DRAM ADDRESS BUS (DRAM)	
DRD[15:0]	DRAM DATA BUS (DRAM)	
DSR	DATA SET READY (RS232 PORT)	
DTACK	DATA TRANSFER ACKNOWLEDGE (68000)	
DTX	DATA TERMINAL READY (RS232 PORT)	
E	PERIPHERAL ENABLE CLOCK (68000)	
EXTICK	EXPANSION PRESENT / RTC TICK	
FC[2:0]	FUNCTION CODE (68000)	
FIRE0/1	FIRE BUTTON 0/1 (JOYSTICKS)	
HLT	PROCESSOR HALT (68000)	
HSYNC	HORIZONTAL SYNC (VIDEO)	
INDEX	INDEX PULSE (FLOPPY)	
INT[2,3,5]	INTERRUPT REQUEST (CHIPS)	
IORESET	I/O RESET	
IPL[2:0]	INTERRUPT PRIORITY LEVEL (68000)	
KBDCLK	KEYBOARD CLOCK (KEYBOARD)	
KBDATA	KEYBOARD DATA (KEYBOARD)	
KPRESET	KEYBOARD RESET (KEYBOARD)	
LDS/WDS	UPPER / LOWER DATA STROBES (68000)	
LED	POWER ON LED / AUDIO FILTER DISABLE	
LEFT/RIGHT	LEFT RIGHT AUDI0 (AUDI0)	

KEY COMPONENTS

RE	CHIP	DESCRIPTION	PAGE
U1	68000	68000 PROCESSOR 16MHZ	2
U2	8374	ALICE (AA AGNUS)	2
U3	8364	PAULA	5
U4	4203	LISA (AA DENISE)	4
U5	F023R	AA GAYLE (ICBM ASIC)	2,8,11
U5	ASST	ROM 512KX16. 150 NS	10
U5	8520	AMIGA VGA L MHZ	7
U7	28F10	FLASH MEMORY 128KX8	10
U7	CXA1145	SONY VIDEO ENCODER	4
U4	88HC05	AMIGA KEYBOARD MPU	9
U4	PSTS18	LOW VOLTAGE SENSE IC	9
U4	LF347	BIMOS OP-AMP	5
U4	TL084	BIMOS OP-AMP	ALT
U5-17	RSST	DRAM 256KX16. BONS	3
U5-19	RSST	DRAM 256KX16 OPTIONAL	3
U20	39122?	BUDDY (ASIC)	2
U28	1488	EIA LINE DRIVER	7
U29	1489	EIA LINE RECEIVER	7
U30	81101	TRIPLE 8-BIT VIDEO DAC	4
X1	OSC	TTL 28.63536 MHZ NTSC	2
X1	OSC	TTL 28.37512 MHZ PAL	ALT
Y4	51	Xtal 4.43619MHZ PAL BURST	4
Y5	21	Xtal 3MHZ CERAMIC RESONATORS	9
X2	ASST	PAL VIDEO MODULATOR	4
X2	ASST	NTSC VIDEO MODULATOR	4

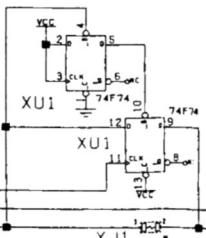
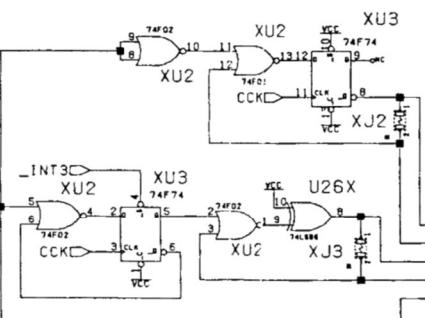
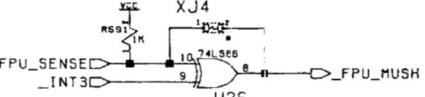
CHANNEL Z
10/10/92



OOPS!

ALL THIS STUFF SERVES TO CORRECT ONE MINOR GAYLE BUG
AND A NUMBER OF ALICE DEFICIENCIES NOT YET CORRECTED.
ASSUMING THE CHANGES ARE IMPLEMENTED IN THE PRODUCTION
GAULE CHIP, THEN ALL THIS SILLYNESS 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



NOTE: VARIOUS COMPONENTS ARE FOR EMI CONTROL
AND MAY BE LOADED WITH FUNNY THINGS...

RS94

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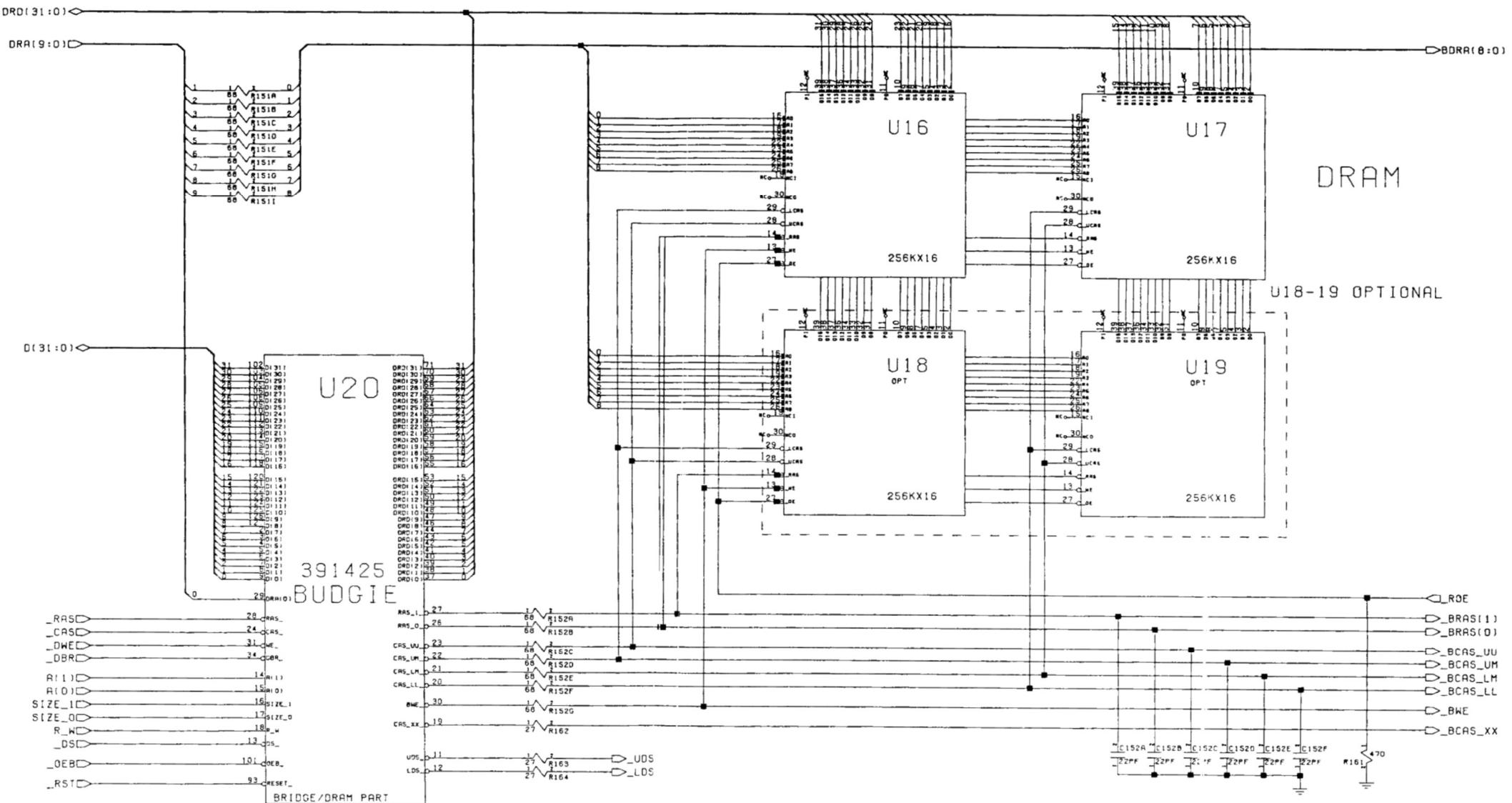
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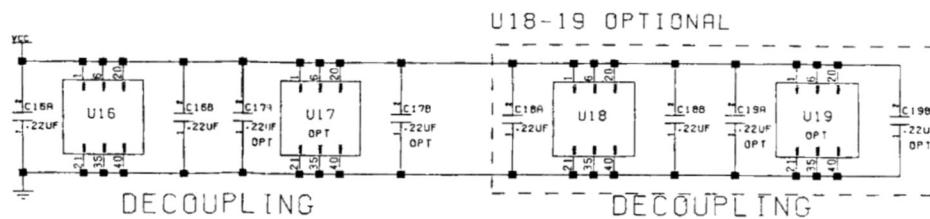
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A1200 REV 1->1D PCB



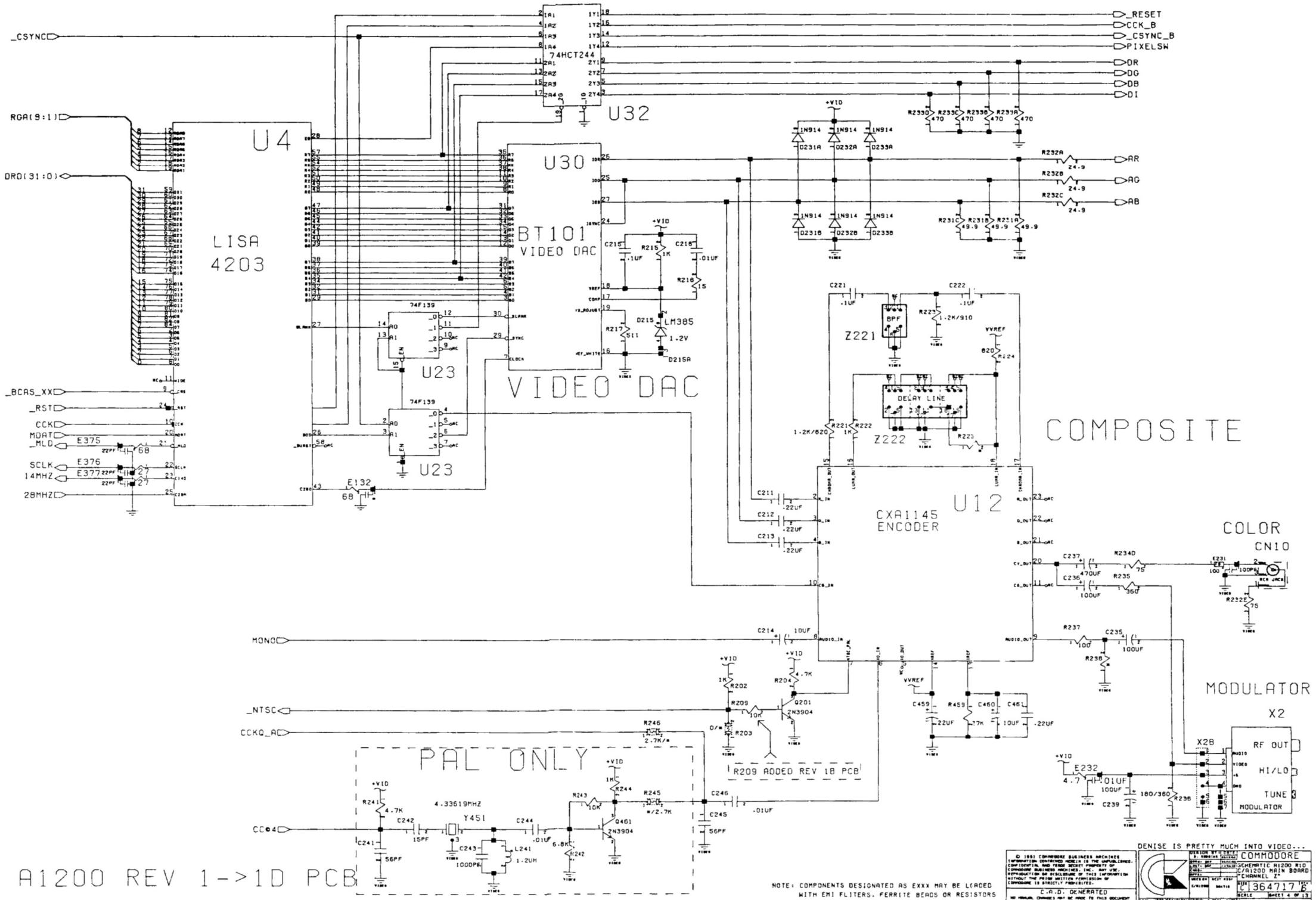
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MEMORY AND...WELL, I USED TO REMEMBER

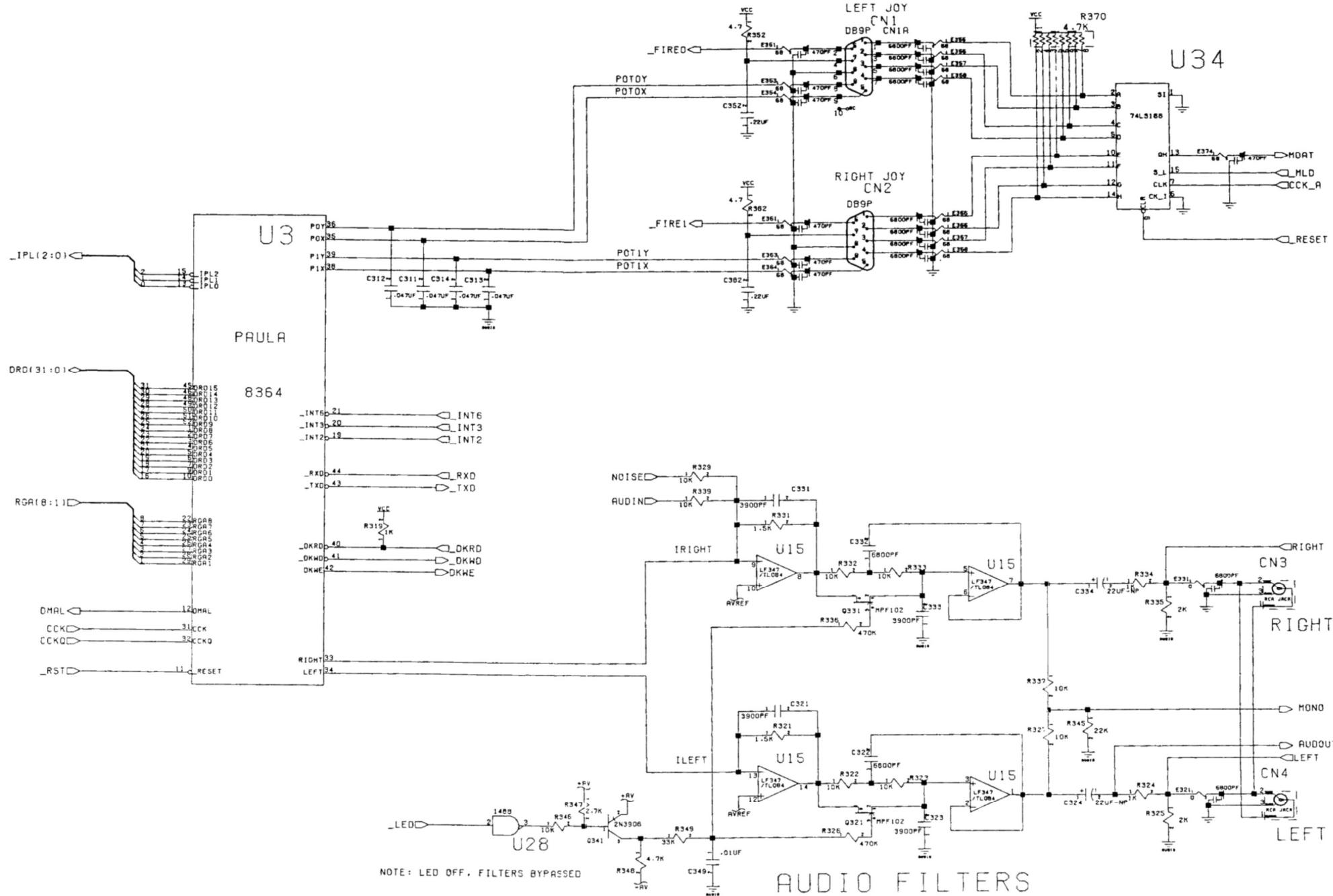
DESIGN BY:
DRAFTED BY:
CHECKED BY:
APPROVED BY:
SCHMATIC ALLOC RID
COMMODORE MAIN BOARD
REV. 1.0
DATE: 04-10-81
PAGE: 1
CHANNEL: 27
PART NO.: 36471-E
PCB NO.: 36471-E
MATERIAL: 3
EQUIPMENT: 3



A1200 REV 1->1D PCB

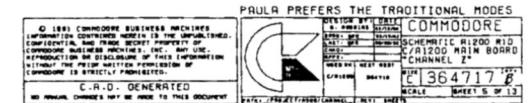
NOTE: COMPONENTS DESIGNATED AS EXXX MAY BE LEADED
WITH EMI FILTERS, FERRITE BEADS OR RESISTOR

MOUSE/JOYSTICK PORTS

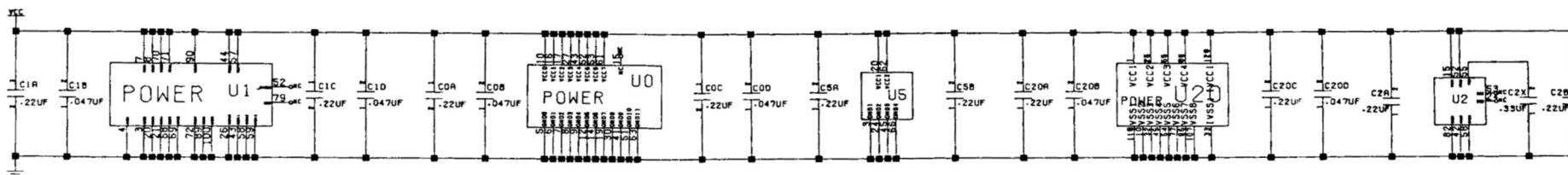


AUDIO FILTERS

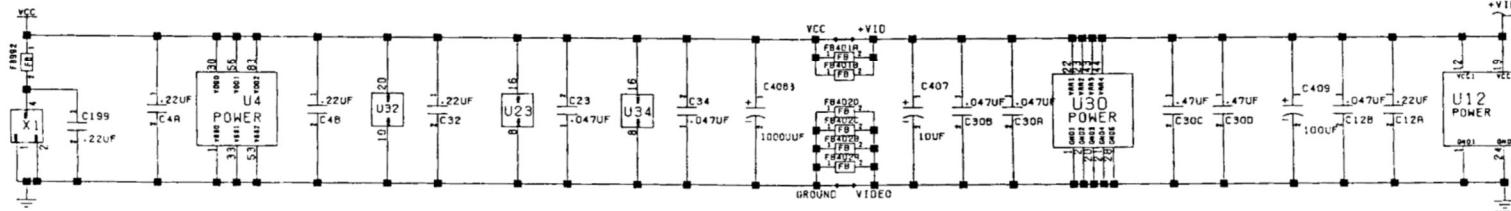
A1200 REV 1->1D PCB



GENERAL DECOUPLING

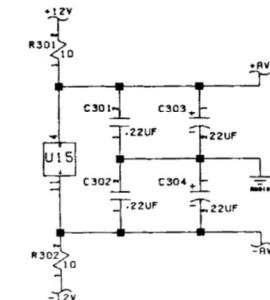


VIDEO DECOUPLING

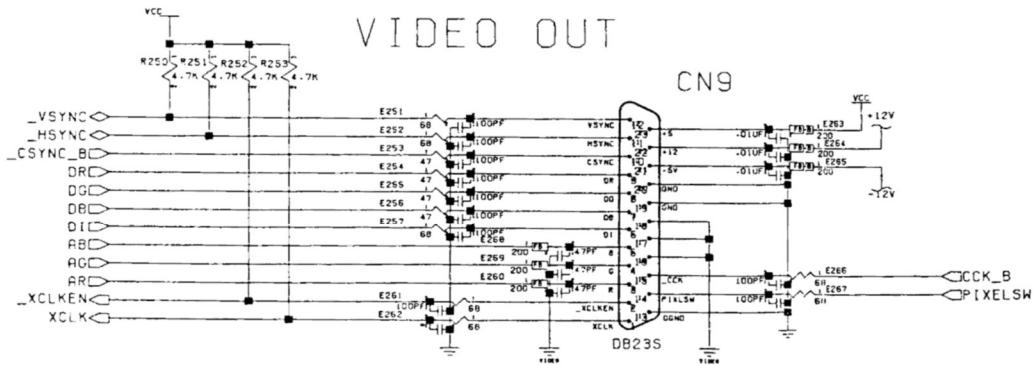


NOTE: AS OF REV 1C, LOGIC AND VIDEO GROUND AND POWER ARE THE SAME NET. BUT REROUTED DISCRETELY EXCEPT AT DAC1
ALSO ADDED C30C AND C30D FOR OVERKILL DAC DECOUPLING.

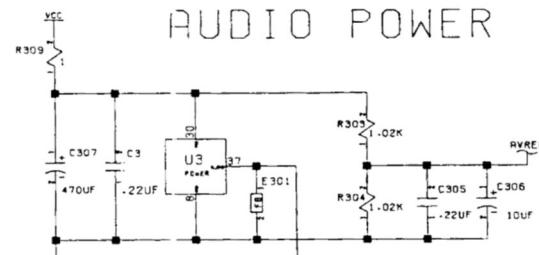
AUDIO DECOUPLING



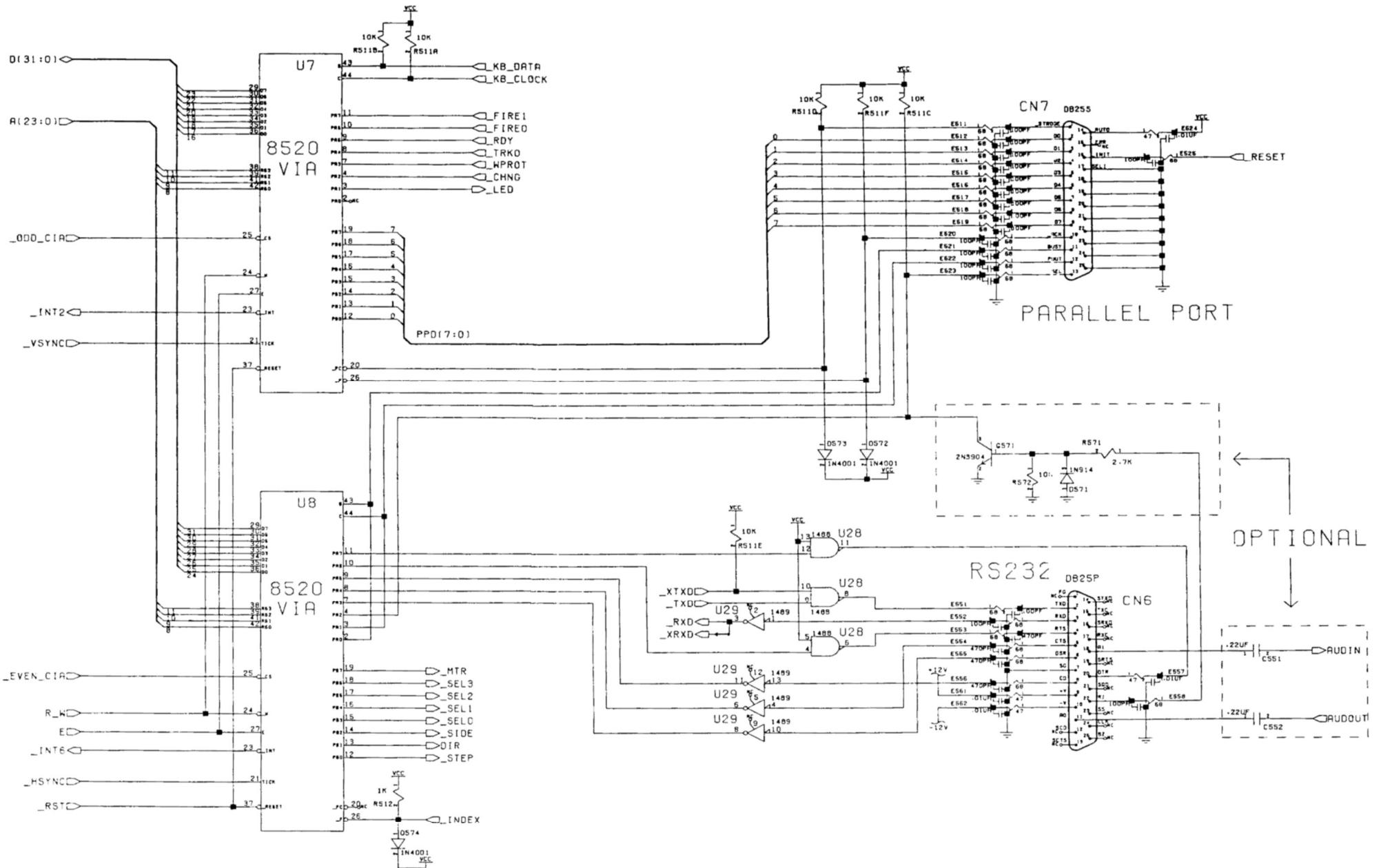
VIDEO OUT



AUDIO POWER



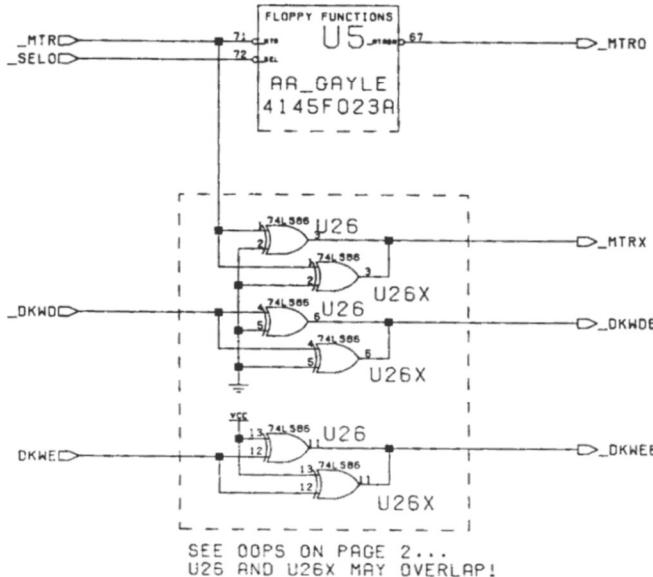
NOTE: GROUND INTERCONNECTION NEAR AUDIO JACKS.



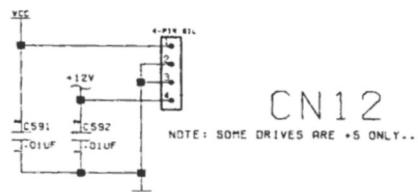
A1200 REV 1->1D PCB

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PRINTED BY DATE	COMMODORE
SCHEMATIC A1200 RIO	SCHEMATIC A1200 RIO
REV. 1	REV. 1
CHANNEL 2	CHANNEL 2
NEXT PAGE	PAGE 1364717 8
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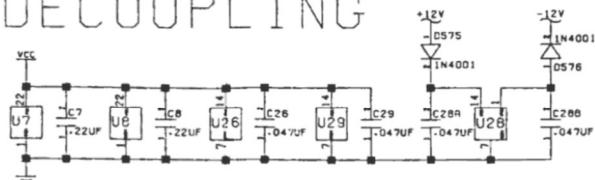
FLOPPY LOGIC



FLOPPY POWER

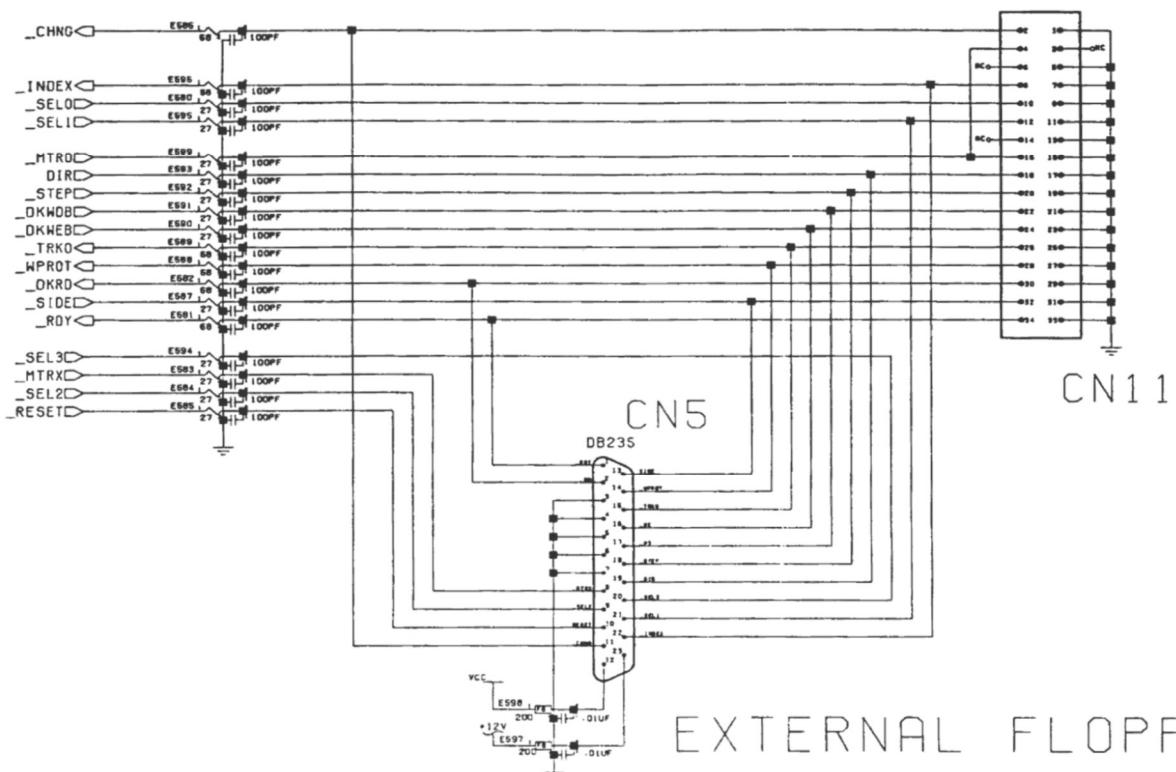


DECOUPLING



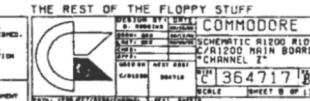
A1200 REV 1 -> 1D PCB

INTERNAL FLOPPY

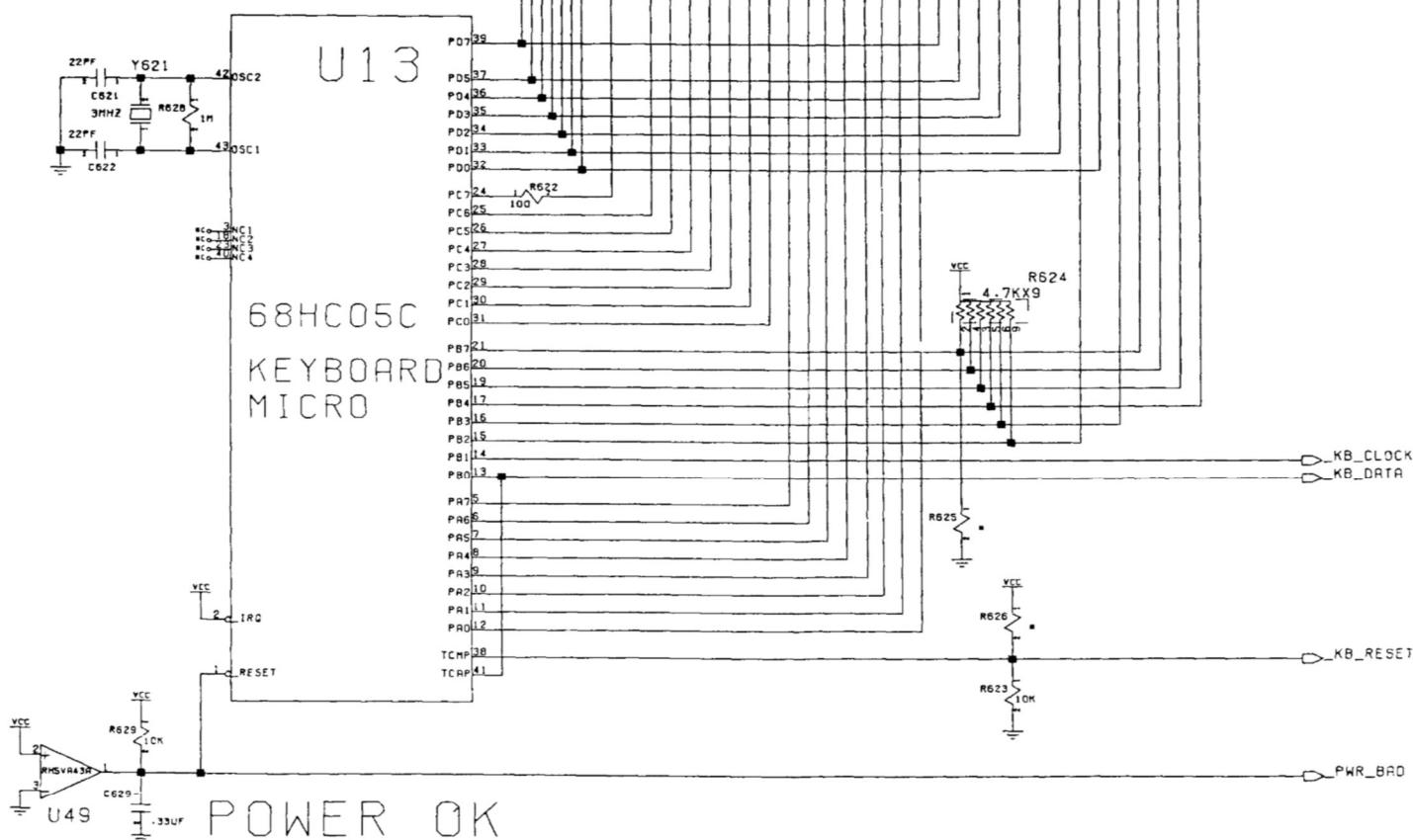


EXTERNAL FLOPPY

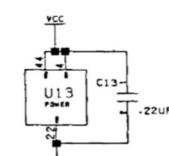
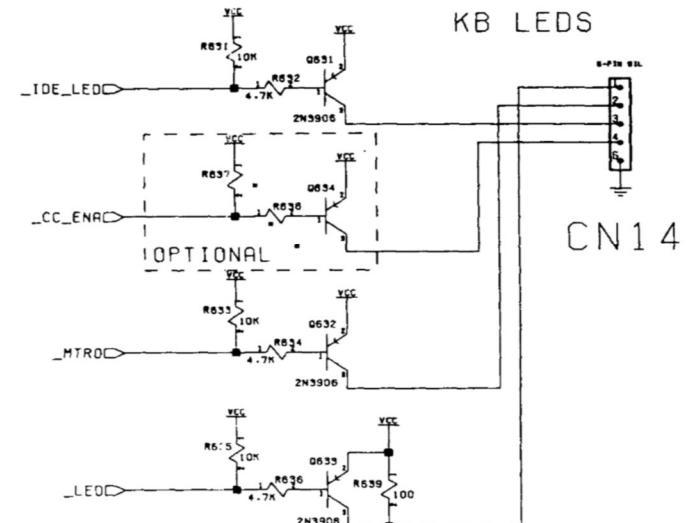
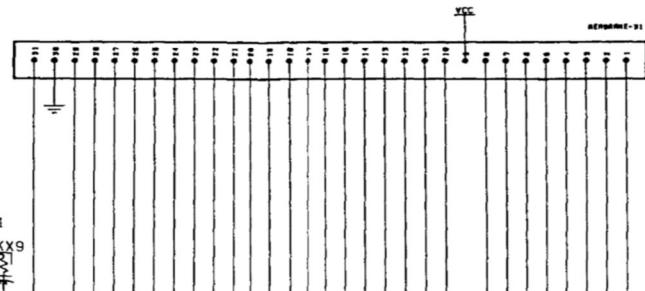
THE REST OF THE FLOPPY STUFF
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SHEET 8 OF 13



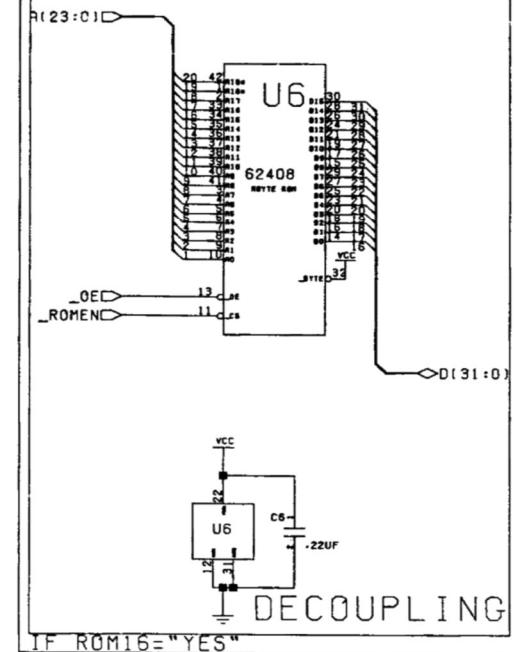
KEYBOARD MPU



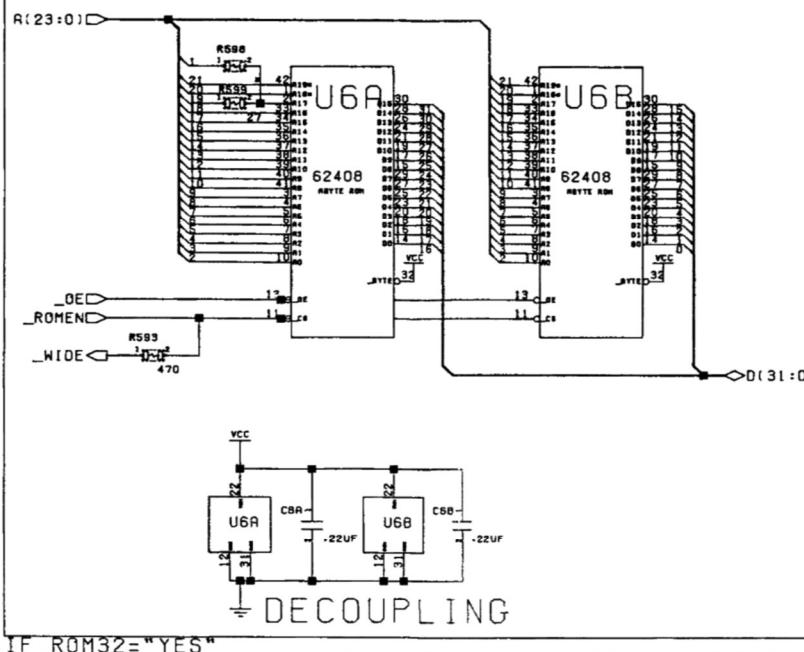
KEYBOARD TAIL CN13



16-BIT ROM

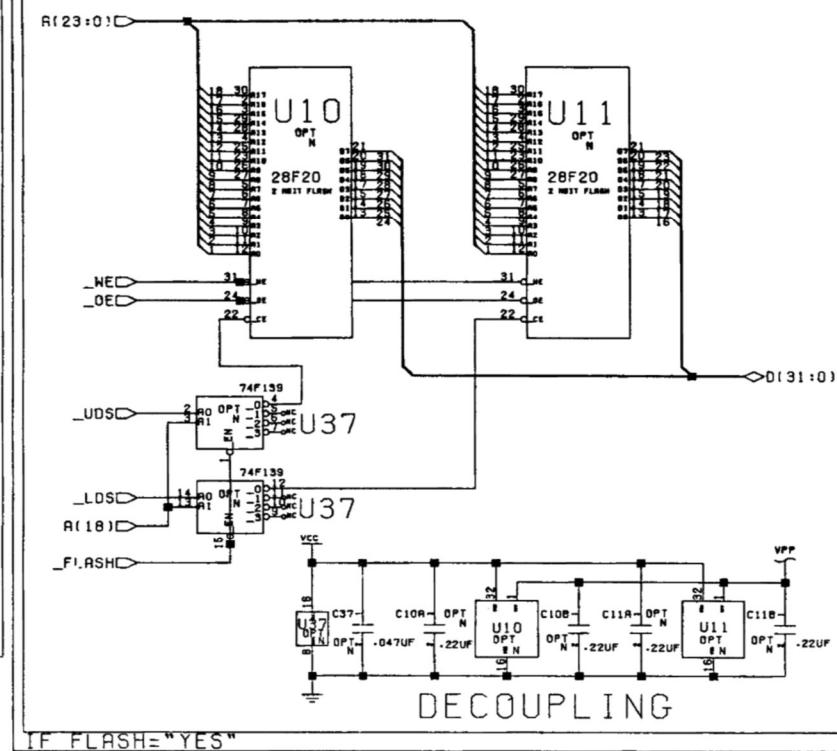


32-BIT ROM

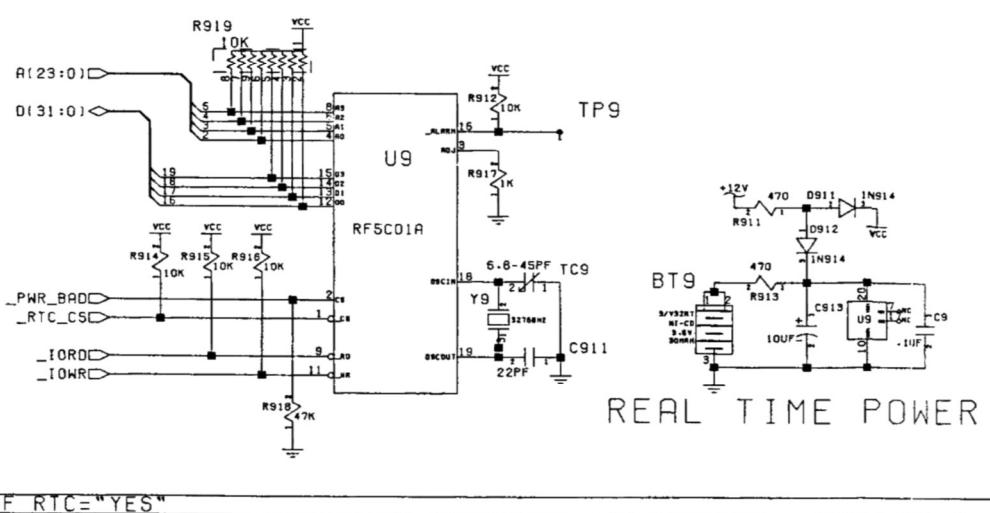


16 AND 32-BIT SOCKETS MAY OVERLAP!

FLASH MEMORY



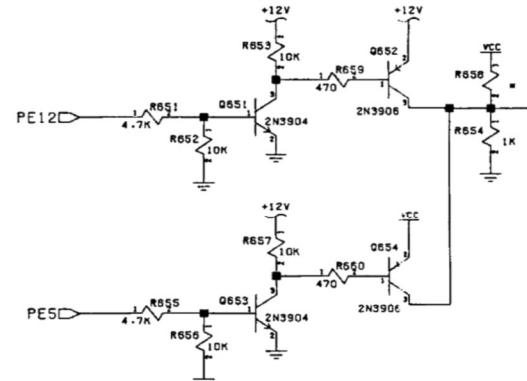
REAL TIME CLOCK



OPTIONAL REAL-TIME CLOCK/CALENDAR

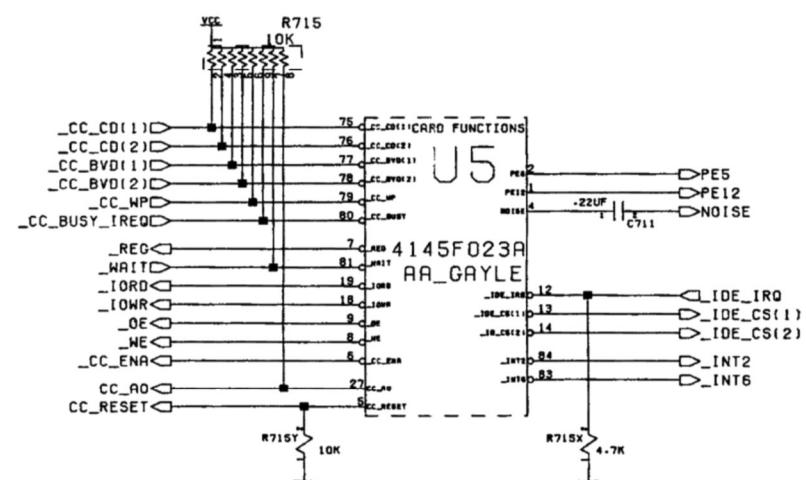
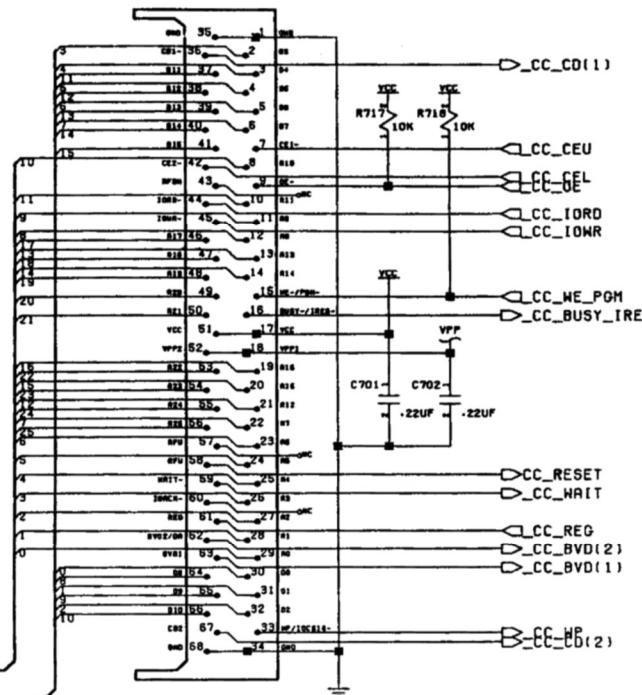
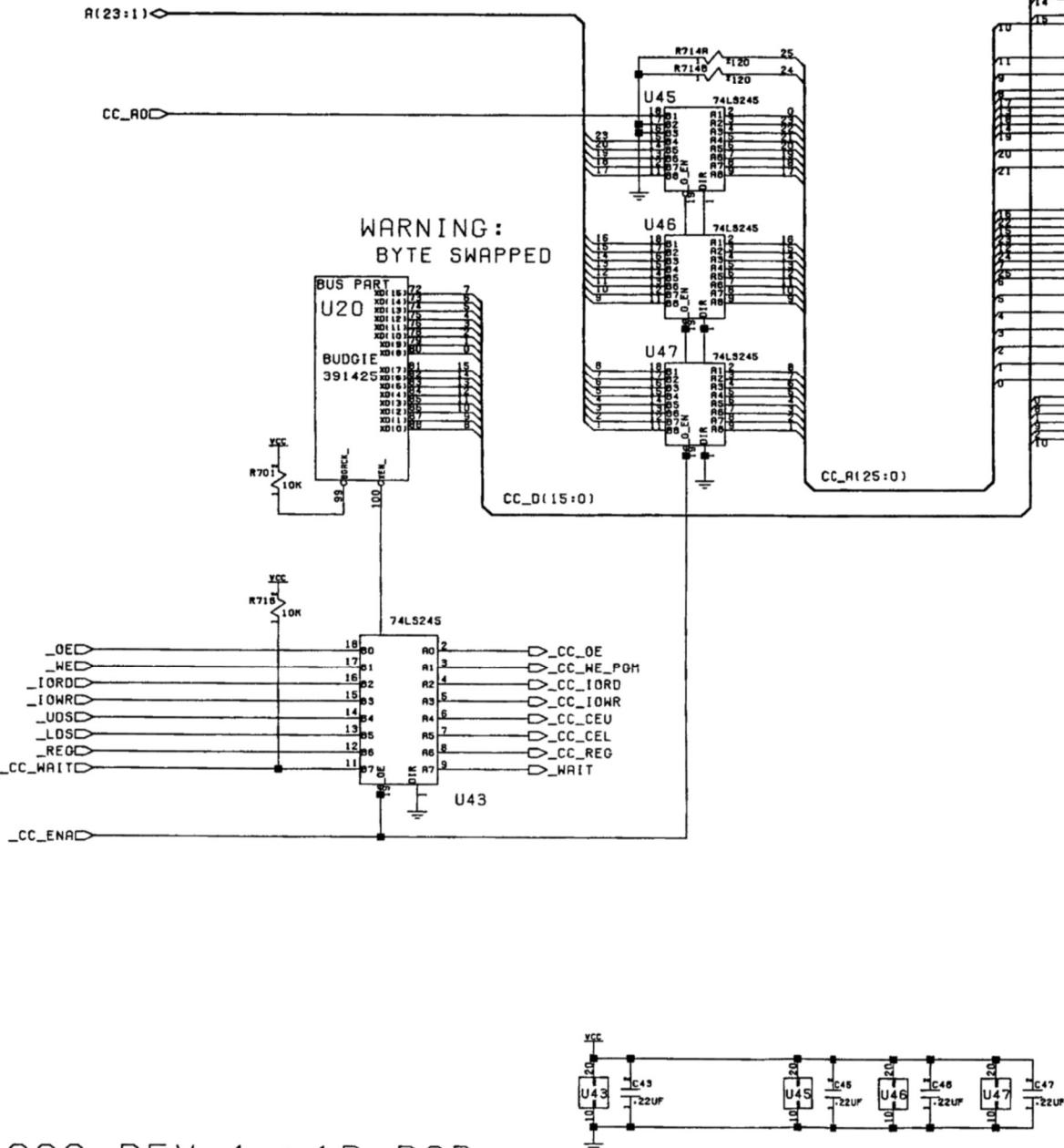
OPTIONAL FLASH MEMORY

PROGRAMMING VOLTAGE



MEMORY CARD

CN15



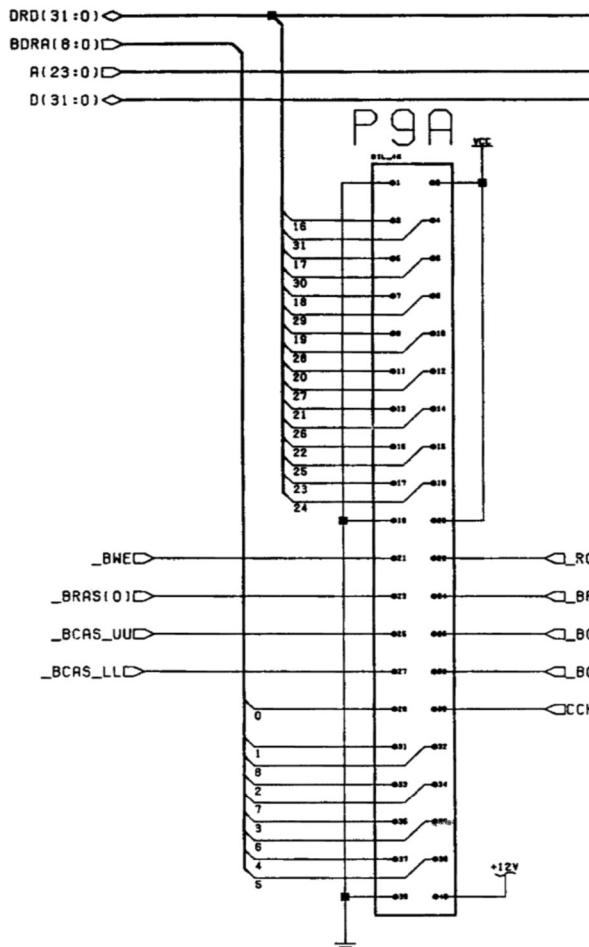
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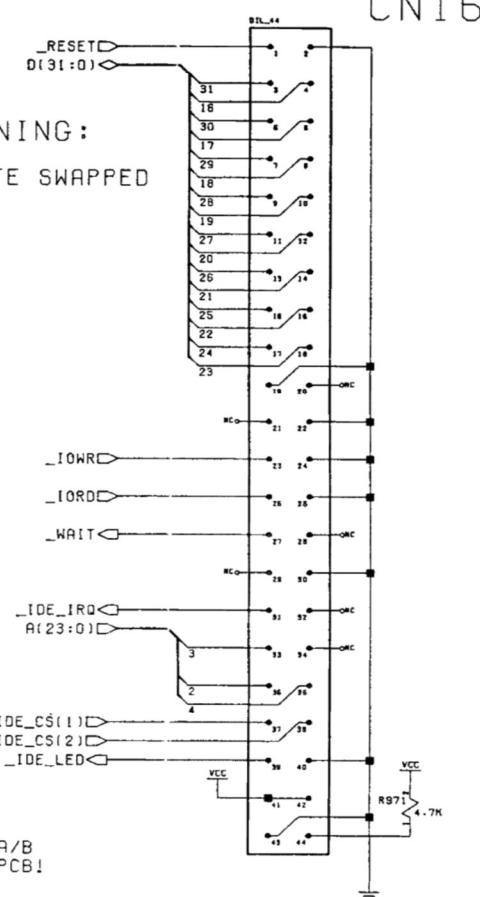
THE KISSY FACE CREDIT CARD MONSTER	
LAST NAME	DATE OF BIRTH
C. S. R. NUMBER	
444-1234	MM/YY
ADDRESS	
SCHEMATICS A1200 RID	
C/A1200 MAIN BOARD	
CHANNEL 2	
CODE WORDS	
USER NAME / BEST MUG	
COMMODORE	136471
EXPIRATION MONTH	
EXPIRATION YEAR	
FACSIMILE NUMBER	
TELEPHONE NUMBER	
E-MAIL ADDRESS	
PARENTAL APPROVAL	
SIGNATURE	

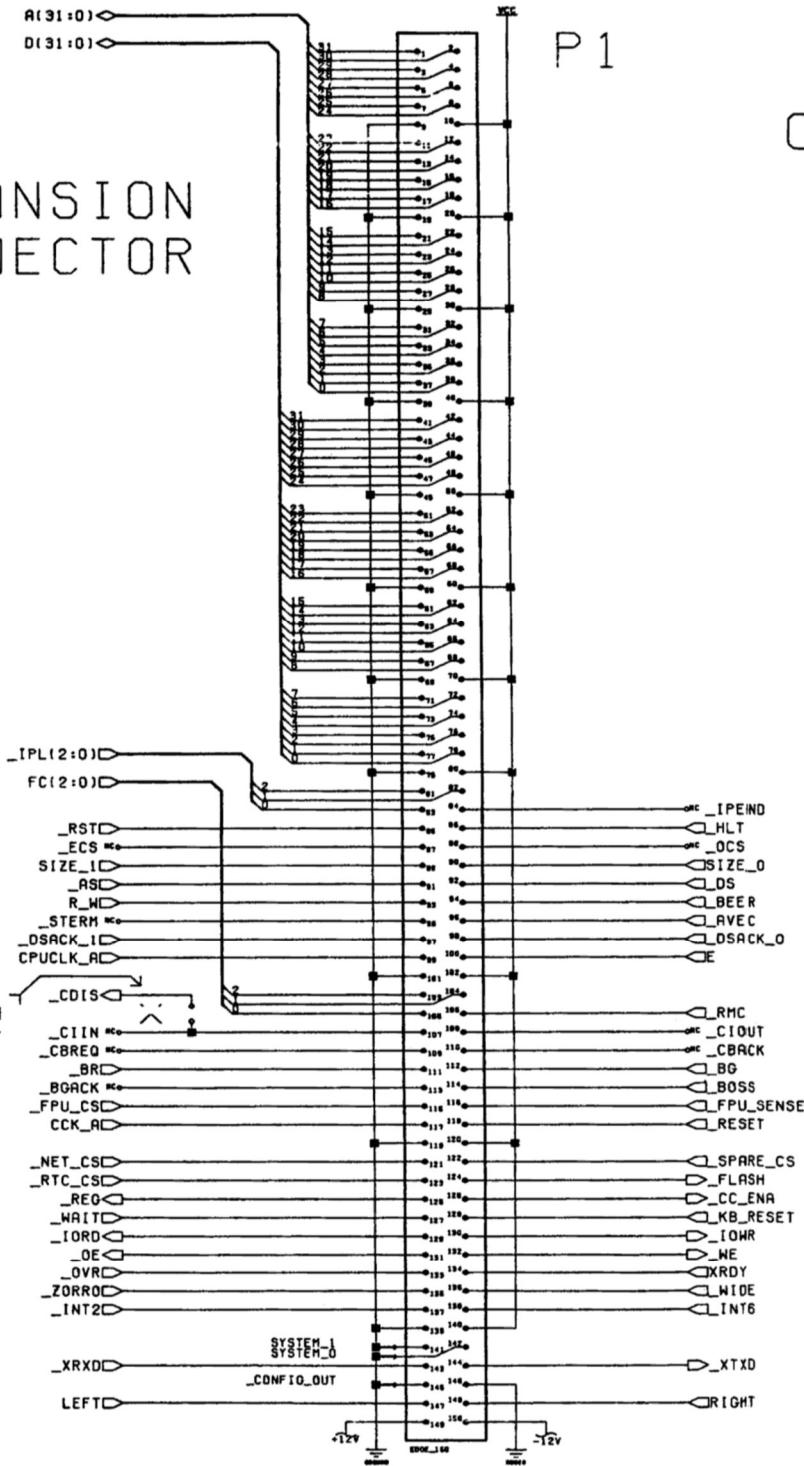
MEMORY EXPANSION

IDE DRIVE



WARNING:
BYTE SWAPPED





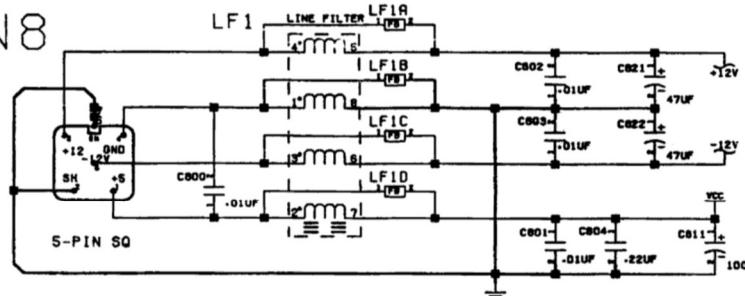
EXPANSION CONNECTOR

P 1

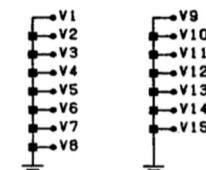
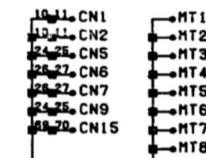
CN 8

POWER INPUT

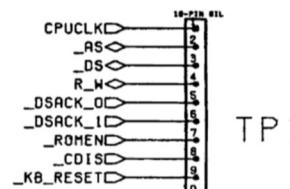
NOTE: HEAVY LINES INDICATE A
SINGLE POINT CONNECTION



HOLES & C.



TEST ACCESS

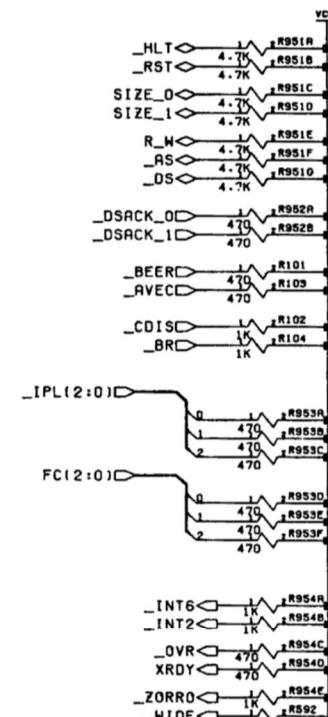


TP3

SYSTEM CONFIGURATION BITS

SYSTEM 1= 0= CPU/CPUCLK=
0 0 EC020/14MHZ
0 1 D20/14MHZ
1 0 O30/14MHZ
1 1 O30/>14MHZ

TERMINATION



Gayle

/ /
D D
S S

G	/ /	A A
A A A A A A A A A A A A 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		

D15	54	32	/RAMEN
D14	55	31	/REGEN
D13	56	30	/BLS
D12	57	29	/DBR
D11	58	28	/OEB
D10	59	27	CC_A0
D9	60	26	/OVR
D8	61	25	XRDY
VCC2	62	24	GND2
/KBRESET	63	23	CCK
/SENSE	64	22	C14M
/FPU_CS	65	21	/ROMEN
GND4	66	20	VCC1
/MTRON	67	19	/IORD
/WIDE	68	18	/IOWR
FC1	69	17	/RTC_CS
FC0	70	16	/NET_CS
/MTR	71	15	/SPARE_CS
/SEL	72	14	/IDE_CS(2)
/ODD_CIA	73	13	/IDE_CS(1)
/EVEN_CIA	74	12	/IDE_IRQ
	75 76 77 78 79 80 81 82 83 84 1 2 3 4 5 6 7 8 9 10 11		

/ / / / / / / / / / / P P G N C / / / / E /		
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		
I 2 D D S E A		
1 2 Y T		

Alice

/ /
 V D D D D D D D D G N C 7 C 4 S R
 N C 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 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

	53 52 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33		
/CAS	54	32	RGA2
VBB	55	31	RGA3
DRA9	56	30	RGA4
/RAS	57	29	RGA5
GND3	58	28	RGA6
A19	59	27	RGA7
A1	60	26	RGA8
A2	61	25	/RAMEN
A3	62	24	NC2
A4	63	23	/REGEN
A5	64	22	R_W
A6	65	21	/WE
A7	66	20	/DBR
A8	67	19	/BLS
A9	68	18	DMAL
A10	69	17	/INTR
A11	70	16	/RESET
A12	71	15	VCC1
A13	72	14	DRD0
A14	73	13	DRD1
A15	74	12	DRD2
	75 76 77 78 79 80 81 82 83 84 1 2 3 4 5 6 7 8 9 10 11		

A A A / / / G 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
 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 9 8 7 6 5 4 3
 N N N N 5 4 3 2 1 0
 C C C

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G		C		G
N		2		N
D R R R R R G G G G	8	G G G G B B B B B D		
3 4 3 2 1 0 7 6 5 4 0	3 2 1 0 7 6 5 4 3 2			

	53 52 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33		
R5	54	32	B2
R6	55	31	B1
VCC2	56	30	VCC1
R7	57	29	BO
/BRST	58	28	ZD
D31	59	27	BLANK
D30	60	26	SOG
D29	61	25	C28M
D28	62	24	/RST
D27	63	23	C14O
D26	64	22	SCLK
D25	65	21	/MLD
D24	66	20	MDAT
D23	67	19	RGA1
D22	68	18	RGA2
D21	69	17	RGA3
D20	70	16	RGA4
D19	71	15	RGA5
D18	72	14	RGA6
D17	73	13	RGA7
D16	74	12	RGA8
	75 76 77 78 79 80 81 82 83 84 1 2 3 4 5 6 7 8 9 10 11		

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 1 9 8 C 7 N 6 5 4 3 2 1 0 C C I
5 4 3 2 1 0 C D A K D
3 1 S E