

# **SYSTEM SCHEMATICS**

## **A3000**

**MARCH, 1990**

**PN-314677-01**

### **Commodore Business Machines, Inc.**

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## A3000 FUNCTIONAL SPECIFICATION

### INTRODUCTION

The A3000 is a cost reduced version of the A2500 personal computer. These cost reductions are achieved by extensive use of in house gate array technology, superior packaging and reduced power consumption. Visually, the A3000 is rendered similarly to a PS-2 computer; a low profile, small footprint case is used with a detached keyboard.

### FEATURES

The objectives (features are:)

- 16 Mhz 68030 based CPU w/ 68881 optional (Optionally a 25 Mhz 68030 w/ 68882).
- 1 Meg of Chip Ram, expandable on board to 2 Meg. (32 bit access to CPU).
- 1 Meg of 32 bit wide Fast Ram, (expandable on board to 4 Meg).
- Kickstart in 32 bit ROM.
- Integral 3.5 inch Hard Disk & SCSI controller
- Facilities for 2 3.5 inch floppies.
- Real Time Clock.
- Facilities for on board de-interlacer/scan doubler.
- 4 100 pin Amiga slots, 2 of which are in line with PCAT slots, and one of which is in line with a new formfactor video slot.

The height and width of the A2000 casework has been replaced by a smaller footprint low profile case. The external floppy expansion disk connector has been replaced with the SCSI connector. The fan shall be less noisy than that on the A2000.

### WHAT'S ADDED

The system now has a 68030 running with 32 bit wide RAM, and 32 bit wide ROM. An on board SCSI controller provides support for the optional internal hard disk drive, as well as a host of external peripherals such as optical disk drives, etc. 32 bit access to chip memory is provided.

### CUSTOM CHIPS

The A3000 CPU will require the use of more custom integrated circuitry than any previous Commodore product. In addition to the 3 chip Amiga chipset, there are 5 new custom chips.

These include the system glue chip (FATGARY), a new expansion buss controller (FATBUSTER), a new ram controller with DMA support (RAMSEY), a new improved disk IO controller (SDMAC), and the flicker fixer gate array controller part (AMBER).

### FATGARY

As the name implies, this chip is a larger version of the gary chip originally used in the A500 CPU design. Fat gary provides chip select and DASCK support for motherboard resources such as the 8520's, RTC, chipram, roms and SDMAC.

### FATBUSTER

Fat Buster is a new, larger version of the A2000 chip of the same name. As before, it is responsible for expansion buss control and arbitration. However, the new buster also maps 32 bit 68030 memory cycles onto standard A2000 16 bit expansion buss cycles. Fat Buster also provides extensions to the standard A2000 16 bit buss protocol which allow full 32 bit address and data DMA to occur to and from expansion cards. Thus FATBUSTER allows us to mix and match existing 16 bit A2000 expansion cards, and a new 32 bit card format on the same expansion buss in a wholly compatible manner.

### RAMSEY

RAMSEY is a dual function chip. It provides support for up to 4 megabytes of on board 32 bit wide ram, and provides address generation support for the super DMAC.

### SDMAC

SDMAC is a new improved version of the 4701 series of disk & SCSI DMA controllers. SDMAC allows us to provide 32 bit Direct Disk DMA. It is felt that this will yield greatly improved system throughput for large applications, or disk intensive operating systems (read UNIX).

### AMBER

Amber is the name of the flicker fixer controller gate array. This device, in conjunction with some specialized video memories, effectively provides a flicker fixer at low cost. This essential capability is to be option due to the sensitive cost of the specialized video drams required.

## SYSTEM IO

The IO capabilities of the A3000 are as follows:

### EXTERNAL SYSTEM IO

#### *Serial/Parallel/Mouse/Joystick/Keyboard/Stereo Audio ports*

These ports remain unchanged from their A2000 counterparts.

#### *SCSI connector*

This connector is the same as that found on the back of the 2090 series of hard disk controllers. It allows communication to a variety of devices including hard disks, optical drives and laser printers.

#### *Video & VGA connectors*

As in all Amigas, the A3000 supplies the standard 23 pin video connector. In addition, the on board flicker fixer provides a standard 15 pin VGA connector.

### INTERNAL SYSTEM IO

The following connectors comprise the internal IO capabilities of the A3000.

- SCSI hard drive ribbon cable header
- 4 Amiga slots
  - 2 — PC/AMIGA bridge slots
  - 1 — Amiga slot colinear with video expansion
  - 1 — 1 Amiga only slot
- Socketed chip memory expansion good for upgrade from 1 to 2 meg of chip.
- Socketed fast RAM expansion for upgrade from 1 to 4 Meg.

### MEMORY MAP

The A3000 makes use of the full 32 bit addressing capability of the MC68030. In the lower 16 Meg, (the only region addressable by the 68000), the memory map is basically unchanged from that of the A2000.

\$000000-	\$1FFFFFF	Up to 2 Megs of Chip Memory
\$200000-	\$9FFFFFF	Auto Config Expansion space
\$A00000-	\$BFFFFFF	IO Space (8520s)
\$C00000-	\$D7FFFF	Location of A500 Magic \$C00000 memory. Unused in this machine.
\$D80000-	\$D9FFFF	Custom chip register mirror or real time clock.
\$DA0000-	\$DBFFFF	Unused.
\$DC0000-	\$DDFFFF	Real Time Clock.
\$DE0000-	\$DFFFFFF	Custom chip registers.
\$E00000-	\$E80000	Unused.
\$E80000-	\$E8FFFF	Autoconfig slot.
\$E90000-	\$EFFFFFF	64k autoconfig slots.
\$F00000-	\$FFFFFF	Rom space.
\$01000000-	\$07FFFFFF	On board 32 bit ram space. This grows down from \$07FFFFFF.
\$08000000-	\$0FFFFFF	32 bit ram expansion space. This grows up from \$08000000.
\$10000000-	\$EFFFFFF	32 bit 'other' expansion space.

**Commodore International Spare Parts List  
SHIPPING ASSEMBLIES**

Commodore part numbers are provided for reference only and do not indicate the availability of spare parts from Commodore. Industry standard parts (Resistors, Capacitors, Connectors) should be secured locally. Part number information may vary according to country, some parts may not be available in all countries.

<b>313276-01 A3000 SHIPPING ASSY (USA) 16 MHZ</b>	363327-01 BOX PACKING CPU 320408-04 BAG FLAT 650 X 650 MM 318992-01 PACKING END CAP 318993-01 PACKING SPACER 318170-01 CARD READ THIS FIRST 316840-01 LABEL UPC 313278-02 MAIN ASSY (NTSC 110V) 16MHZ 903508-15 CORD POWER 327124-02 MOUSE ASSY 313323-02 KEYBOARD A3000 (U.S.) 363312-01 MANUAL A3000 QUICK CONNECT GUIDE 380426-01 FOAM NEOPOLEN SET (USE W/KEYBD) 251006-02 BAG FLAT 580MM X 350 MM (USE W/KEYBD) 324257-01 BAG DRYING AGENT 324252-07 TAPE ADHESIVE TRANSPARENT 50MM 315929-01 SOFTWARE SUB ASSY A3000 U.S.	<b>533000-01 A3000 SHIPPING ASSY (EUROPEAN) 16 MHZ</b>	363326-01 BOX PACKING CPU 320408-04 BAG FLAT 650 X 650 MM 318992-01 PACKING END CAP 324257-01 BAG DRYING AGENT 324252-07 TAPE ADHESIVE TRANSPARENT 50MM 313278-01 MAIN ASSY (PAL 220V) 16MHZ
<b>313276-02 A3000 SHIPPING ASSY (CANADA) 16 MHZ</b>	363327-01 BOX PACKING CPU 320408-04 BAG FLAT 650 X 650 MM 318992-01 PACKING END CAP 318993-01 PACKING SPACER 318170-01 CARD READ THIS FIRST 316840-01 LABEL UPC 313278-02 MAIN ASSY (NTSC 110V) 16MHZ 903508-15 CORD POWER 327124-02 MOUSE ASSY 313323-02 KEYBOARD A3000 (U.S.) 363312-01 MANUAL A3000 QUICK CONNECT GUIDE 380426-01 FOAM NEOPOLEN SET (USE W/KEYBD) 251006-02 BAG FLAT 580MM X 350 MM (USE W/KEYBD) 324257-01 BAG DRYING AGENT 324252-07 TAPE ADHESIVE TRANSPARENT 50MM 315929-02 SOFTWARE SUB ASSY A3000 CANADA	<b>533000-02 A3000 SHIPPING ASSY (EUROPEAN) 25 MHZ</b>	363326-01 BOX PACKING CPU 320408-04 BAG FLAT 650 X 650 MM 318992-01 PACKING END CAP 324257-01 BAG DRYING AGENT 324252-07 TAPE ADHESIVE TRANSPARENT 50MM 313278-03 MAIN ASSY (PAL 220V) 25MHZ
<b>313276-03 A3000 SHIPPING ASSY (USA) 25 MHZ</b>	363327-01 BOX PACKING CPU 320408-04 BAG FLAT 650 X 650 MM 318992-01 PACKING END CAP 318993-01 PACKING SPACER 318170-01 CARD READ THIS FIRST 316840-01 LABEL UPC 313278-04 MAIN ASSY (NTSC 110V) 25MHZ 903508-15 CORD POWER 327124-02 MOUSE ASSY 313323-02 KEYBOARD A3000 (U.S.) 363312-01 MANUAL A3000 QUICK CONNECT GUIDE 380426-01 FOAM NEOPOLEN SET (USE W/KEYBD) 251006-02 BAG FLAT 580MM X 350 MM (USE W/KEYBD) 324257-01 BAG DRYING AGENT 324252-07 TAPE ADHESIVE TRANSPARENT 50MM 315929-01 SOFTWARE SUB ASSY A3000 U.S.	<b>313323-01 KEYBOARD ASSY A3000 U.K.</b>	312458-01 HOUSING KEYBOARD TOP 312375-01 HOUSING KEYBOARD BOTTOM 312715-01 PCB ASSY KEYBOARD U.K. 380130-01 FOOT KEYBOARD ADJUSTABLE 380131-01 PLATE SPRING 907272-06 WASHER FLAT 4.3 MM 906883-04 SCREW PAN HEAD S.T. 2.9 X 9.5MM 906805-03 SCREW FLAT HEAD S.T. 2.9 X 9.5MM 380129-01 FOOT PLASTIC 380018-05 CABLE KEYBOARD ASSY II HITEK
<b>313276-04 A3000 SHIPPING ASSY (CANADA) 25 MHZ</b>	363327-01 BOX PACKING CPU 320408-04 BAG FLAT 650 X 650 MM 318992-01 PACKING END CAP 318993-01 PACKING SPACER 318170-01 CARD READ THIS FIRST 316840-01 LABEL UPC 313278-04 MAIN ASSY (NTSC 110V) 25MHZ 903508-15 CORD POWER 327124-02 MOUSE ASSY 313323-02 KEYBOARD A3000 (U.S.) 363312-01 MANUAL A3000 QUICK CONNECT GUIDE 380426-01 FOAM NEOPOLEN SET (USE W/KEYBD) 251006-02 BAG FLAT 580MM X 350 MM (USE W/KEYBD) 324257-01 BAG DRYING AGENT 324252-07 TAPE ADHESIVE TRANSPARENT 50MM 315929-02 SOFTWARE SUB ASSY A3000 CANADA	<b>313323-02 KEYBOARD ASSY A3000 U.S.</b>	312458-01 HOUSING KEYBOARD TOP 312375-01 HOUSING KEYBOARD BOTTOM 312715-02 PCB ASSY KEYBOARD U.S. 380130-01 FOOT KEYBOARD ADJUSTABLE 380131-01 PLATE SPRING 907272-06 WASHER FLAT 4.3 MM 906883-04 SCREW PAN HEAD S.T. 2.9 X 9.5MM 906805-03 SCREW FLAT HEAD S.T. 2.9 X 9.5MM 380129-01 FOOT PLASTIC 380018-06 CABLE KEYBOARD ASSY II TOROID
		<b>313323-03 KEYBOARD ASSY A3000 GERMANY</b>	312458-01 HOUSING KEYBOARD TOP 312375-01 HOUSING KEYBOARD BOTTOM 312715-03 PCB ASSY KEYBOARD GERMANY 380130-01 FOOT KEYBOARD ADJUSTABLE 380131-01 PLATE SPRING 907272-06 WASHER FLAT 4.3 MM 906883-04 SCREW PAN HEAD S.T. 2.9 X 9.5MM 906805-03 SCREW FLAT HEAD S.T. 2.9 X 9.5MM 380129-01 FOOT PLASTIC 380018-05 CABLE KEYBOARD ASSY II HITEK
		<b>313323-04 KEYBOARD ASSY A3000 ITALY</b>	312458-01 HOUSING KEYBOARD TOP 312375-01 HOUSING KEYBOARD BOTTOM 312715-04 PCB ASSY KEYBOARD ITALY 380130-01 FOOT KEYBOARD ADJUSTABLE 380131-01 PLATE SPRING 907272-06 WASHER FLAT 4.3 MM 906883-04 SCREW PAN HEAD S.T. 2.9 X 9.5MM 906805-03 SCREW FLAT HEAD S.T. 2.9 X 9.5MM 380129-01 FOOT PLASTIC 380018-05 CABLE KEYBOARD ASSY II HITEK
		<b>313323-05 KEYBOARD ASSY A3000 FRANCE</b>	312458-01 HOUSING KEYBOARD TOP 312375-01 HOUSING KEYBOARD BOTTOM 312715-05 PCB ASSY KEYBOARD FRANCE 380130-01 FOOT KEYBOARD ADJUSTABLE 380131-01 PLATE SPRING 907272-06 WASHER FLAT 4.3 MM 906883-04 SCREW PAN HEAD S.T. 2.9 X 9.5MM 906805-03 SCREW FLAT HEAD S.T. 2.9 X 9.5MM 380129-01 FOOT PLASTIC 380018-05 CABLE KEYBOARD ASSY II HITEK

**Commodore International Spare Parts List**  
**SHIPPING ASSEMBLIES (Continued)**

<b>313323-06</b>	<b>KEYBOARD ASSY A3000 SPAIN</b>	<b>533001-01</b>	<b>KEYBOARD SHIPPING ASSY U.K.</b>
312458-01	HOUSING KEYBOARD TOP	313323-01	KEYBOARD ASSY U.K.
312375-01	HOUSING KEYBOARD BOTTOM	316828-01	LABEL CARTON U.K.
312715-06	PCB ASSY KEYBOARD SPAIN	251006-02	BAG FLAT 580 X 350 MM
380130-01	FOOT KEYBOARD ADJUSTABLE	380426-01	FOAM SET NEOPOLEN
380131-01	PLATE SPRING	380425-03	CONTAINER SHIPPING
907272-06	WASHER FLAT 4.3 MM	324252-07	TAPE TRANSPARENT ADHESIVE 50MM
906883-04	SCREW PAN HEAD S.T. 2.9 X 9.5MM	327124-02	MOUSE ASSY
906805-03	SCREW FLAT HEAD S.T. 2.9 X 9.5MM	363303-01	MANUAL USER A3000 U.K.
380129-01	FOOT PLASTIC	327273-02	MANUAL BASIC ENGLISH
380018-05	CABLE KEYBOARD ASSY II HITEK	317241-01	DISK ASSY 3.5 WORKBENCH V1.4 U.K.
<b>313323-07</b>	<b>KEYBOARD ASSY A3000 SWISS</b>	317234-01	DISK ASSY 3.5 AMIGA EXTRAS V1.4 INTERNATIONAL
312458-01	HOUSING KEYBOARD TOP	325249-01	CARD WARRANTY U.K.
312375-01	HOUSING KEYBOARD BOTTOM	363313-01	MANUAL WORKBENCH 1.4 ENGLISH
312715-07	PCB ASSY KEYBOARD SWISS	363312-01	MANUAL A3000 QUICK CONNECT GUIDE
380130-01	FOOT KEYBOARD ADJUSTABLE	903508-12	CORD POWER BSI MEDIUM BEIGE U.K. AUS
380131-01	PLATE SPRING	390543-01	TOOL TUNNING
907272-06	WASHER FLAT 4.3 MM	<b>533001-02</b>	<b>KEYBOARD SHIPPING ASSY U.S. (NOT USED)</b>
906883-04	SCREW PAN HEAD S.T. 2.9 X 9.5MM	313323-02	KEYBOARD ASSY U.S.
906805-03	SCREW FLAT HEAD S.T. 2.9 X 9.5MM	316827-01	LABEL CARTON U.S.A.
380129-01	FOOT PLASTIC	251006-02	BAG FLAT 580 X 350 MM
380018-05	CABLE KEYBOARD ASSY II HITEK	380426-01	FOAM SET NEOPOLEN
<b>313323-08</b>	<b>KEYBOARD ASSY A3000 DENMARK</b>	380425-03	CONTAINER SHIPPING
312458-01	HOUSING KEYBOARD TOP	324252-07	TAPE TRANSPARENT ADHESIVE 50MM
312375-01	HOUSING KEYBOARD BOTTOM	327124-02	MOUSE ASSY
312715-08	PCB ASSY KEYBOARD DENMARK	363303-01	MANUAL USER A3000 U.K.
380130-01	FOOT KEYBOARD ADJUSTABLE	327273-02	MANUAL BASIC ENGLISH
380131-01	PLATE SPRING	317954-01	DISK ASSY 3.5 WORKBENCH V1.4 U.S.
907272-06	WASHER FLAT 4.3 MM	317235-01	DISK ASSY 3.5 AMIGA EXTRAS V1.4 U.S.
906883-04	SCREW PAN HEAD S.T. 2.9 X 9.5MM	318896-01	CARD SOFTWARE LICENSE AGREEMENT
906805-03	SCREW FLAT HEAD S.T. 2.9 X 9.5MM	318903-01	CARD WARRANTY U.S.A.
380129-01	FOOT PLASTIC	312341-02	CARD DISK EXCHANGE U.S.A.
380018-05	CABLE KEYBOARD ASSY II HITEK	363313-01	MANUAL WORKBENCH 1.4 ENGLISH
<b>313323-09</b>	<b>KEYBOARD ASSY A3000 NORWAY</b>	314877-02	BOOKLET SERVICE CENTER LIST U.S.A.
312458-01	HOUSING KEYBOARD TOP	380720-01	CARD REMINDER DISK & PRINTER CAUTIONS
312375-01	HOUSING KEYBOARD BOTTOM	363312-01	MANUAL A3000 QUICK CONNECT GUIDE
312715-09	PCB ASSY KEYBOARD NORWAY	903508-15	CORD POWER MEDIUM BEIGE CSA/U.S.
380130-01	FOOT KEYBOARD ADJUSTABLE	390543-01	TOOL TUNNING
380131-01	PLATE SPRING	<b>533001-03</b>	<b>KEYBOARD SHIPPING ASSY GERMANY</b>
907272-06	WASHER FLAT 4.3 MM	313323-03	KEYBOARD ASSY GERMAN
906883-04	SCREW PAN HEAD S.T. 2.9 X 9.5MM	316831-01	LABEL CARTON GERMAN
906805-03	SCREW FLAT HEAD S.T. 2.9 X 9.5MM	251006-02	BAG FLAT 580 X 350 MM
380129-01	FOOT PLASTIC	380426-01	FOAM SET NEOPOLEN
380018-05	CABLE KEYBOARD ASSY II HITEK	380425-03	CONTAINER SHIPPING
<b>313323-10</b>	<b>KEYBOARD ASSY A3000 SWEDEN/FINLAND</b>	324252-07	TAPE TRANSPARENT ADHESIVE 50MM
312458-01	HOUSING KEYBOARD TOP	327124-02	MOUSE ASSY
312375-01	HOUSING KEYBOARD BOTTOM	363306-01	MANUAL USER A3000 GERMAN
312715-10	PCB ASSY KEYBOARD SWEDEN/FINLAND	380798-02	MANUAL BASIC GERMAN
380130-01	FOOT KEYBOARD ADJUSTABLE	317244-01	DISK ASSY 3.5 WORKBENCH V1.4 GERMAN
380131-01	PLATE SPRING	317236-01	DISK ASSY 3.5 AMIGA EXTRAS V1.4 GERMAN
907272-06	WASHER FLAT 4.3 MM	318708-02	CARD PROGRAM LICENSE AGREEMENT GERMAN
906883-04	SCREW PAN HEAD S.T. 2.9 X 9.5MM	320046-06	CARD WARRANTY GERMAN
906805-03	SCREW FLAT HEAD S.T. 2.9 X 9.5MM	363316-01	MANUAL WORKBENCH 1.4 GERMAN
380129-01	FOOT PLASTIC	363312-01	MANUAL A3000 QUICK CONNECT GUIDE
380018-05	CABLE KEYBOARD ASSY II HITEK	903508-11	CORD POWER VDE MEDIUM BEIGE
<b>313323-11</b>	<b>KEYBOARD ASSY A3000 ICELANDIC</b>	390543-01	TOOL TUNNING
312458-01	HOUSING KEYBOARD TOP	<b>533001-04</b>	<b>KEYBOARD SHIPPING ASSY ITALY</b>
312375-01	HOUSING KEYBOARD BOTTOM	313323-04	KEYBOARD ASSY ITALY
312715-11	PCB ASSY KEYBOARD ICELANDIC	316830-01	LABEL CARTON ITALY
380130-01	FOOT KEYBOARD ADJUSTABLE	251006-02	BAG FLAT 580 X 350 MM
380131-01	PLATE SPRING	380426-01	FOAM SET NEOPOLEN
907272-06	WASHER FLAT 4.3 MM	380425-03	CONTAINER SHIPPING
906883-04	SCREW PAN HEAD S.T. 2.9 X 9.5MM	324252-07	TAPE TRANSPARENT ADHESIVE 50MM
906805-03	SCREW FLAT HEAD S.T. 2.9 X 9.5MM	327124-02	MOUSE ASSY
380129-01	FOOT PLASTIC	363305-01	MANUAL USER A3000 ITALIAN
380018-05	CABLE KEYBOARD ASSY II HITEK	380798-04	MANUAL BASIC ITALIAN
		317243-01	DISK ASSY 3.5 WORKBENCH V1.4 ITALIAN
		317234-01	DISK ASSY 3.5 AMIGA EXTRAS V1.4 INTERNATIONAL
		363315-01	MANUAL WORKBENCH 1.4 ITALIAN
		363312-01	MANUAL A3000 QUICK CONNECT GUIDE
		903508-11	CORD POWER VDE MEDIUM BEIGE
		390543-01	TOOL TUNNING

## Commodore International Spare Parts List SHIPPING ASSEMBLIES (Continued)

<b>533001-05</b>	<b>KEYBOARD SHIPPING ASSY FRANCE</b>	<b>533001-09</b>	<b>KEYBOARD SHIPPING ASSY NORWAY</b>
313323-05	KEYBOARD ASSY FRANCE	313323-09	KEYBOARD ASSY NORWAY
316829-01	LABEL CARTON FRANCE	316838-01	LABEL CARTON NORWAY
251006-02	BAG FLAT 580 X 350 MM	251006-02	BAG FLAT 580 X 350 MM
380426-01	FOAM SET NEOPOLEN	380426-01	FOAM SET NEOPOLEN
380425-03	CONTAINER SHIPPING	380425-03	CONTAINER SHIPPING
324252-07	TAPE TRANSPARENT ADHESIVE 50MM	324252-07	TAPE TRANSPARENT ADHESIVE 50MM
327124-02	MOUSE ASSY	327124-02	MOUSE ASSY
363304-01	MANUAL USER A3000 FRENCH	363310-01	MANUAL USER A3000 NORWEGIAN
380798-03	MANUAL BASIC FRENCH	327273-02	MANUAL BASIC ENGLISH
317242-01	DISK ASSY 3.5 WORKBENCH V1.4 FRENCH	317247-01	DISK ASSY 3.5 WORKBENCH V1.4 NORWEGIAN
317234-01	DISK ASSY 3.5 AMIGA EXTRAS V1.4 INTERNATIONAL	317234-01	DISK ASSY 3.5 AMIGA EXTRAS V1.4 INTERNATIONAL
325254-01	CARD WARRANTY FRENCH	363313-01	MANUAL WORKBENCH 1.4 ENGLISH
363314-01	MANUAL WORKBENCH 1.4 FRENCH	363312-01	MANUAL A3000 QUICK CONNECT GUIDE
363312-01	MANUAL A3000 QUICK CONNECT GUIDE	903508-11	CORD POWER VDE MEDIUM BEIGE
903508-11	CORD POWER VDE MEDIUM BEIGE	390543-01	TOOL TUNNING
390543-01	TOOL TUNNING	<b>533001-10</b>	<b>KEYBOARD SHIPPING ASSY FINLAND</b>
<b>533001-06</b>	<b>KEYBOARD SHIPPING ASSY SPAIN</b>	313323-10	KEYBOARD ASSY SWEDEN/FINLAND
313323-06	KEYBOARD ASSY SPAIN	316837-01	LABEL CARTON FINLAND
316832-01	LABEL CARTON SPAIN	251006-02	BAG FLAT 580 X 350 MM
251006-02	BAG FLAT 580 X 350 MM	380426-01	FOAM SET NEOPOLEN
380426-01	FOAM SET NEOPOLEN	380425-03	CONTAINER SHIPPING
380425-03	CONTAINER SHIPPING	324252-07	TAPE TRANSPARENT ADHESIVE 50MM
324252-07	TAPE TRANSPARENT ADHESIVE 50MM	327124-02	MOUSE ASSY
327124-02	MOUSE ASSY	363303-01	MANUAL USER A3000 U.K.
363307-01	MANUAL USER A3000 SPANISH	327273-02	MANUAL BASIC ENGLISH
380798-06	MANUAL BASIC SPANISH	317240-01	DISK ASSY 3.5 WORKBENCH V1.4 INTERNATIONAL
317245-01	DISK ASSY 3.5 WORKBENCH V1.4 SPANISH	317234-01	DISK ASSY 3.5 AMIGA EXTRAS V1.4 INTERNATIONAL
317234-01	DISK ASSY 3.5 AMIGA EXTRAS V1.4 INTERNATIONAL	363313-01	MANUAL WORKBENCH 1.4 ENGLISH
363317-01	MANUAL WORKBENCH 1.4 SPANISH	363312-01	MANUAL A3000 QUICK CONNECT GUIDE
363312-01	MANUAL A3000 QUICK CONNECT GUIDE	903508-11	CORD POWER VDE MEDIUM BEIGE
903508-11	CORD POWER VDE MEDIUM BEIGE	390543-01	TOOL TUNNING
390543-01	TOOL TUNNING	<b>533001-11</b>	<b>KEYBOARD SHIPPING ASSY SWEDEN</b>
<b>533001-07</b>	<b>KEYBOARD SHIPPING ASSY NETHERLANDS</b>	313323-10	KEYBOARD ASSY SWEDEN/FINLAND
313323-07	KEYBOARD ASSY DUTCH	316839-01	LABEL CARTON SWEDEN
316836-01	LABEL CARTON DUTCH	251006-02	BAG FLAT 580 X 350 MM
251006-02	BAG FLAT 580 X 350 MM	380426-01	FOAM SET NEOPOLEN
380426-01	FOAM SET NEOPOLEN	380425-03	CONTAINER SHIPPING
380425-03	CONTAINER SHIPPING	324252-07	TAPE TRANSPARENT ADHESIVE 50MM
324252-07	TAPE TRANSPARENT ADHESIVE 50MM	327124-02	MOUSE ASSY
327124-02	MOUSE ASSY	363311-01	MANUAL USER A3000 SWEDISH
363309-01	MANUAL USER A3000 DUTCH	380798-05	MANUAL BASIC SWEDISH
380798-09	MANUAL BASIC DUTCH	317248-01	DISK ASSY 3.5 WORKBENCH V1.4 SWEDISH
317240-01	DISK ASSY 3.5 WORKBENCH V1.4 INTERNATIONAL	317234-01	DISK ASSY 3.5 AMIGA EXTRAS V1.4 INTERNATIONAL
317234-01	DISK ASSY 3.5 AMIGA EXTRAS V1.4 INTERNATIONAL	363313-01	MANUAL WORKBENCH 1.4 ENGLISH
363313-01	MANUAL WORKBENCH 1.4 ENGLISH	363312-01	MANUAL A3000 QUICK CONNECT GUIDE
363312-01	MANUAL A3000 QUICK CONNECT GUIDE	903508-11	CORD POWER VDE MEDIUM BEIGE
903508-11	CORD POWER VDE MEDIUM BEIGE	390543-01	TOOL TUNNING
390543-01	TOOL TUNNING	<b>533001-12</b>	<b>KEYBOARD SHIPPING ASSY ICELANDIC</b>
<b>533001-08</b>	<b>KEYBOARD SHIPPING ASSY DENMARK</b>	313323-01	KEYBOARD ASSY U.K.
313323-08	KEYBOARD ASSY DENMARK	313323-11	KEYBOARD ASSY ICELANDIC
316835-01	LABEL CARTON DENMARK	251006-02	BAG FLAT 580 X 350 MM
251006-02	BAG FLAT 580 X 350 MM	380426-01	FOAM SET NEOPOLEN
380426-01	FOAM SET NEOPOLEN	380425-03	CONTAINER SHIPPING
380425-03	CONTAINER SHIPPING	324252-07	TAPE TRANSPARENT ADHESIVE 50MM
324252-07	TAPE TRANSPARENT ADHESIVE 50MM	327124-02	MOUSE ASSY
327124-02	MOUSE ASSY	327273-02	MANUAL BASIC ENGLISH
363308-01	MANUAL USER A3000 DANISH	317240-01	DISK ASSY 3.5 WORKBENCH V1.4 INTERNATIONAL
327273-02	MANUAL BASIC ENGLISH	317234-01	DISK ASSY 3.5 AMIGA EXTRAS V1.4 INTERNATIONAL
317246-01	DISK ASSY 3.5 WORKBENCH V1.4 DANISH	363313-01	MANUAL WORKBENCH 1.4 ENGLISH
317234-01	DISK ASSY 3.5 AMIGA EXTRAS V1.4 INTERNATIONAL	363312-01	MANUAL A3000 QUICK CONNECT GUIDE
363313-01	MANUAL WORKBENCH 1.4 ENGLISH	903508-11	CORD POWER VDE MEDIUM BEIGE
363312-01	MANUAL A3000 QUICK CONNECT GUIDE	390543-01	TOOL TUNNING
903508-11	CORD POWER VDE MEDIUM BEIGE		
390543-01	TOOL TUNNING		

**Commodore International Spare Parts List**  
**SHIPPING ASSEMBLIES (Continued)**

<b>533001-13</b>	<b>KEYBOARD SHIPPING ASSY BELGIUM</b>	<b>315929-01</b>	<b>SOFTWARE SUB ASSY A3000 (U.S.)</b>
313323-05	KEYBOARD ASSY FRANCE	317954-01	DISKETTE ASSY WORKBENCH 1.4 (ENG)
251006-02	BAG FLAT 580 X 350 MM	317235-01	DISKETTE ASSY AMIGA EXTRAS 1.4 (ENG)
380426-01	FOAM SET NEOPLEN	318843-01	DISKETTE HOLDER
380425-03	CONTAINER SHIPPING	318611-01	LABEL STOP
324252-07	TAPE TRANSPARENT ADHESIVE 50MM	318270-01	CARD WARRANTY (U.S.)
327124-02	MOUSE ASSY	312341-02	CARD DISK EXCHANGE (U.S.)
363309-01	MANUAL USER A3000 DUTCH	363303-01	MANUAL USER A3000 (ENG)
380798-09	MANUAL BASIC DUTCH	327273-02	MANUAL BASIC (ENG)
317249-01	DISK ASSY 3.5 WORKBENCH V1.4 BELGIUM	363313-01	MANUAL WORKBENCH 1.4 (ENG)
317234-01	DISK ASSY 3.5 AMIGA EXTRAS V1.4 INTERNATIONAL	318896-01	CARD SOFTWARE LICENSE AGREEMENT
363314-01	MANUAL WORKBENCH 1.4 FRENCH	314877-04	BOOKLET SERVICE CENTER LIST
316833-12	LABEL CARTON BELGIUM	380720-01	CARD REMINDER DISK/PRINTER CAUTIONS
363312-01	MANUAL A3000 QUICK CONNECT GUIDE	318757-16	SHRINK WRAP
903508-11	CORD POWER VDE MEDIUM BEIGE	317201-01	DISKETTE ASSY A3000 HD
390543-01	TOOL TUNNING	390543-01	TOOL TUNNING
<b>533001-14</b>	<b>KEYBOARD SHIPPING ASSY CANADA (NOT USED)</b>	<b>315929-02</b>	<b>SOFTWARE SUB ASSY A3000 (CAN.)</b>
313323-02	KEYBOARD ASSY U.S.	317954-01	DISKETTE ASSY WORKBENCH 1.4 (ENG)
251006-02	BAG FLAT 580 X 350 MM	317235-01	DISKETTE ASSY AMIGA EXTRAS 1.4 (ENG)
380426-01	FOAM SET NEOPLEN	318843-01	DISKETTE HOLDER
380425-03	CONTAINER SHIPPING	318611-01	LABEL STOP
324252-07	TAPE TRANSPARENT ADHESIVE 50MM	318882-01	CARD WARRANTY (CAN.)
327124-02	MOUSE ASSY	318556-02	CARD DISK EXCHANGE (CAN.)
363303-01	MANUAL USER A3000 U.K.	363303-01	MANUAL USER A3000 (ENG)
327273-02	MANUAL BASIC ENGLISH	327273-02	MANUAL BASIC (ENG)
317241-01	DISK ASSY 3.5 WORKBENCH V1.4 U.K.	363313-01	MANUAL WORKBENCH 1.4 (ENG)
317235-01	DISK ASSY 3.5 AMIGA EXTRAS V1.4 U.S.	318896-01	CARD SOFTWARE LICENSE AGREEMENT
318896-01	CARD SOFTWARE LICENSE AGREEMENT	380720-01	CARD REMINDER DISK/PRINTER CAUTIONS
363313-01	MANUAL WORKBENCH 1.4 ENGLISH	318757-16	SHRINK WRAP
380720-01	CARD REMINDER DISK & PRINTER CAUTIONS	317201-01	DISKETTE ASSY A3000 HD
316834-01	LABEL CARTON CANADA	390543-01	TOOL TUNNING
318556-02	CARD DISK EXCHANGE CANADA		
318882-01	CARD WARRANTY CANADA		
363312-01	MANUAL A3000 QUICK CONNECT GUIDE		
903508-15	CORD POWER MEDIUM BEIGE CSA/U.S.		
390543-01	TOOL TUNNING		
<b>533001-15</b>	<b>KEYBOARD SHIPPING ASSY AUSTRALIA</b>		
313323-01	KEYBOARD ASSY U.K.		
251006-02	BAG FLAT 580 X 350 MM		
380426-01	FOAM SET NEOPLEN		
380425-03	CONTAINER SHIPPING		
324252-07	TAPE TRANSPARENT ADHESIVE 50MM		
327124-02	MOUSE ASSY		
363303-01	MANUAL USER A3000 U.K.		
327273-02	MANUAL BASIC ENGLISH		
317241-01	DISK ASSY 3.5 WORKBENCH V1.4 U.K.		
317234-01	DISK ASSY 3.5 AMIGA EXTRAS V1.4 INTERNATIONAL		
363313-01	MANUAL WORKBENCH 1.4 ENGLISH		
318884-01	CARD WARRANTY AUSTRALIA		
363312-01	MANUAL A3000 QUICK CONNECT GUIDE		
903508-12	CORD POWER BSI MEDIUM BEIGE U.K. AUS		
390543-01	TOOL TUNNING		



## Commodore International Spare Parts List MAJOR ASSEMBLIES

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<b>MAIN ASSY</b>		<b>MOUNTING BRACKET ASSY - A3000</b>	
313278-01	MAIN ASSY PAL 220V 16MHZ	313285-01	BRACKET ASSY MOUNTING 240 VOLT
313278-02	MAIN ASSY NTSC 110V 16MHZ	313285-02	BRACKET ASSY MOUNTING 120 VOLT
313278-03	MAIN ASSY PAL 220V 16MHZ	313292-01	BRACKET DRIVE & POWER SUPPLY MOUNTING
313278-04	MAIN ASSY NTSC 110V 25MHZ	906800-05	SCREW MACH M3 X 0.5 X 6.0 LG
313281-01	BASE ASSY PAL 16 MHZ	390500-01	POWER SUPPLY A3000 240 VOLT
313281-02	BASE ASSY NTSC 16 MHZ	390500-02	POWER SUPPLY A3000 120 VOLT
313281-03	BASE ASSY PAL 25 MHZ	<b>LED HOLDER ASSEMBLY</b>	
313281-04	BASE ASSY NTSC 25 MHZ	313303-01	LED HOLDER ASSY
313319-01	DRIVE ASSY HARD (ADD CABLE CONNECTIONS)	313556-01	LED 2.0MM X 10.0MM GREEN LED
313318-01	DRIVE ASSY FLOPPY (ADD CABLE CONNECTIONS)	313568-01	LED 2.0MM X 10.0MM YELLOW LED
313284-01	BRACKET MOUNTING 3.5 DISK DRIVE	313316-01	LED PCB
313250-01	CARD EXPANSION PCB ASSY	903351-05	CONNECTOR HOUSING 5 PINS
313299-01	SUPPORT CONNECTOR BOARD	903353-01	CONNECTOR PINS
318236-01	INSULATION SHEET BACK PLANE	903756-02	LEAD WIRE AWG 24 RED L = 120.0MM
313298-01	ROD CONNECTING	903756-10	LEAD WIRE AWG 24 BLACK L = 120.0MM
313297-01	BUTTON POWER	<b>COVER ASSY- A3000</b>	
313301-01	COVER ASSY	313301-01	COVER ASSY
325542-02	SCREW MACH.,W/EXT.TOOTH 4 X 0.7 X 6.0 LG	313279-01	COVER TOP
<b>BASE ASSY</b>		313280-01	BEZEL FRONT
313281-01	BASE ASSY PAL 16 MHZ	906884-03	SCREW SELF TAPPING M4 X 10.0 LG
313281-02	BASE ASSY NTSC 16MHZ	313296-01	COVER FLOPPY DRIVE HOLE
313281-03	BASE ASSY PAL 25 MHZ	310317-03	LENS FLOPPY LED
313281-04	BASE ASSY NTSC 25 MHZ	<b>3.5 HARD DISK DRIVE CABLE ASSY</b>	
313283-01	MAIN CHASSIS BASE	311829-01	CABLE ASSY 3.5 HARD DISK DRIVE
313293-01	BRACKET OPTION CARD	311829-02	CABLE ASSY 3.5 HARD DISK DRIVE
251118-01	GUIDE PCB	903468-07	CONNECTOR SOCKET 50 POS
906803-05	SCREW FLAT HEAD M3 X 0.5 X 4.0 LG	903134-11	CABLE FLAT 50 POS X 575.0 ± 5.0 MM LG
325542-02	SCREW MACH W/EXT TOOTH M4 X 0.7 X 6.0 LG	<b>DRIVE CABLE ASSY II A3000</b>	
906800-05	SCREW MACH M3 X 0.5 X 6.0 LG	380742-01	CABLE ASSY DRIVE II AMIGA/MATSUSHITA JU363-282/CHINON F354
390251-02	STANDOFF D CONN	380742-02	CABLE ASSY DRIVE II AMIGA/MATSUSHITA JU253-02T/CHINON FB354
380128-01	FOOT	903135-10	CABLE FLAT 34 POS L = 570MM
313294-01	BRACKET MOUSE & KEYBOARD PCB	903468-05	CONN DUAL ROW 34P
313303-01	LED HOLDER ASSY	380328-01	PLUG KEYING
313310-01	PCB ASSY PAL 16 MHZ	<b>HARD DRIVE SUB ASSY</b>	
313310-02	PCB ASSY NTSC 16 MHZ	313319-01	DRIVE HARD ASSY (SUBASSEMBLY)
313310-03	PCB ASSY PAL 25 MHZ	313440-01	DRIVE ASSY HARD DISK 40 MB SCSI (QUANTUM PRODRIVE 40S)
313310-04	PCB ASSY NTSC 25 MHZ	906610-01	SCREW MACH #6 - 32 X 1/4
318233-01	INSULATION SHEET	313314-01	BRACKET MOUNTING 3.5 HDD
390251-04	STAND OFFS HEX M/F 5 MM	<b>FLOPPY DRIVE SUB ASSY</b>	
316854-01	LABEL FCC ID	313318-01	DRIVE ASSY, FLOPPY (SUBASSEMBLY)
316791-01	LABEL BACK PANEL	313315-01	DRIVE 3.5 FLOPPY DISK
311829-02	CABLE SCSI DRIVE	313284-01	BRACKET MOUNTING 3.5 DISK DRIVE
380742-03	CABLE FLOPPY DRIVE	325541-03	SCREW MACH W/EXT TOOTH M3 X 0.5 X 8.0 LG
380120-01	CARD PANEL EXTENSION		
380739-01	CARD PANEL EXPANSION		
313277-01	CARD PANEL EXTENSION - VIDEO ADAPTER		
390329-01	SCREW MACH W/EXT TOOTH M3.5 X 0.6 X 5.0 LG		
313285-01	BRACKET ASSY MOUNTING 240 V		
313285-02	BRACKET ASSY MOUNTING 120 V		
390662-	STANDOFF HEX M/F		

**Commodore International Spare Parts List  
PCB Components  
PCB Assembly #313310**

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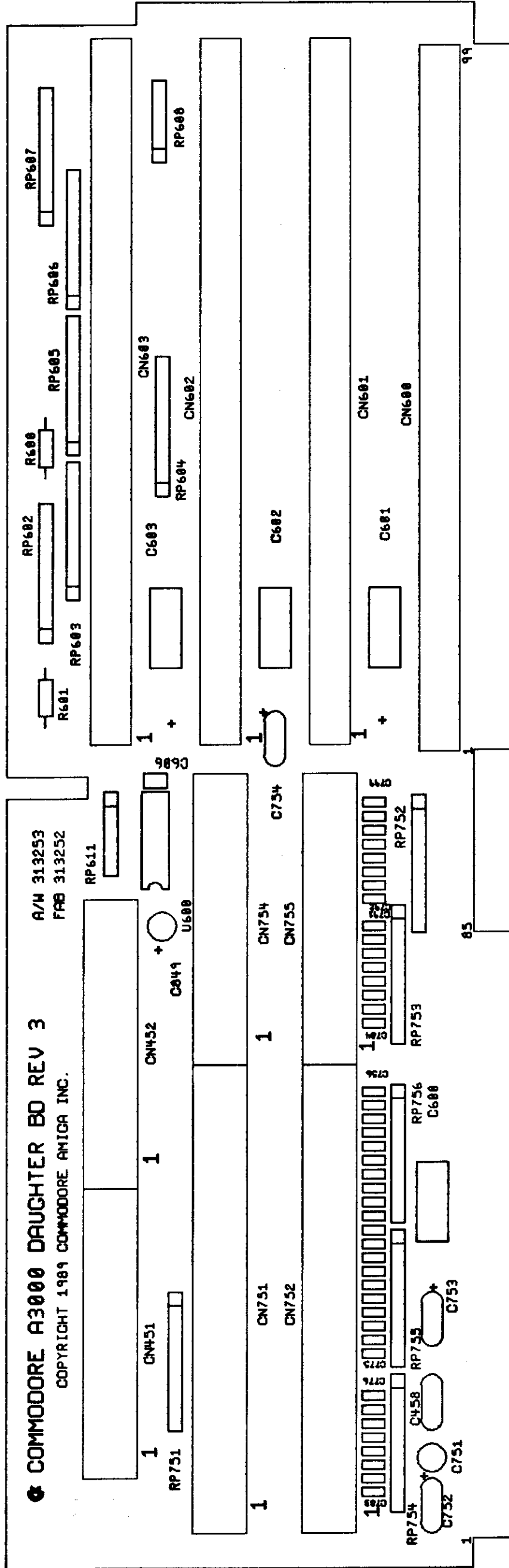
IC COMPONENTS			RESISTOR PACKS (Continued)		
901882-01	1488	U304	902410-10	RPK 1K OHM 9 X 10	RP100-RP110,RP351,RP703
901883-01	1489	U305	902441-31	RPK 4.7K OHM 5 X 6	RP453-RP455
318099-01	414256 100 NS	U850-U881,U274(U263-U266,U271-U274,U858-U881) NOT INSERTED	902422-22	1K OHM 7 X 8	RP609,RP610,RP180
901522-30	7407	U713,U801	902441-17	470 OHM 5 X 6	RP701
390420-01	74ALS163	U476	380388-04	220/330 10 PIN	RP802,RP804
390110-01	74F04	U204,U711	380388-01	220/330 6 PIN	RP803
390203-01	74F08	U303,U710	<b>RESISTORS 5% @ 1/4 WATT, CARBON FILM, UNLESS OTHERWISE SPECIFIED</b>		
390108-01	74F373	U251	901550-118	1 OHM	R400,R478,R479
390089-01	74F245	U702,U708,U709,U715,U716,U257,U258,U891-U894	901550-17	1.2K OHM	R401,R402
390077-01	74F32	U712	901550-64	10 OHM	R403,R404,R484
390281-01	74F646	U253-U256,U703-U707	901550-20	10K OHM	R191,R305,R306,R405,R406,R408,R431,R432,R441,R442,R451,R452,R454
390081-01	74F74	U106	901550-137	91 OHM	R489
310001-01	74HC14	U477	901550-01	1K OHM	R302,R433,R443,R482,R483,R487,R803,R805
318828-01	74HCT244	U451-U452	901550-23	2.7K OHM	R407
901521-03	74LS08	U355	901550-112	200 OHM	R301
901521-11	74LS157	U401	901550-02	3.3K OHM	R110,R112
901521-63	74LS174	U195,U354	901550-105	33 OHM	R472,R473,R475-R477,R896
390198-01	74F86	U252	901550-108	360 OHM	R430,R440
901521-01	74LS00	U353	901550-57	390 OHM	R434,R444
901521-06	74LS74A	U201,U351,U480	901550-19	4.7K OHM	R203
318069-03	8372 FAT AGNUS 2 MEG	U205	901550-56	47 OHM	R202,R204,R895
318029-02	8520	U300,U350	901550-58	470 OHM	R190,R192,R699
390538-01	AMBER	U478	901550-82	470K OHM	R435,R445
390433-01	8373 ECS DENISE	U450	901550-131	56 OHM	R300
390537-01	DPMC	U802	901550-94	68 OHM	R307
390539-01	FAT BUSTER	U700	901550-114	9.1K OHM	R480
390540-01	FAT GARY 4141F008A	U110	901550-63	22 OHM	R100-R101,R106,R109,R450,R809
390530-01	MSM 514221RS-6	U470-U472	901550-07	100K OHM	R193
390086-01	LF347	U402	901600-36	1 OHM 1/2W 5% CARBON	R420
390399-03	MC68030 16 MHZ QFP	U100	901600-15	47 OHM 1/2W 5% CARBON UNSTUFFED RESISTOR	R353
390277-03	MC68881 16 MHZ PLCC	U101	<b>CAPACITORS</b>		
390339-04	MC68030 25 MHZ QFP	U100	900462-20	20 PF AXIAL	C192
390434-02	MC68882 25 MHZ PLCC	U101	900462-29	47 PF AXIAL	C458
390531-01	NE564	U481	900462-31	56 PF AXIAL	C193
252127-01	PAULA	U400	900462-37	100 PF NPO AXIAL	C420-C422,C459,C491,C496,C498
390532-01	UPD 42101C-2	U473-U475,U479	900463-08	220 PF AXIAL	C108,C109
390206-01	WD33C93	U800	900463-23	3900 PF AXIAL	C432,C442
328156-02	PST518	U112	900463-26	6800 PF AXIAL	C431,C441
390541-01	RAM CONTROLLER	U890	900463-28	.01 UF AXIAL	C103,C104,C161,C170,C172,C174,C176,C177,C402
390525-01	RP5C01	U190	900463-36	.047 UF AXIAL	C411-C414
390630-01	ROM V1.4 32 BIT HIGH WORD	U181	900462-27	39 PF AXIAL	C497
390629-01	ROM V1.4 32 BIT LOW WORD	U180	390082-01	.1 UF AXIAL MLC	C102,C106,C111,C191,C195,C201-C205,C251-C258,C300,C305,C350-C355,C362,C400,C401,C409,C410,C415,C434,C444,C451-C452,C470-C482,C484-C486,C489,C490,C494,C495
390555-01	DELAY LINE 25 NS	U102	390082-05	.22 UF AXIAL MLC	C100,C101,C110,C180-C183,C403,C405,C406,C450,C455-C457,C700-C716
390526-01	PAL PROG 16L8D	U202	390082-04	.33 UF AXIAL MLC	C259-C274,C800,C801,C850-C873,C890-C894
390527-01	PAL PROG 16L8D	U203	900402-13	1.0 UF RADIAL TANT	C487,C488
390528-01	PAL PROG 16R4A	U701	390101-05	4.7 UF RADIAL ELECTROLYTIC	C190,C404
390529-01	PAL PROG 16L8D	U714			
OSCILLATORS					
252344-01	28.375 MHZ (PAL)	U111			
325566-14	28.6363 MHZ (NTSC)	U111			
325566-24	32 MHZ	U104			
325566-27	50 MHZ	U104			
	OSC	U103 UNSTUFFED			
RESISTOR PACKS					
326149-01	22 OHM 4 X 8	RP700,RP890,RP891			
326149-04	47 OHM 4 X 8	RP252-RP254,RP451,RP452			
326149-06	63 OHM 4 X 8	RP401			
902410-11	470 OHM 9 X 10	RP256			
902441-22	1K OHM 5 X 6	RP600,RP601,RP702			
902410-08	4.7K OHM 9 X 10	RP400			
390227-03	22 OHM 5 X 10	RP892,RP893			
902410-06	3.3K OHM 5 X 10	RP350,RP800,RP801			
390227-06	47 OHM 5 X 10	RP201,RP251,RP255			

## Commodore International Spare Parts List PCB Components (Continued) PCB Assembly #313310

CAPACITORS (Continued)			MISCELLANEOUS (Continued)		
900402-01	10 UF RADIAL TANT	C483	390280-01	FUSE 3A	F300,F350,F351,F400,F450
390101-04	22 UF RADIAL ELECTROLYTIC	C105,C107,C113,C317,C318,C433,C443	903025-01	FERRITE BEAD	FB110,FB111,FB400,FB401,FB420-FB422,FB480-FB487
390101-01	47 UF RADIAL ELECTROLYTIC	C112,C162-C169,C171,C173,C175,C407,C408,C899	903326-03	HEADER SIL .100	J101,J102,J104,J151,J152,J180,J200,J350-J352,J481-J483,J800,J851,J853
390101-02	100 UF RADIAL ELECTROLYTIC	C178	903326-05	HEADER SIL .100 1 X 5	J852
390101-03	470 UF RADIAL ELECTROLYTIC	C160,C416,C423,C454,C460,C492,C493	903326-04	HEADER SIL .100 1 X 4	J100,J103
	UNSTUFFED RESERVED CAPACITORS	C307,C308,C430,C440	390229-01	IC VIDEO HYBRID	HY450,HY480
CONNECTORS			902410-11	RESISTOR PACK, 470 OHM 9 X 10	RP256
252166-03	KEYBOARD CONNECTORS	CN420	902442-06	RESISTOR PACK, 68 OHM 4 X 8	RP401
390557-01	200 PIN RECEPTACLE	CN606	904150-06	SOCKET 40 PIN DIP	U180,U181,U300,U350,U800
903345-17	34 PIN DIL	CN351	251313-01	SOCKET 48 PIN DIP	U400,U450
903345-25	50 PIN	CN802	390185-01	SOCKET 84 PIN PIN PLCC	U890,U110,U205,U700,U802
903374-05	5 PIN SIL RA	CN302	390185-02	SOCKET 68 PIN PLCC	U478
903446-06	CONN 100	CN600	904150-01	SOCKET 14 PIN DIP .300	U103
252122-01	RCA JACK WHITE	CN402	904150-08	SOCKET 20 PIN DIP .300	U202,U203,U267-U274,U701,U714,U850-U881
390334-01	DB15	CN480	390060-01	SOCKET 24 PIN DIP .300	U473,U474,U475,U479
390242-03	D-SUB 23P MALE PCB	CN450	904150-06	SOCKET 40 PIN DIP	U180,U181,U300,U350,U800
390242-05	D SUB 25P MALE PCB	CN300	904150-02	SOCKET 16 PIN DIP .300	U470,U471,U472
390242-01	D SUB 9P MALE PCB	CN400,CN401	390043-01	SHUNT PACK DIP	J100-J104,J151,J152,J180,J181,J200,J350-J352,J481-J483,J800,J801,J851-J853
903446-05	85P EDGE DIL86	CN451	251029-07	CAP VAR 3-11 PF	VC470
390241-05	DUAL DB25 FEMALE DP25S	CN350,CN801	251029-06	CAP VAR 22-47 PF	VC190
390625-01	POW15	CN160	390546-01	RES VAR 1K 15 TURN	VR470
252122-02	RCA JACK RED	CN403	900560-01	CRYSTAL 32768HZ	Y190
327033-04	D SUB 23 PIN FEMALE PCB	CN352	390192-01	TRANSISTOR 2N3904	Q300
			902707-01	TRANSISTOR 2N3906	Q400
MISCELLANEOUS			390252-01	TRANSISTOR MPF102	Q430,Q440
380393-01	BATTERY NICAD 3.6V 60 MAH	BT190			
390536-01	SWITCH, S.P.S.T. TOGGLE RA	SW480			
900750-01	DIODE 1N4001	D192,D193			
900850-01	DIODE 1N4148	D190,D191,D300,D800			
251842-02	EMI FILTERS 3 PIN	EM1300-EM1309,EM1350-EM1364,EM1430-EM1436,EM1440-EM1442,EM1444-EM1446,EM1450,EM1451,EM1453-EM1456,EM1458,EM1459,EM1490-EM1494			

## Commodore International Spare Parts List A3000 Daughter Board PCB Assembly #313250-01

IC COMPONENTS			CAPACITORS		
380227-01	74HCT32	U600	390082-01	CER AXL .1 UF	C606
RESISTOR PACKS			390082-05	CER AXL 22 UF	C752-C754,C849
902441-22	SIP 1K 5 RES 6 PIN	RP611	900014-02	CER RAD 1000 PF	C756-C799
902410-10	SIP 1K 9 RES 10 PIN	RP752-RP756	900101-47	ELEC AXL 220 UF 16V	C600-C603
380388-01	SIP 220/330 4 RES 6 PIN	RP608	390101-04	ELEC RAD 22 UF 16V	C751
380388-04	220/330 8 RES 10 PIN	RP602-RP607	900462-29	CER AXL 47 PF 50V	C458
902410-08	SIP 4.7K 9 RES 10 PIN	RP751	CONNECTORS		
RESISTORS, 1/4 WATT			903446-06	CARD EDGE 100 PIN	CN600-CN603
901550-58	470 OHM	R601	903446-04	CARD EDGE 36 PIN	CN451,CN452,CN754,CN755
901550-01	1K OHM	R600	903446-02	CARD EDGE 62 PIN	CN751,CN752



A3000 DAUGHTER BOARD, REV. 3

## JUMPER SETTINGS

JUMPER	PINS	313311	313311	313311	313311	FUNCTION
		-01	-02	-03	-04	
J100	4	2-3	2-3	1-2	1-2	Quadrature Clock Phasing
J101	3	2-3	2-3	2-3	2-3	FPU Clock Source
J102	3	2-3	2-3	2-3	2-3	System Clock Source
J103	4	3-4	3-4	3-4	3-4	FPU CS/BERR
J104	3	1-2	1-2	1-2	1-2	CPU Clock Source
J200	3	1-2	2-3	1-2	2-3	NTSC/PAL Select
J151	3	2-3	2-3	1-2	1-2	Rom Timing
J152	3	2-3	2-3	1-2	1-2	Rom Timing
J180	3	2-3	2-3	2-3	2-3	A2000 ROM Compatibility Jumpers
J181	3	2-3	2-3	2-3	2-3	A2000 ROM Compatibility Jumpers
J350	3	1-2	1-2	1-2	1-2	Tick Clock Source
J351	3	2-3	2-3	2-3	2-3	Disable DF1: (1-2 to enable)
J352	3	2-3	2-3	2-3	2-3	Light Pen Source
J481	3	2-3	2-3	2-3	2-3	VDE Scan Double Only Jumper
J482	3	1-2	1-2	1-2	1-2	VDE PLL Loop Adjust
J483	3	---	---	---	---	VDE Factory Test Points
J800	3	1-2	1-2	1-2	1-2	WD33C93 Speed
J851	3	1-2	1-2	2-3	2-3	RAM Controller Speed Jumper
J852	5	4-5	4-5	4-5	4-5	-012A Ramsey only (See Notes)
J853	3	2-3	2-3	2-3	2-3	-012A Ramsey only (See Notes)

### Notes:

#### J150, J151: Rom Timing

The rom timing circuit provides four different speed settings to match the output enable, and access timing of the system roms.

To set the jumpers, determine the output enable time, and access times for the roms you wish to use. The rom must have lower values than for the setting you select.

System standard roms have  $T_{oe} = 110$  ns, and  $T_{acc} = 250$  ns.

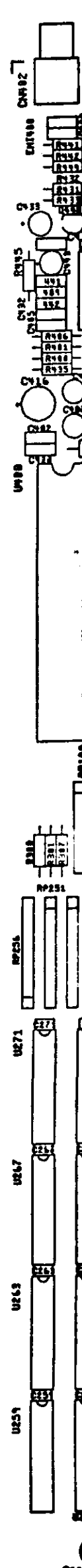
CLK	J151	J150	Toe (min)	Tacc (min)
16 Mhz	2-3	2-3	157 ns	250 ns
16 Mhz	2-3	1-2	220 ns	312 ns
16 Mhz	1-2	2-3	282 ns	375 ns
16 Mhz	1-2	1-2	345 ns	437 ns
25 Mhz	2-3	2-3	90 ns	160 ns
25 Mhz	2-3	1-2	130 ns	200 ns
25 Mhz	1-2	2-3	170 ns	240 ns
25 Mhz	1-2	1-2	210 ns	280 ns

#### J180, J181: Rom Compatibility Jumpers

	J180	J181
A2000/A500 ROMS:	1-2	1-2
A3000 ROMS:	2-3	2-3

#### J851-J853: Ram Controller Compatibility Settings

	J852	J853
-012A Ramsey w/ 256Kx4 rams	4-5	2-3
Later Ramseys w/ 256Kx4 rams	2-3	1-2
Later Ramseys w/ 1Mx4 rams	1-2	1-2















**Schematic #313311, Rev. A**  
**Sheet 2 of 16**

A(0:31) 

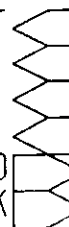
D(31:0) 

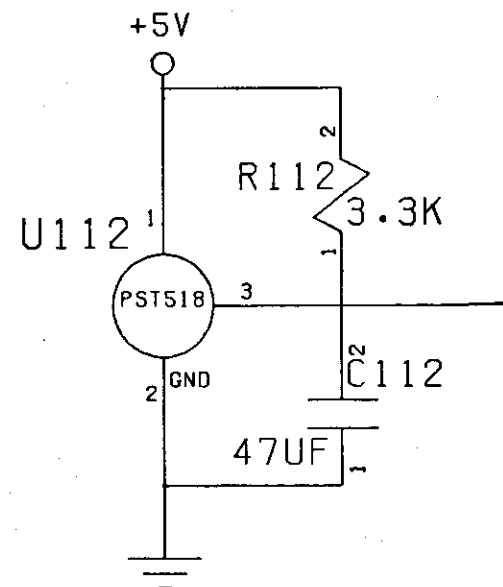
FC(2:0) 

  
\_AS  
\_DS  
R\_W

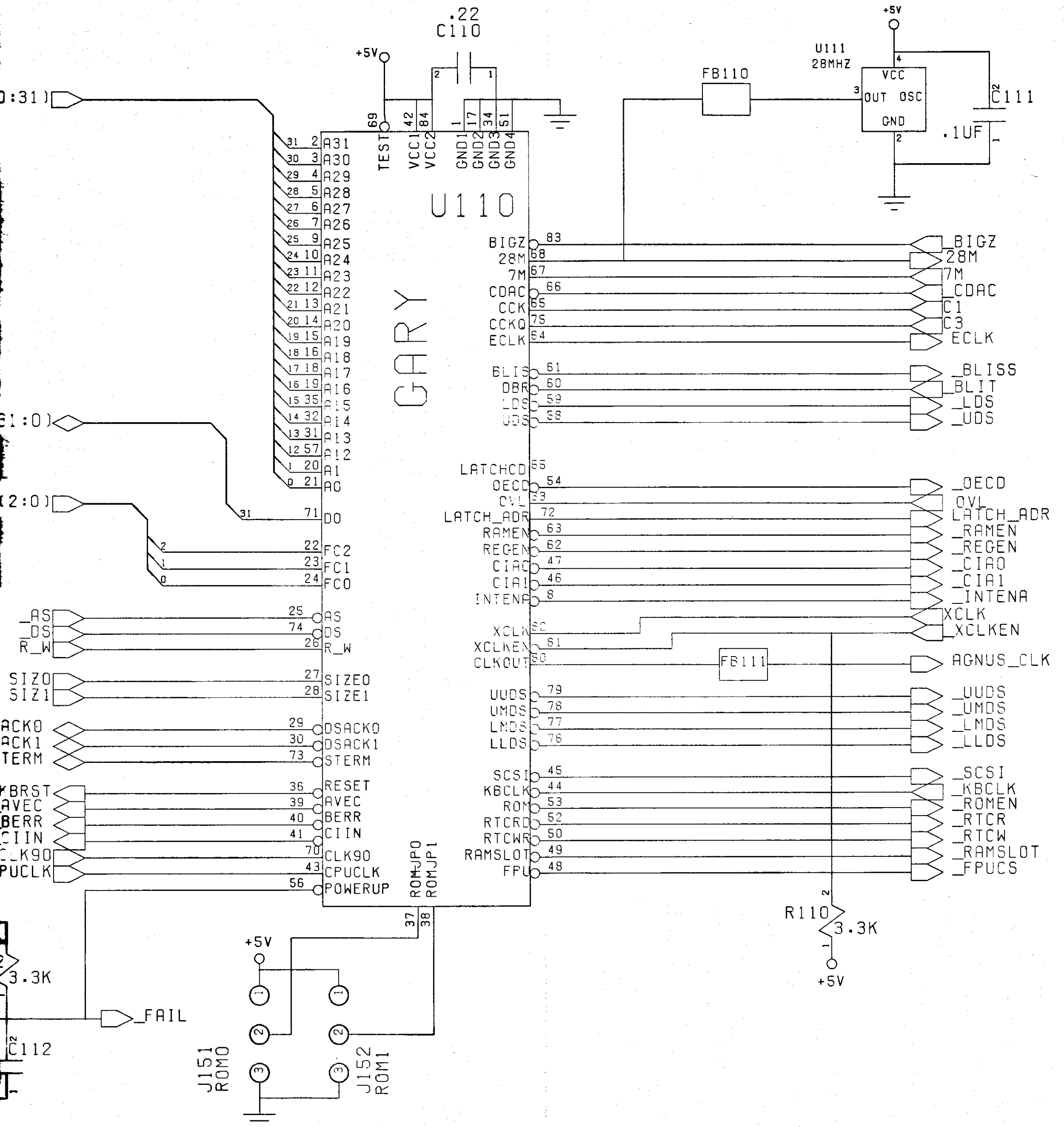
  
SIZE0  
SIZE1

  
\_DSACK0  
\_DSACK1  
\_STERM

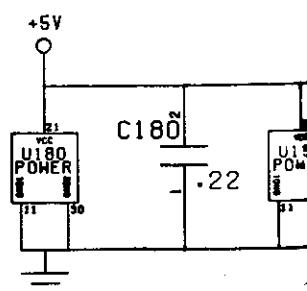
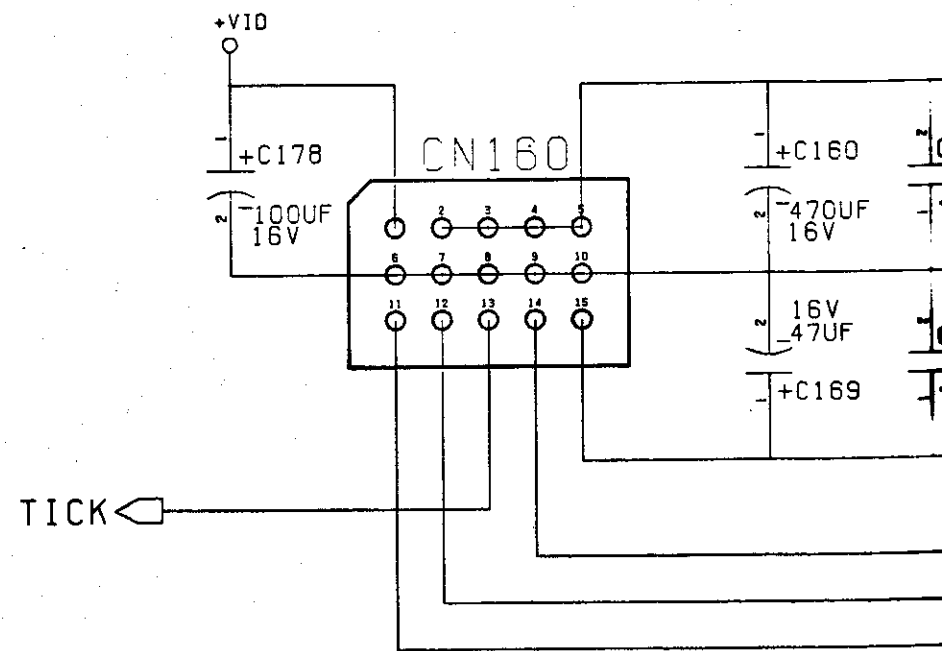
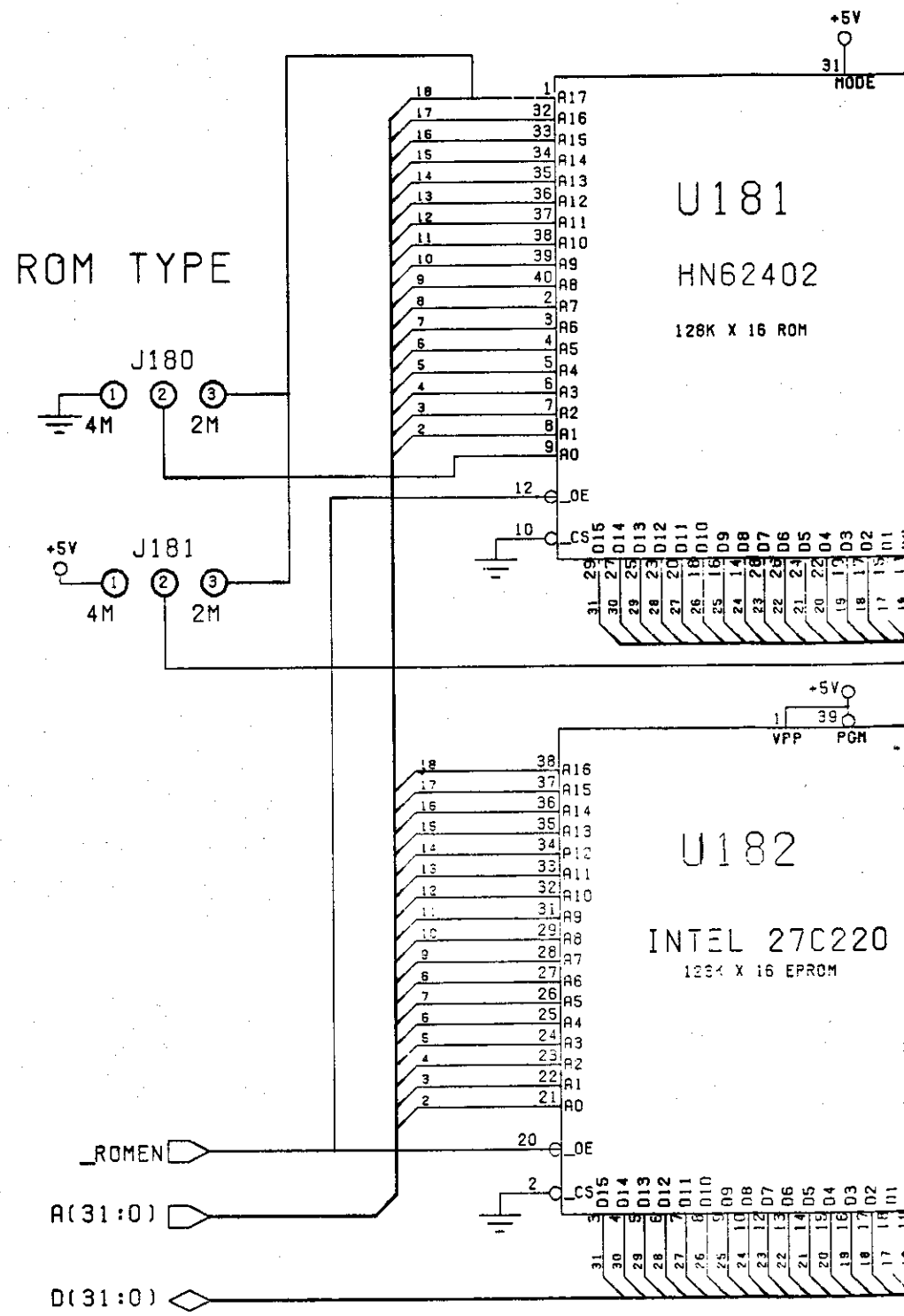
  
\_KBRST  
\_AVEC  
\_BERR  
\_CIIN  
CLK90  
CPUCLK



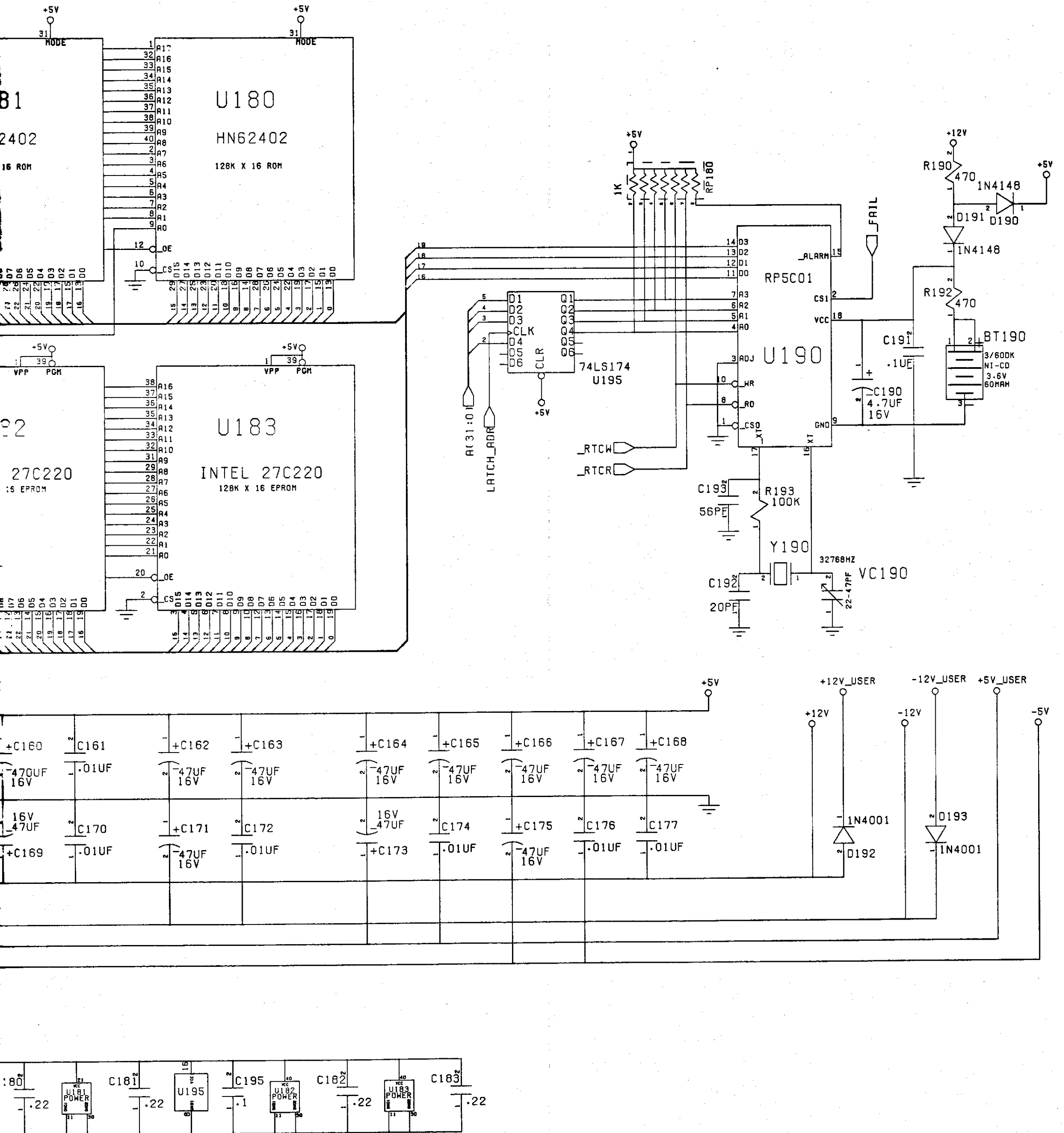
# A3000 SYSTEM SCHEMATICS



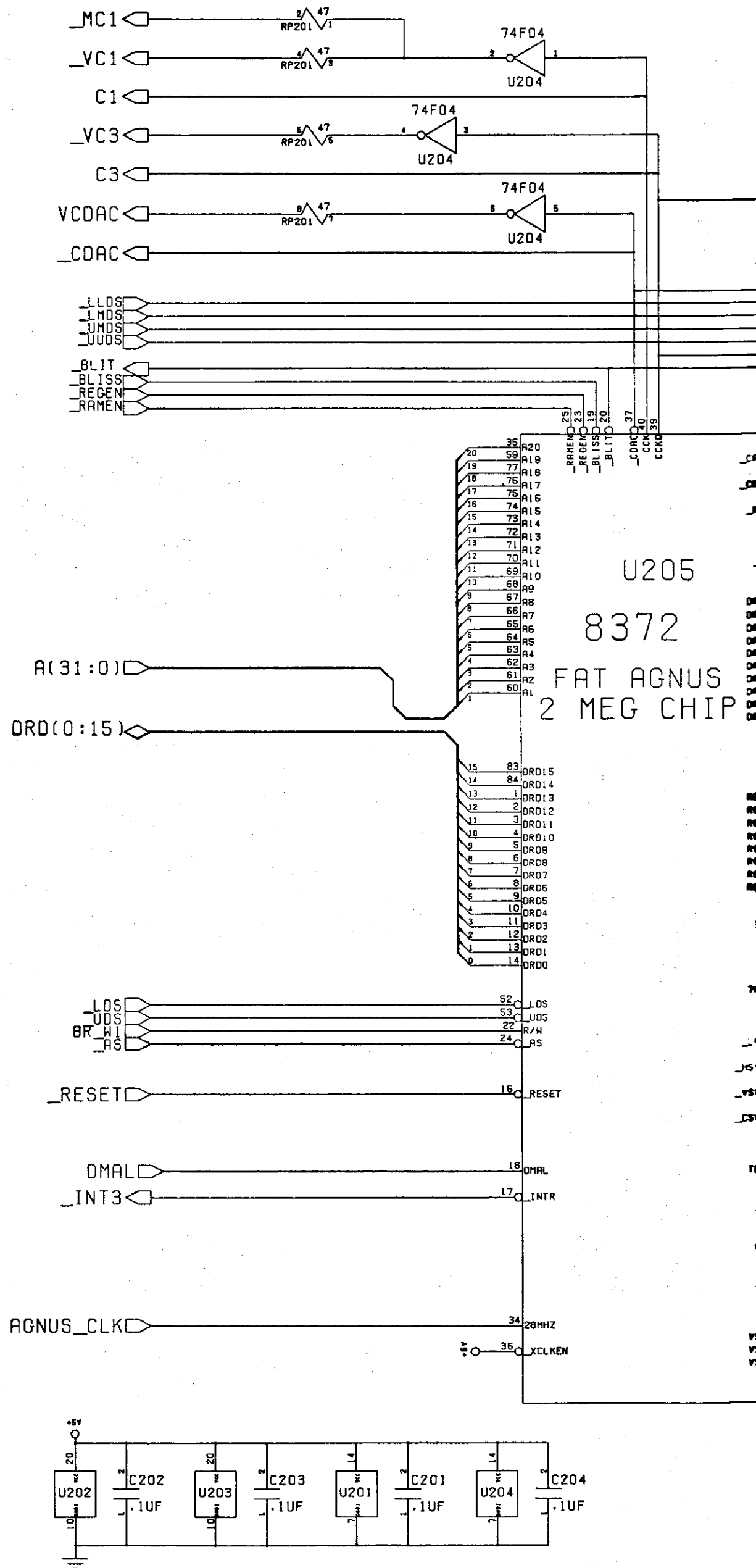
**Schematic #313311, Rev. A**  
*Sheet 3 of 16*



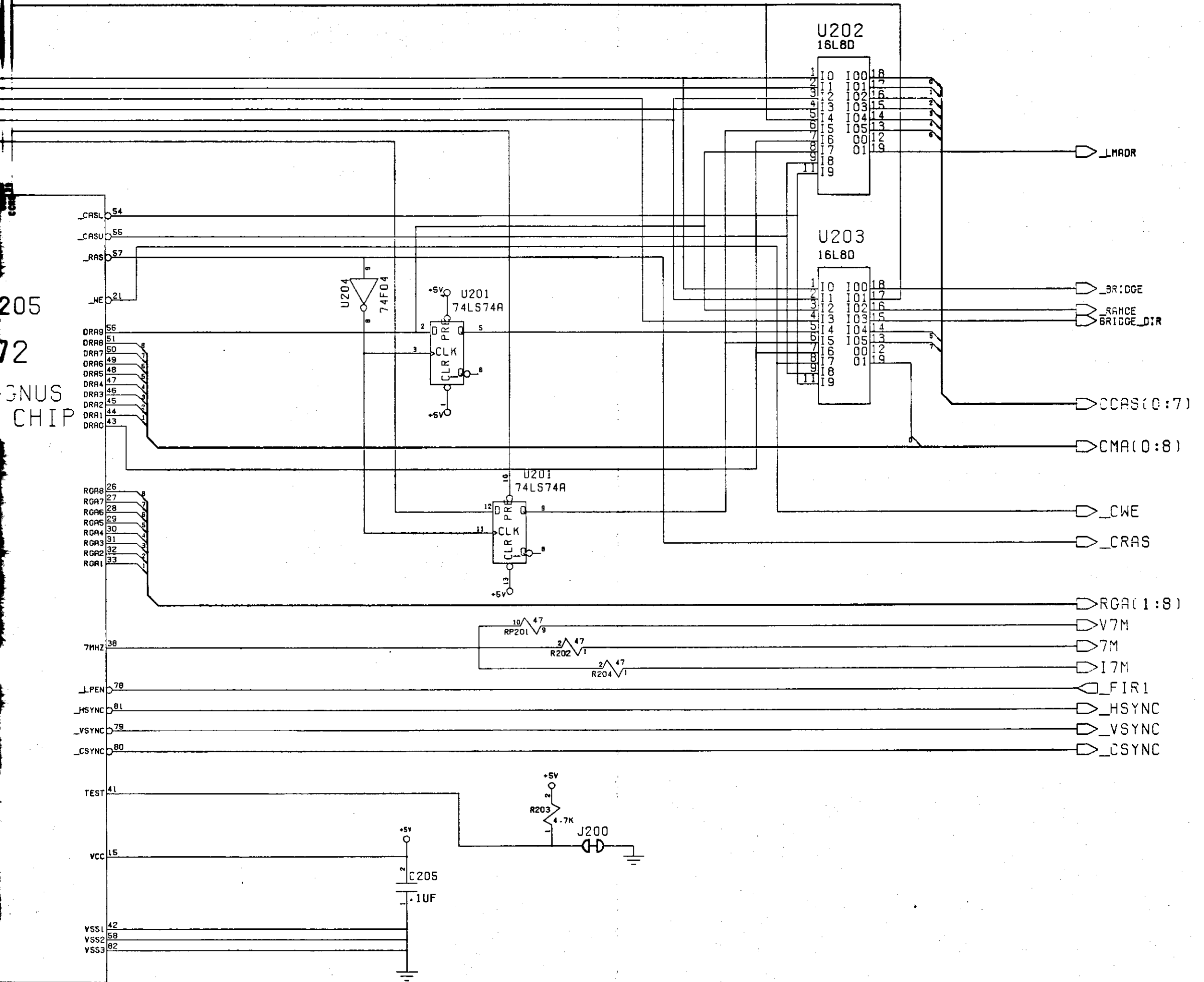
# A3000 SYSTEM SCHEMATICS



**Schematic #313311, Rev. A**  
**Sheet 4 of 16**

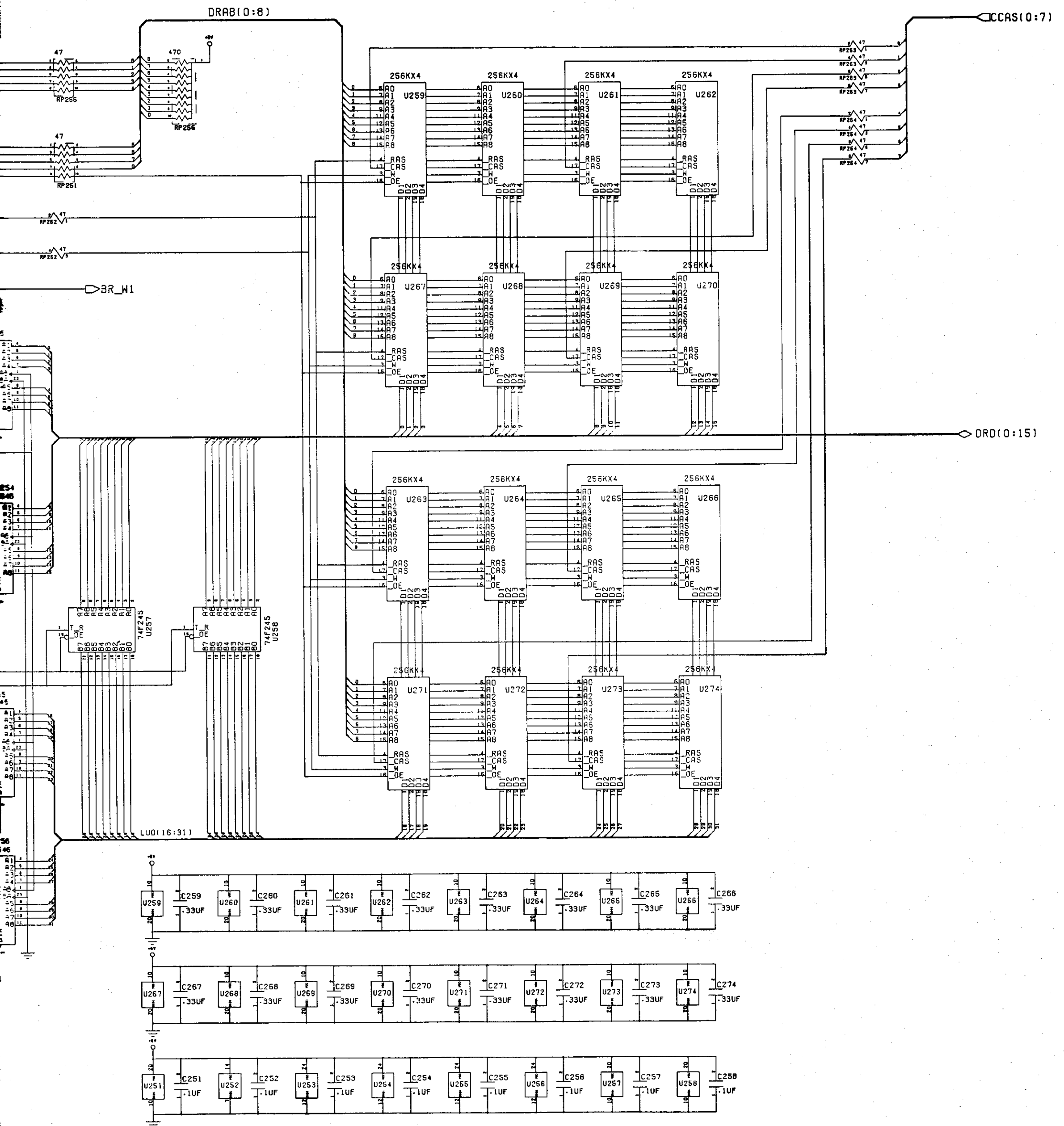


# A3000 SYSTEM SCHEMATICS





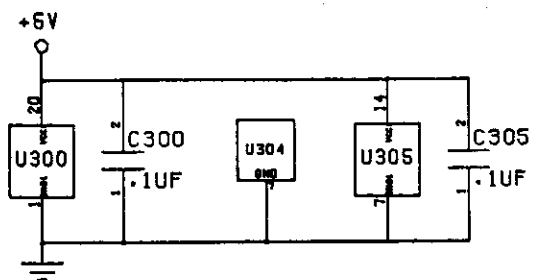
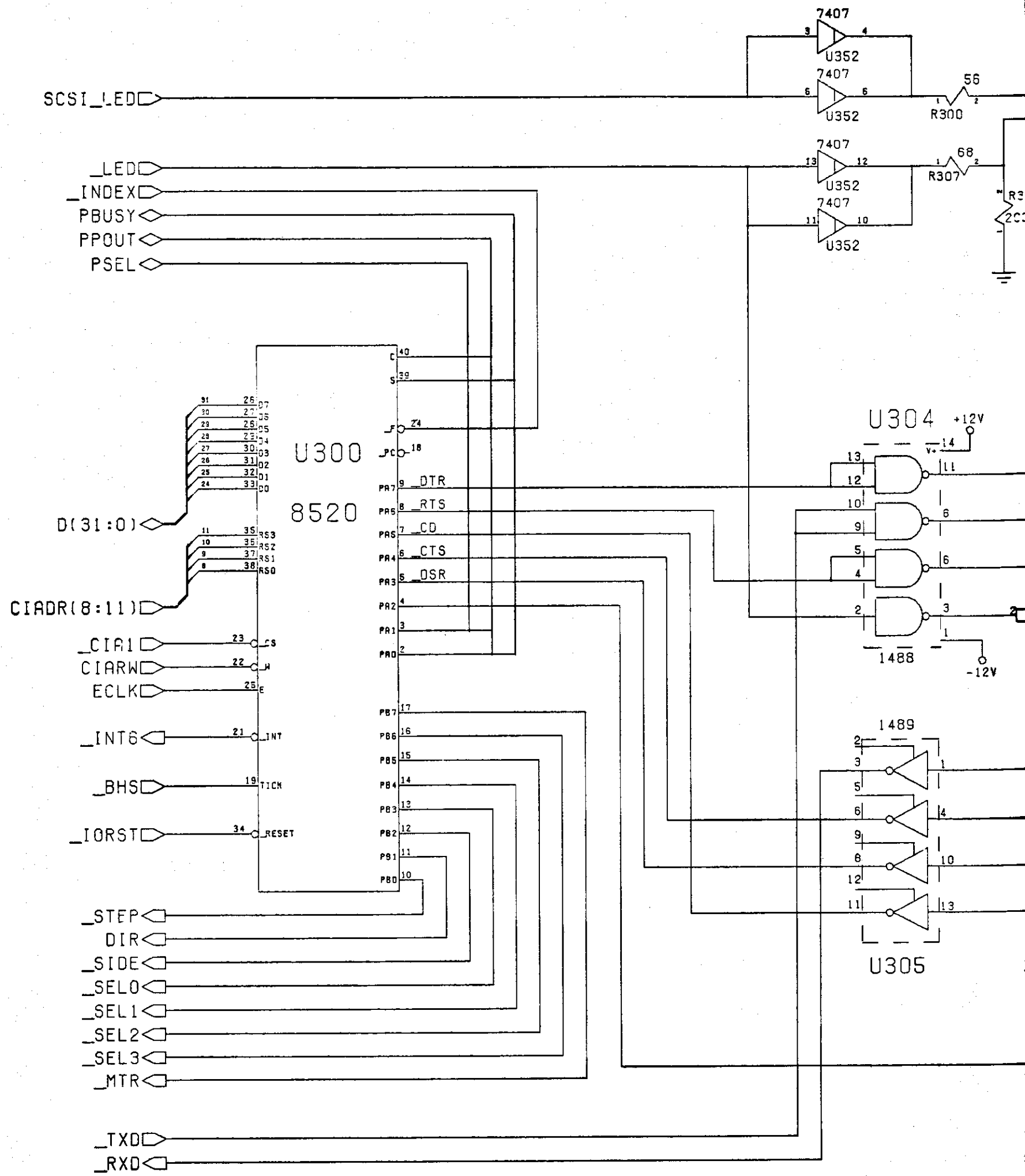
# A3000 SYSTEM SCHEMATICS



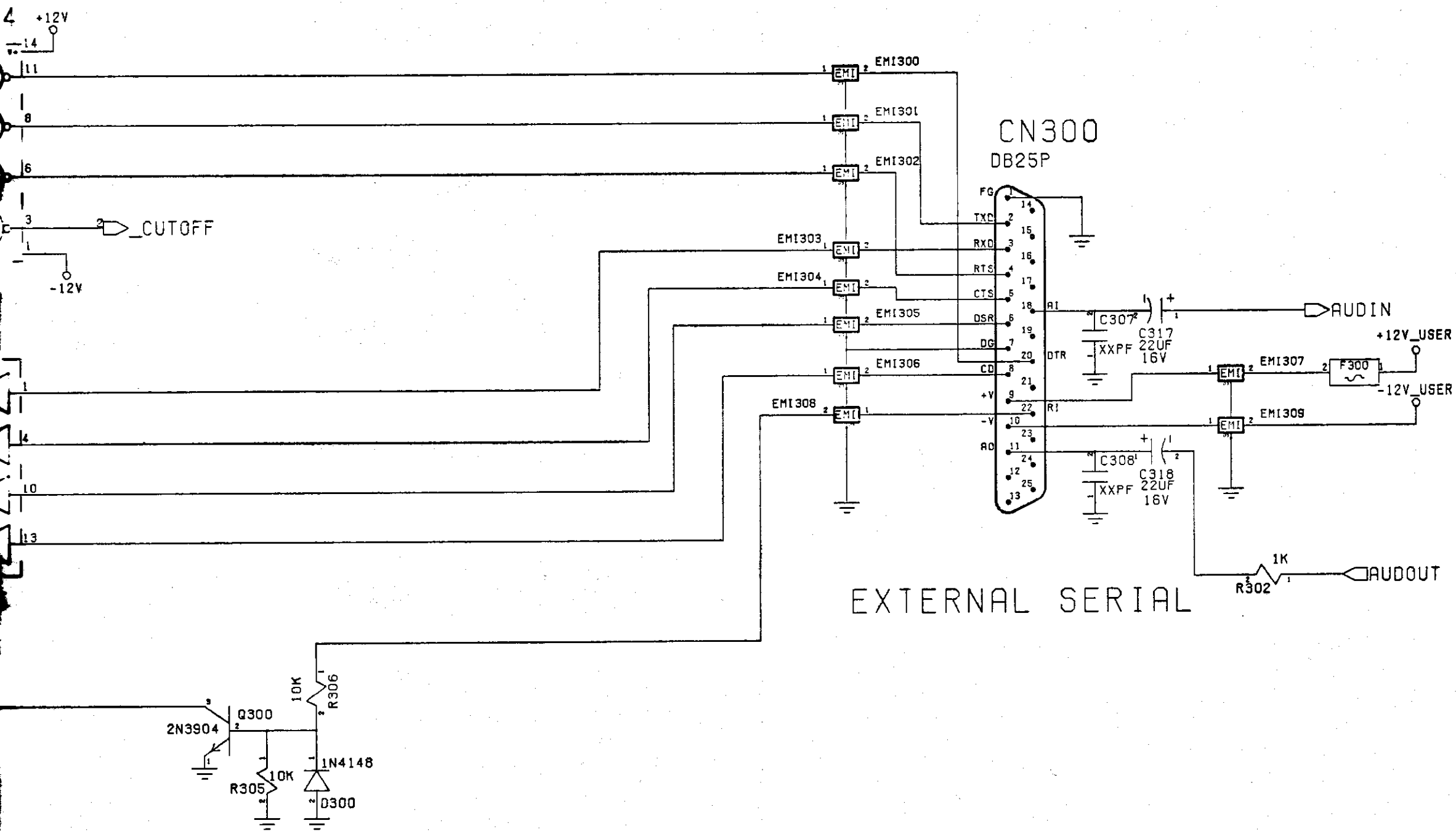
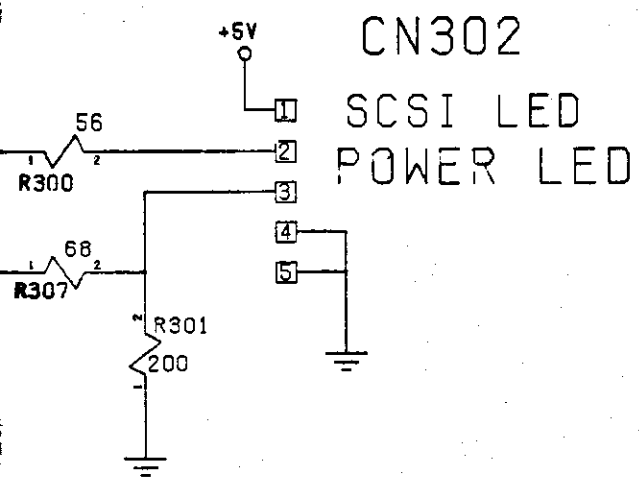


# Schematic #313311, Rev. A

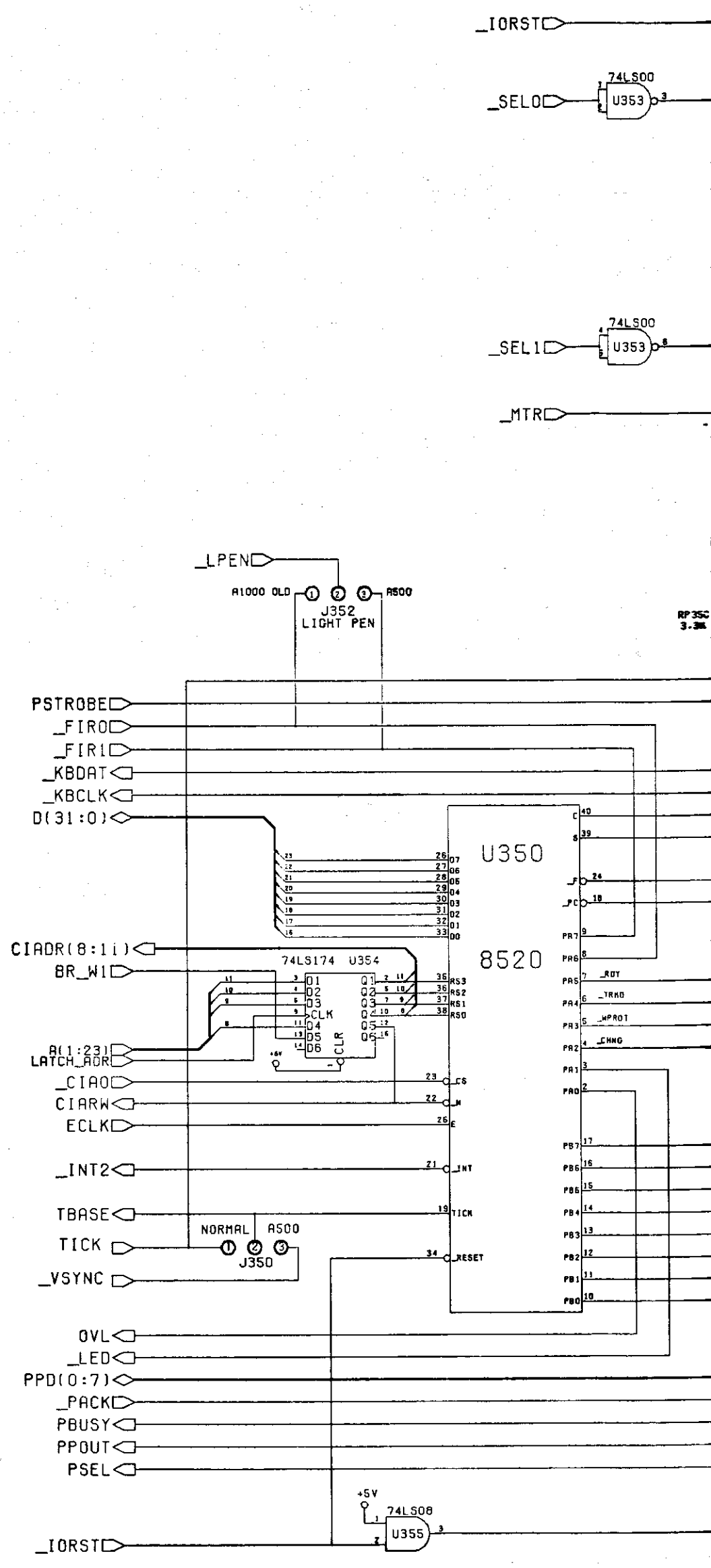
Sheet 6 of 16



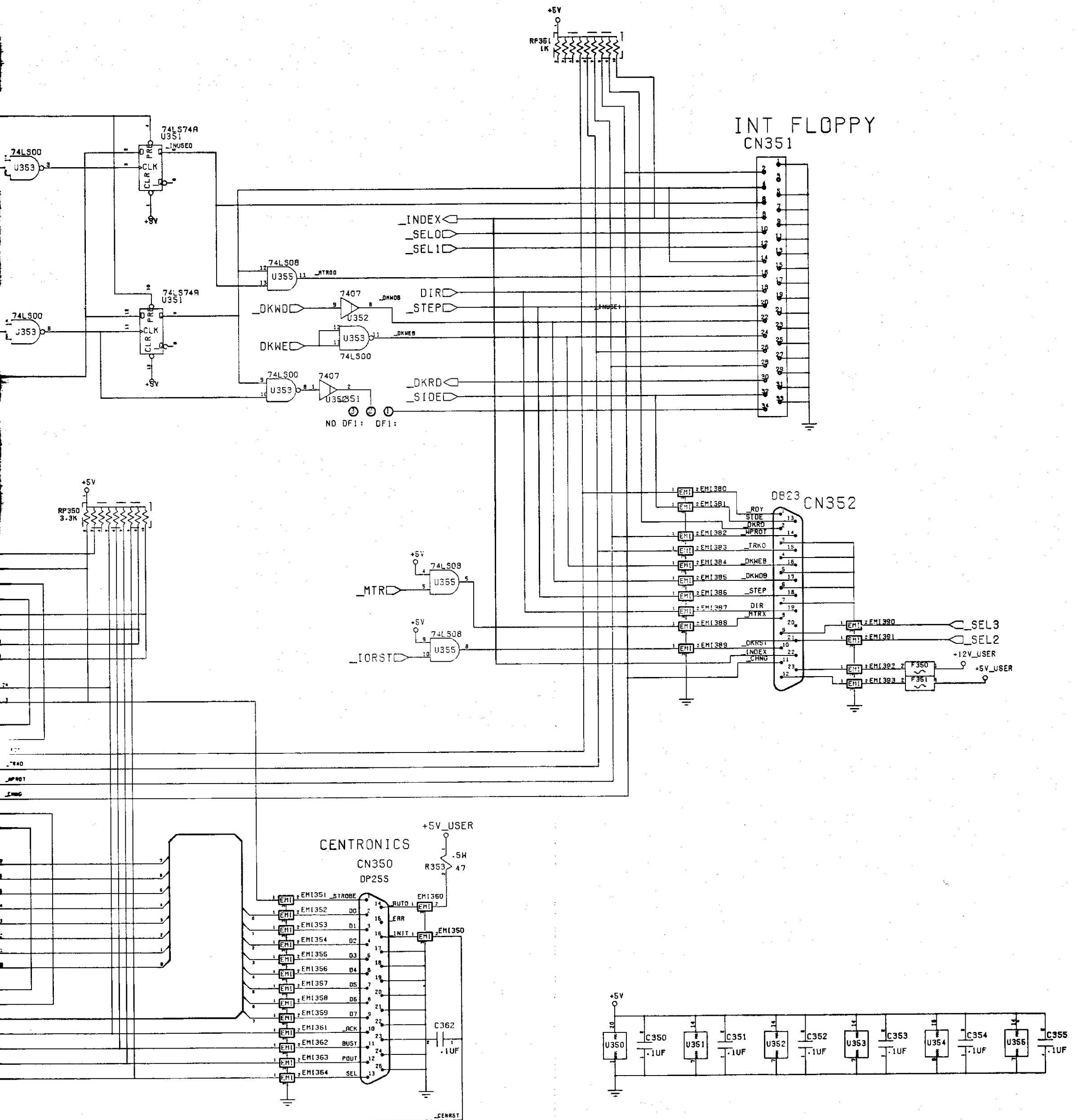
# A3000 SYSTEM SCHEMATICS



**Schematic #313311, Rev. A**  
**Sheet 7 of 16**

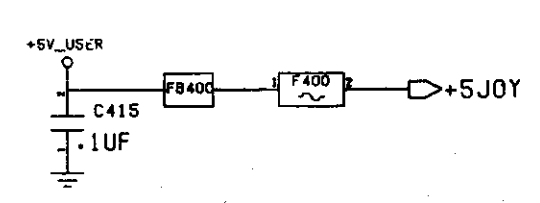
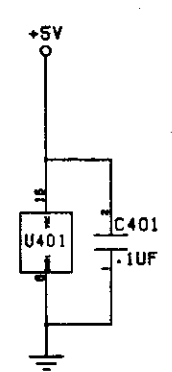
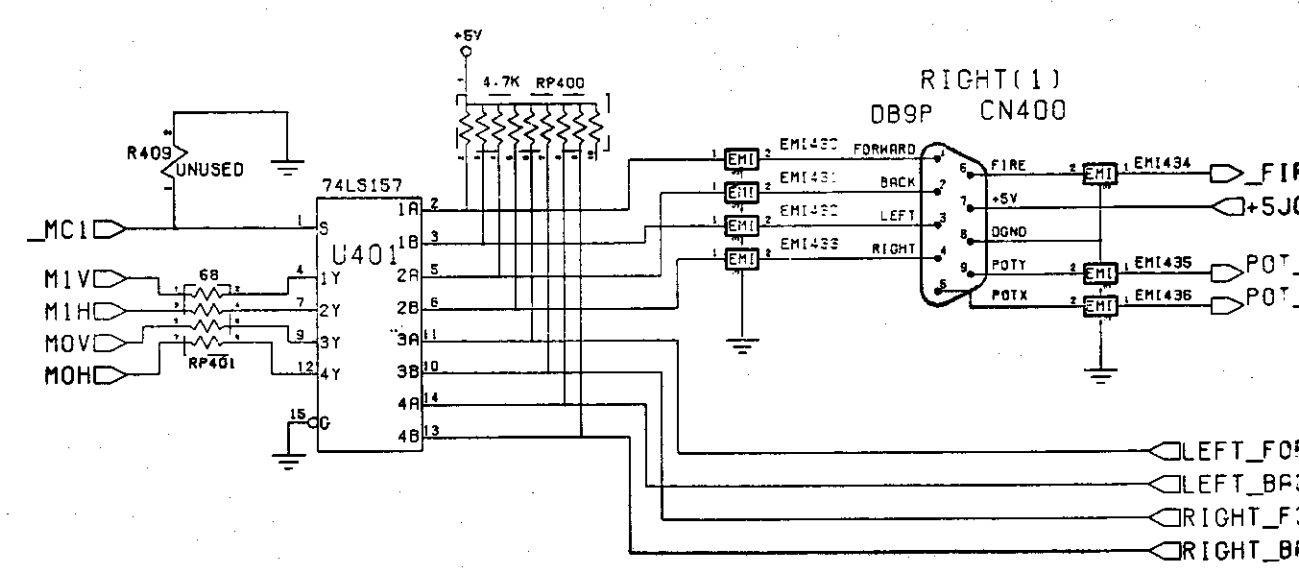
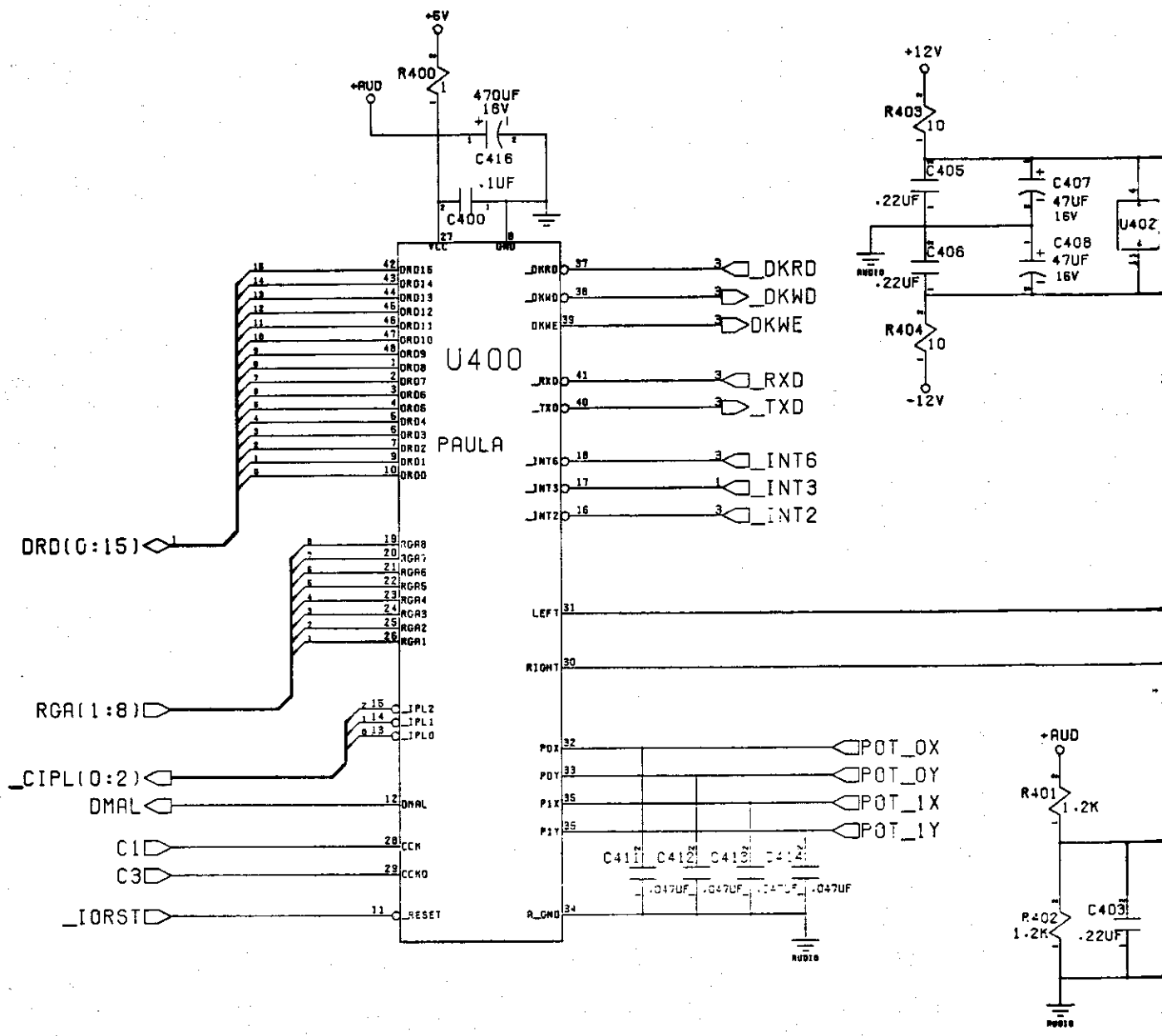


# A3000 SYSTEM SCHEMATICS

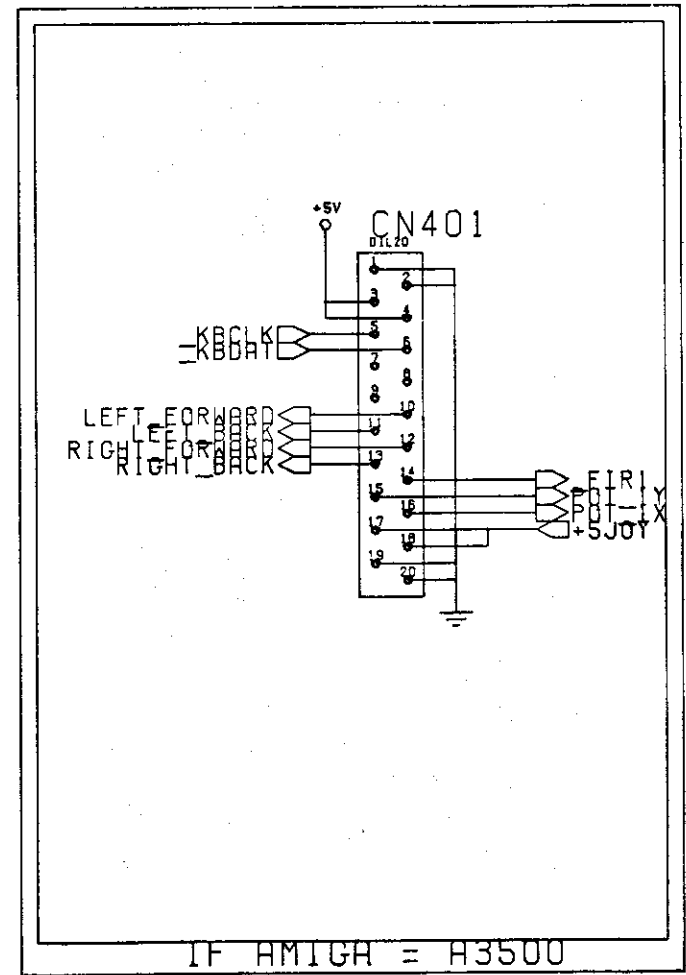
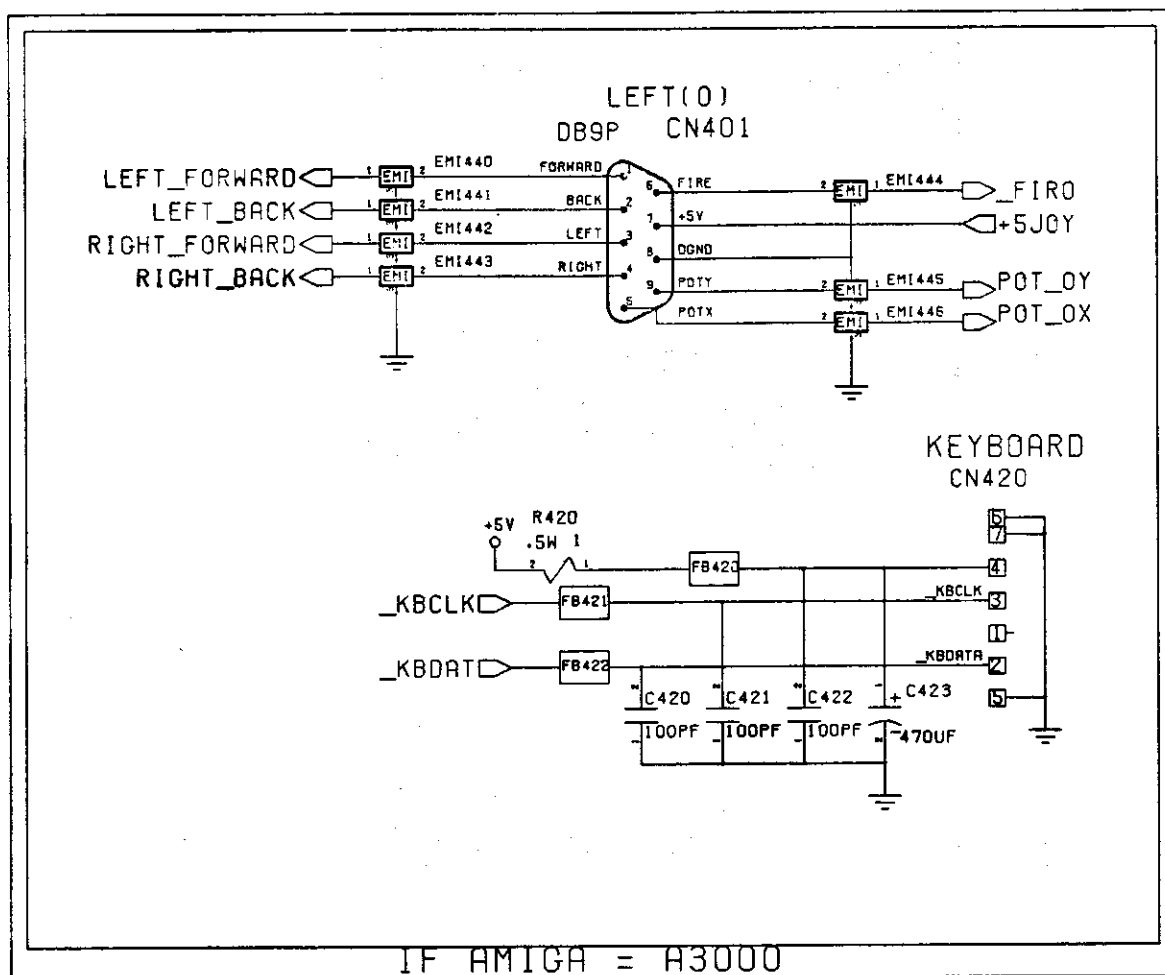
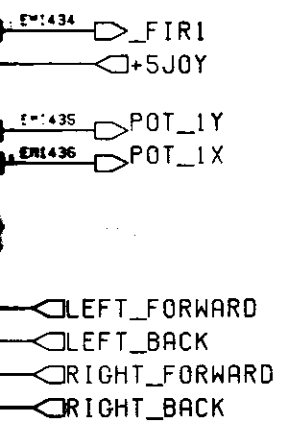
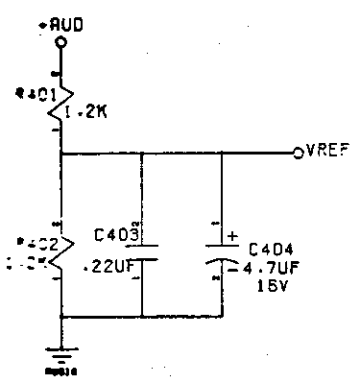
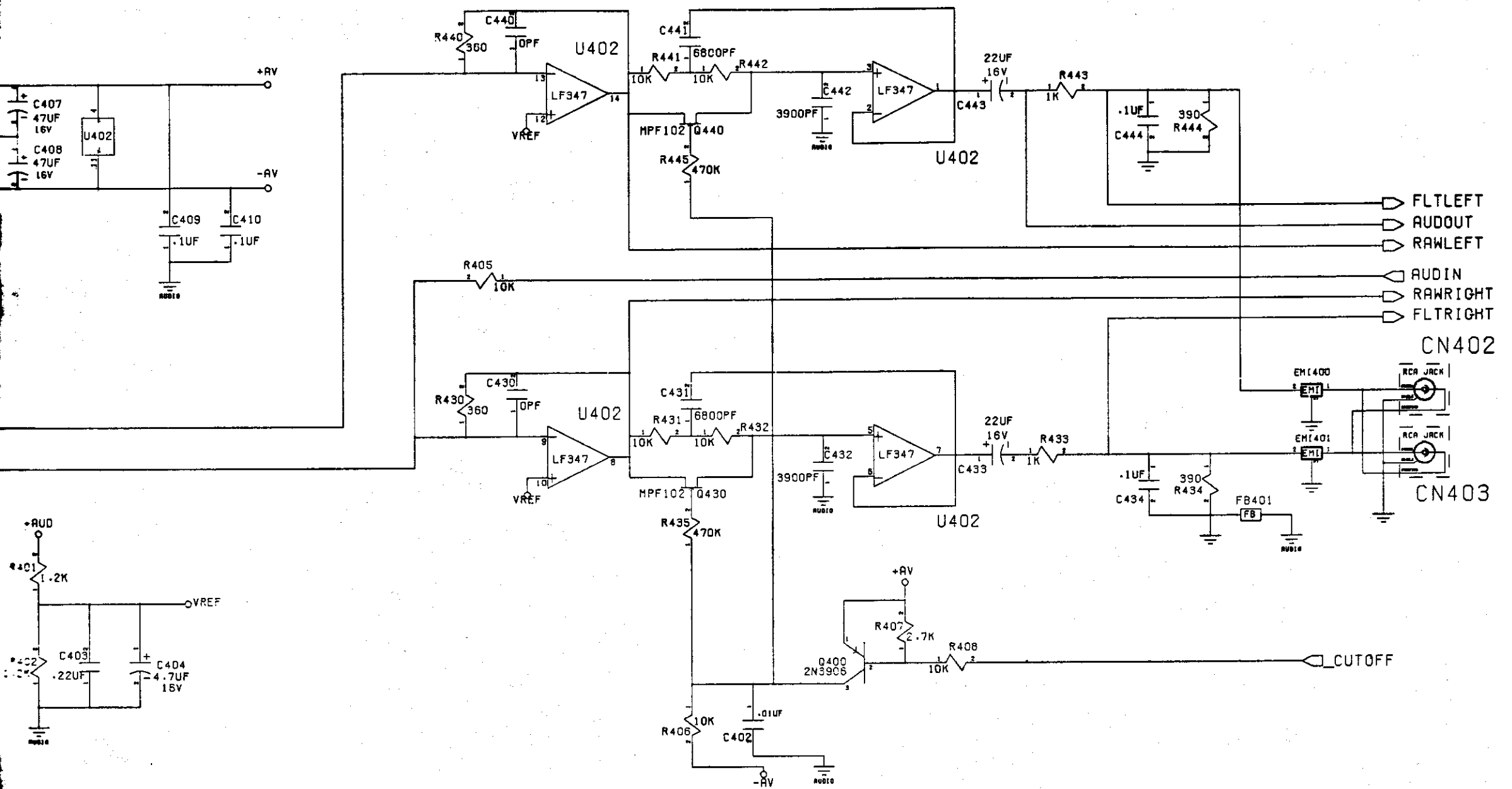


# Schematic #313311, Rev. A

Sheet 8 of 16

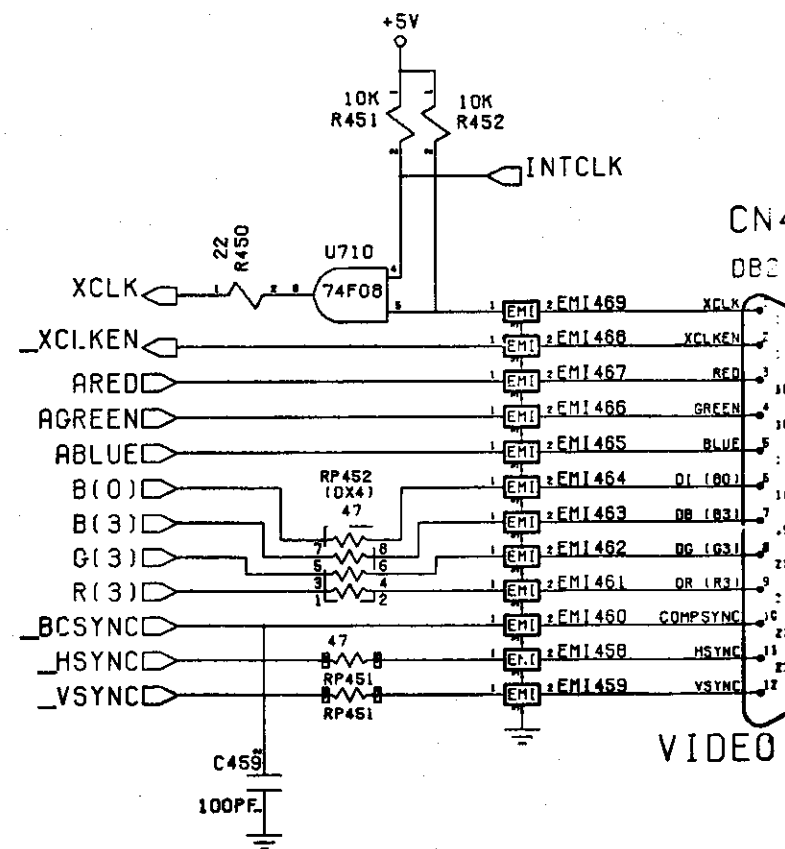
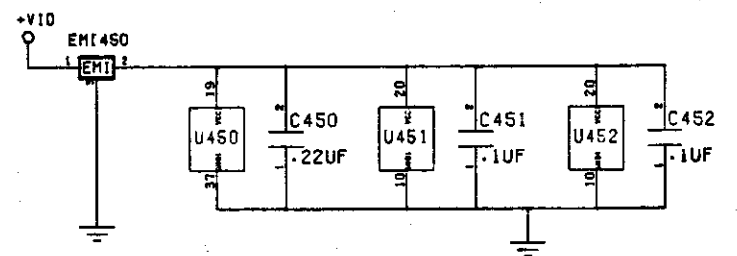
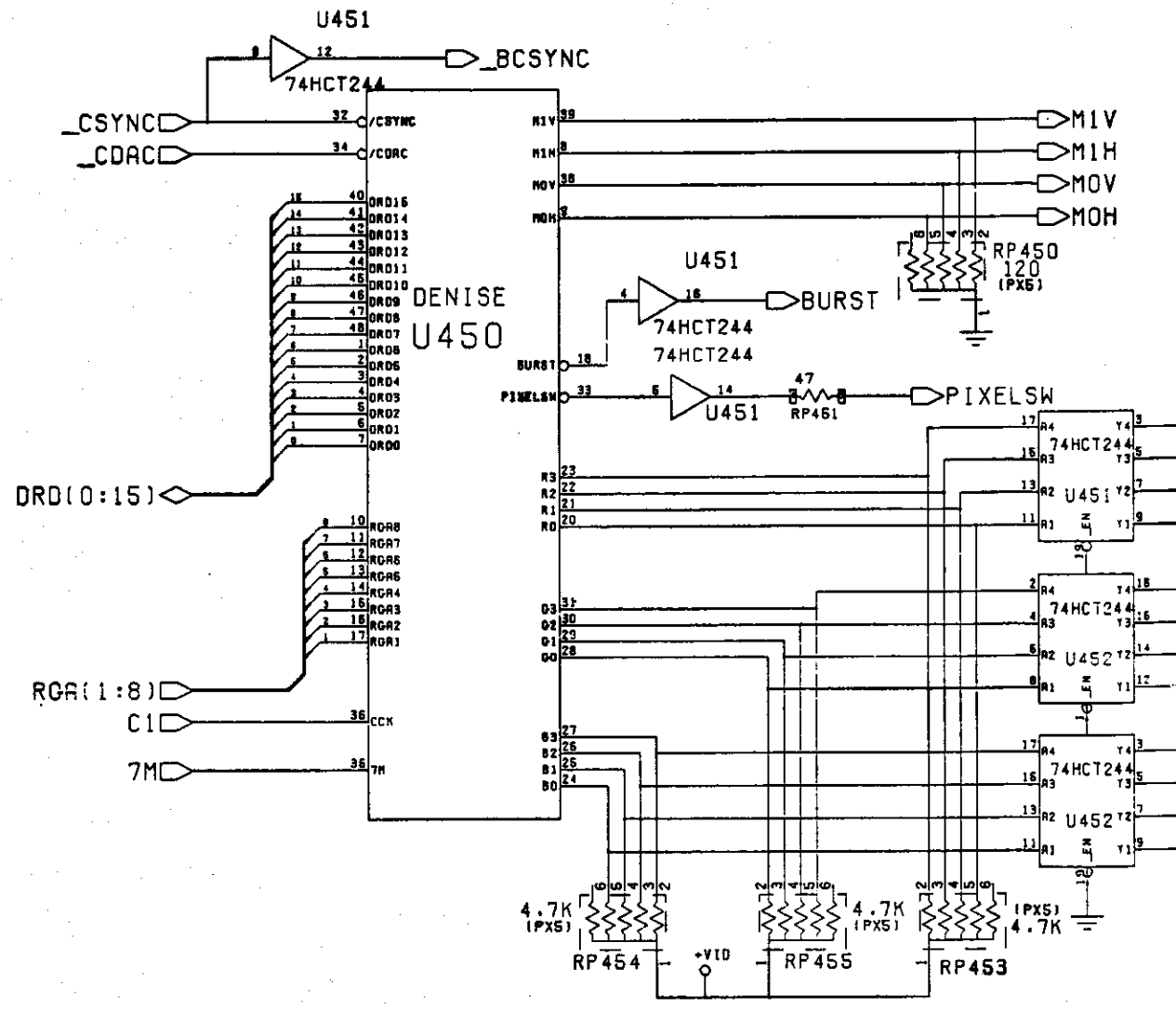


# A3000 SYSTEM SCHEMATICS

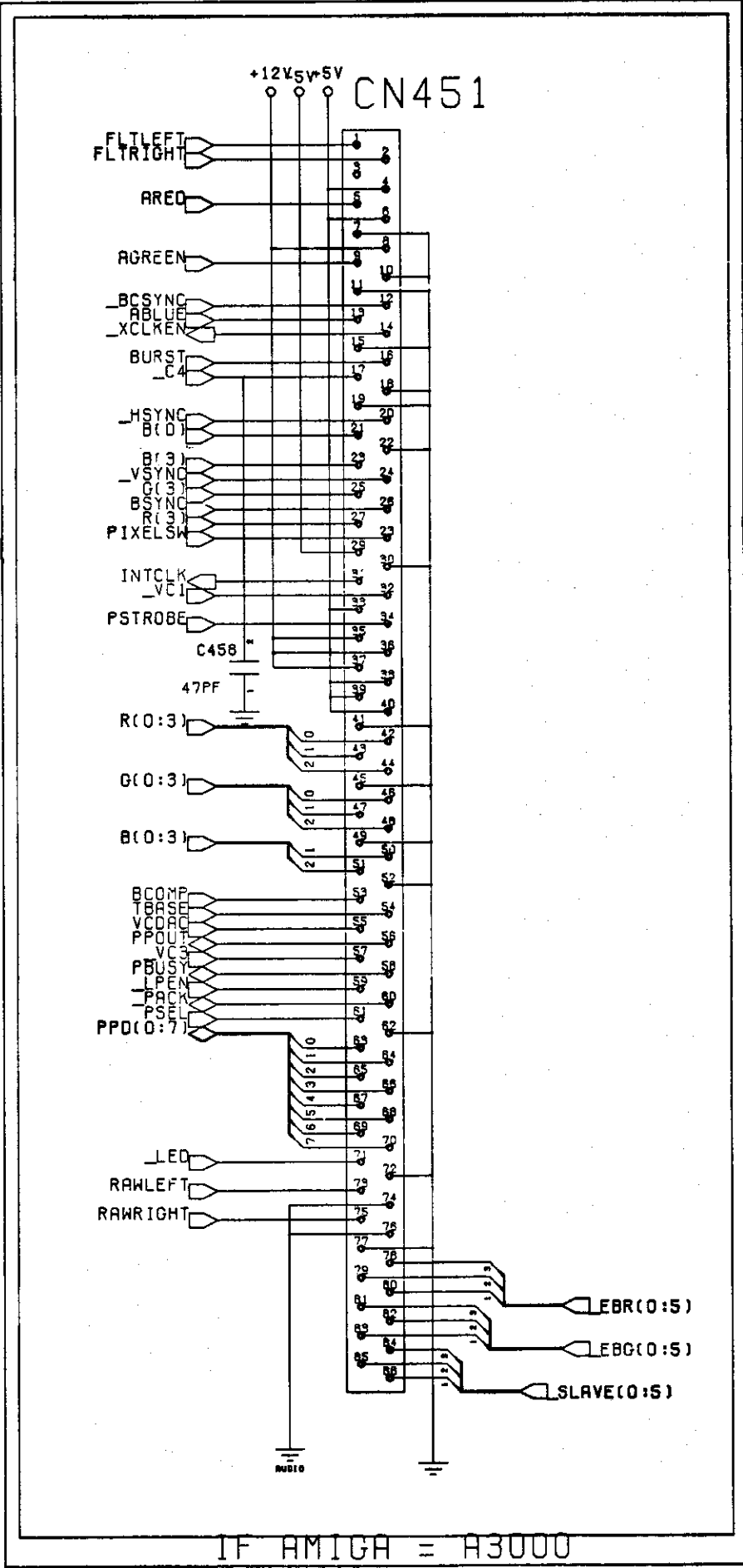
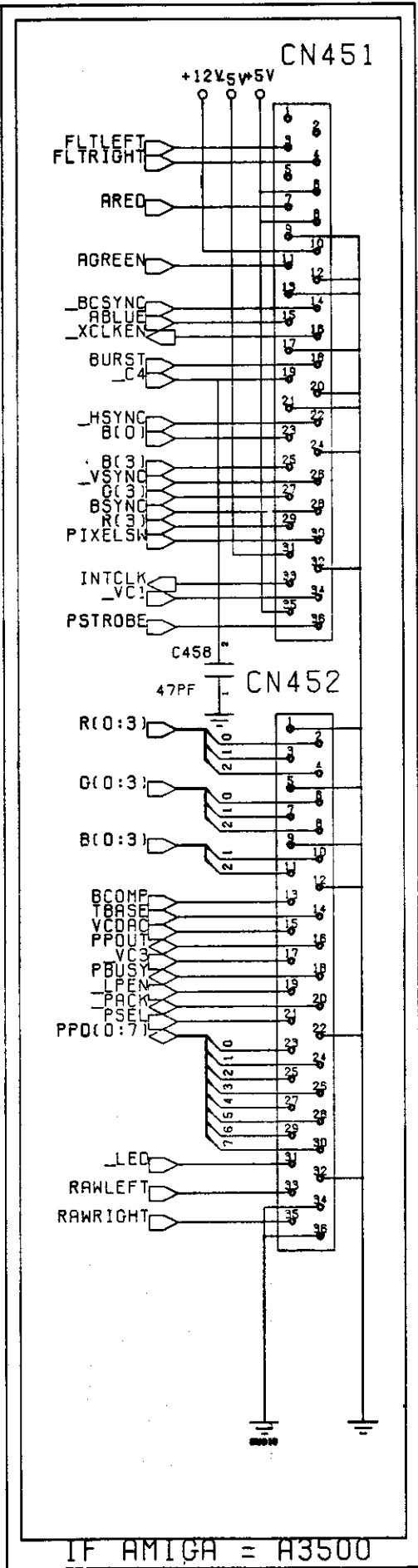
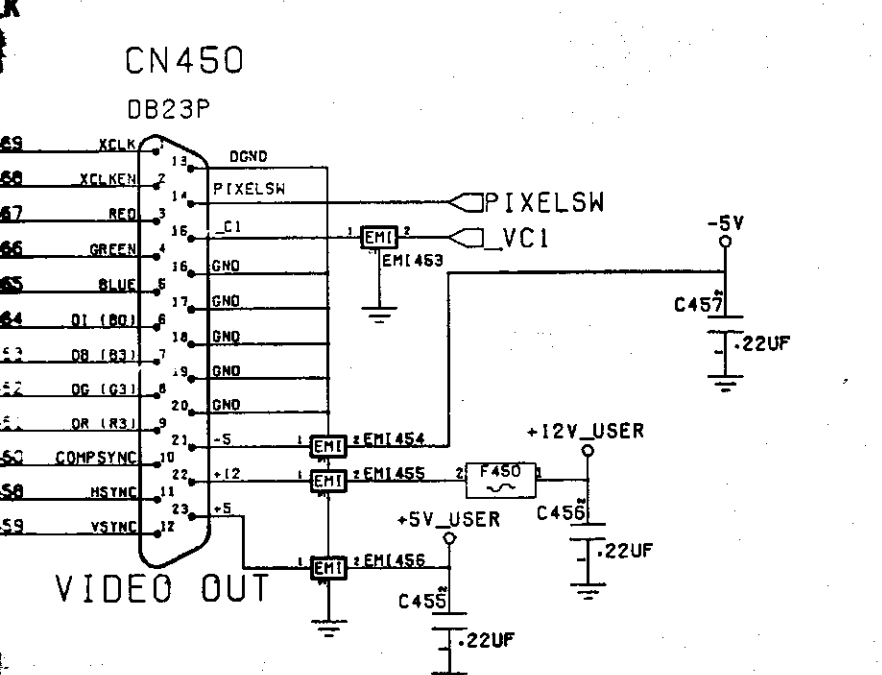
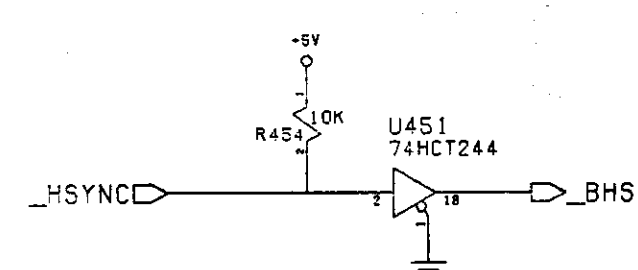
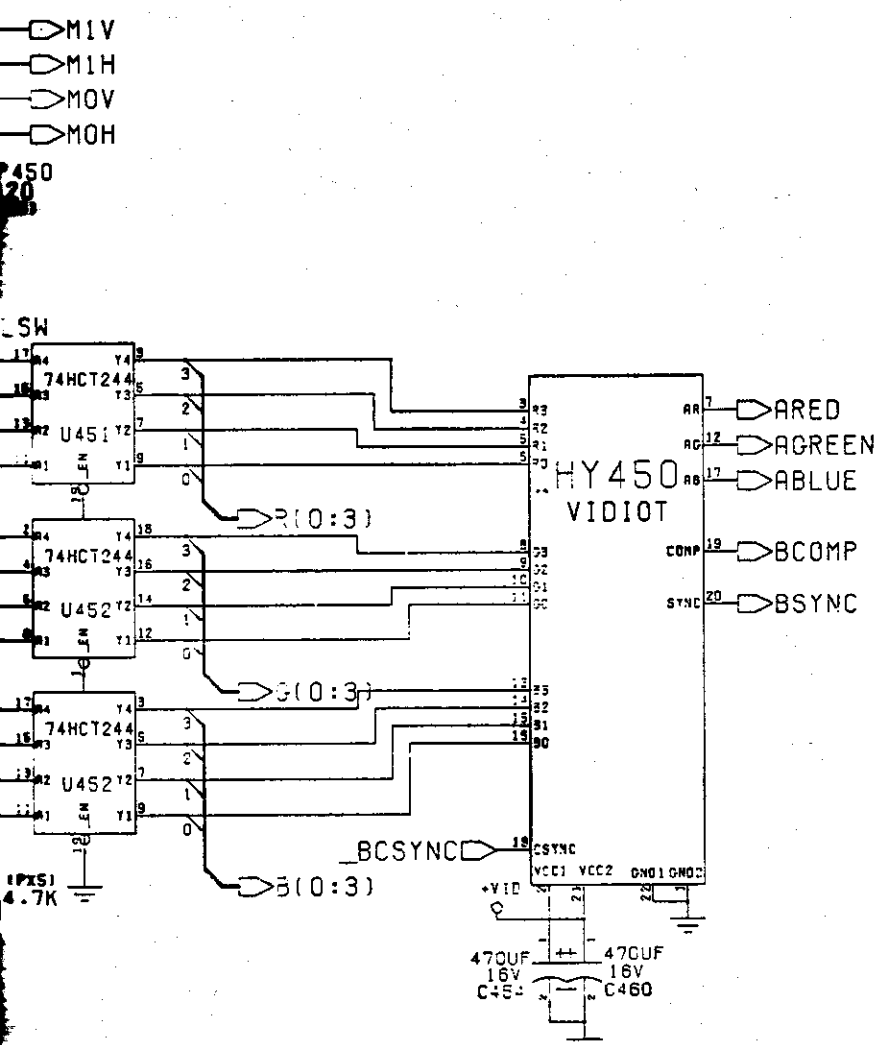


# Schematic #313311, Rev. A

Sheet 9 of 16



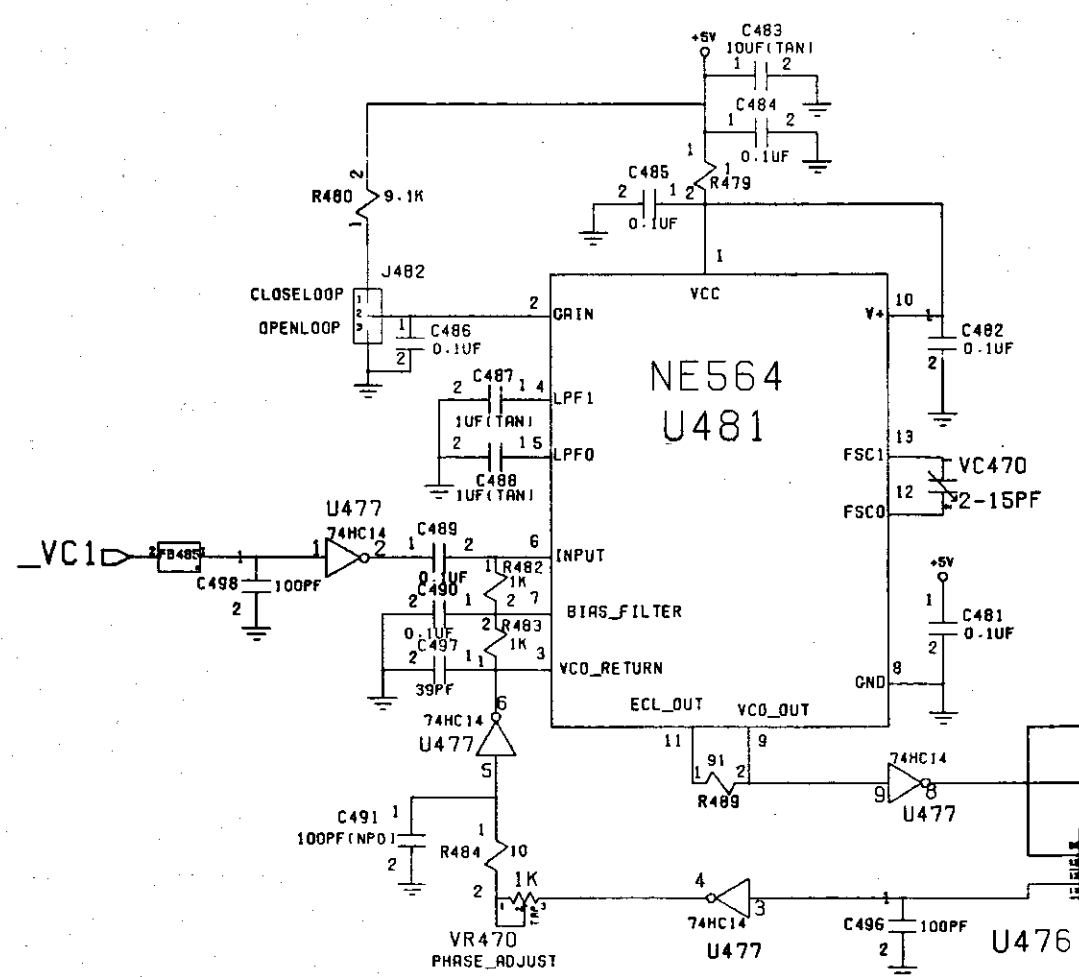
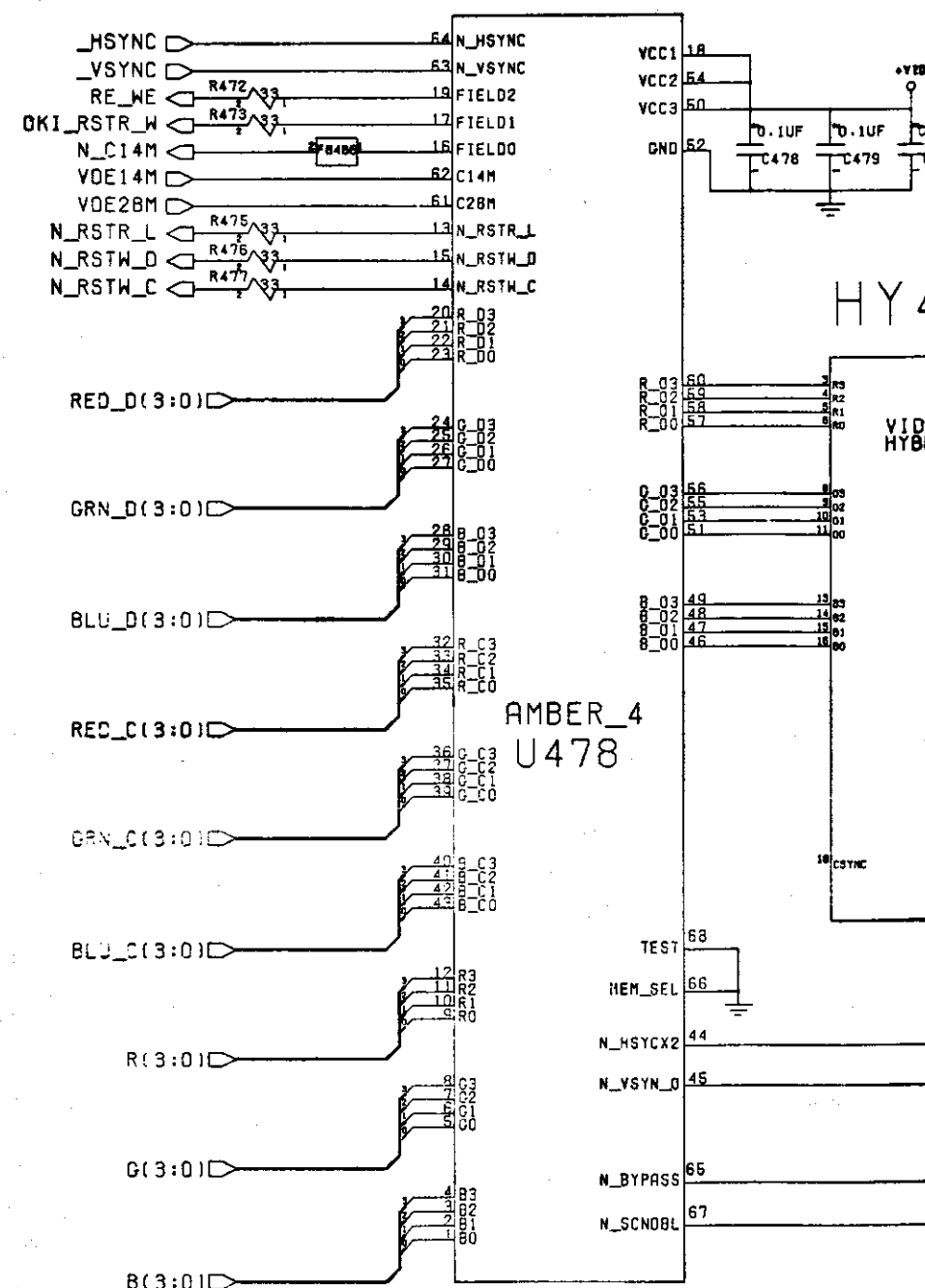
# A3000 SYSTEM SCHEMATICS



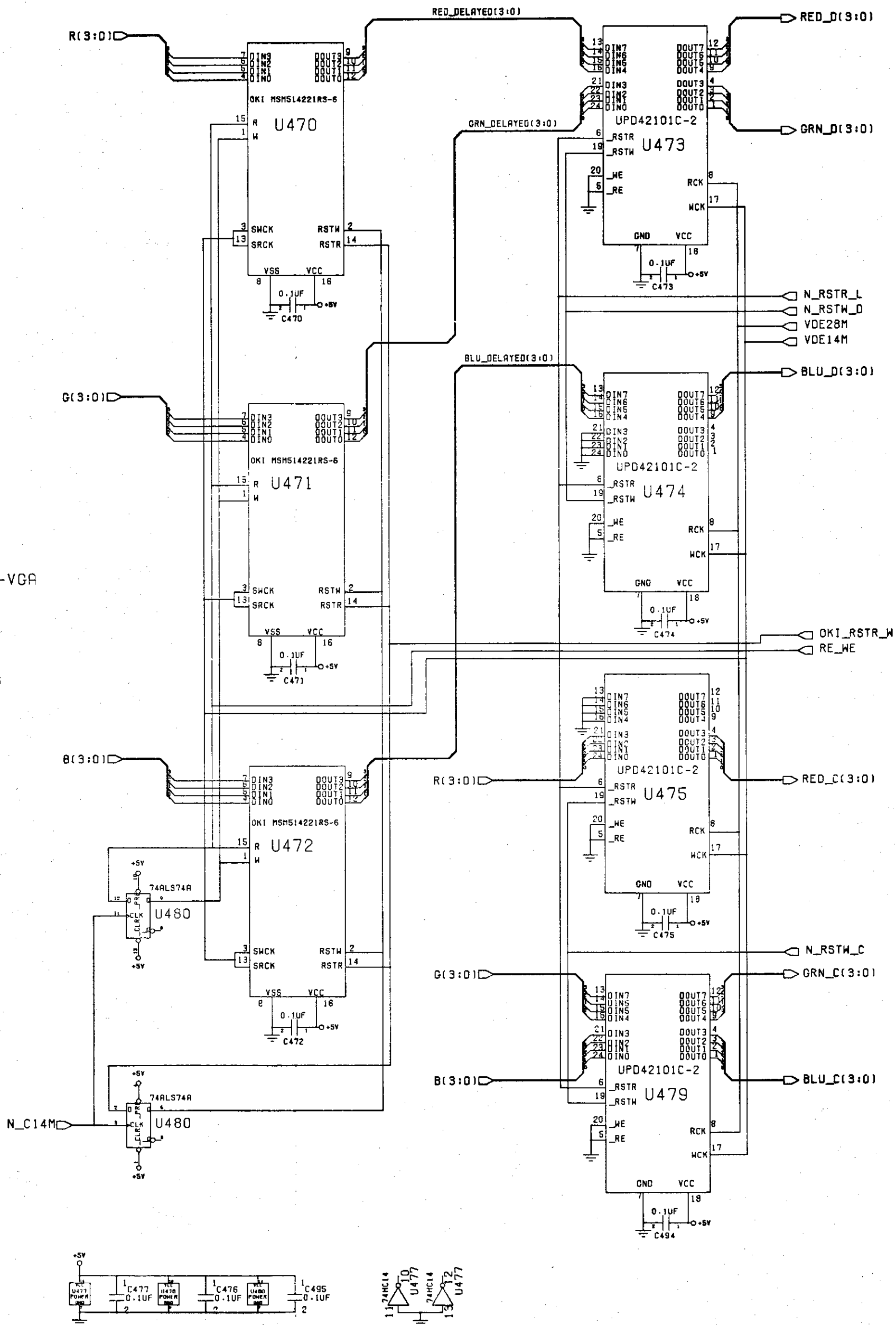
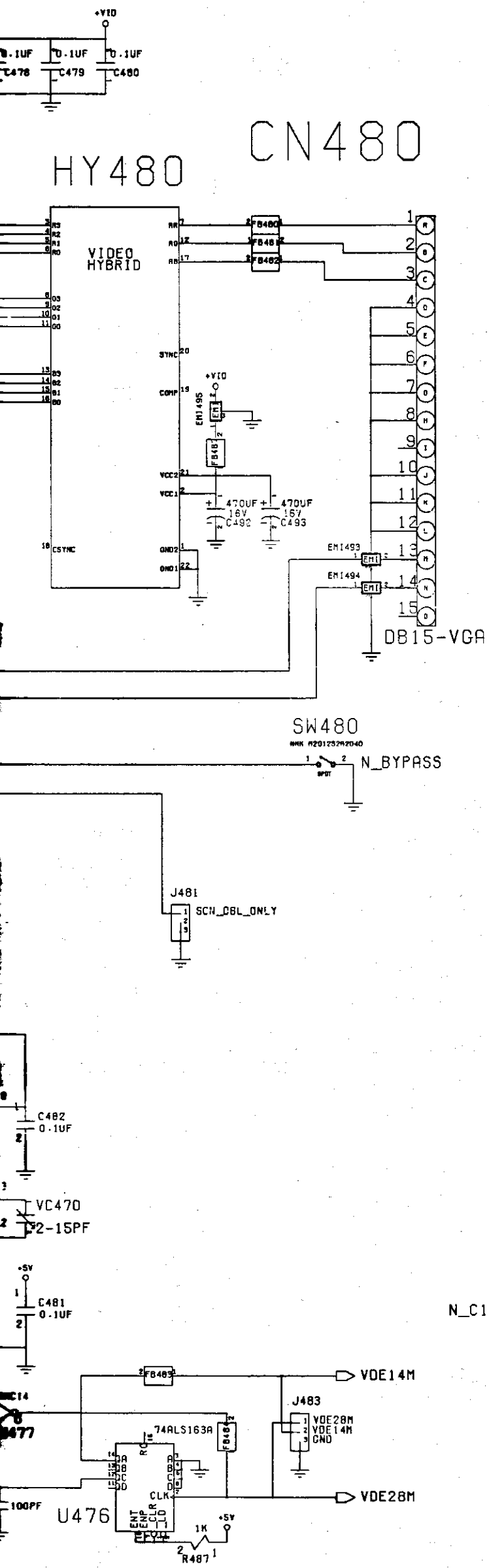


# Schematic #313311, Rev. A

Sheet 10 of 16

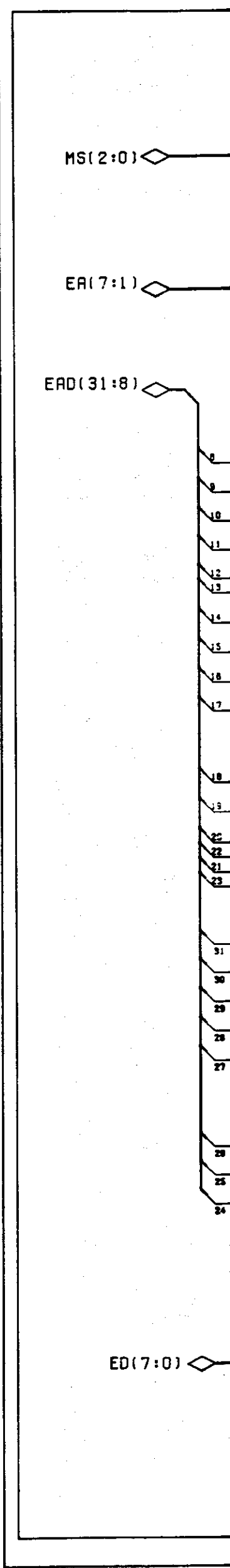


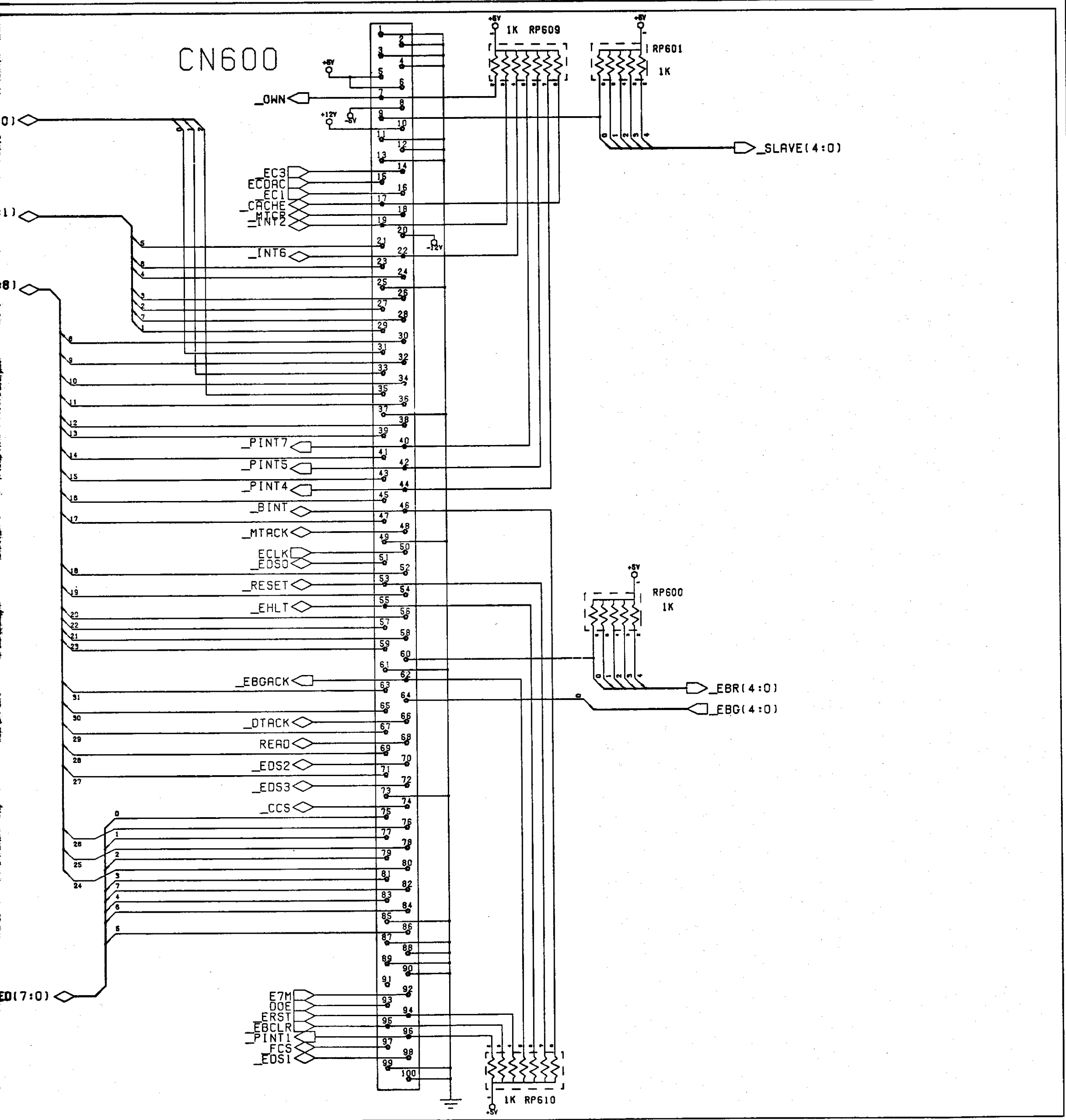
# A3000 SYSTEM SCHEMATICS



**Schematic #313311, Rev. A**

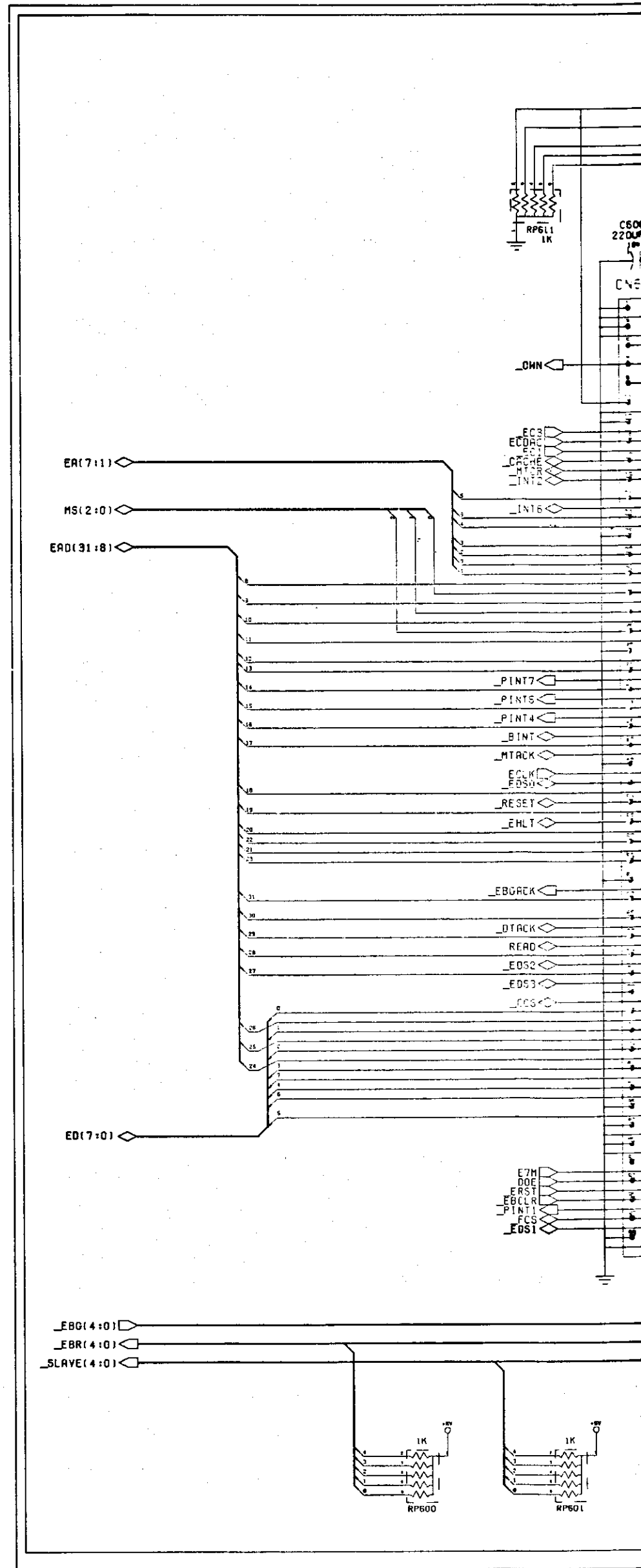
*Sheet 11 of 16*



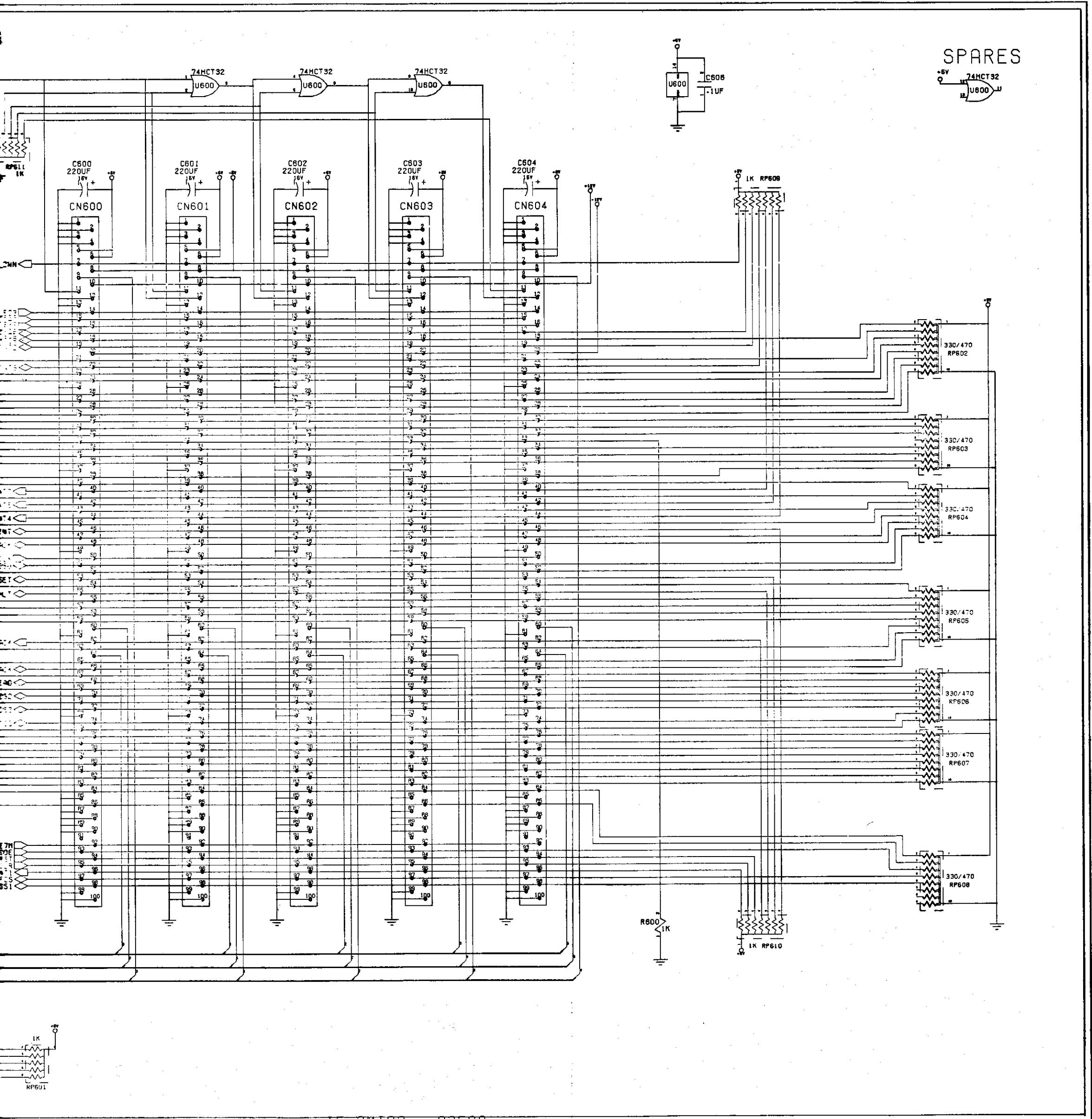


IF AMIGA = A3000

Schematic #313311, Rev. A  
Sheet 12 of 16



# A3000 SYSTEM SCHEMATICS

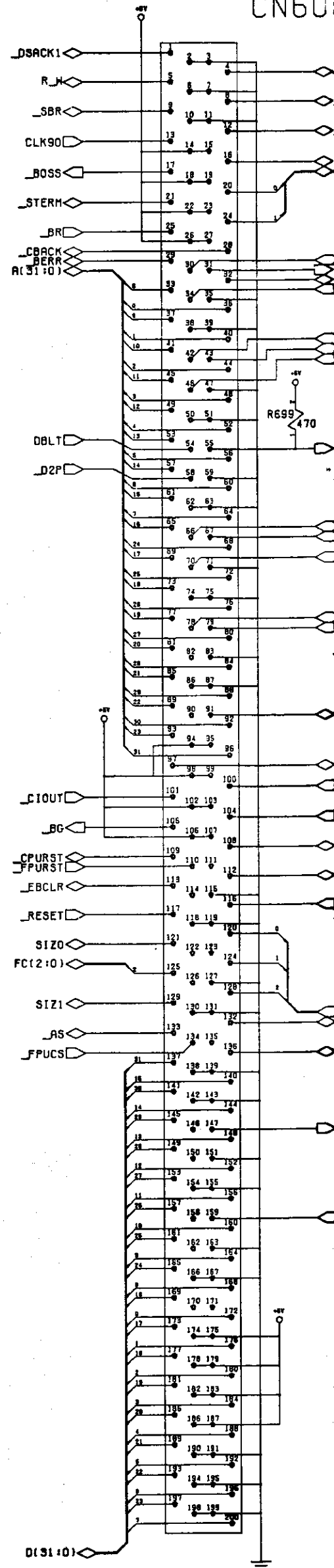


IF AMIGA = A3500

Schematic #313311, Rev. A  
Sheet 13 of 16

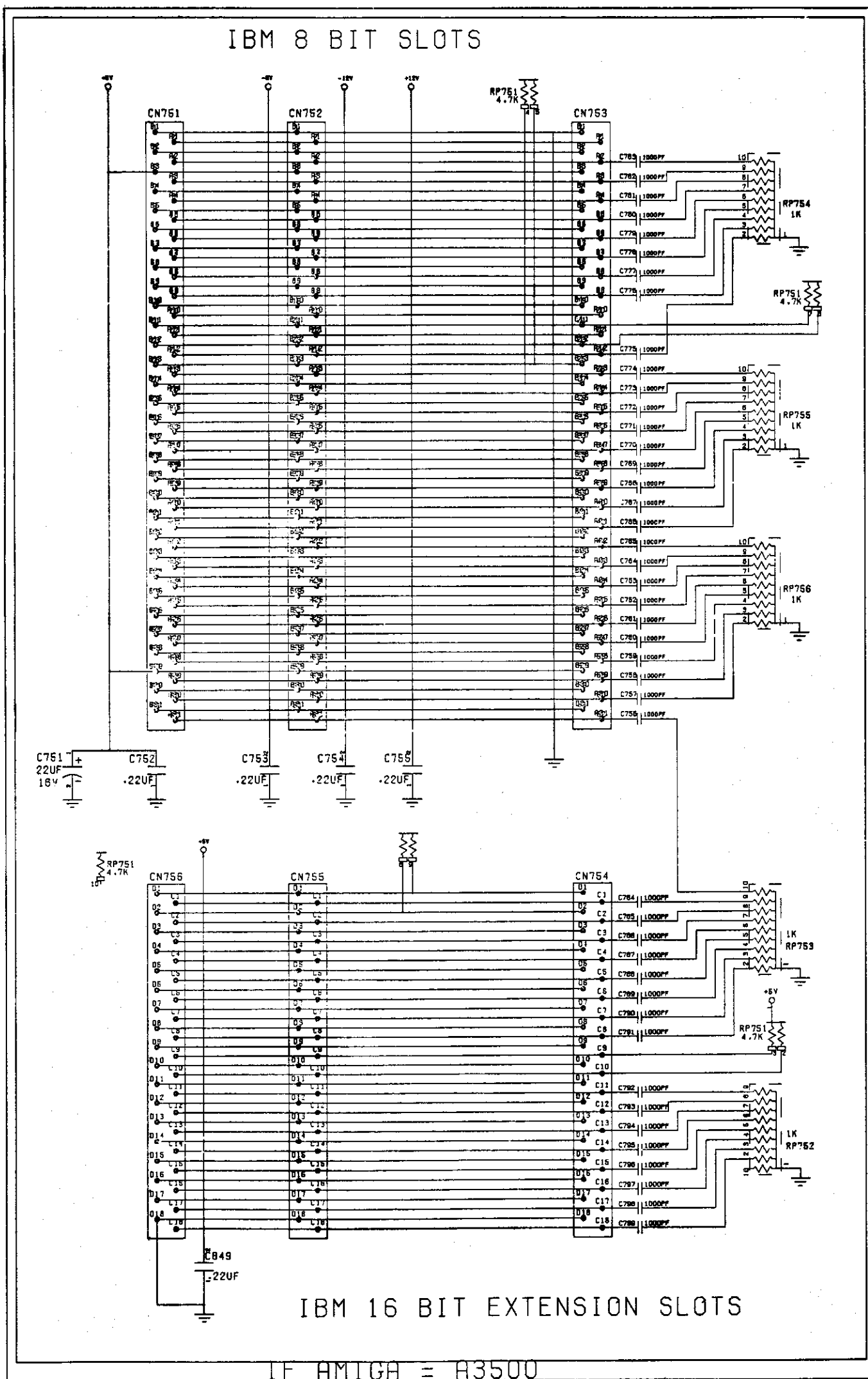
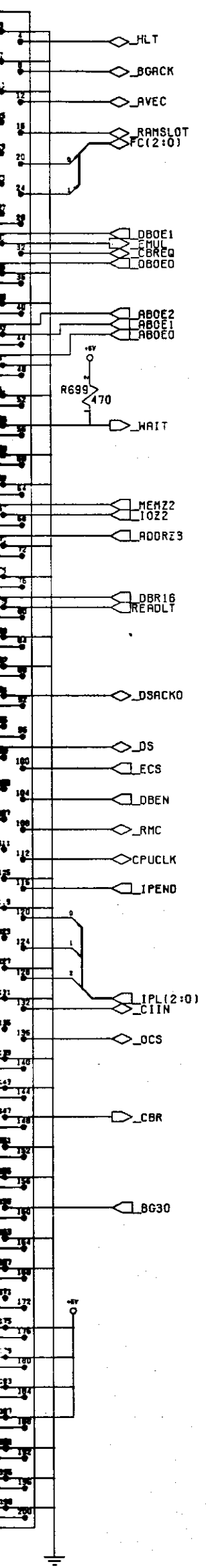
AMIGA 32 BIT LO

CN60



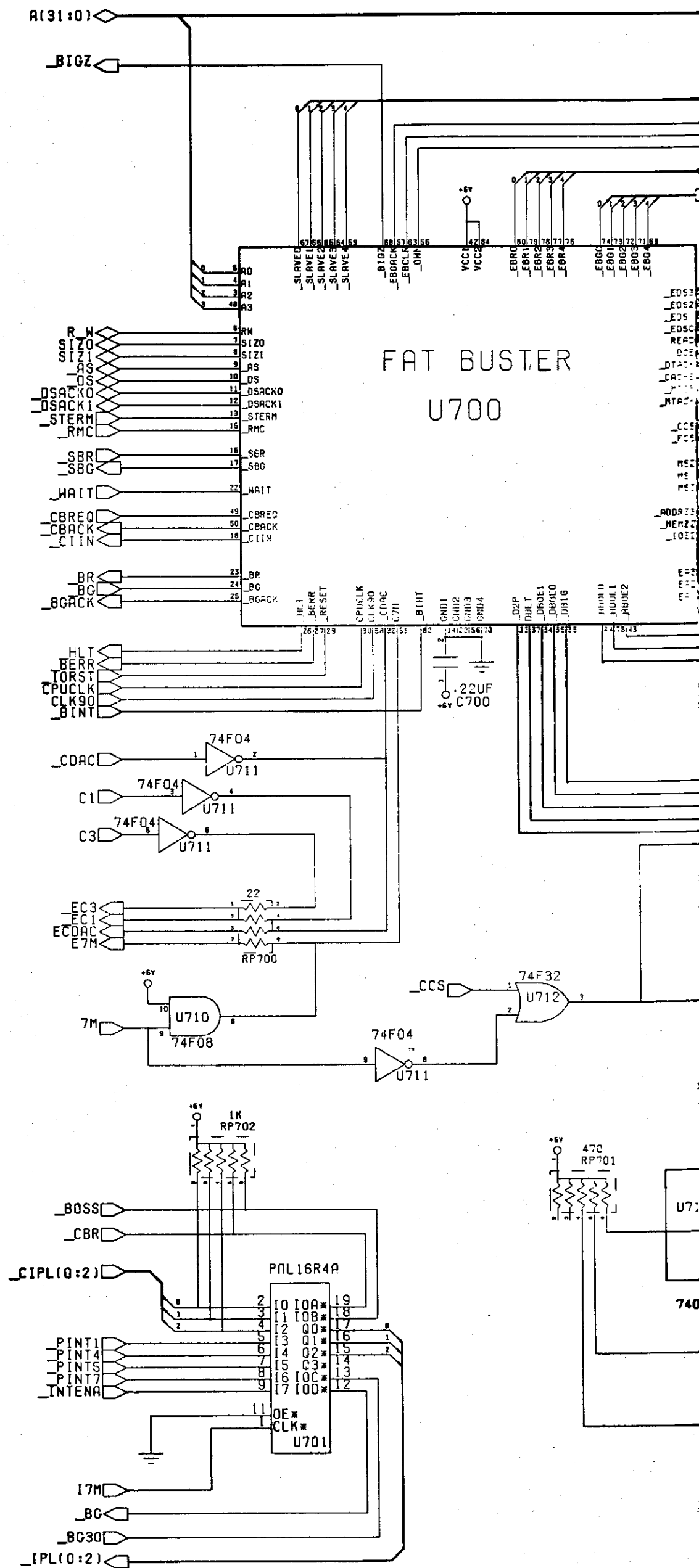
32 BIT LOCAL SLOT

CN606

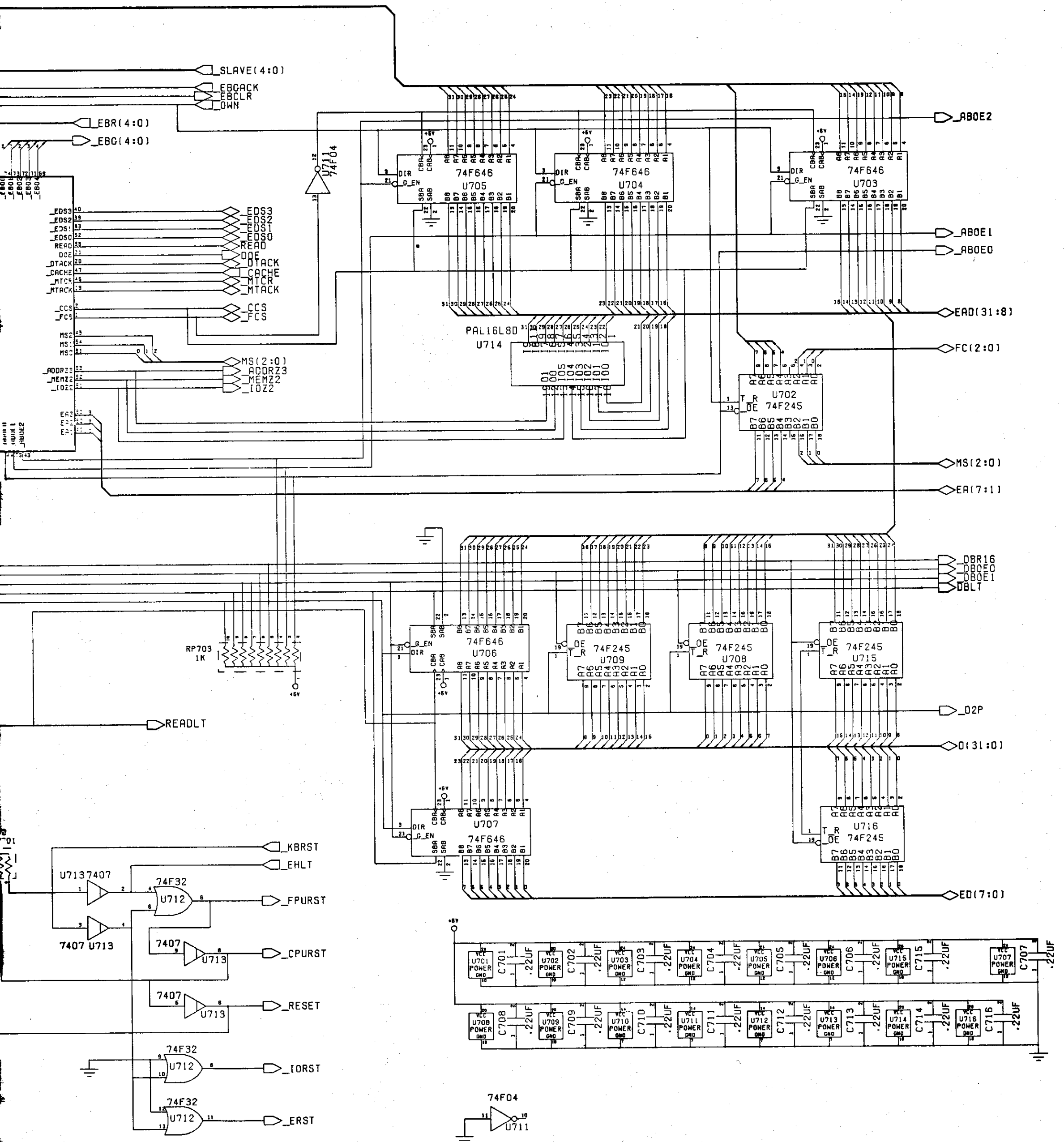




**Schematic #313311, Rev. A**  
**Sheet 14 of 16**

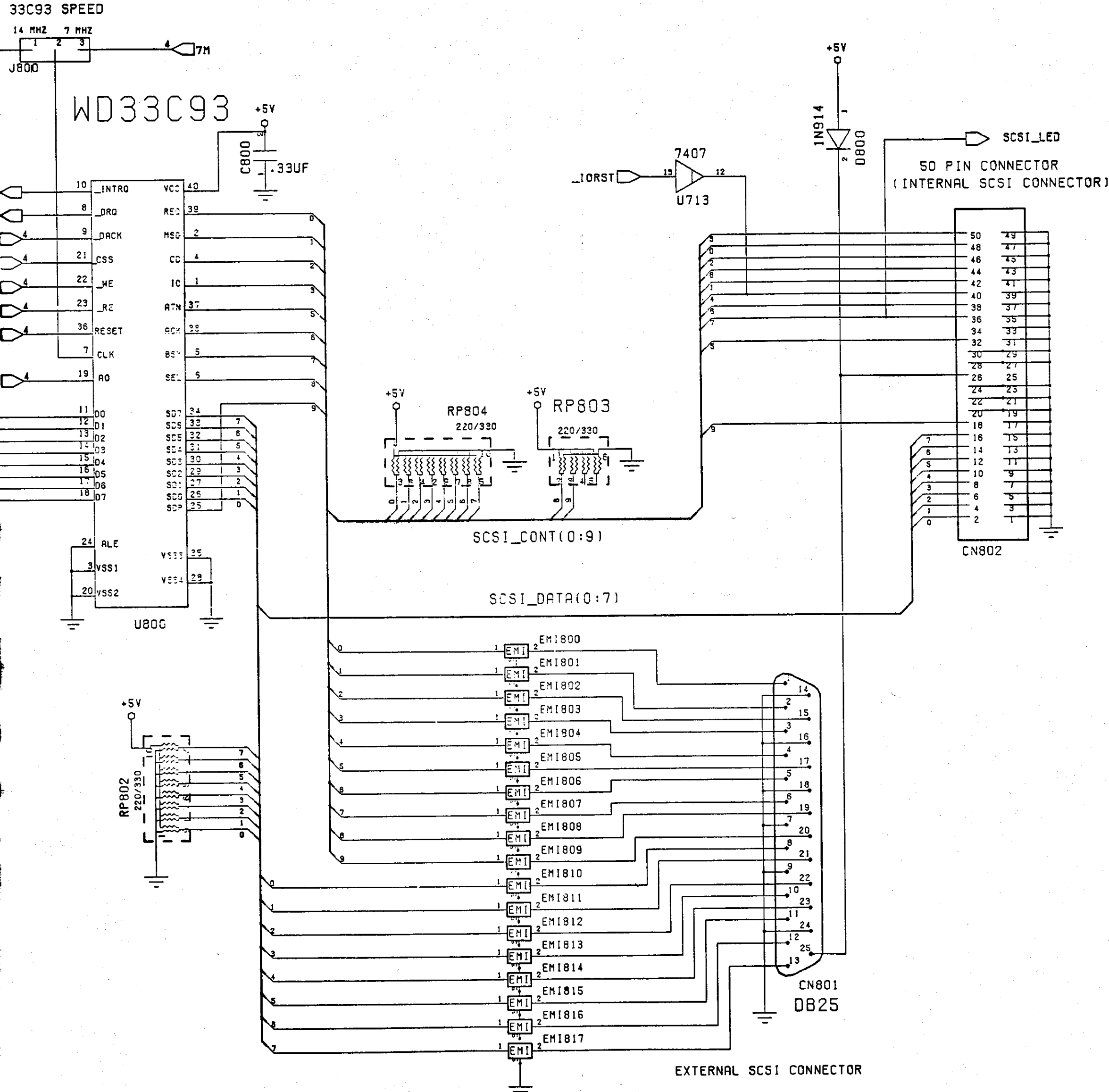


# A3000 SYSTEM SCHEMATICS

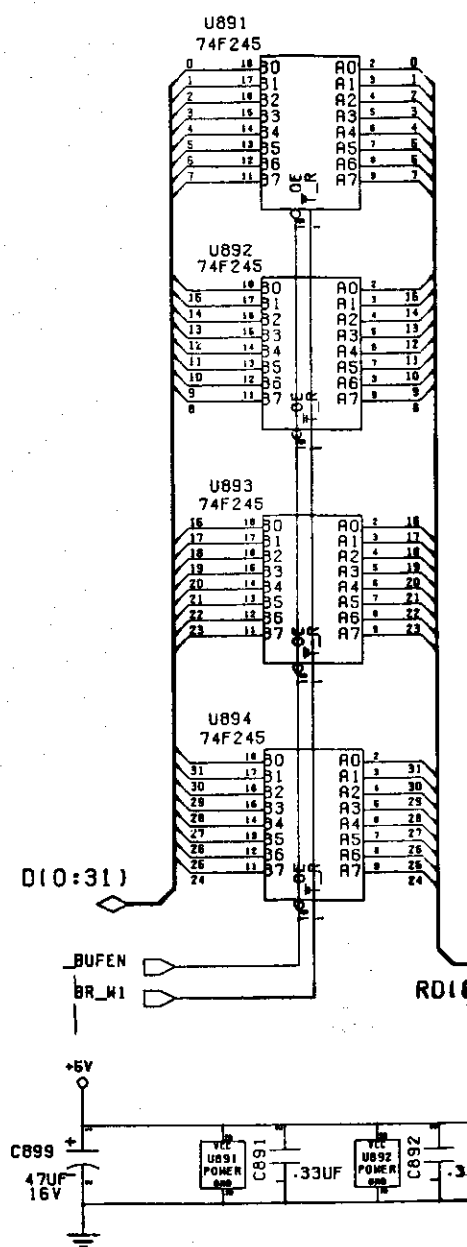
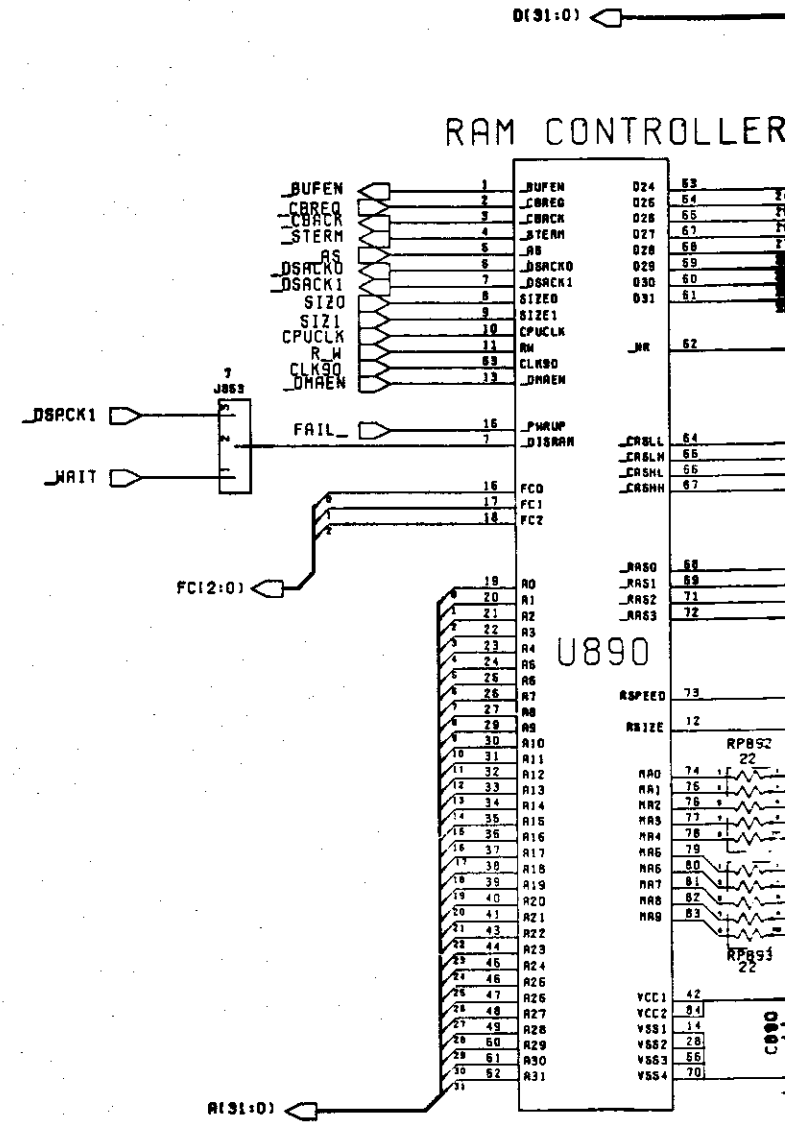




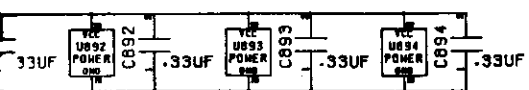
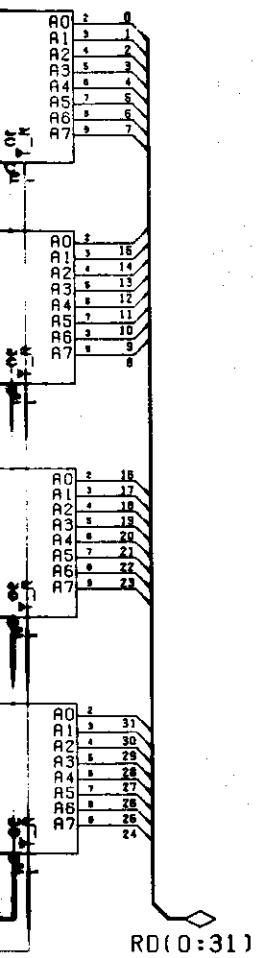
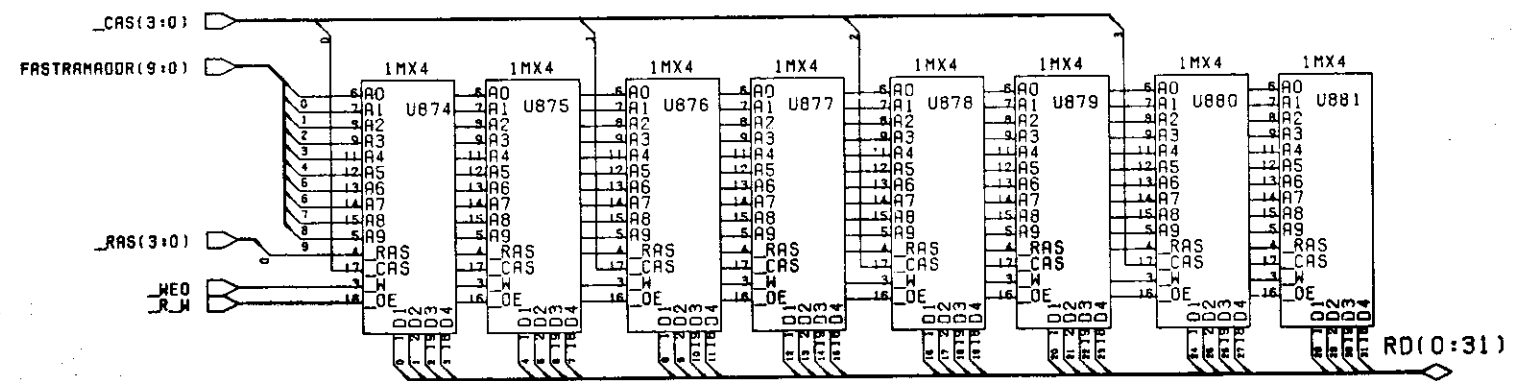
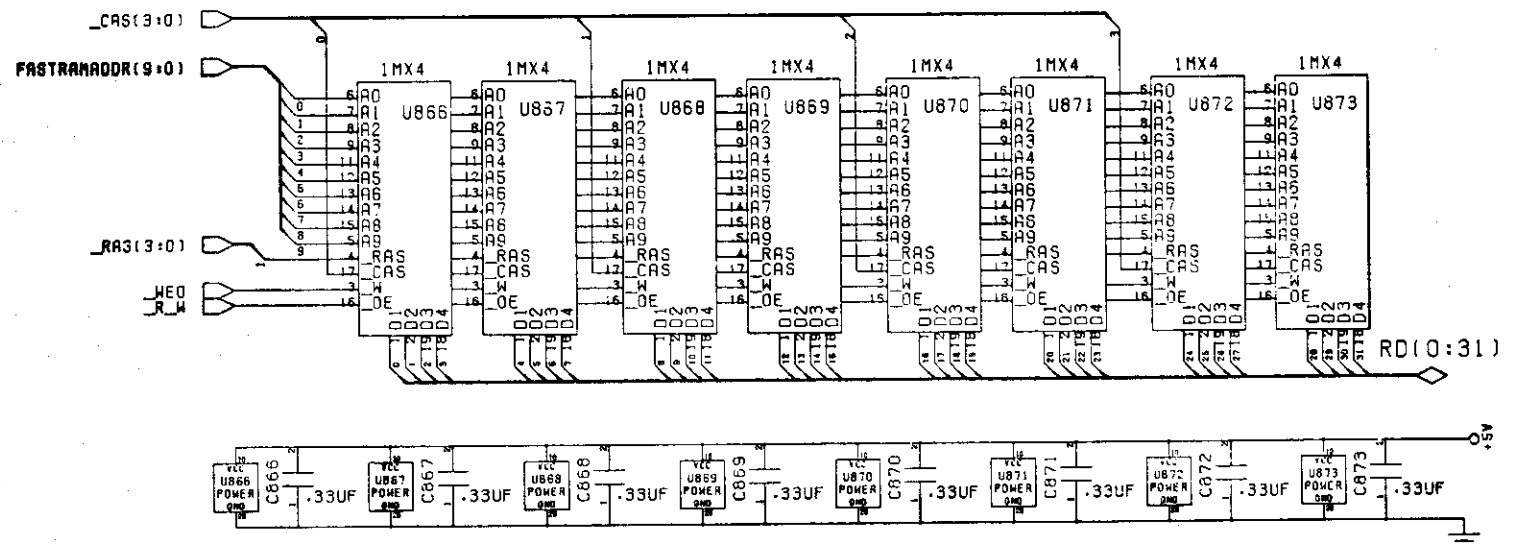
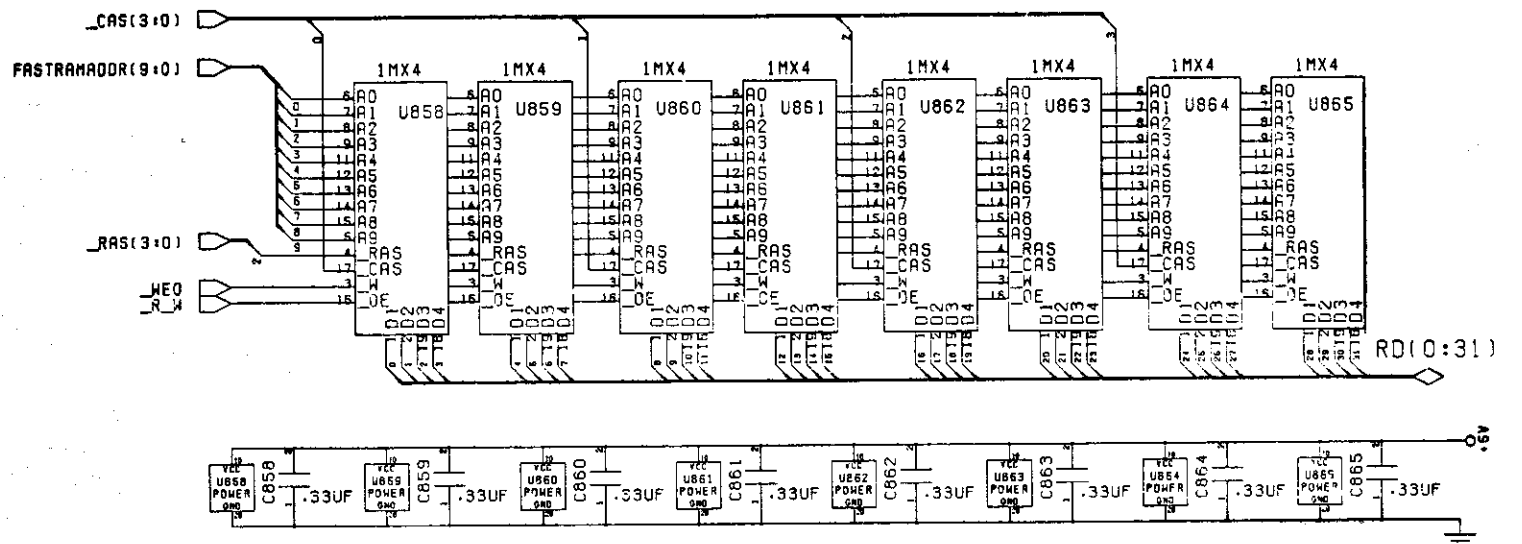
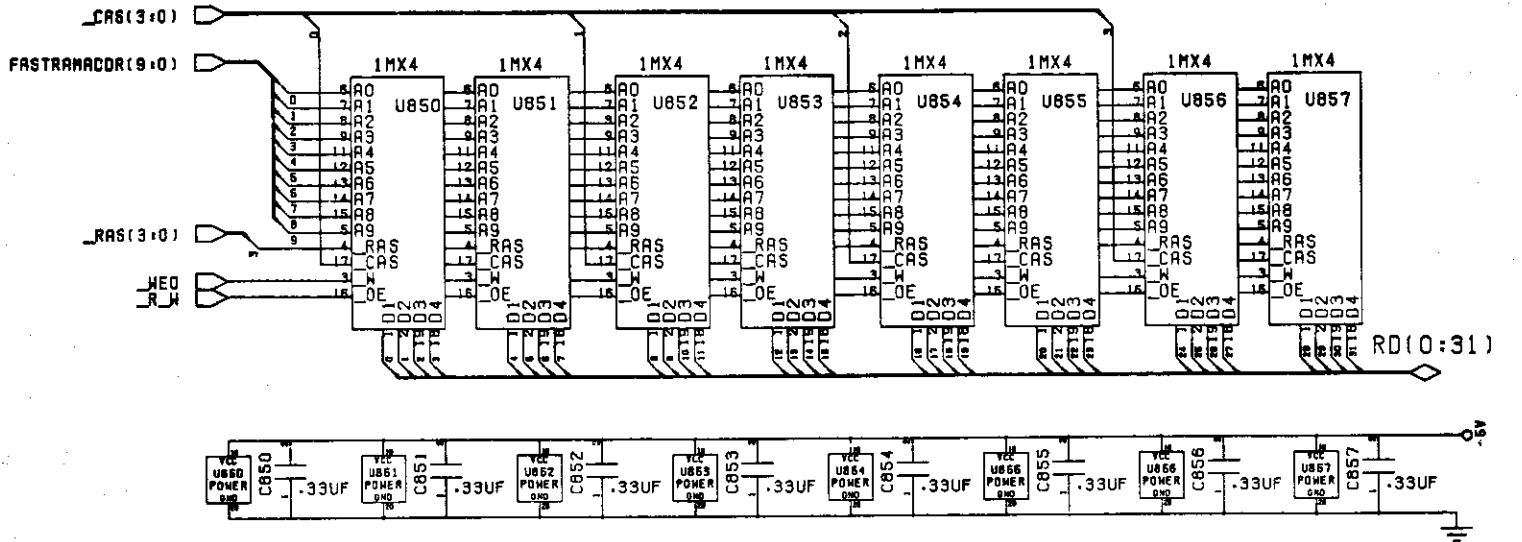
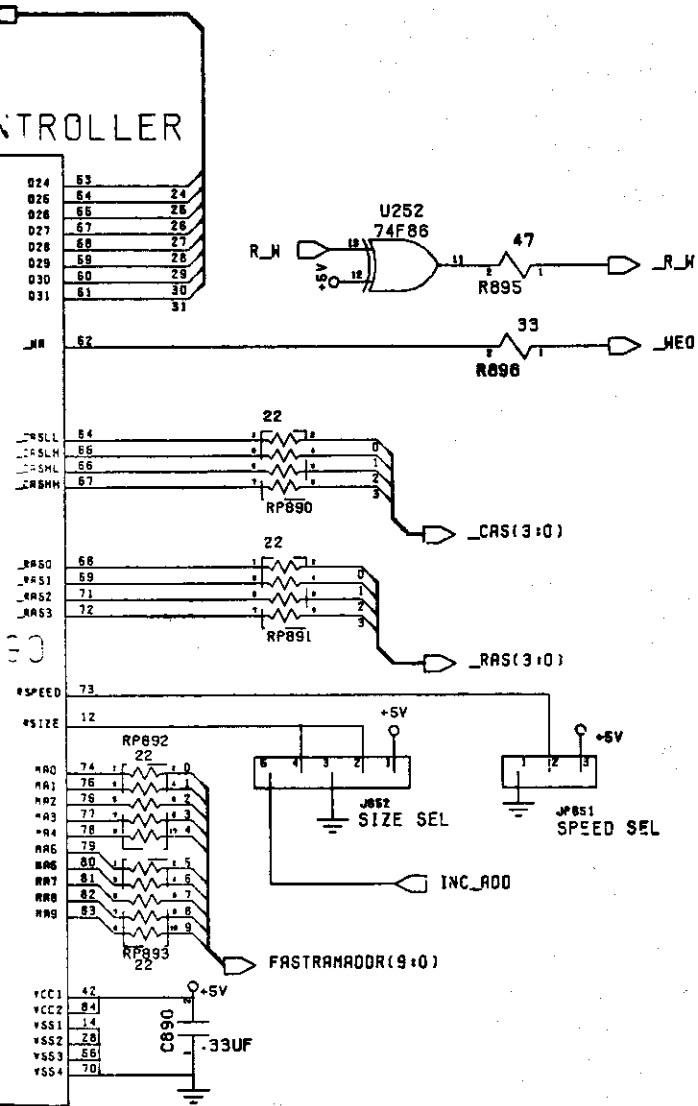
# A3000 SYSTEM SCHEMATICS



Schematic #313311, Rev. A  
 Sheet 16 of 16

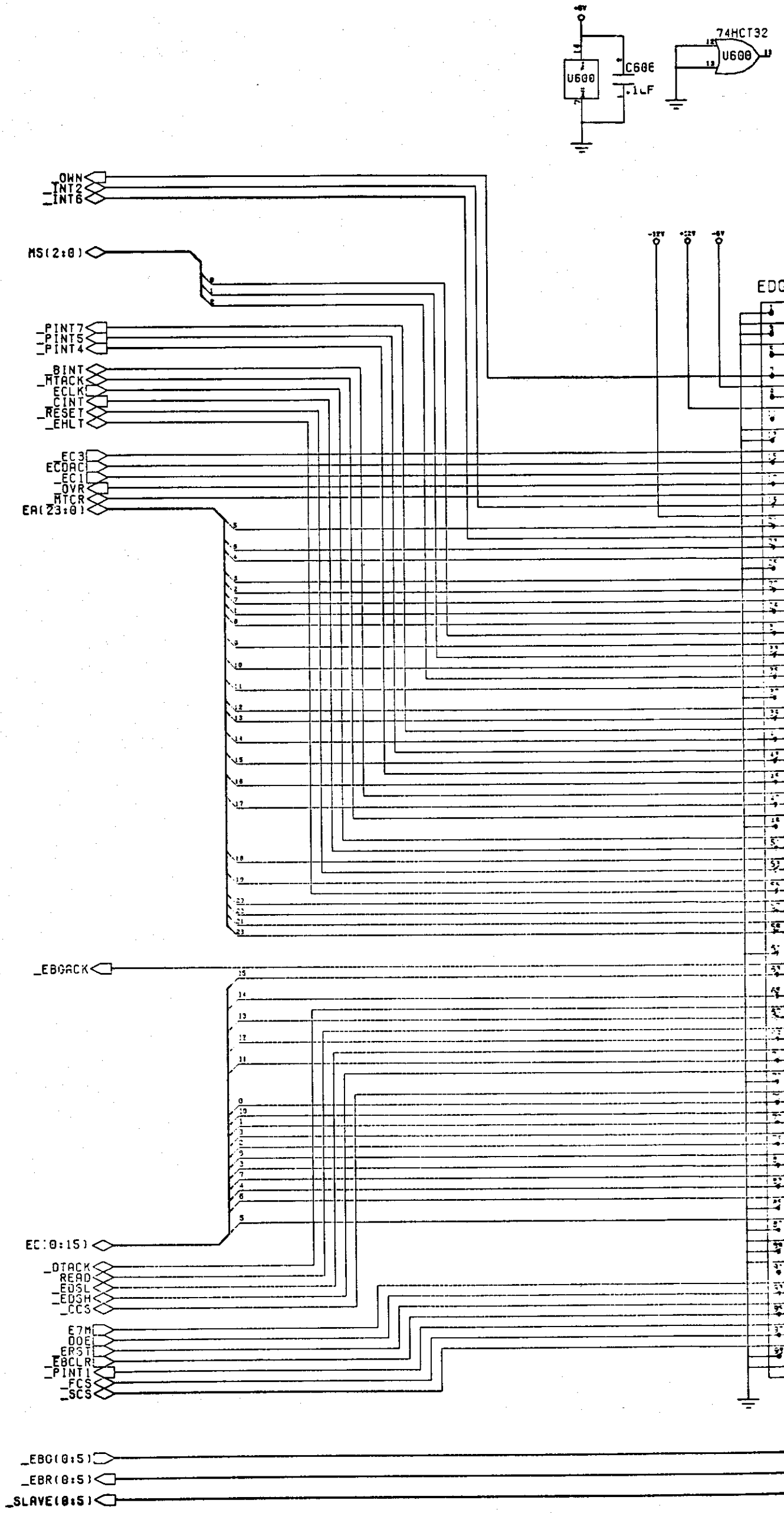


# A3000 SYSTEM SCHEMATICS

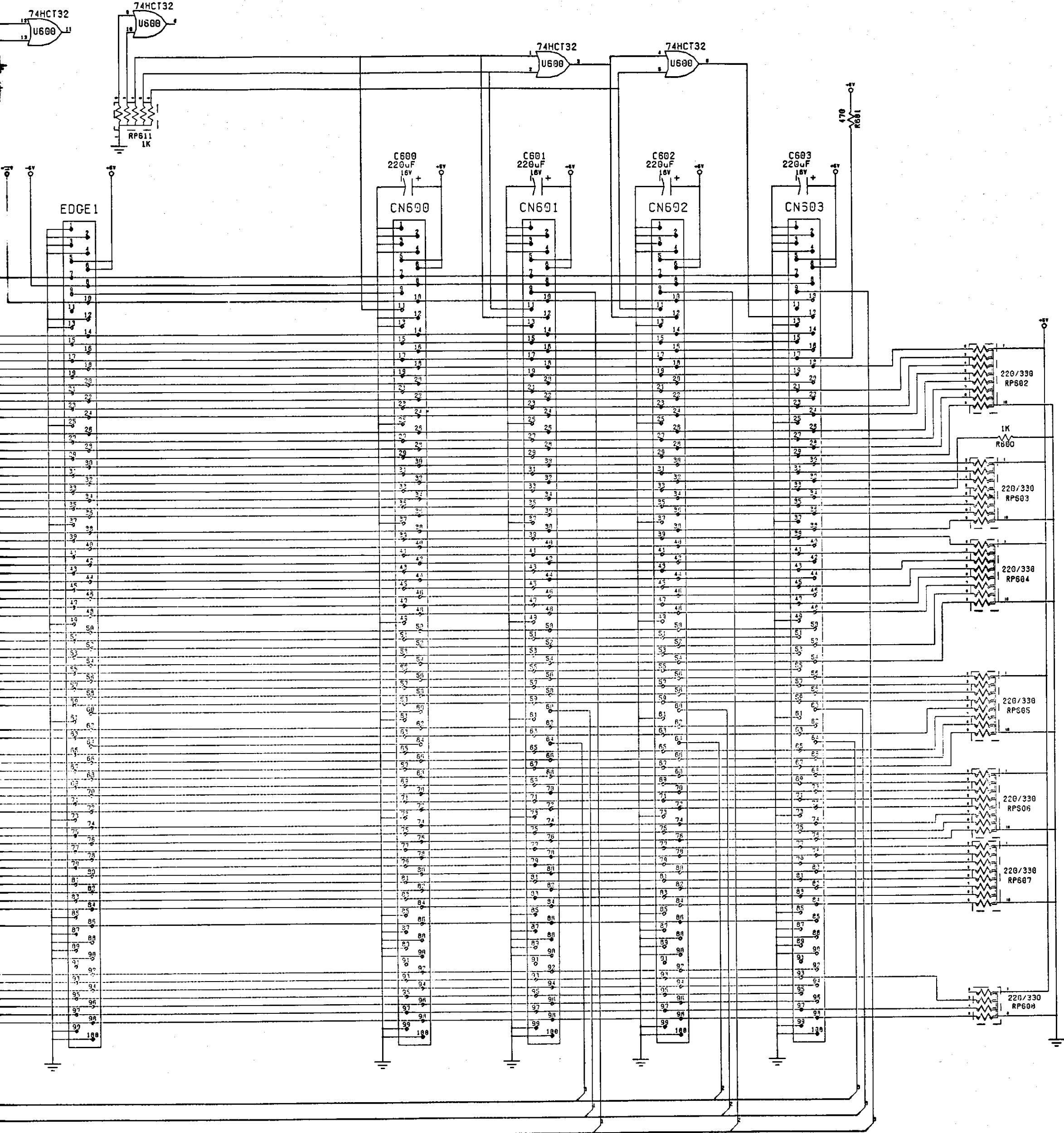


# Schematic #313251, Rev. A

Sheet 1 of 2



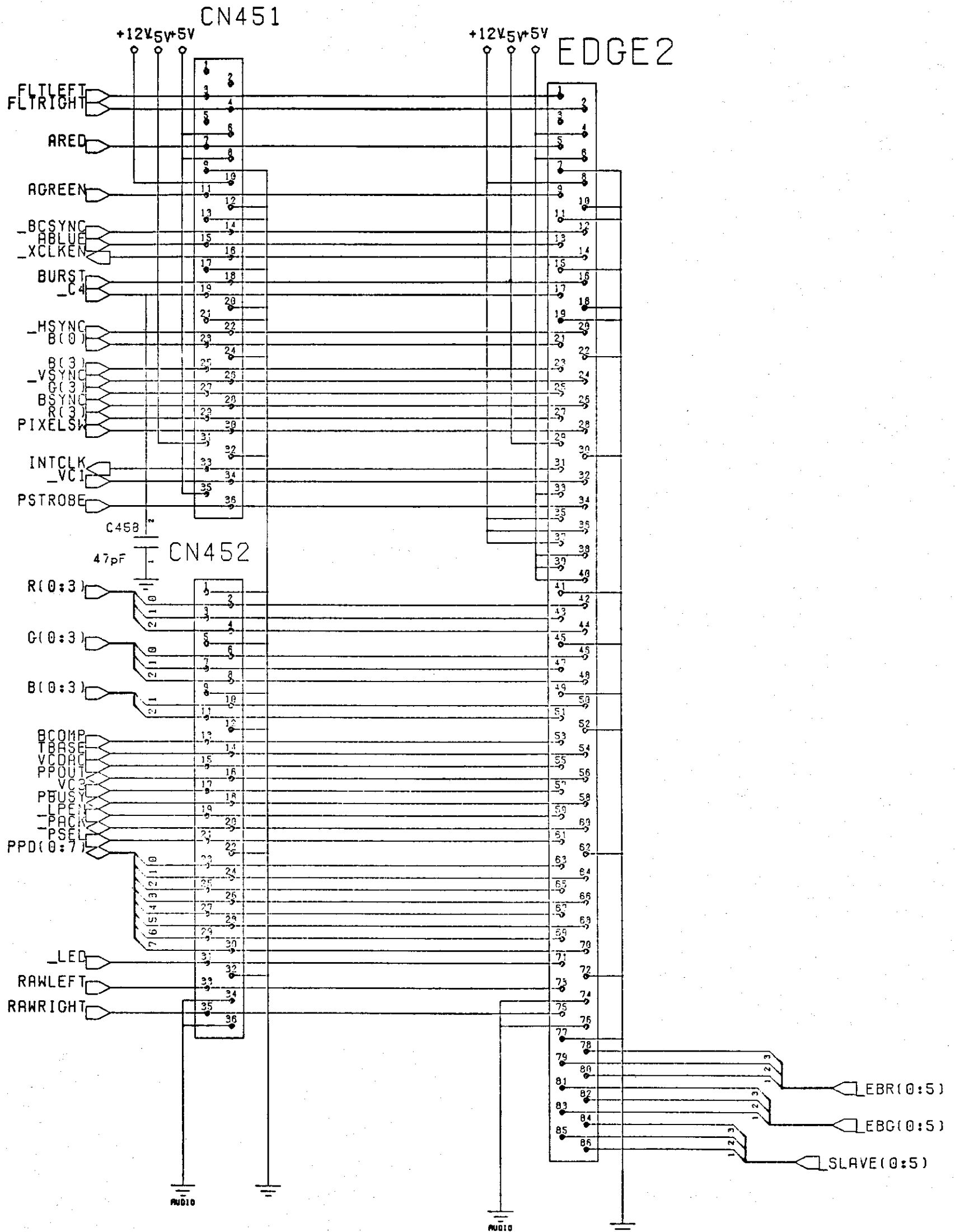
A3000 SYSTEM SCHEMATICS





# Schematic #313251, Rev. A

Sheet 2 of 2

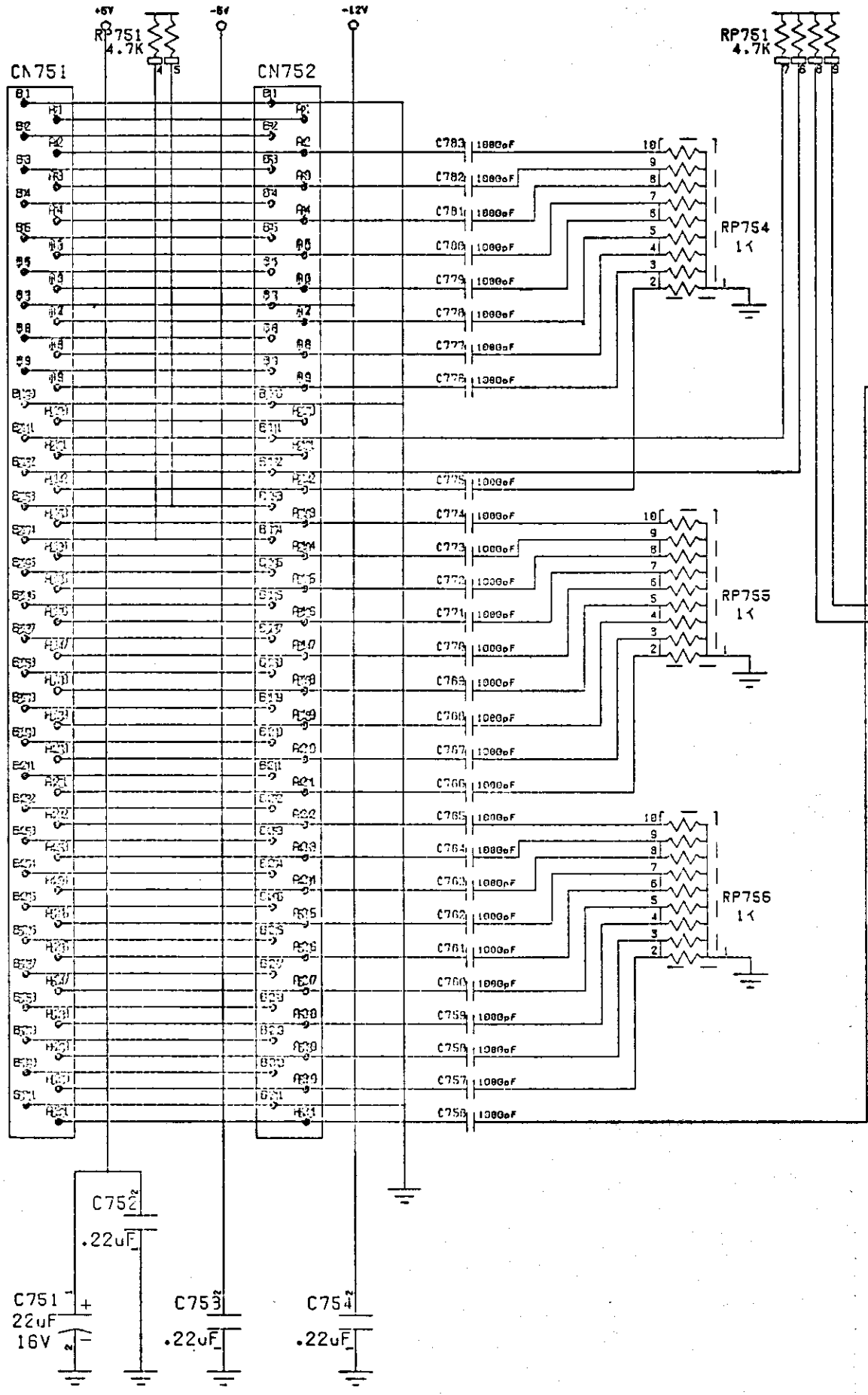


IBM 8 E

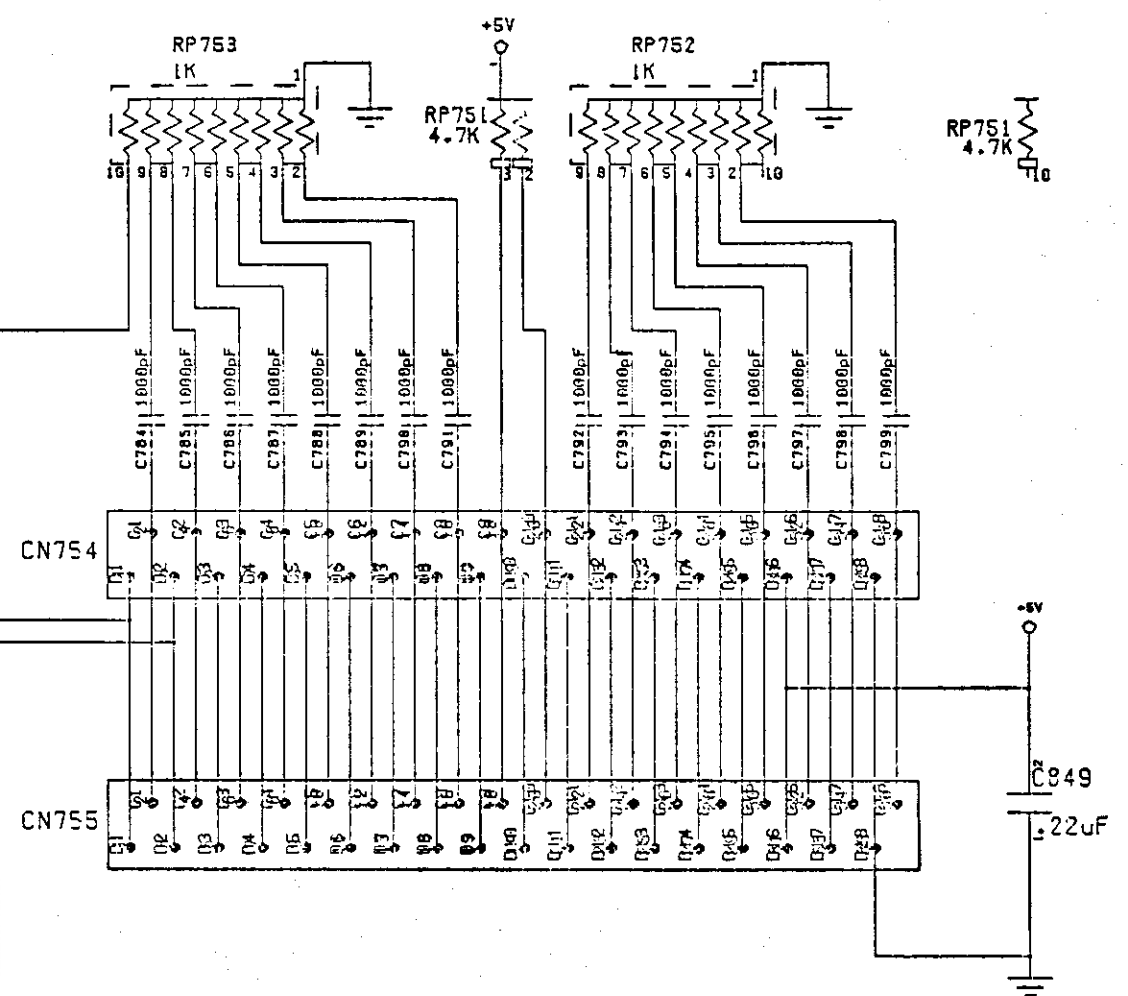


C751  
22uF  
16V

8 BIT SLOTS

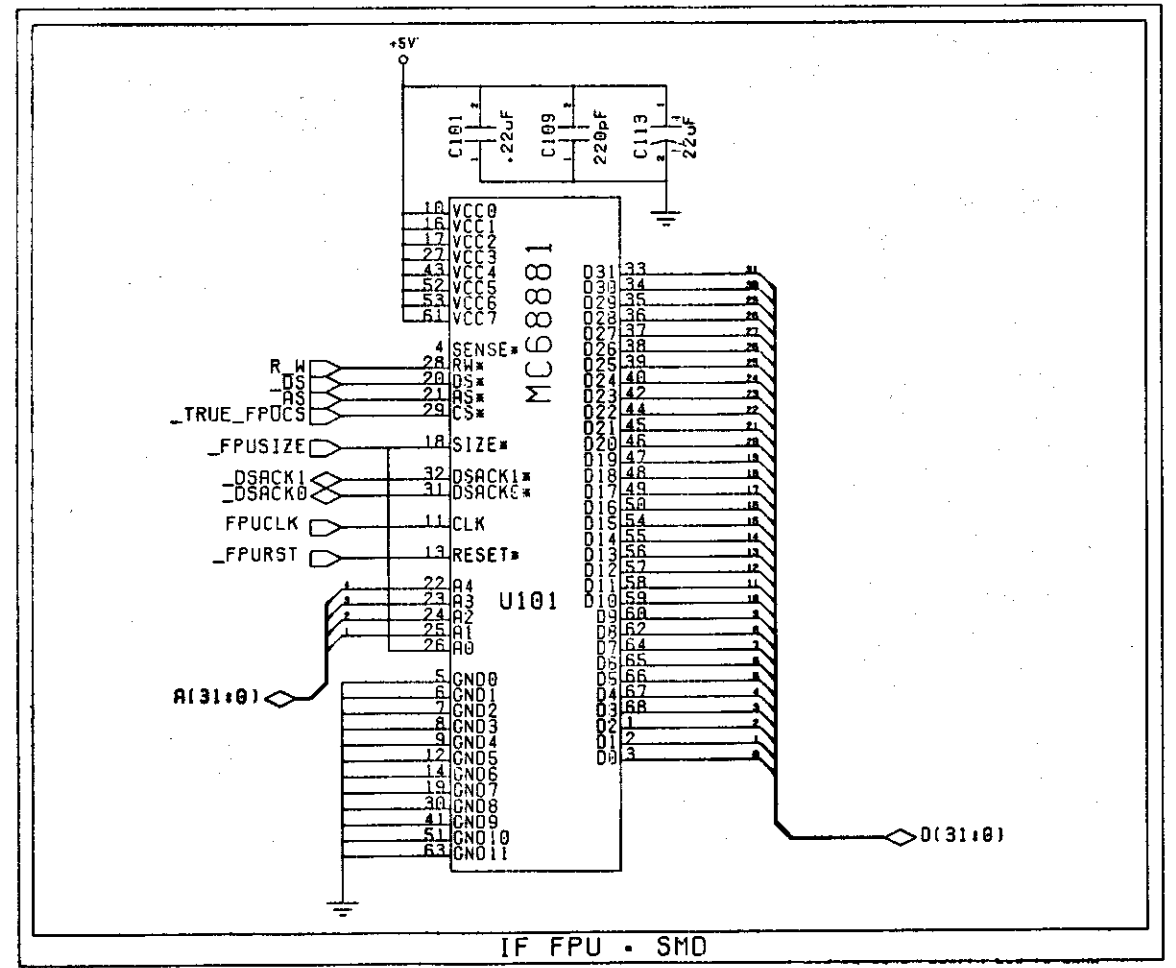
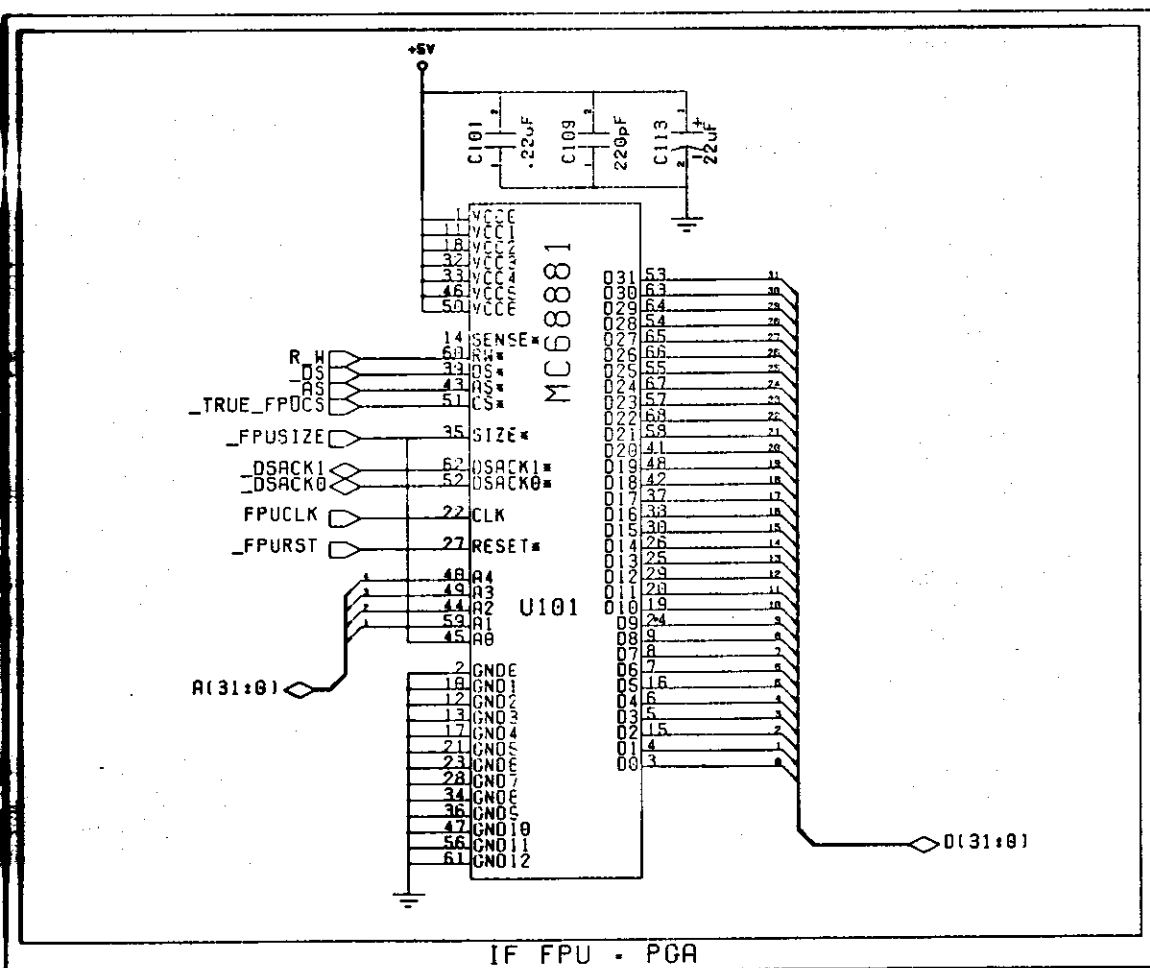
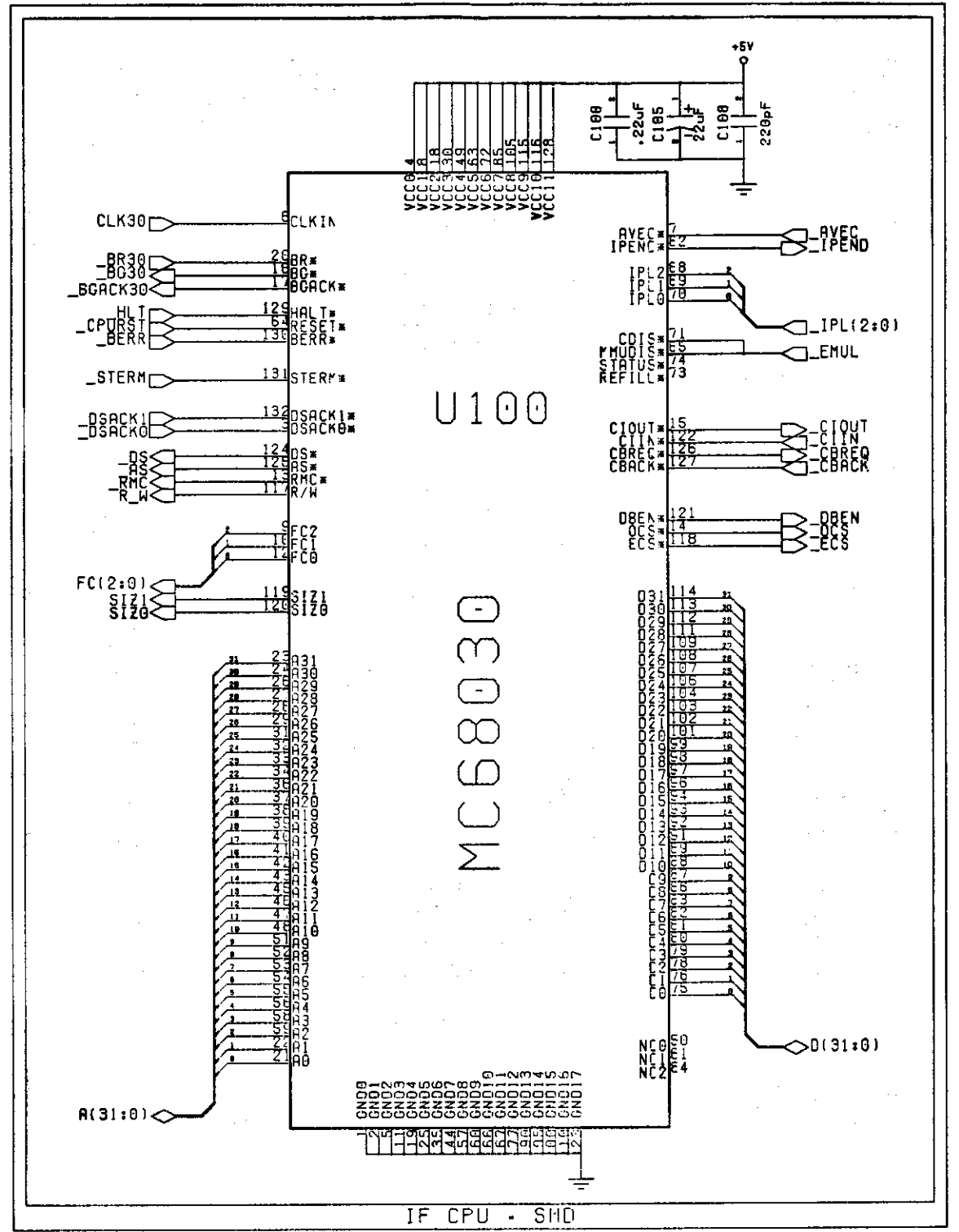
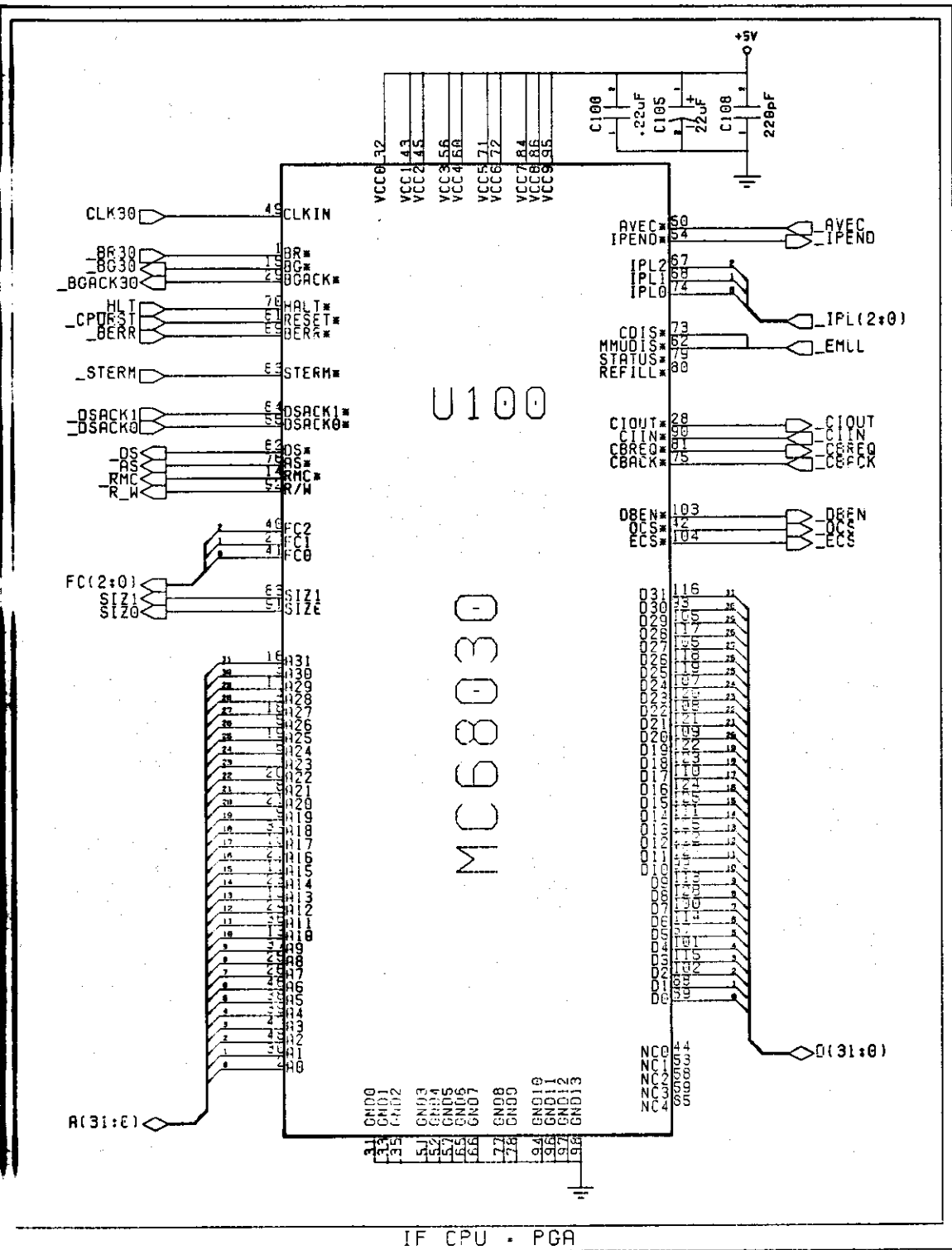


IBM 16 BIT EXTENSION SLOTS








# A3000 SYSTEM SCHEMATICS





**Schematic #313311, Rev. A**  
**Sheet 2 of 16**

A(0:31) 


D(31:0) 

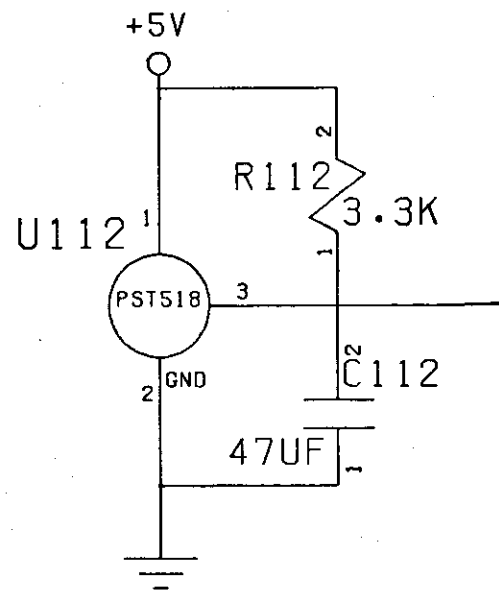
FC(2:0) 

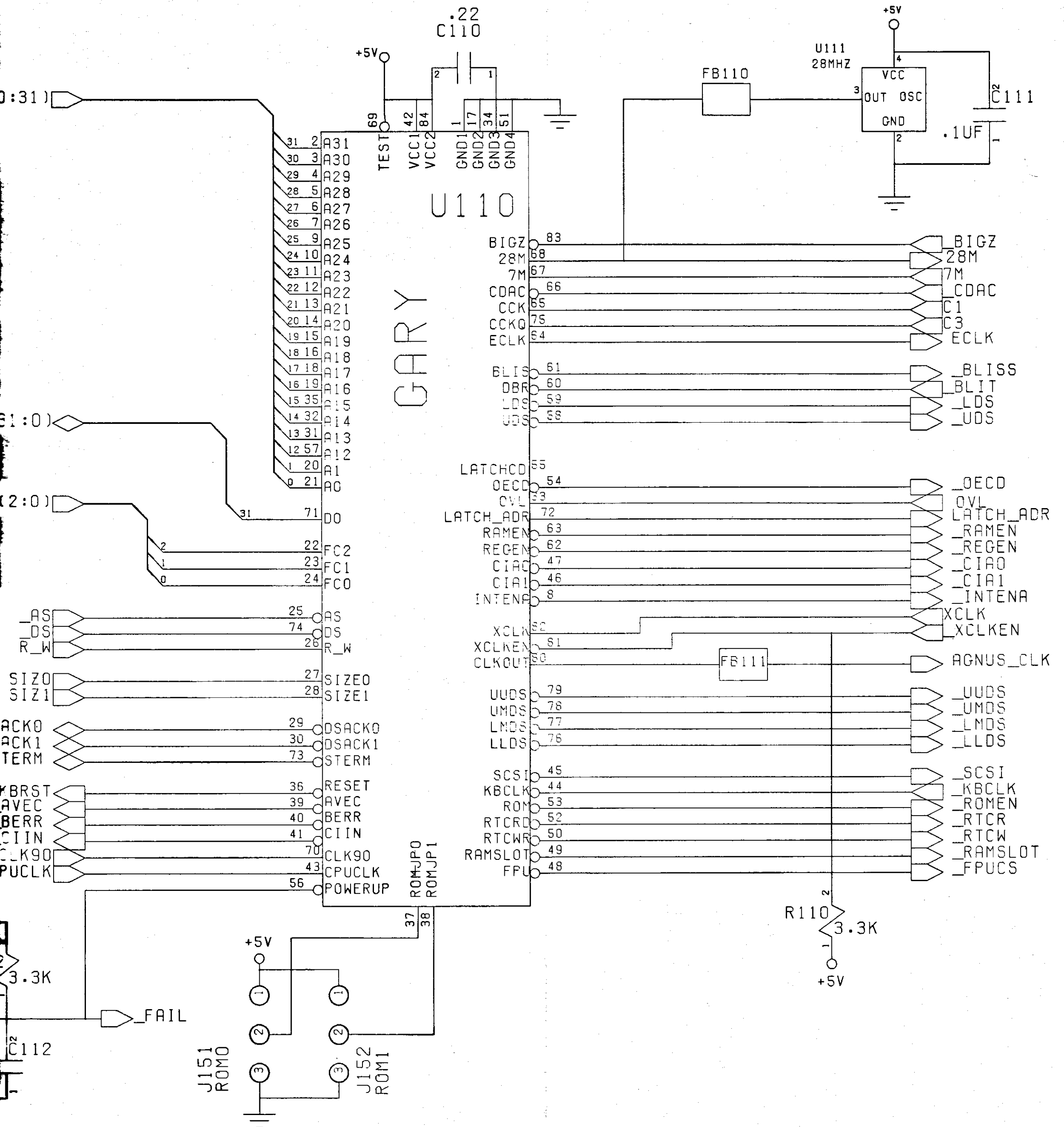
  
\_AS  
\_DS  
R\_W

  
SIZE  
SIZE1

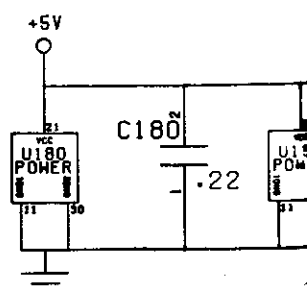
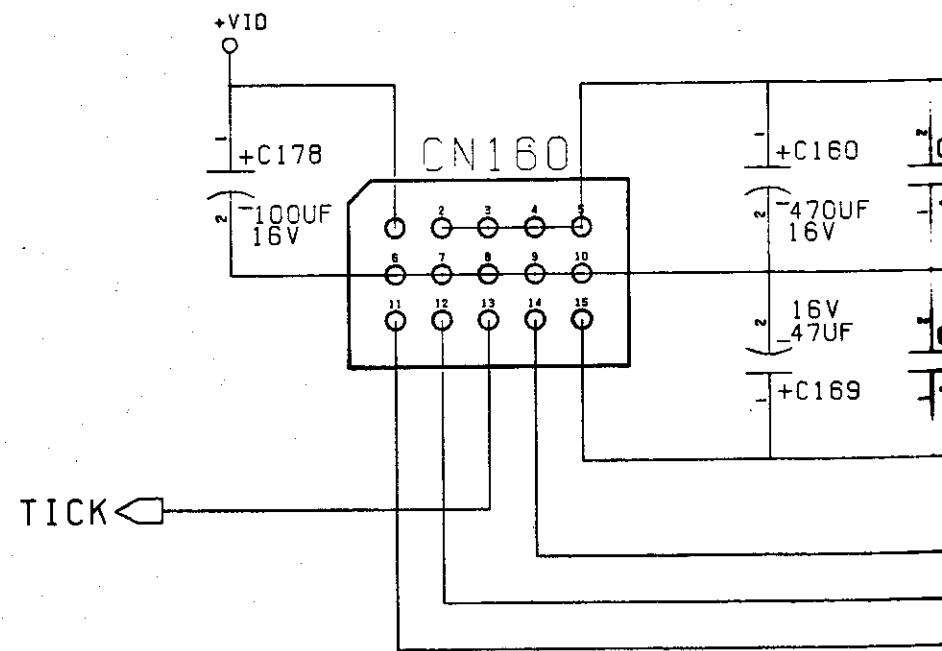
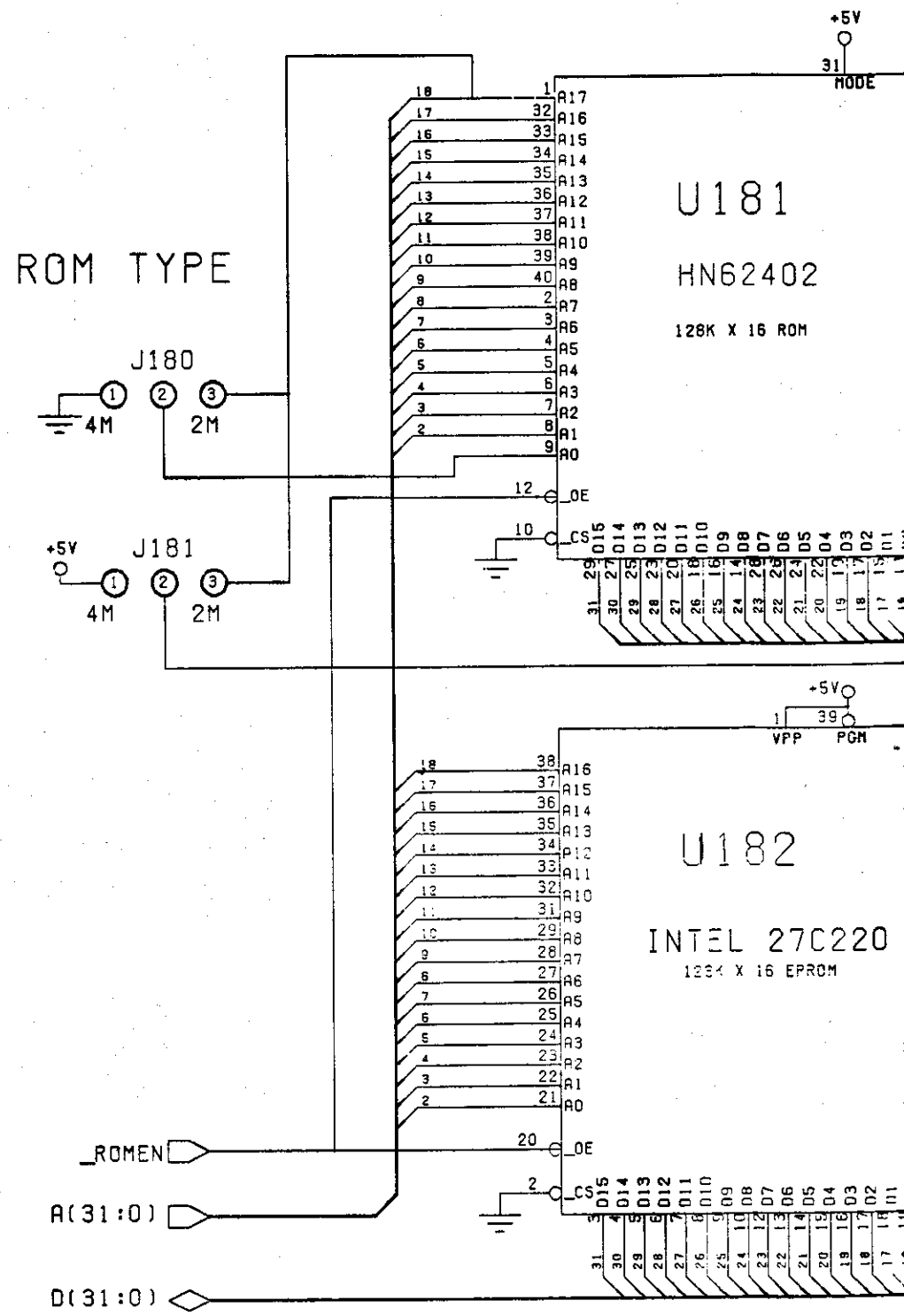
  
\_DSACK0  
\_DSACK1  
\_STERM

  
\_KBRST  
\_AVEC  
\_BERR  
\_CIIN  
CLK90  
CPUCLK

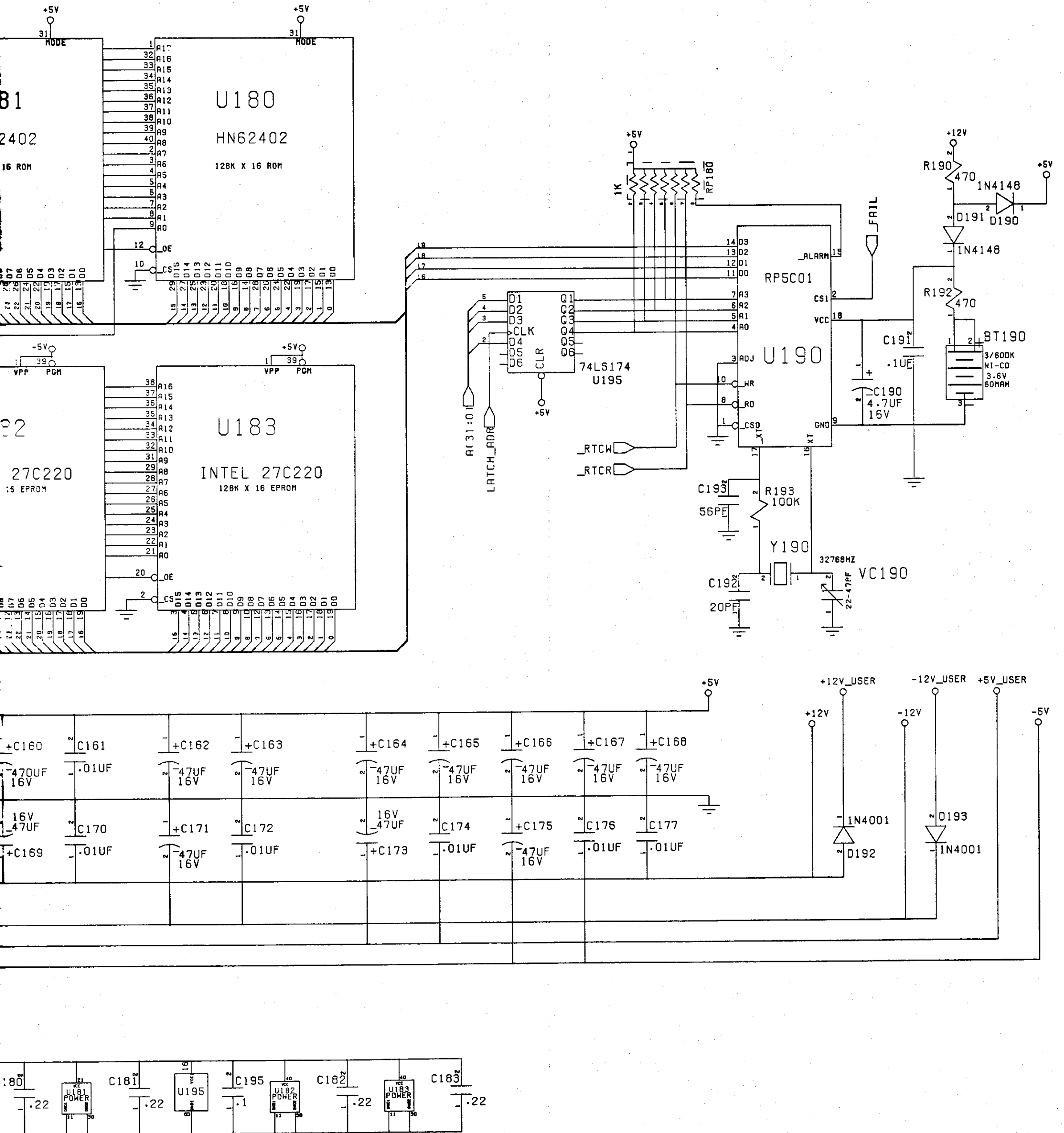




**Schematic #313311, Rev. A**  
*Sheet 3 of 16*

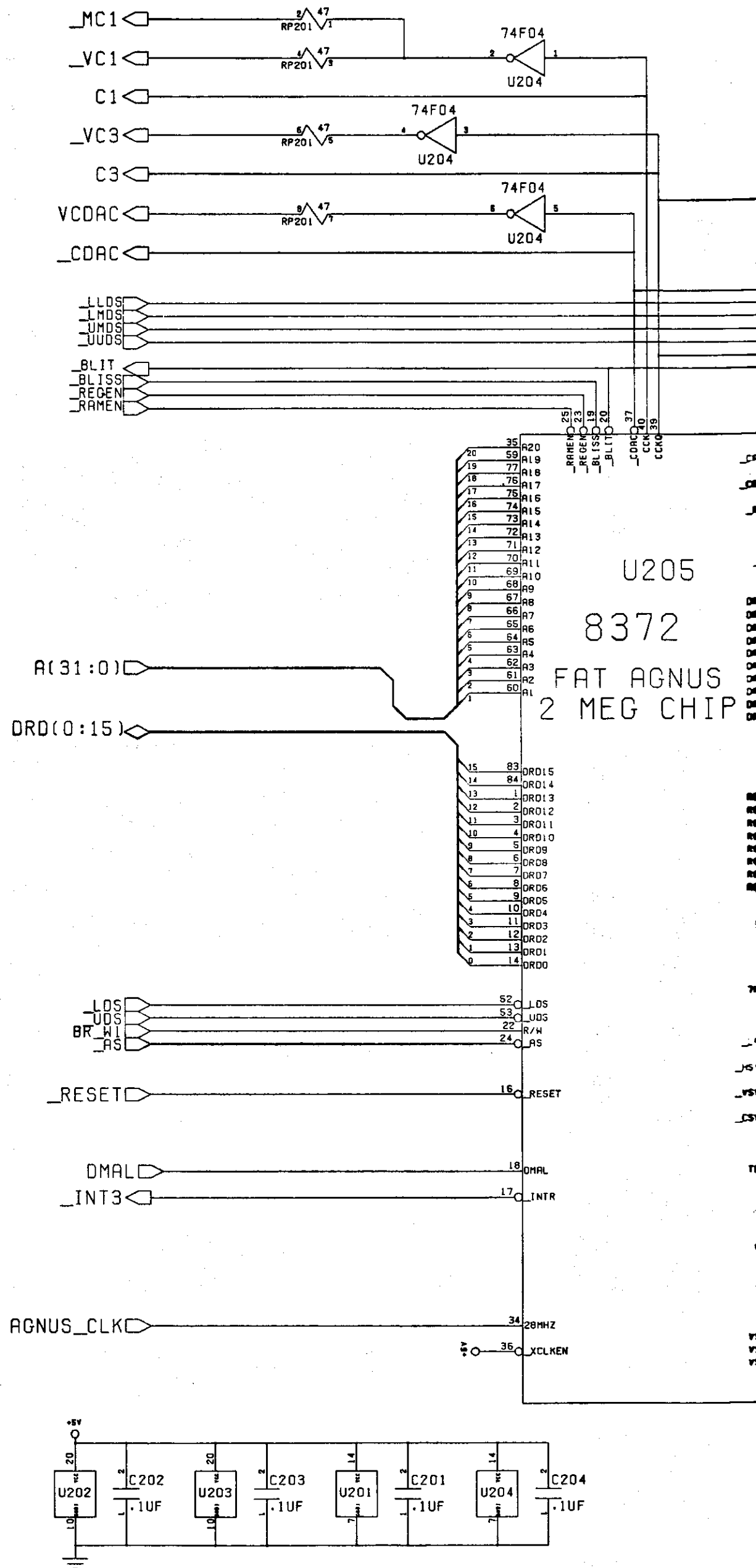


# A3000 SYSTEM SCHEMATICS

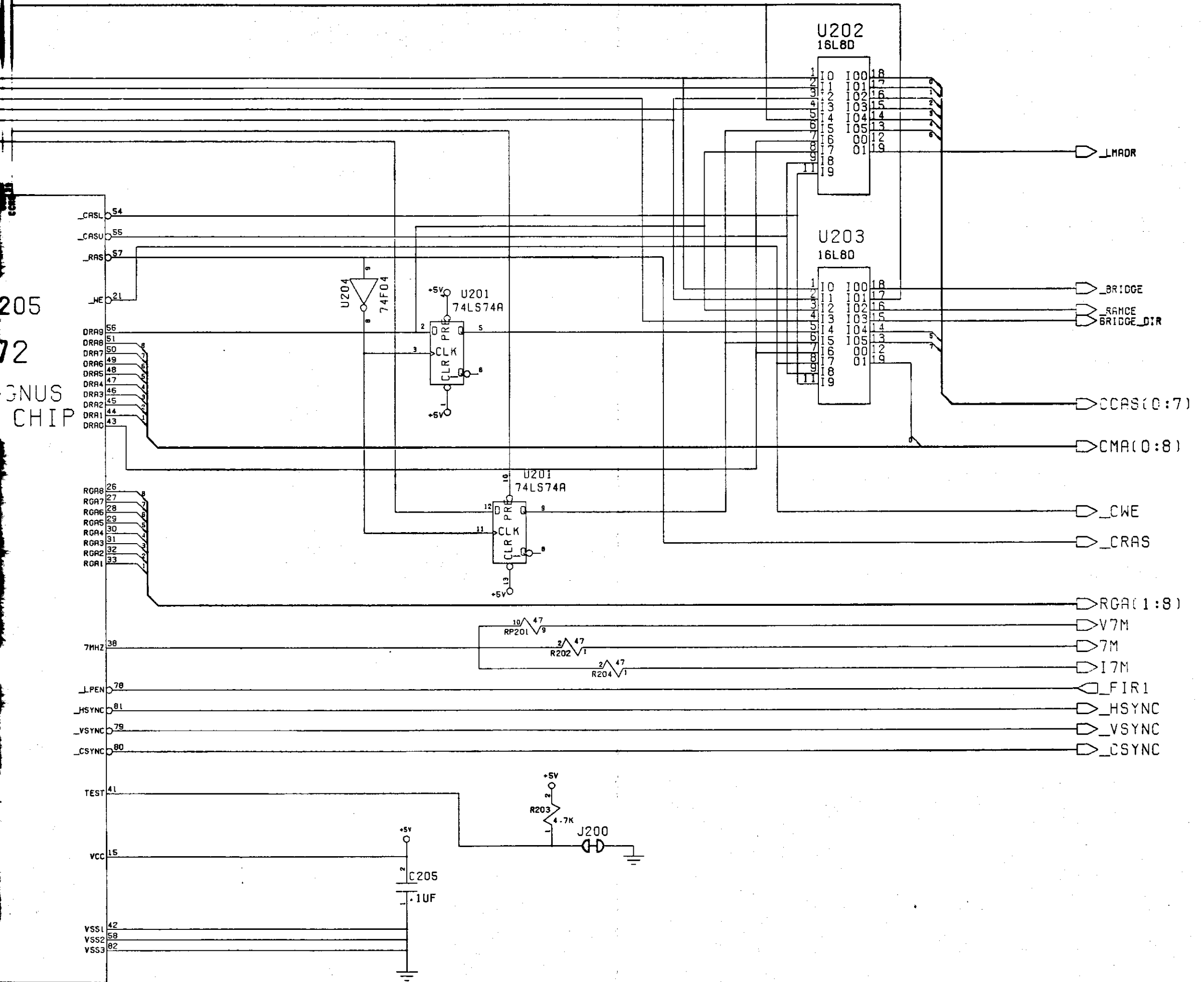




**Schematic #313311, Rev. A**  
*Sheet 4 of 16*

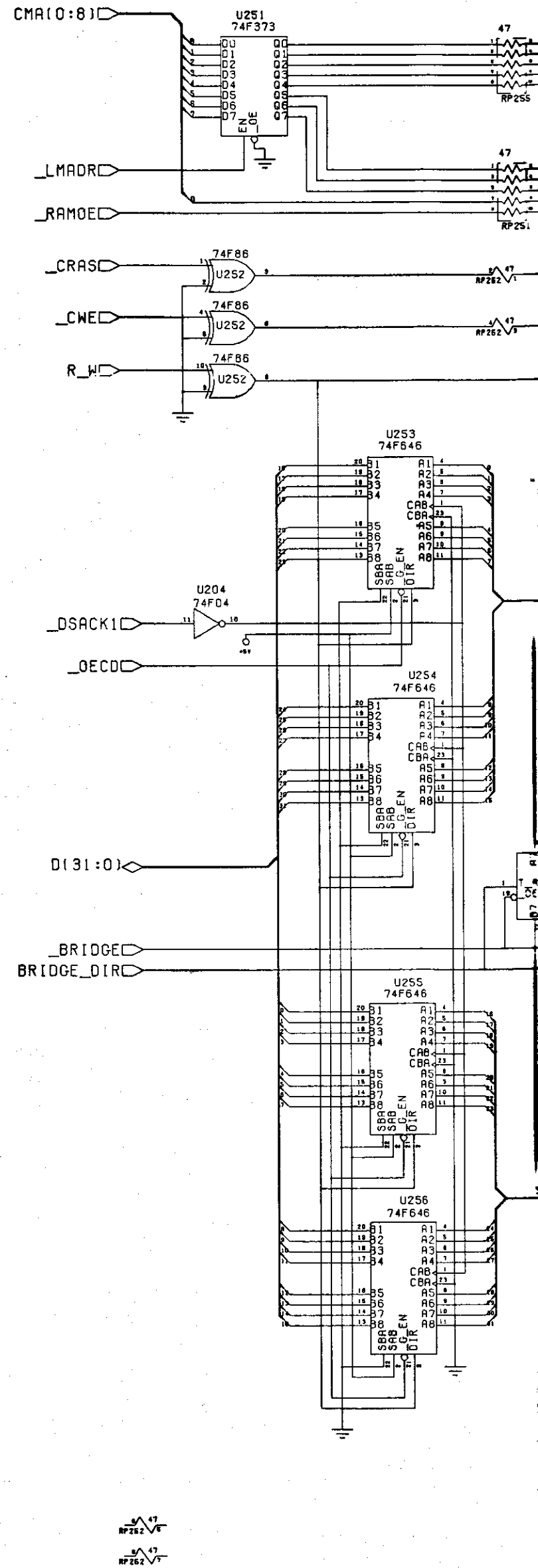


# A3000 SYSTEM SCHEMATICS

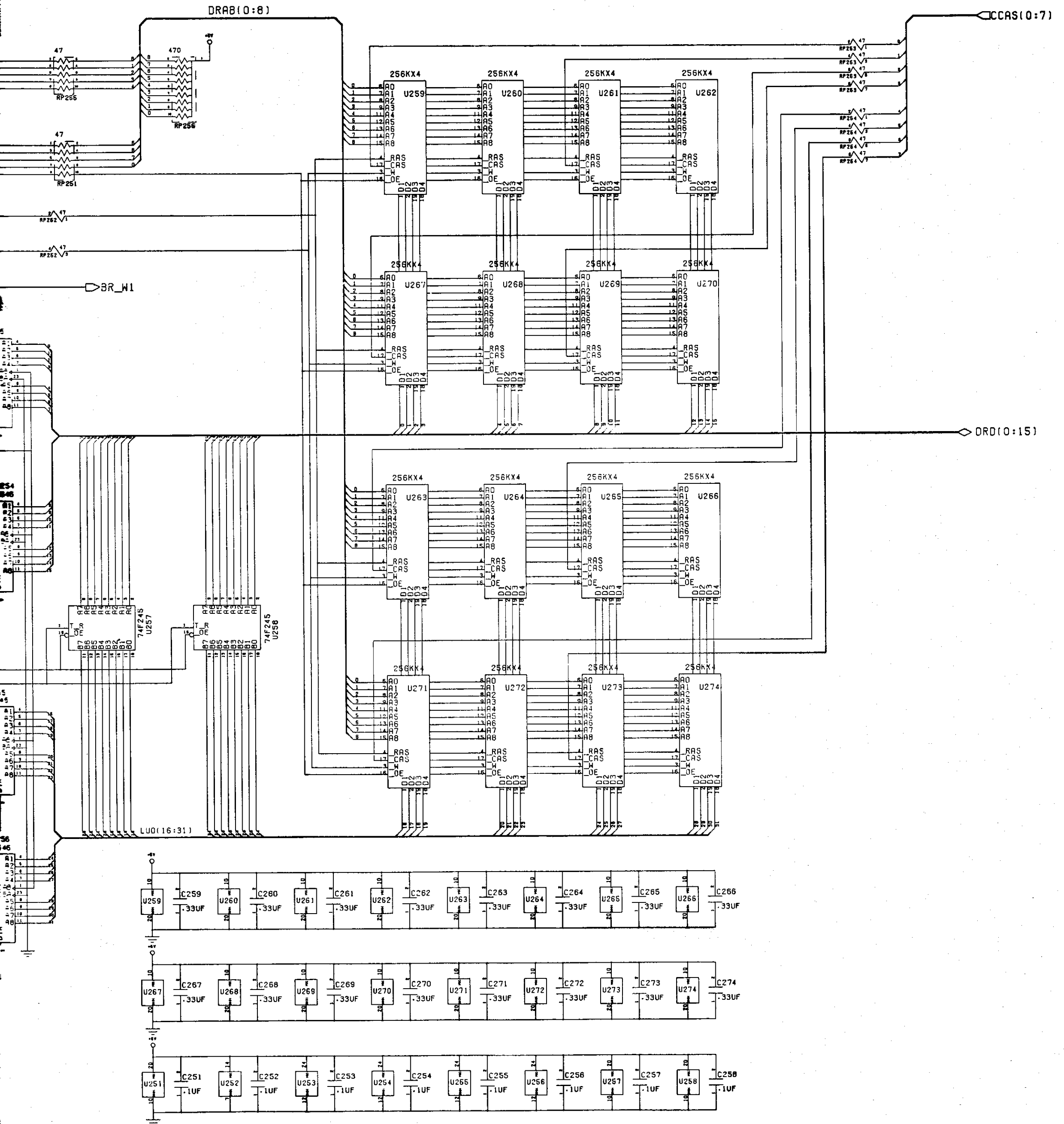


# Schematic #313311, Rev. A

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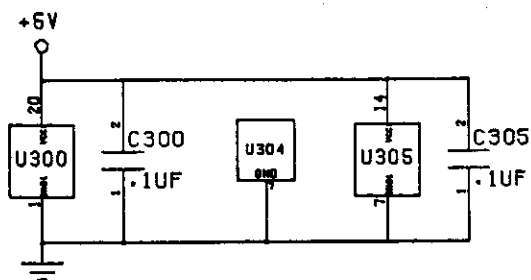
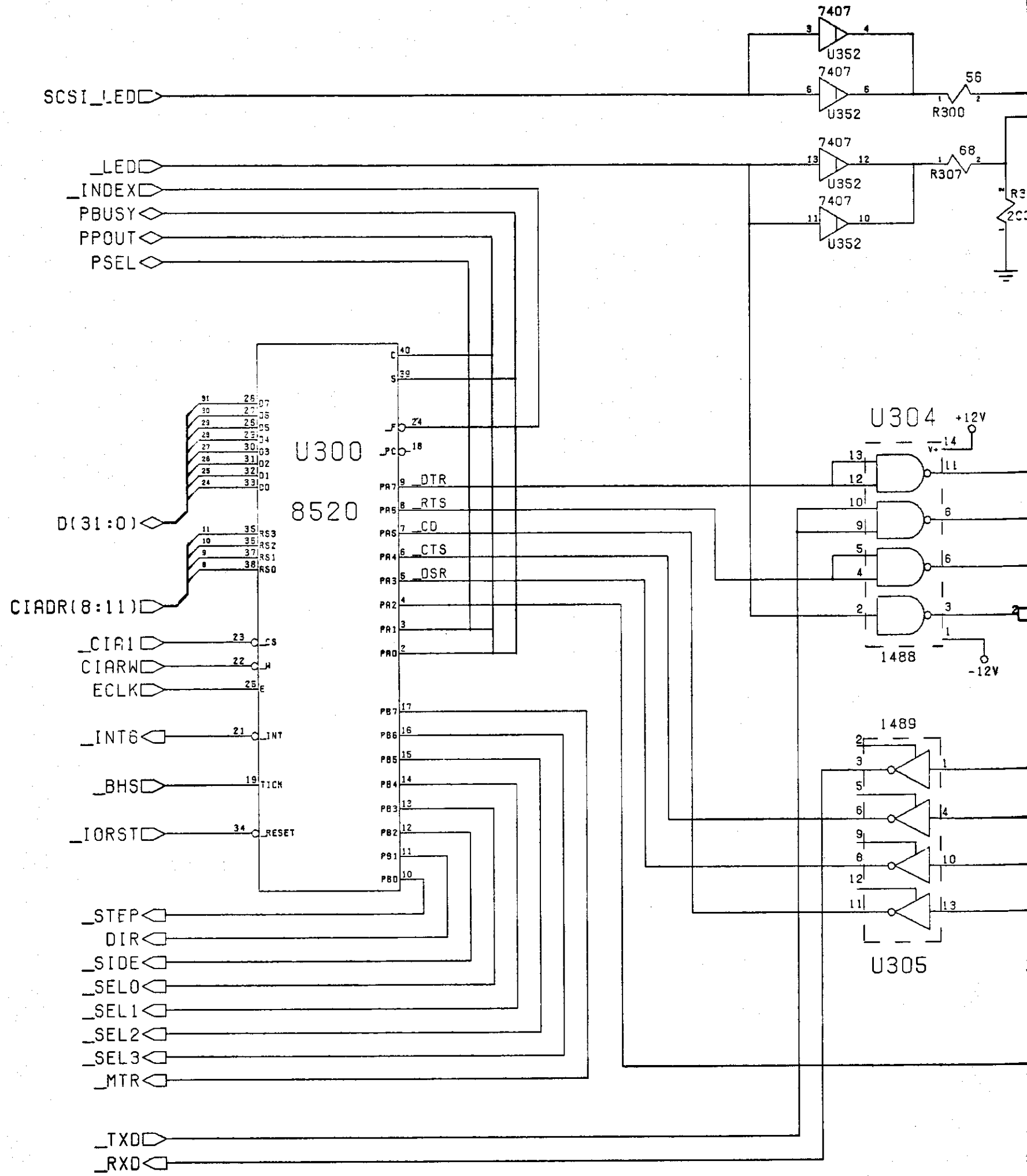


# A3000 SYSTEM SCHEMATICS

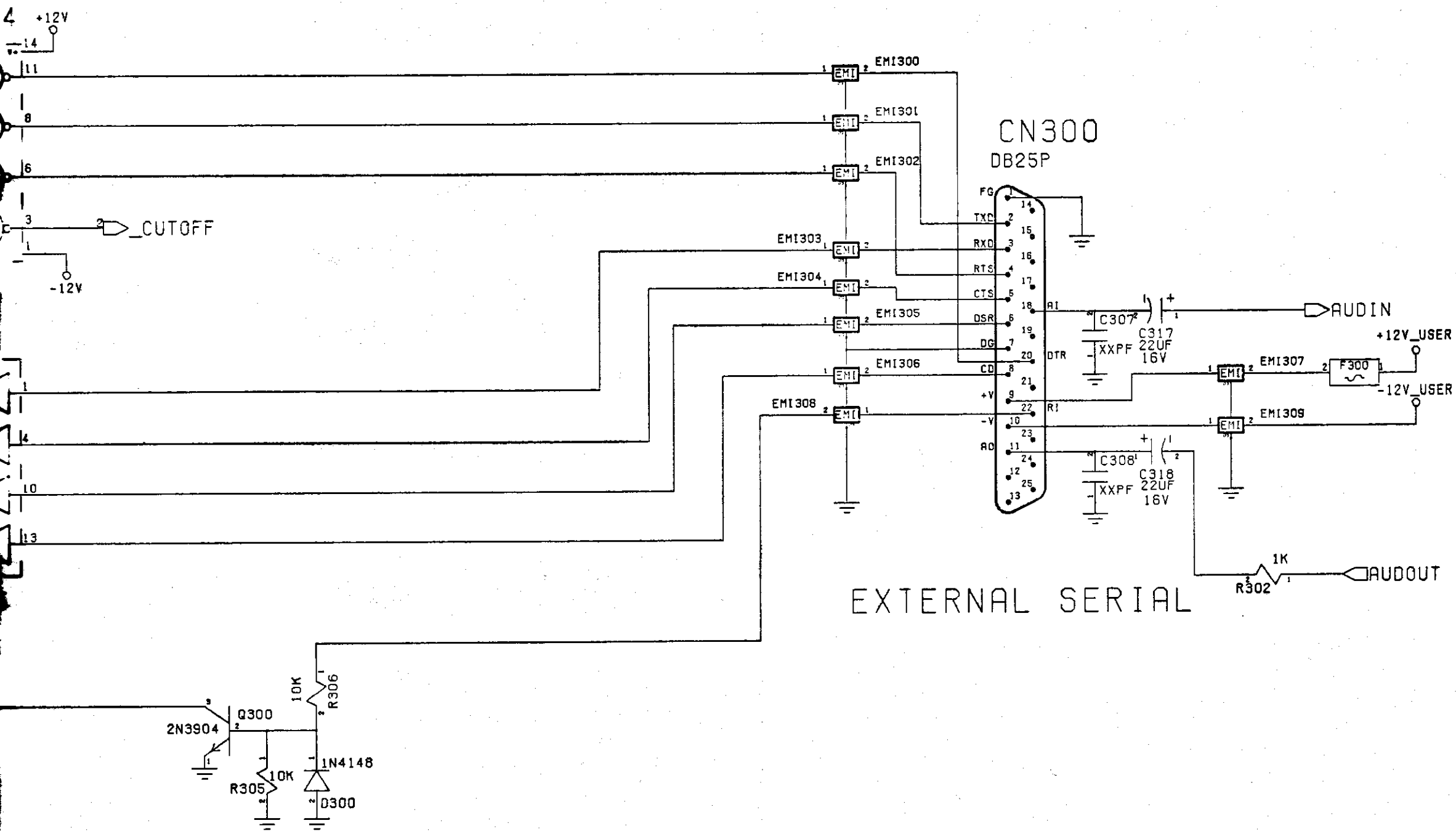
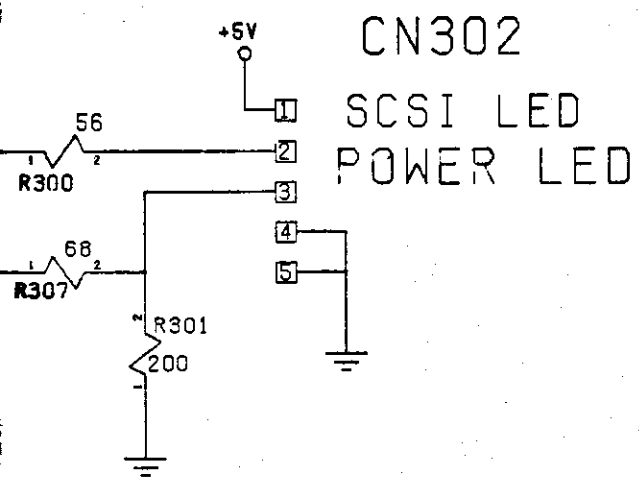


# Schematic #313311, Rev. A

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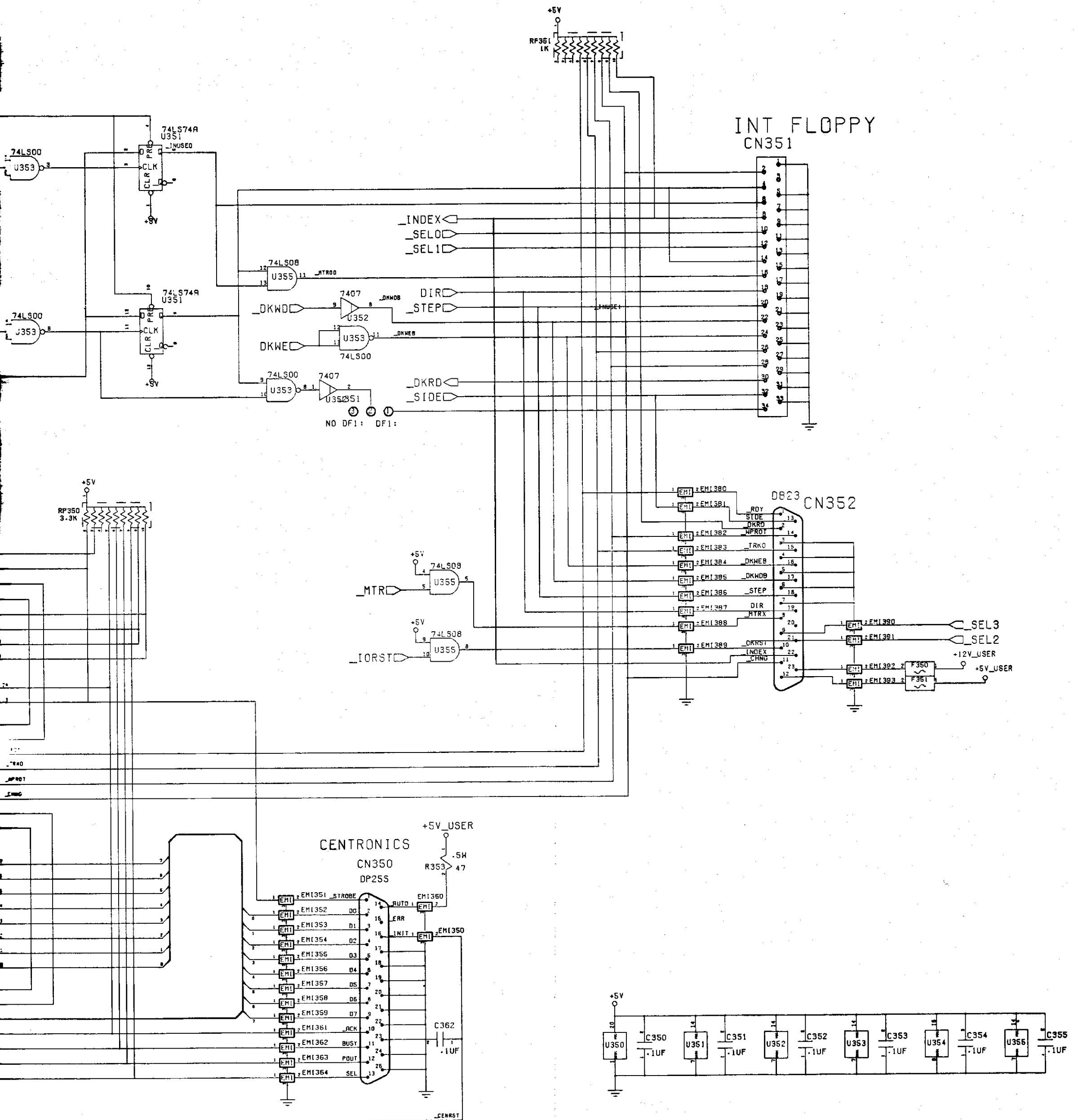


# A3000 SYSTEM SCHEMATICS





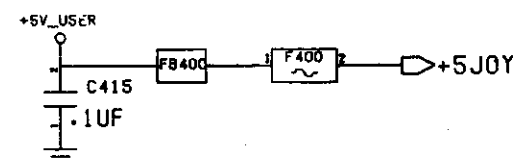
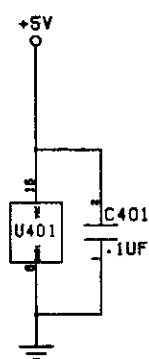
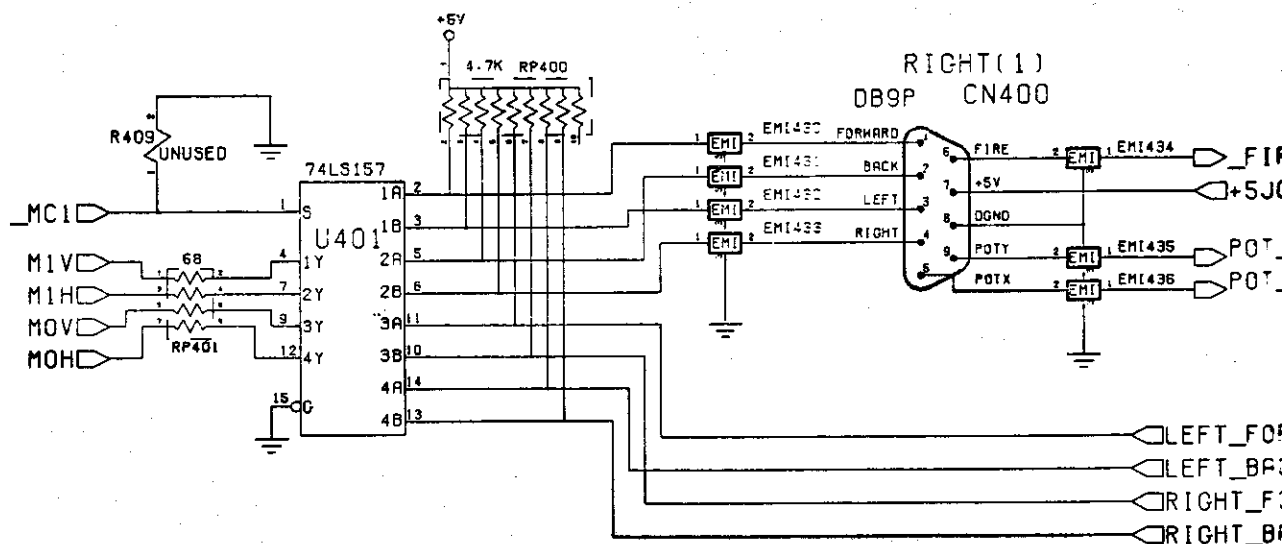
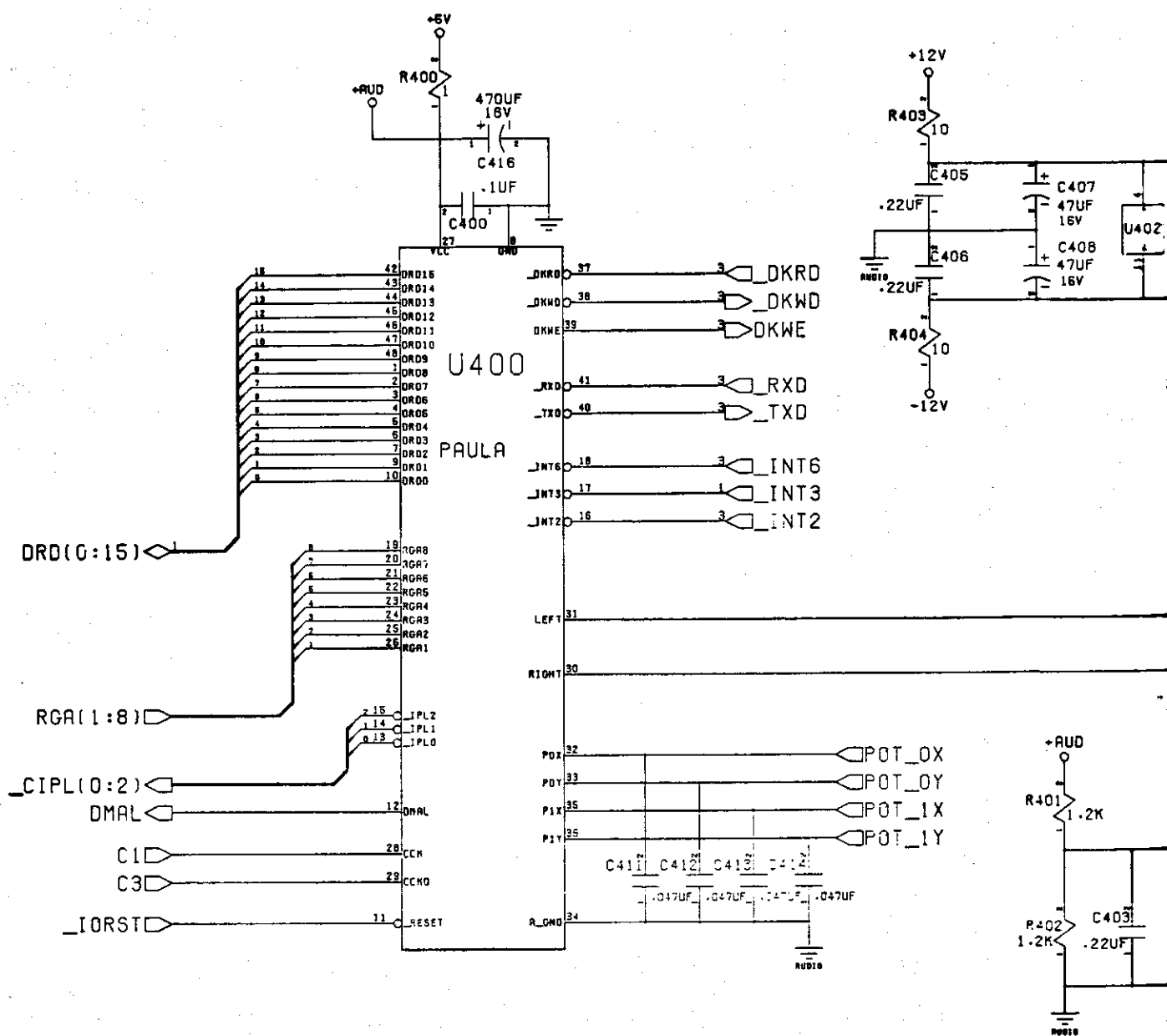
# A3000 SYSTEM SCHEMATICS



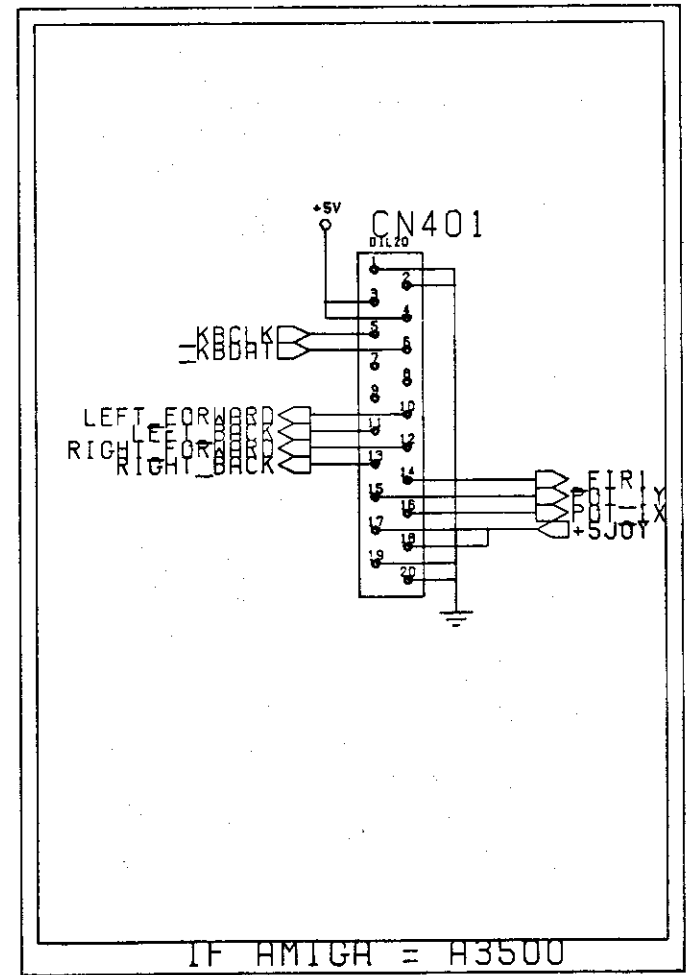
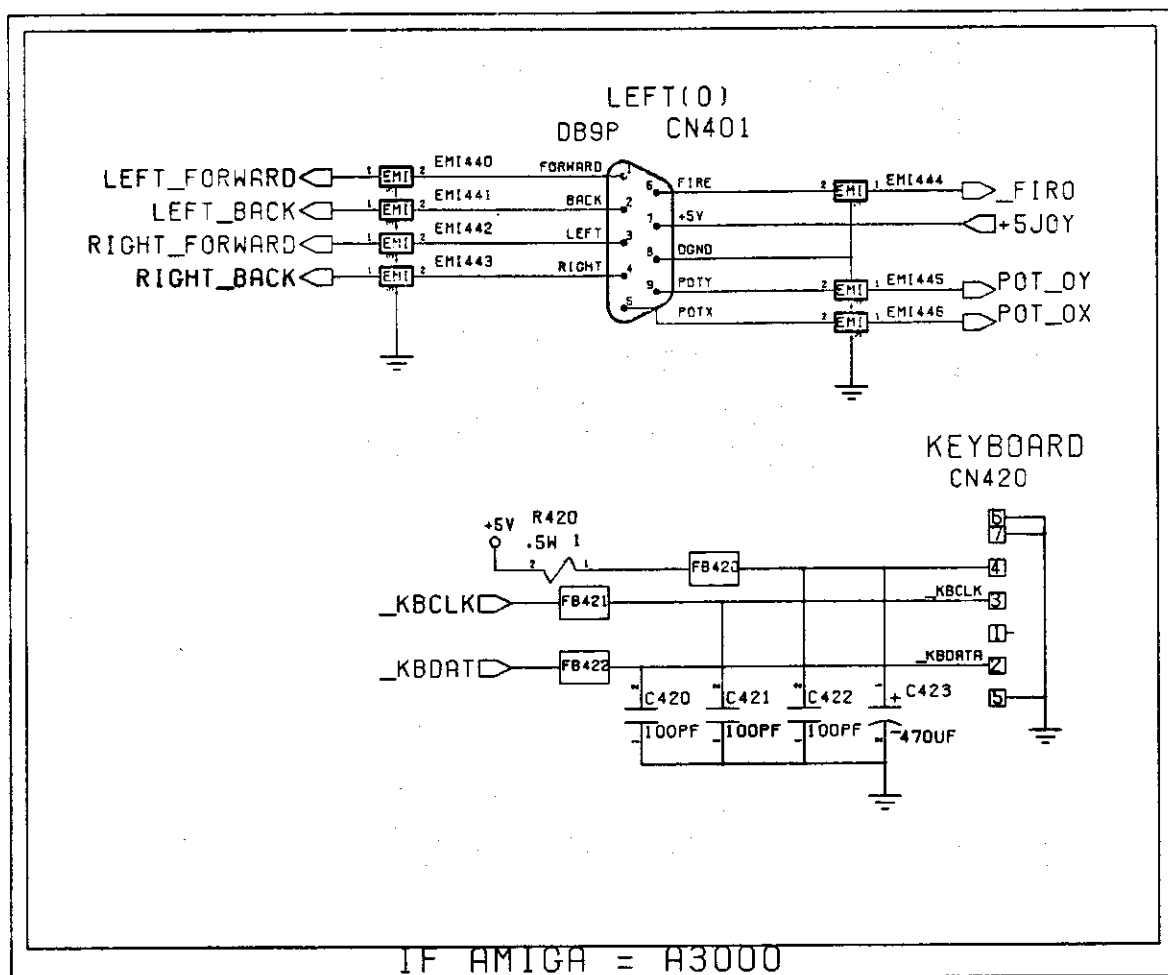
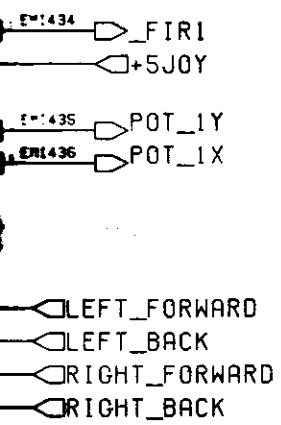
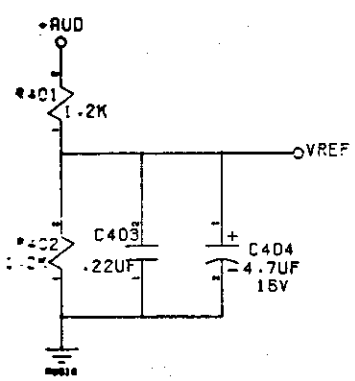
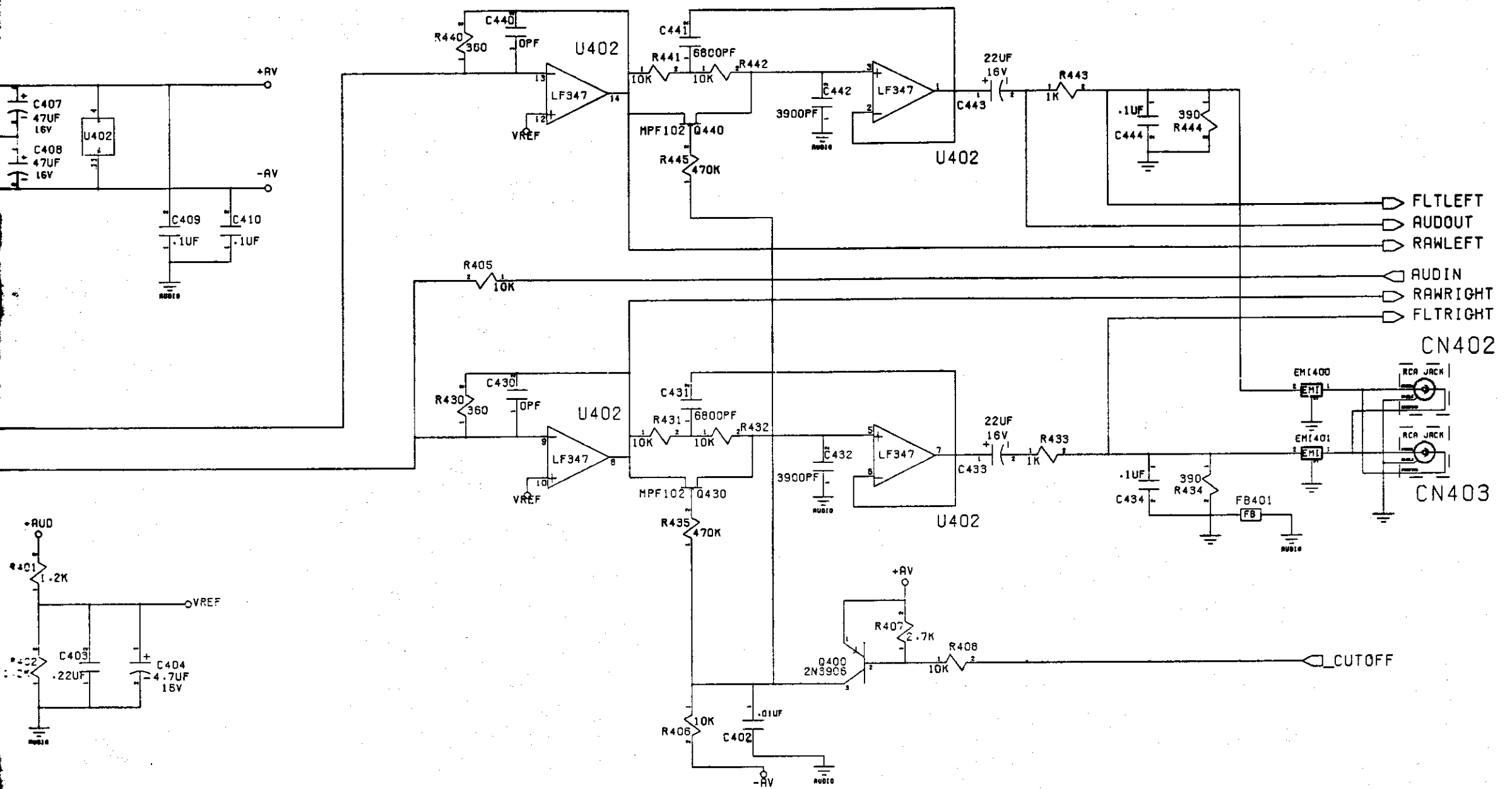


# Schematic #313311, Rev. A

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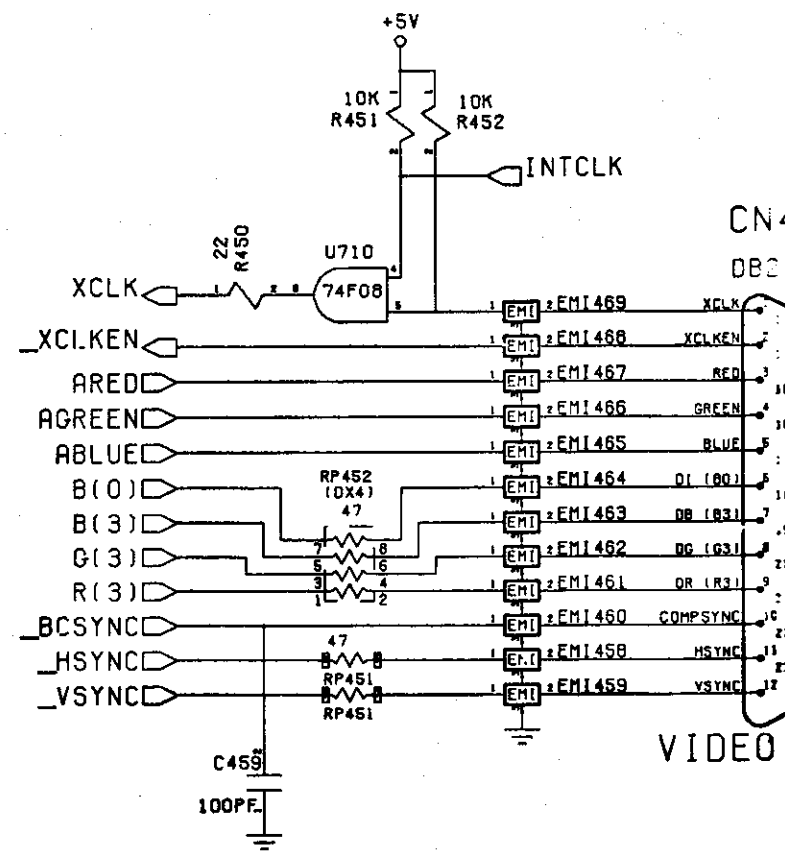
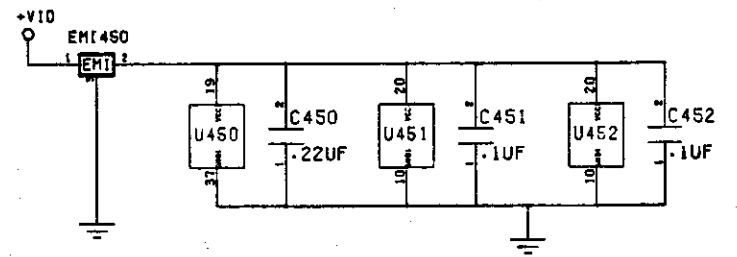
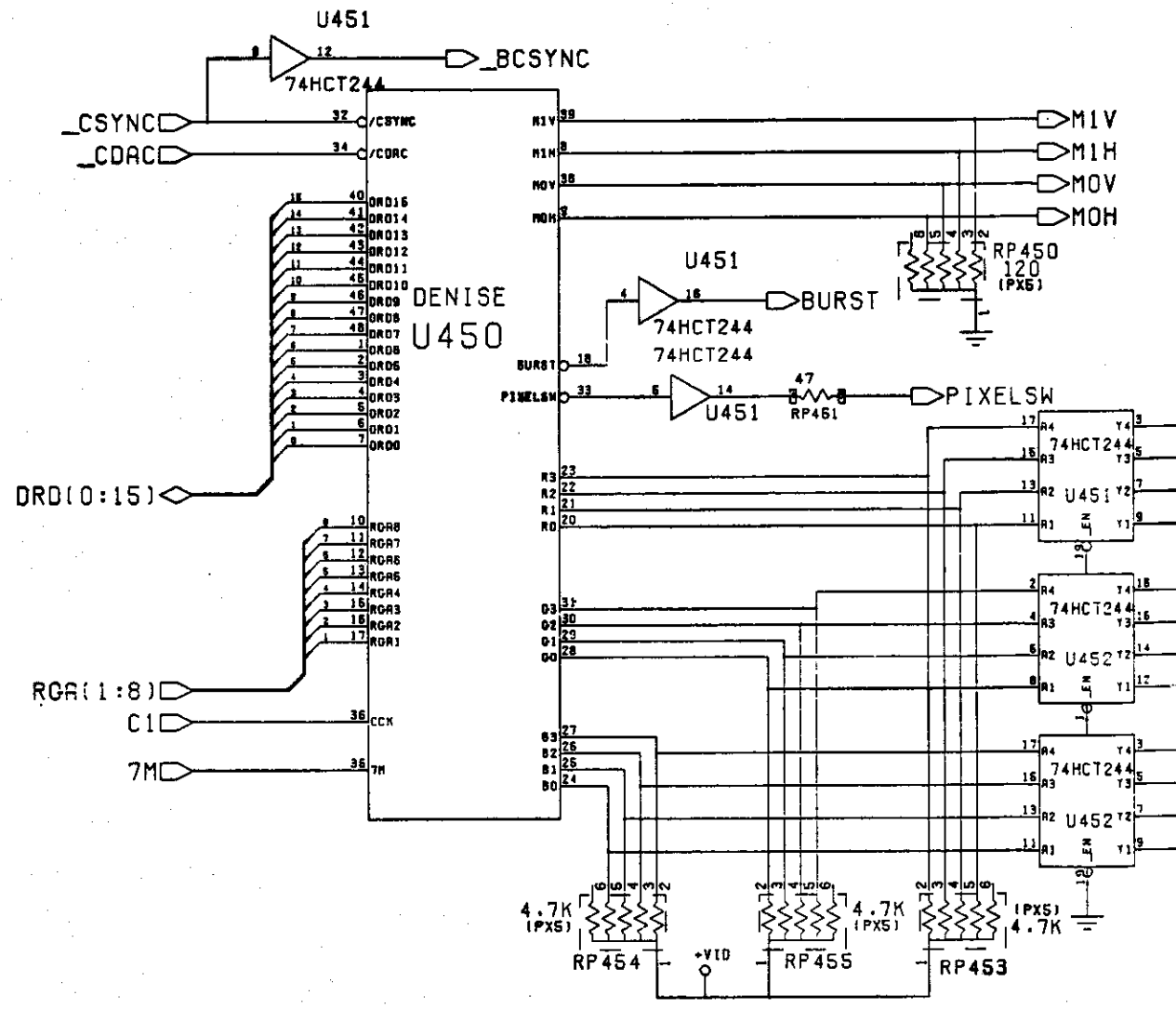


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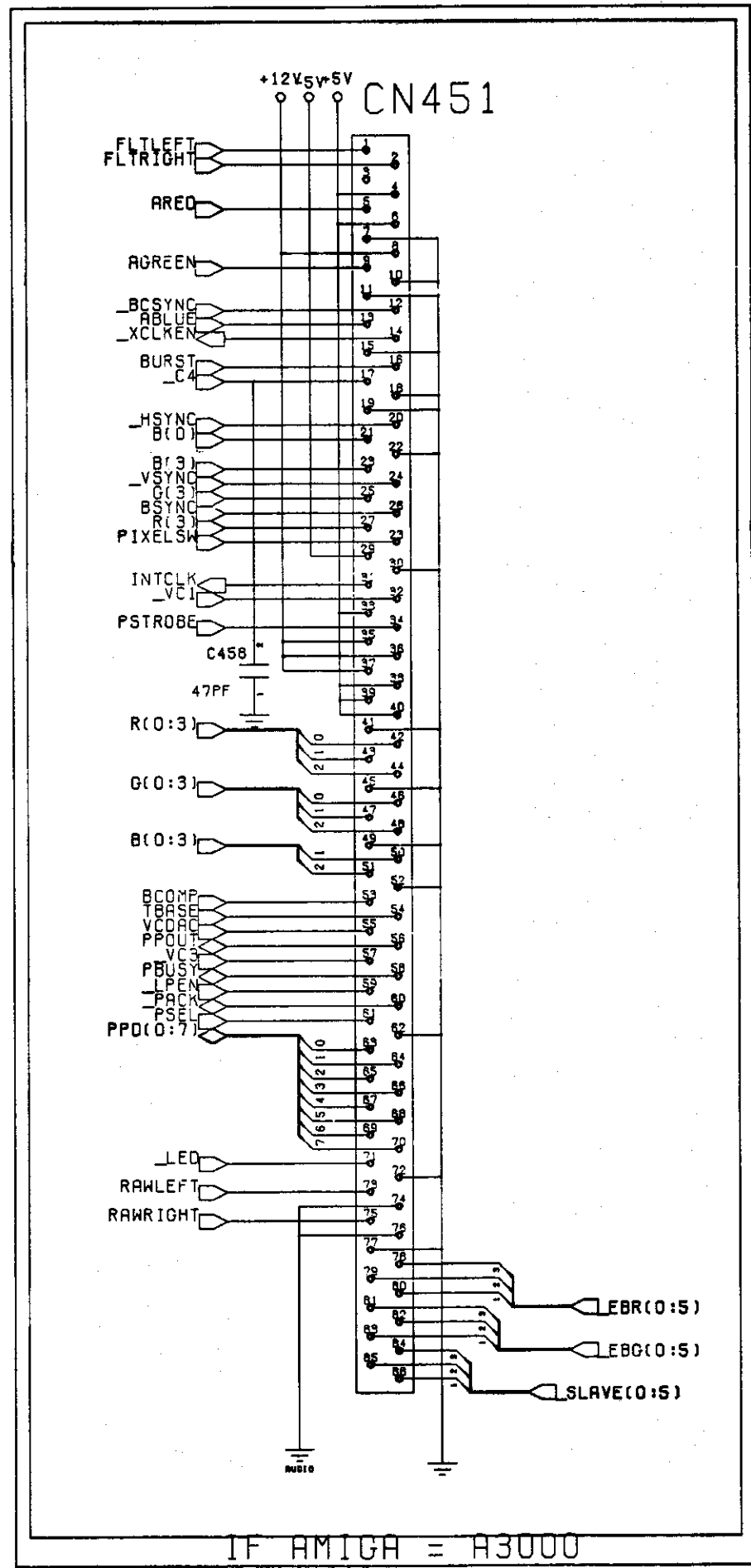
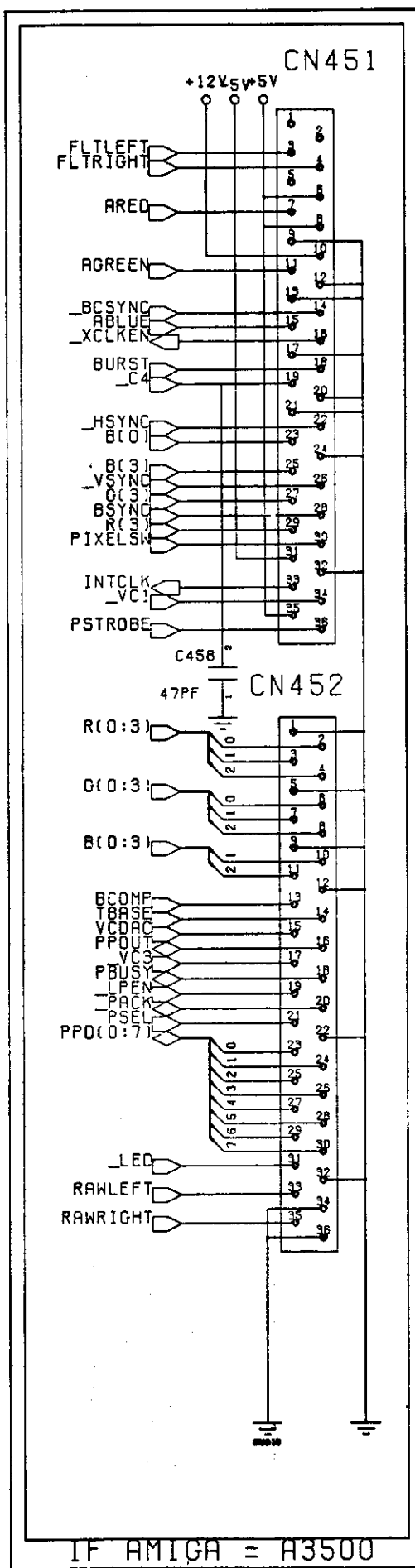
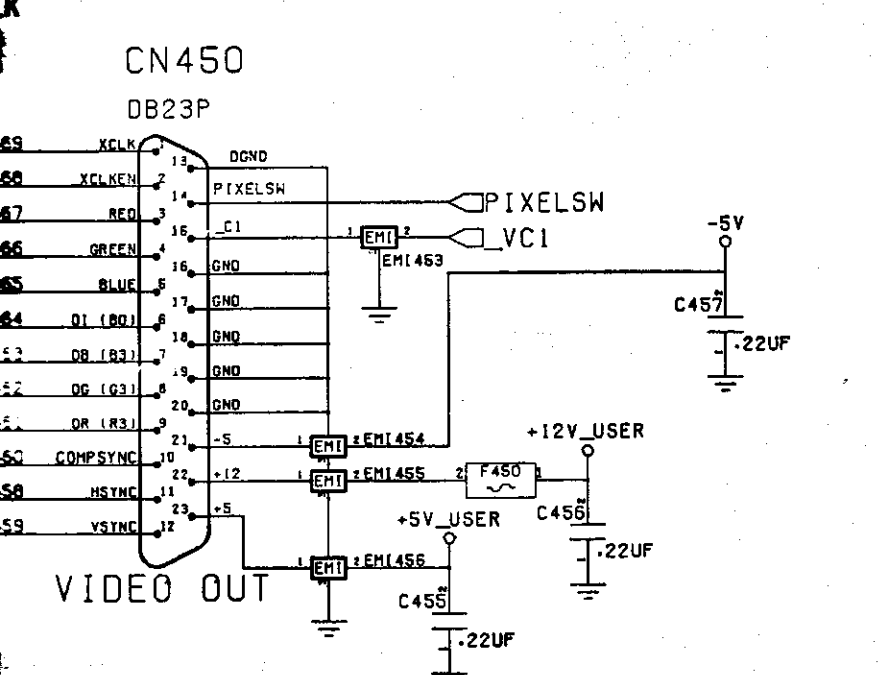
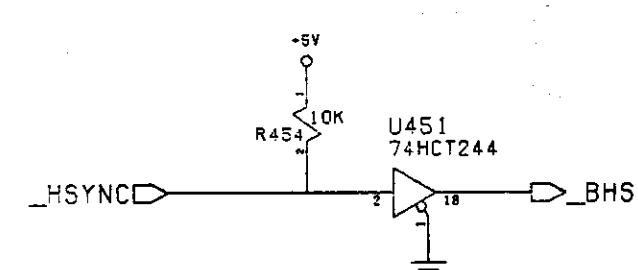
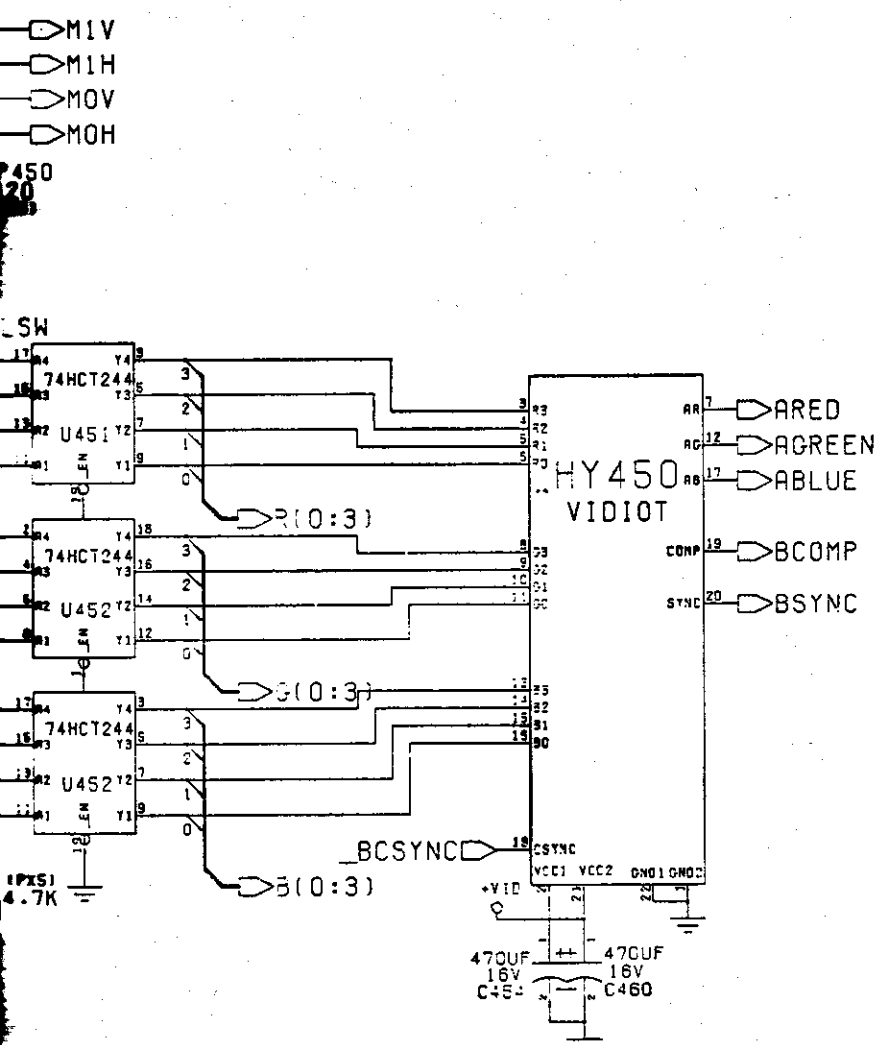


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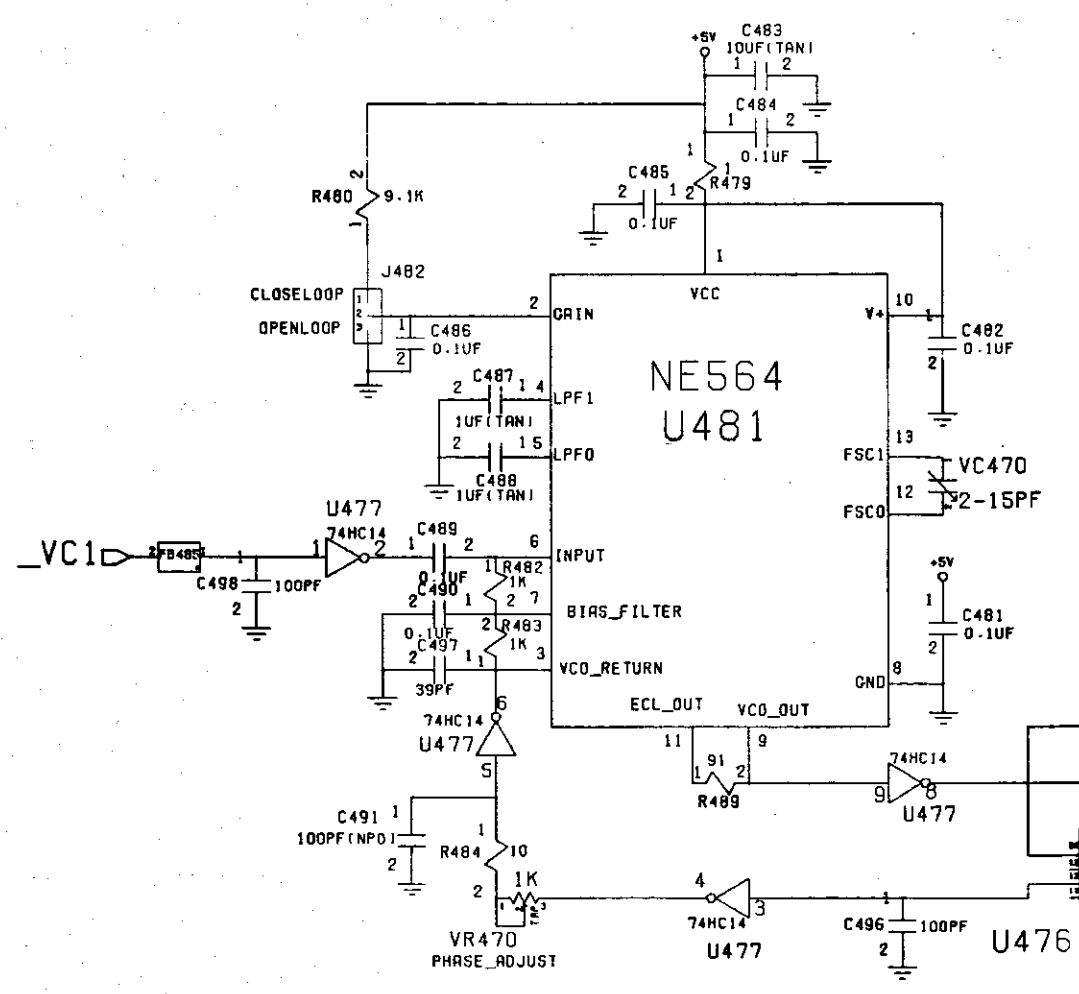
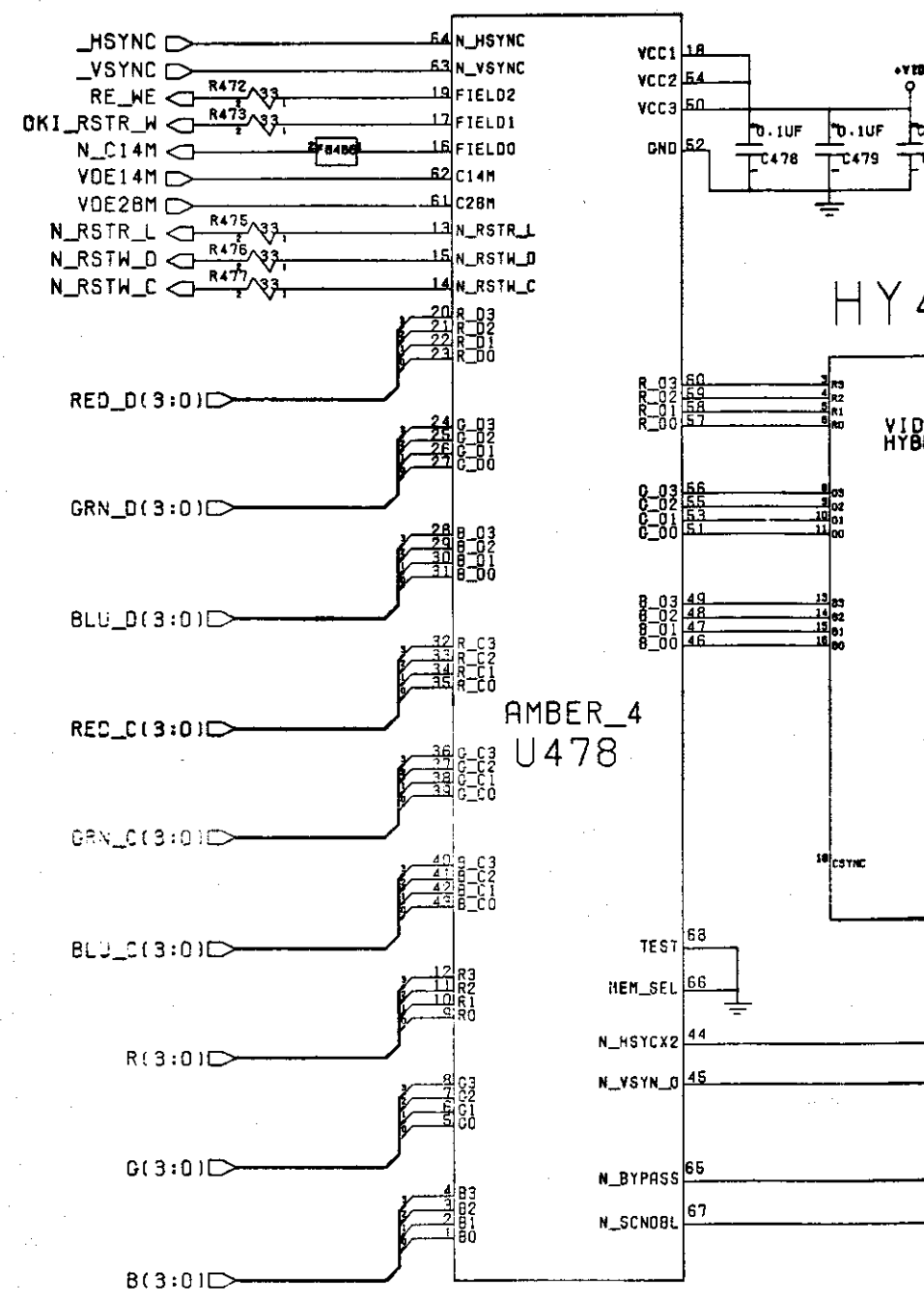


# A3000 SYSTEM SCHEMATICS

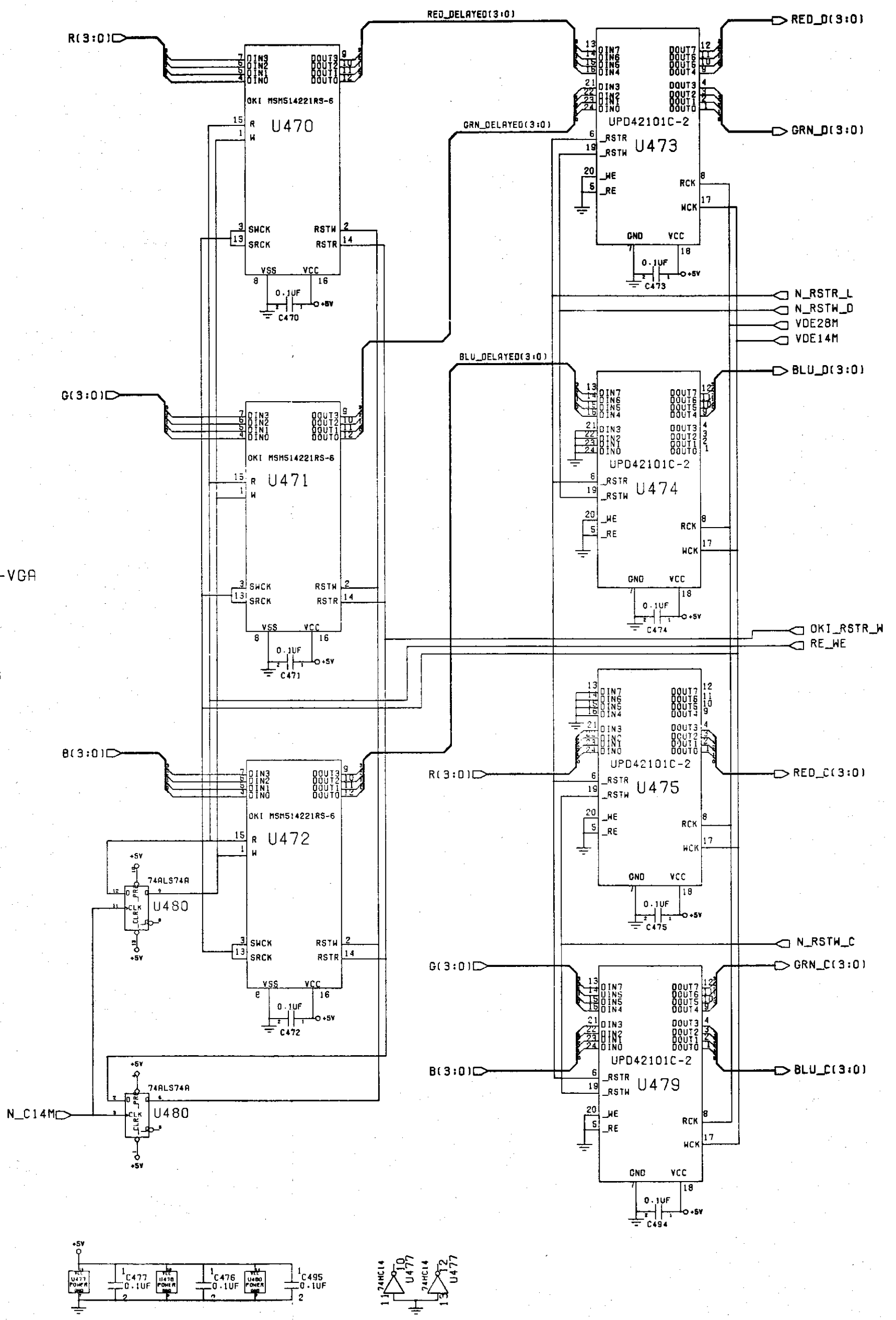
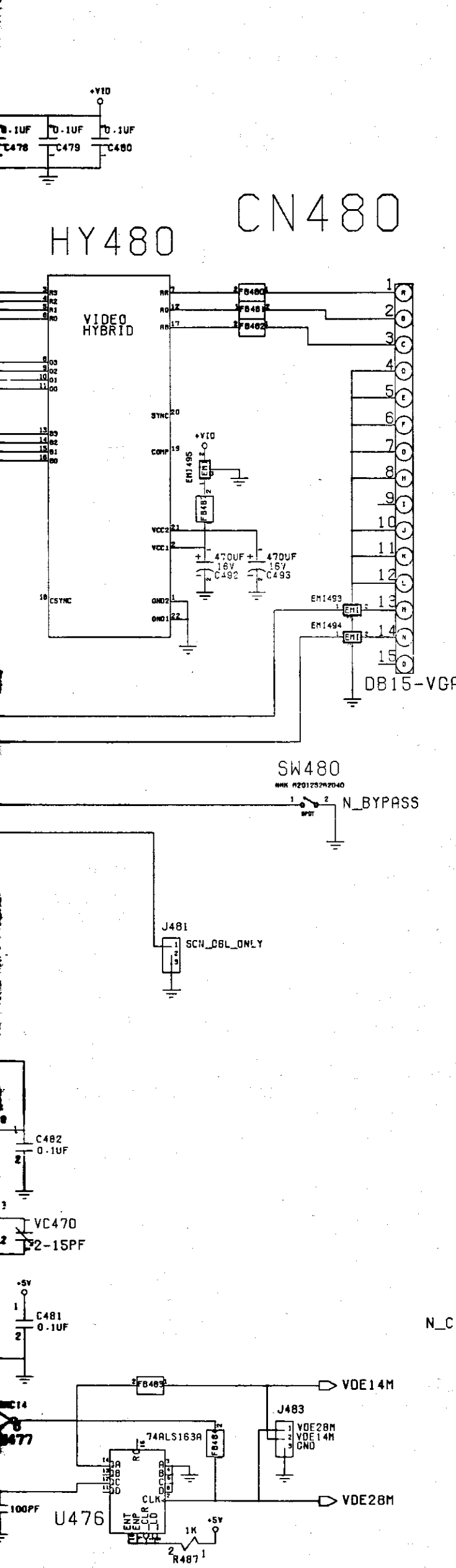


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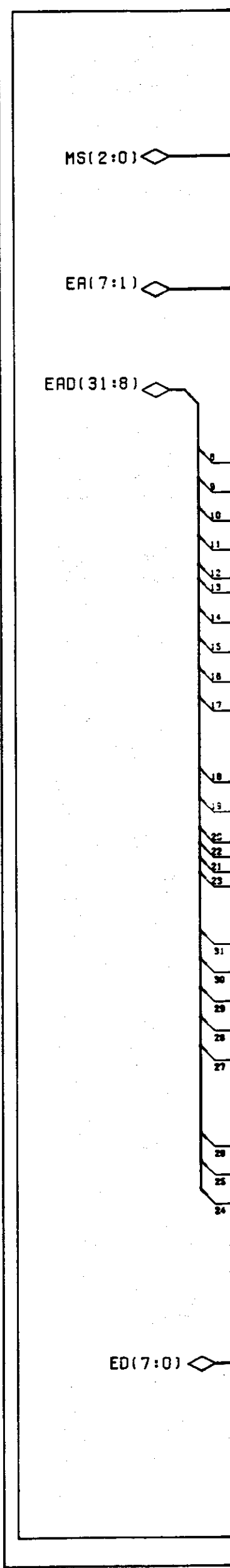


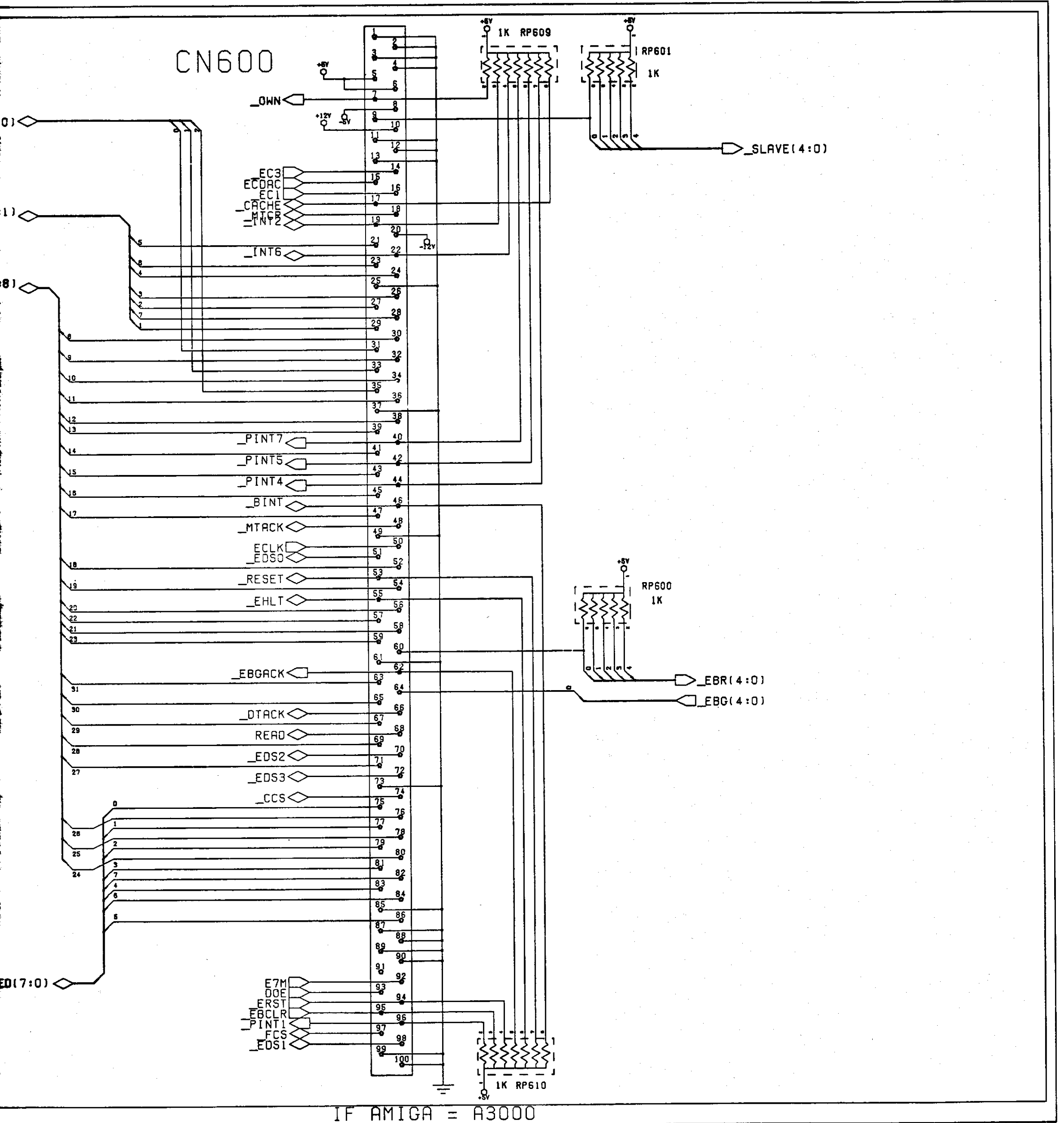
# A3000 SYSTEM SCHEMATICS



**Schematic #313311, Rev. A**

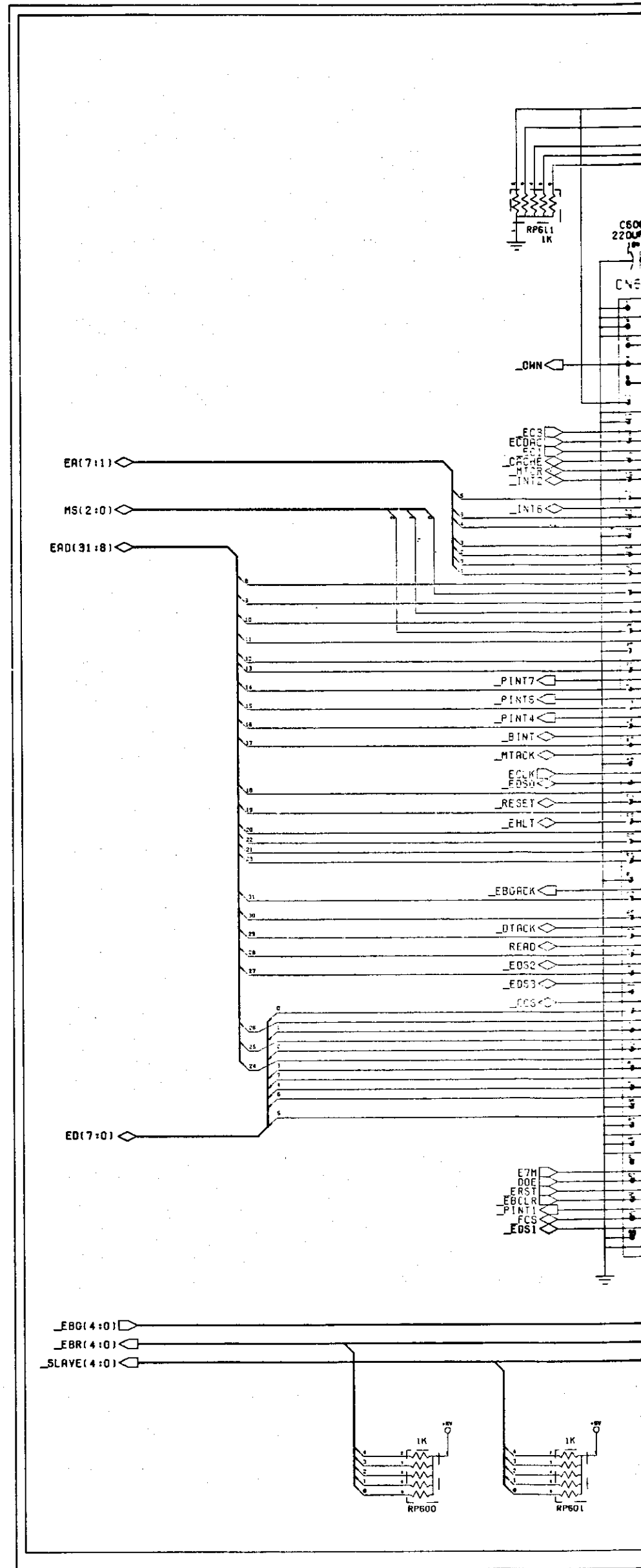
*Sheet 11 of 16*



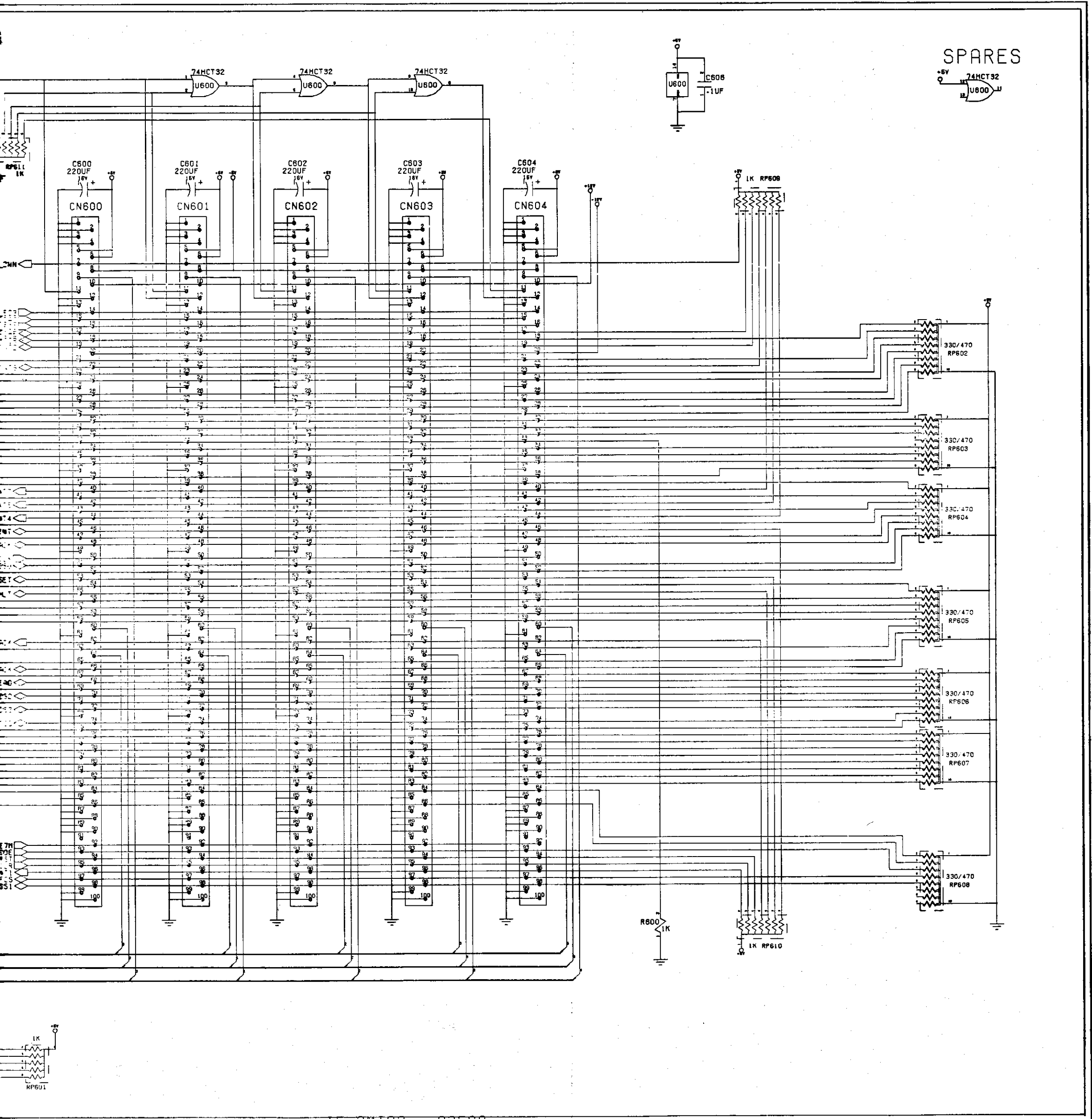




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# A3000 SYSTEM SCHEMATICS

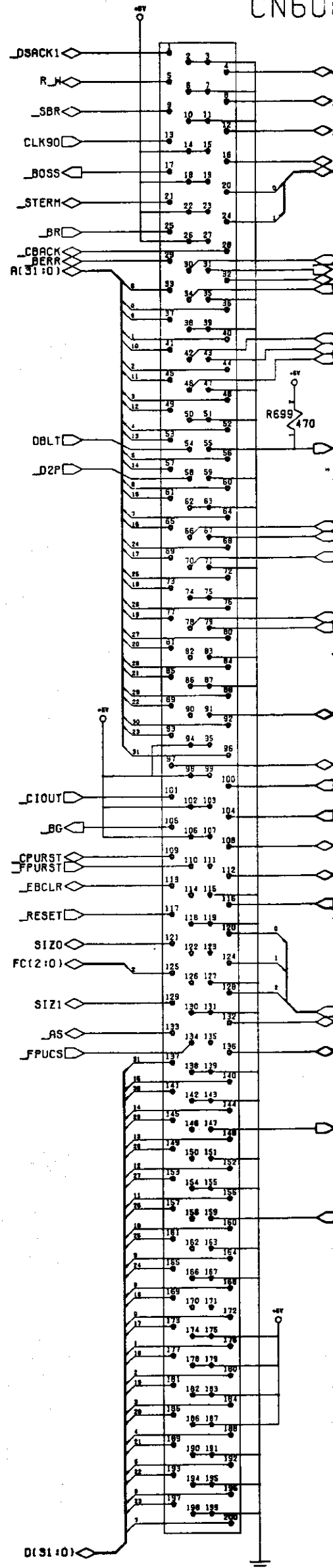


IF AMIGA = A3500

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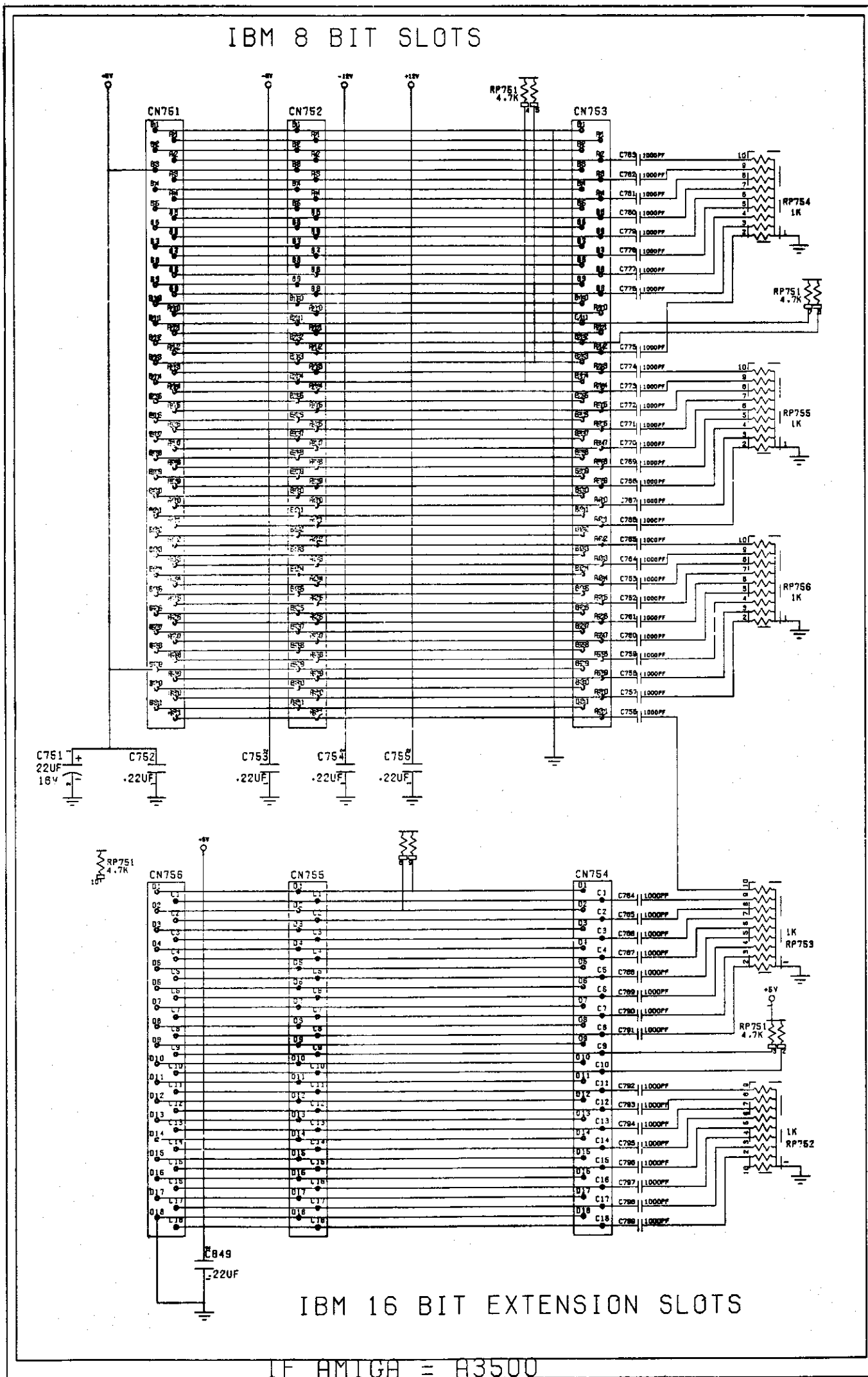
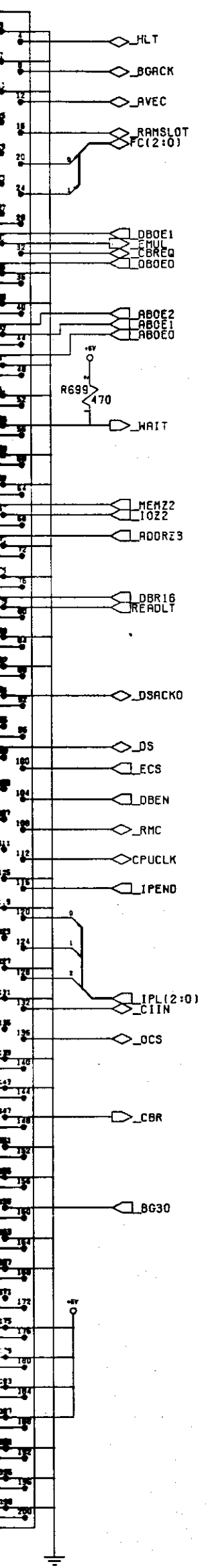
AMIGA 32 BIT LO

CN60

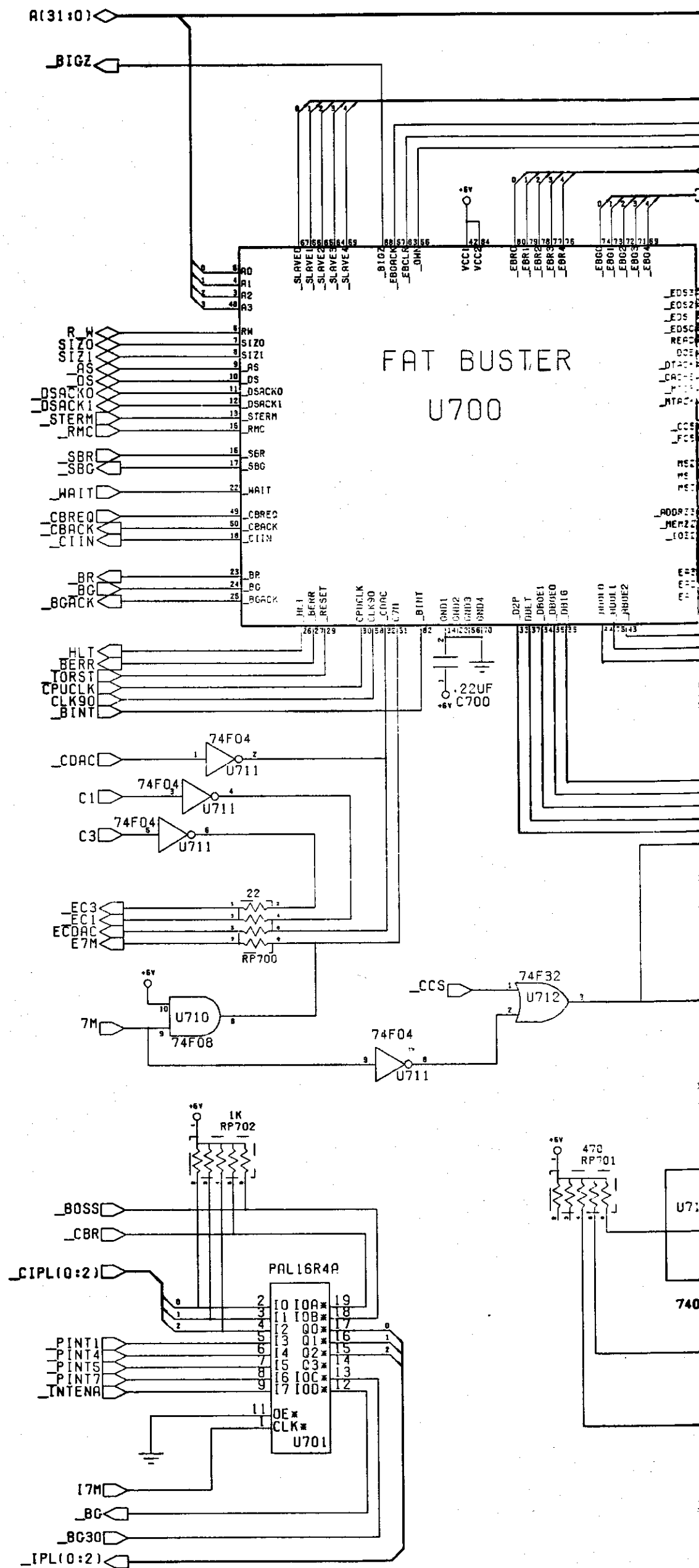


32 BIT LOCAL SLOT

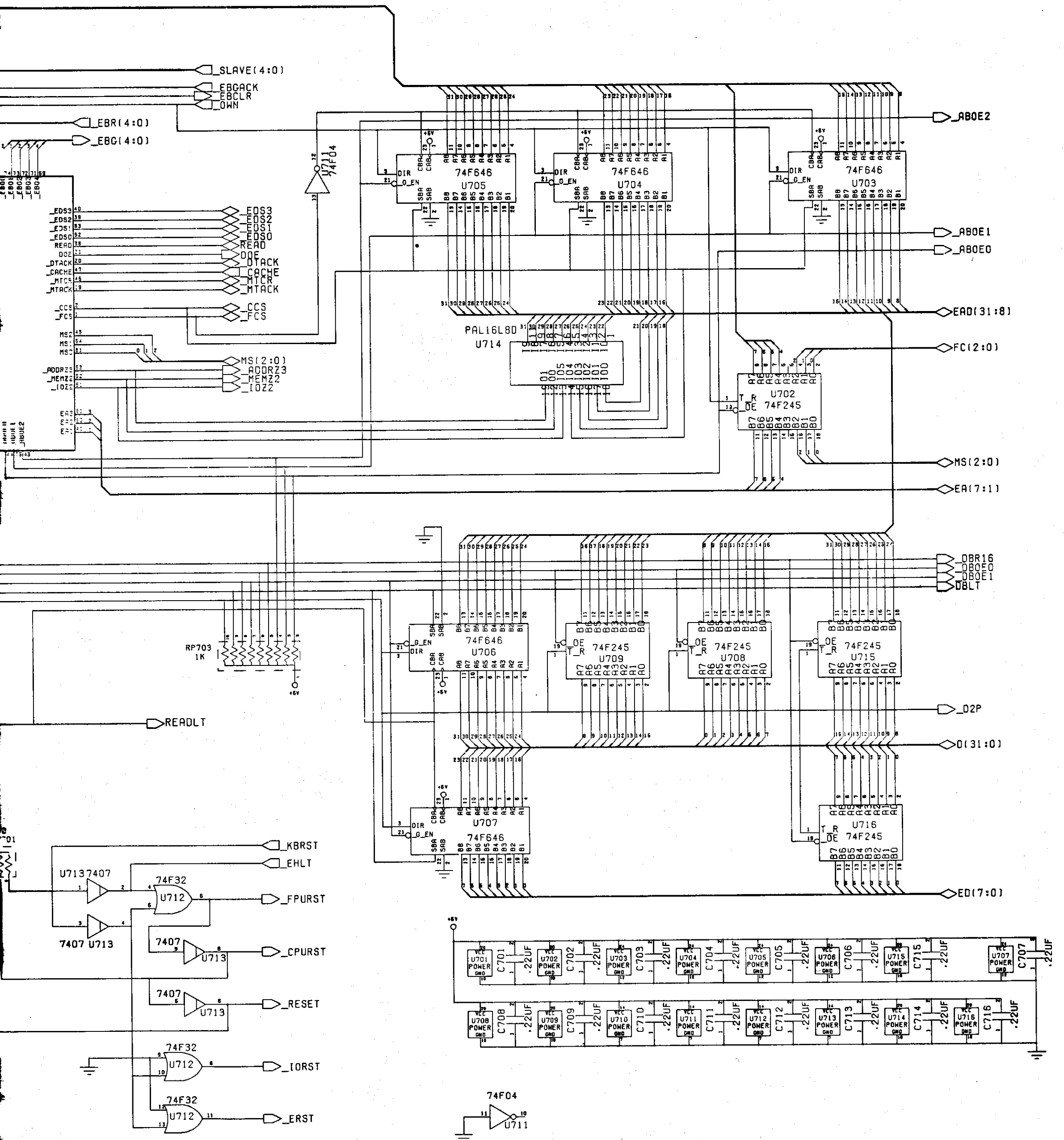
CN606



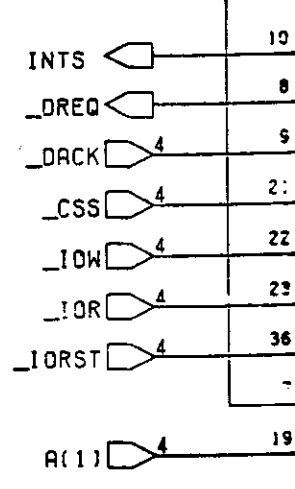
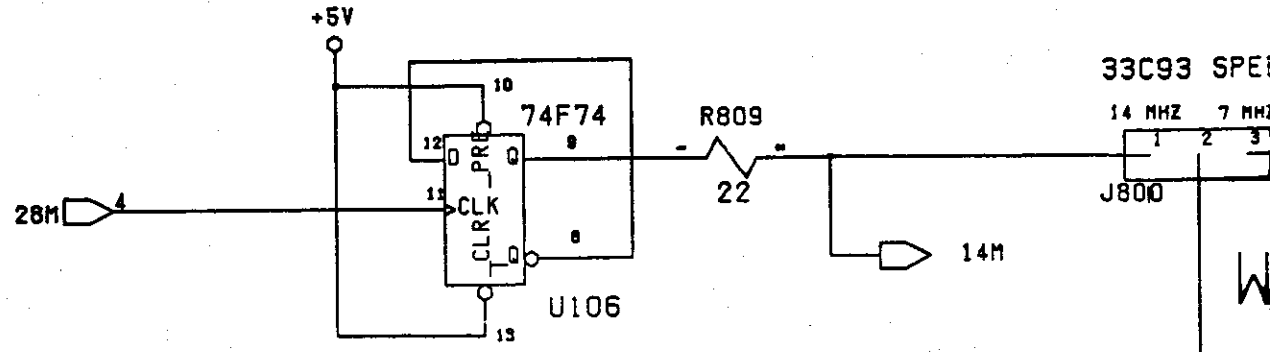
**Schematic #313311, Rev. A**  
**Sheet 14 of 16**



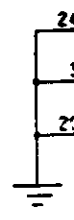
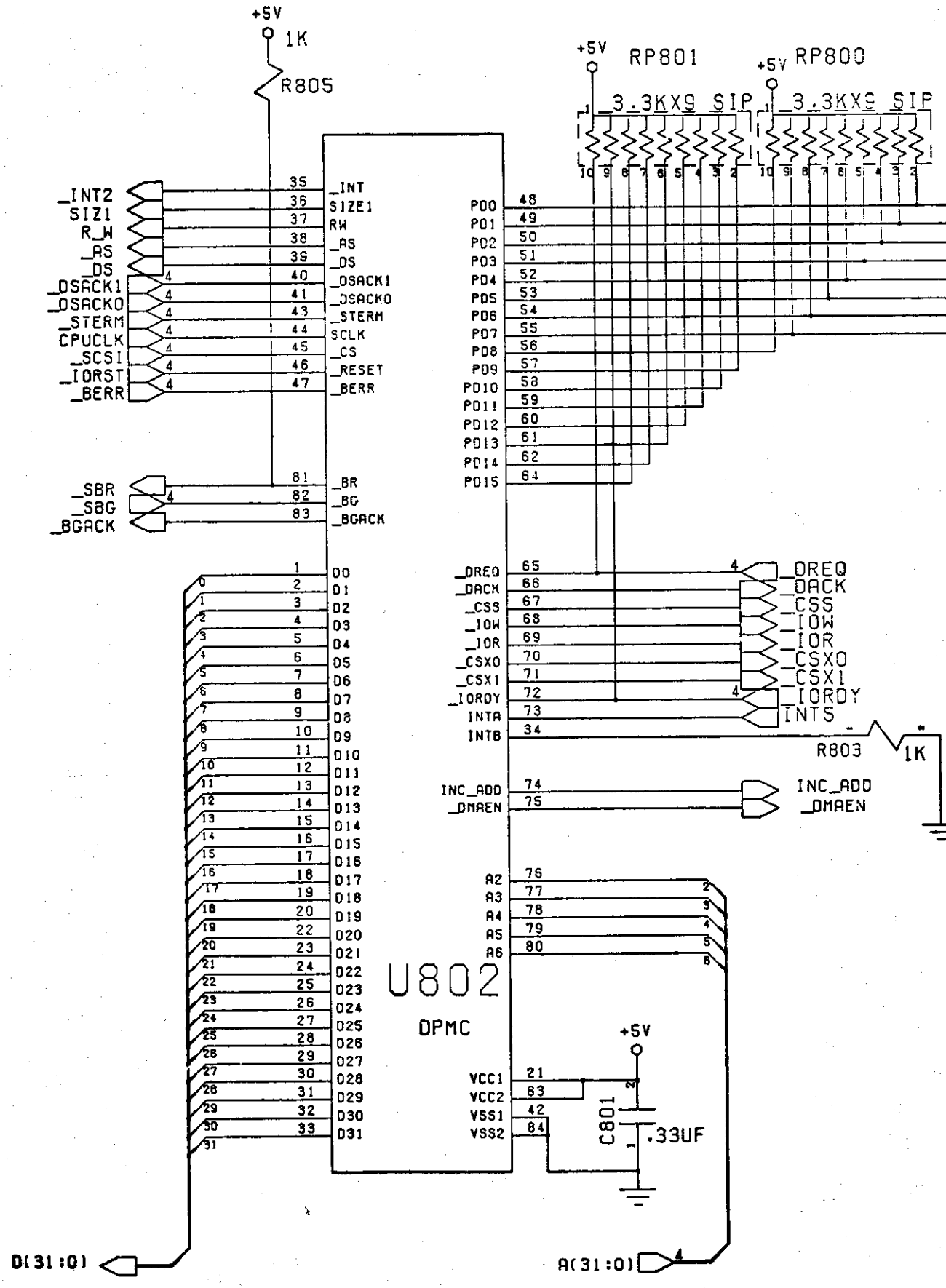
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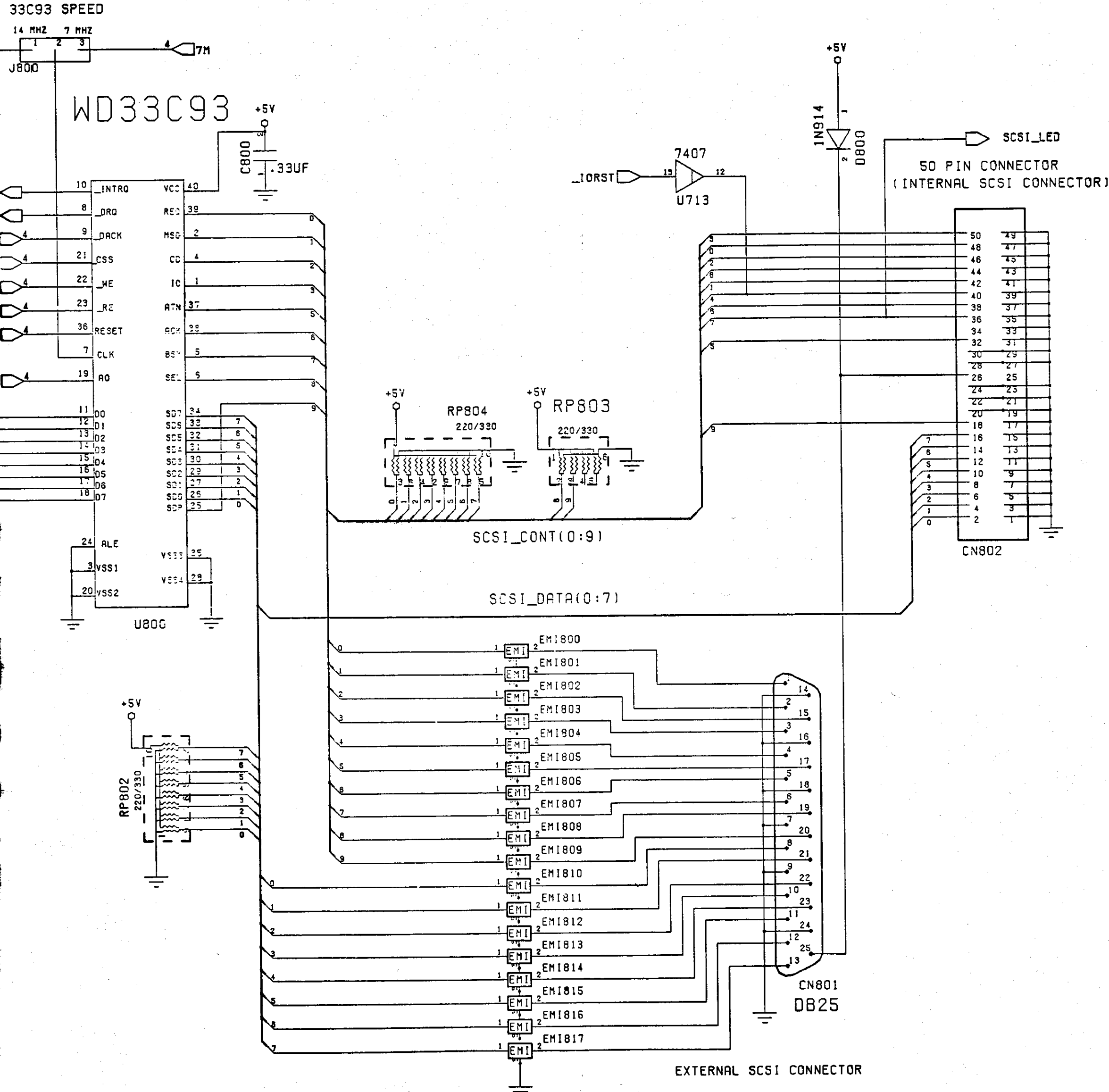
**Schematic #313311, Rev. A**  
**Sheet 15 of 16**



**SUPER DMAC**

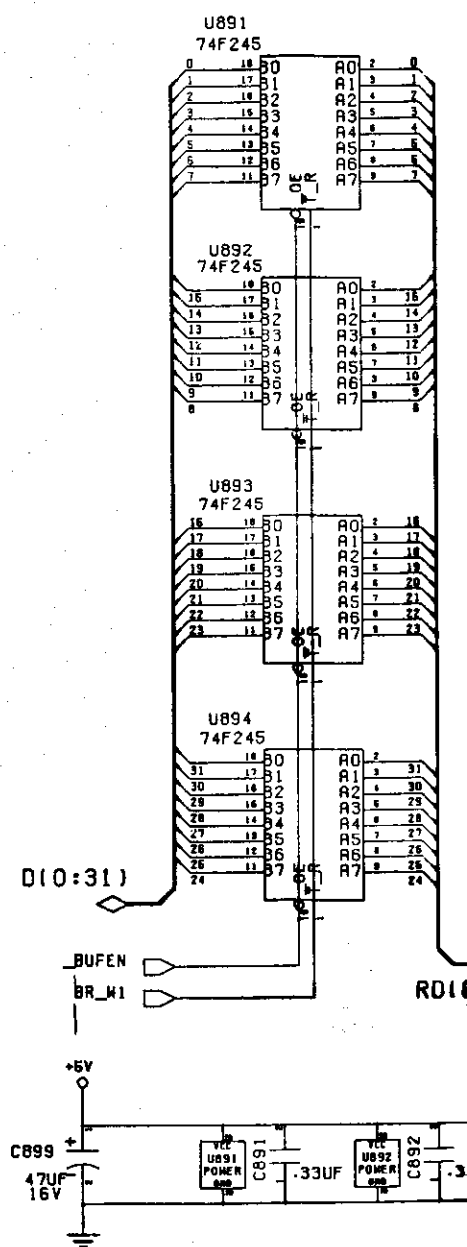
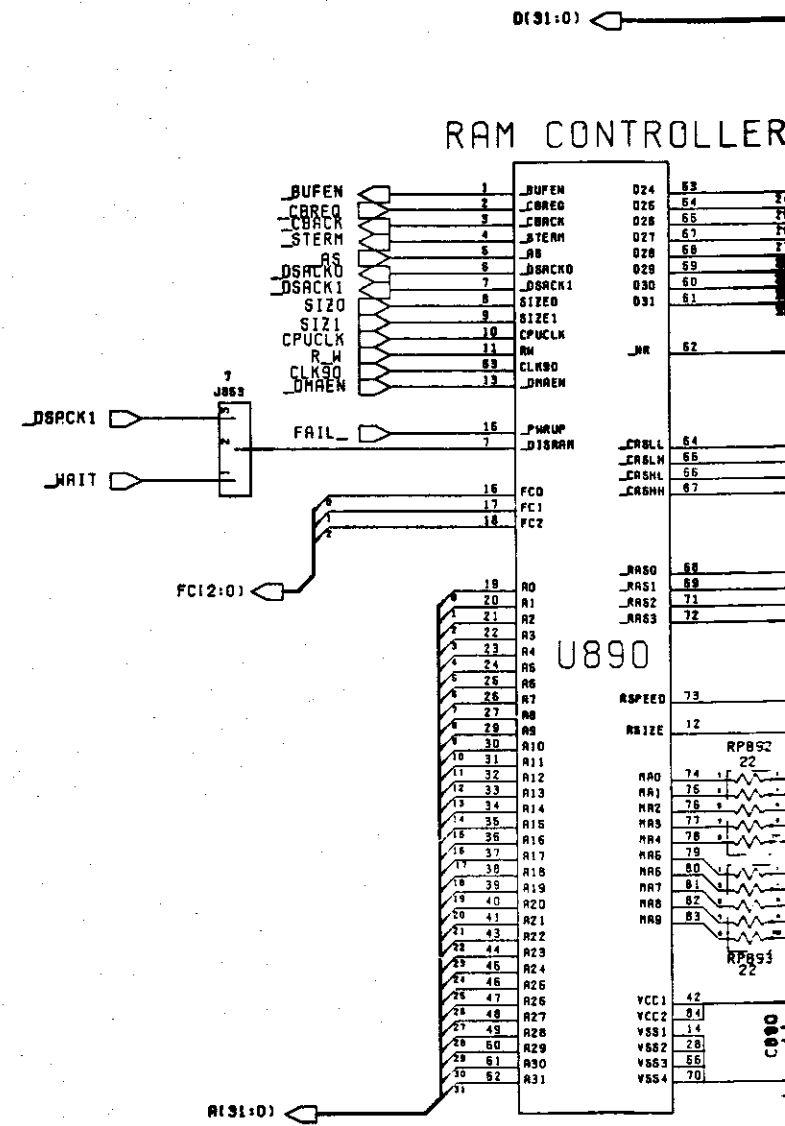


# A3000 SYSTEM SCHEMATICS

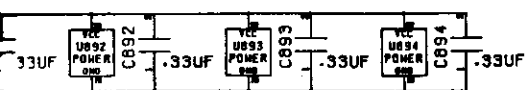
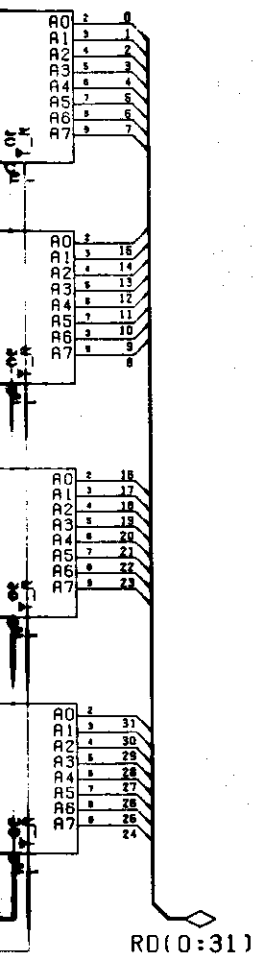
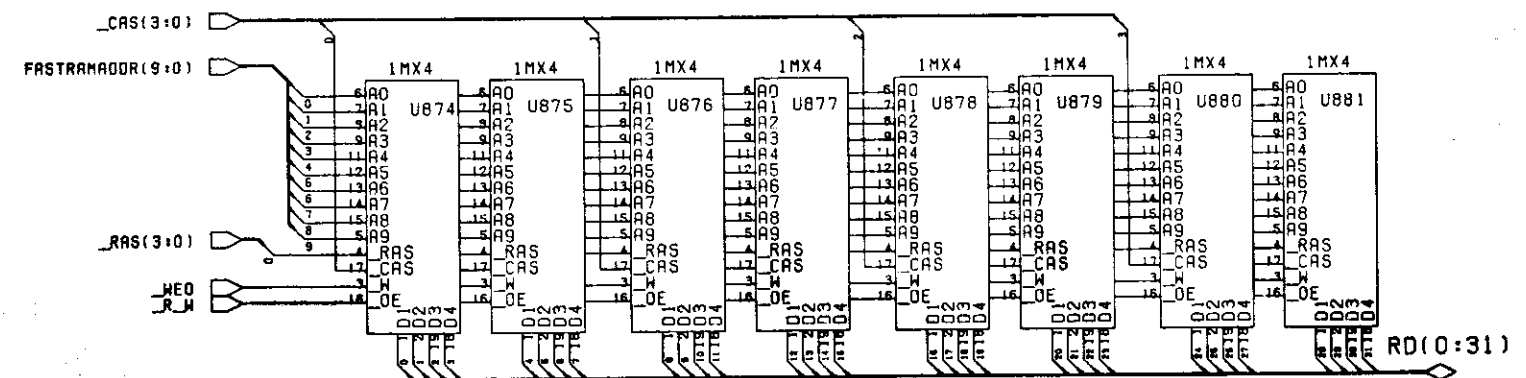
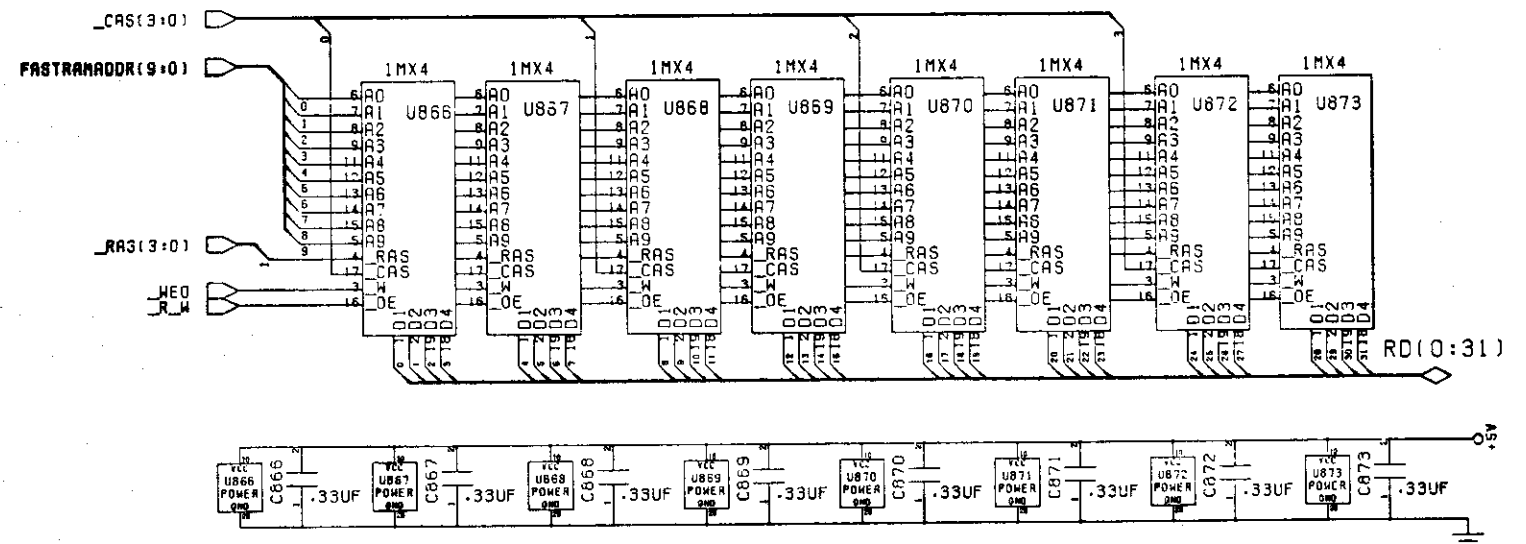
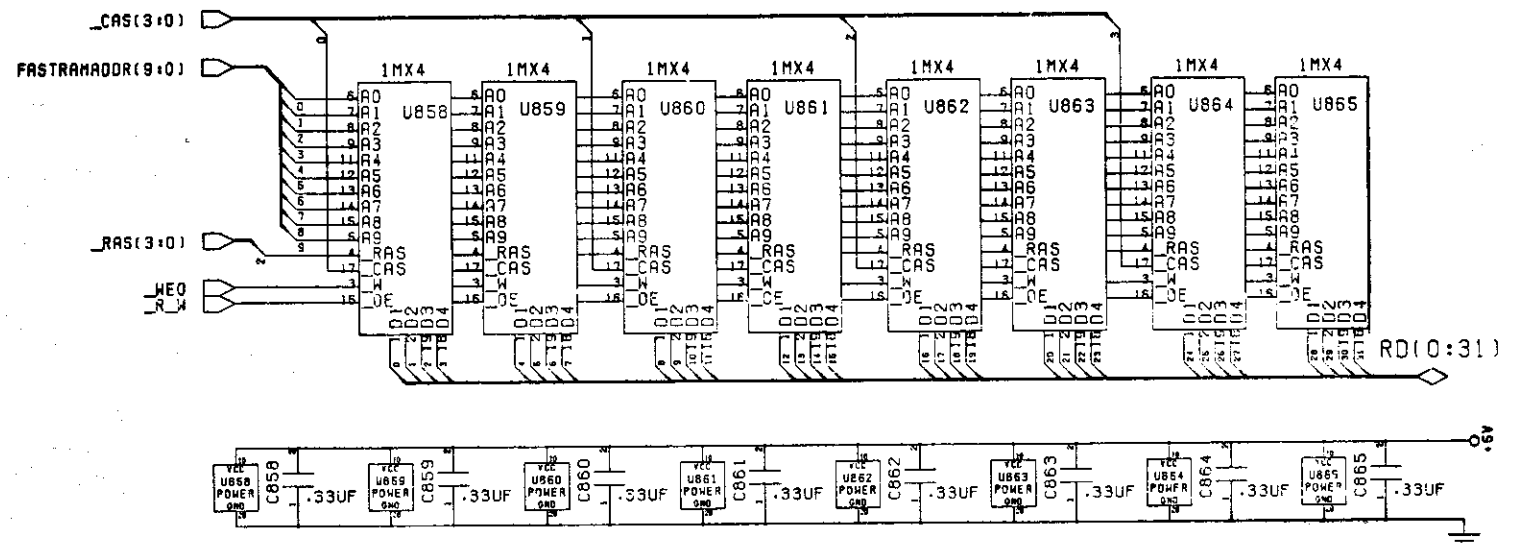
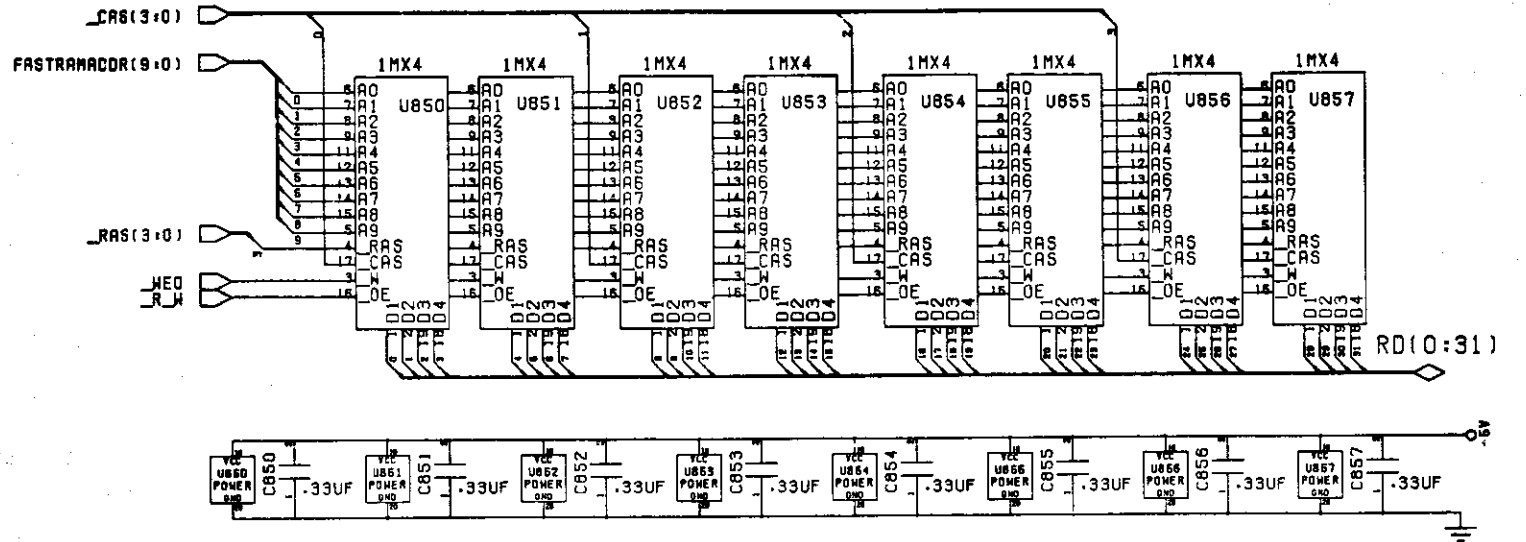
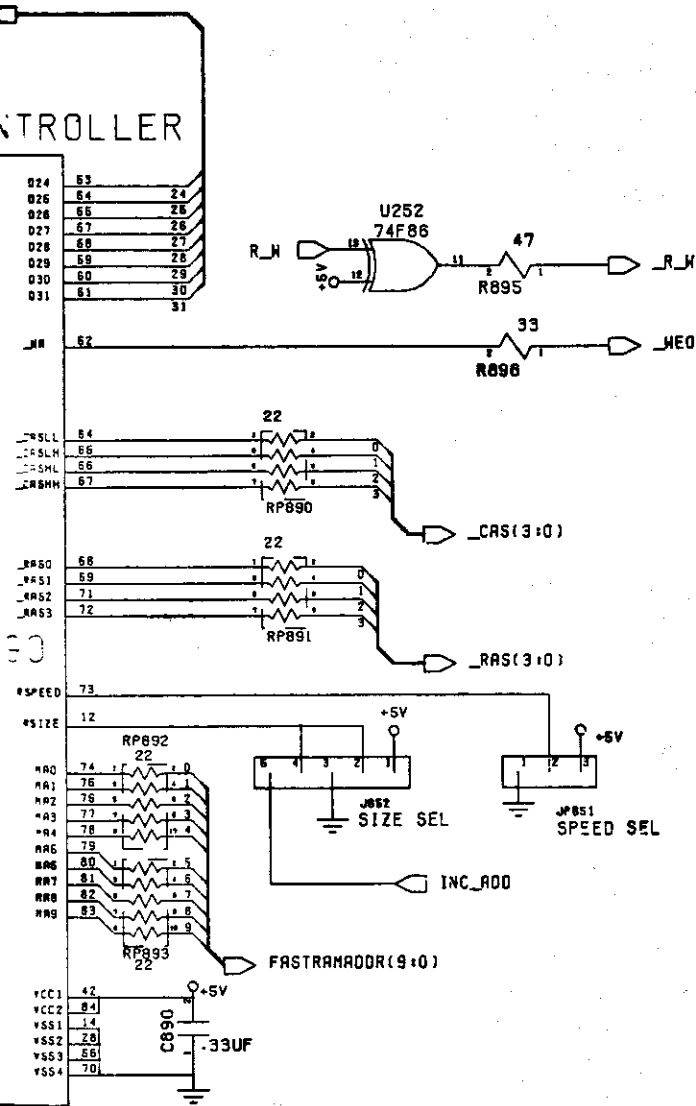




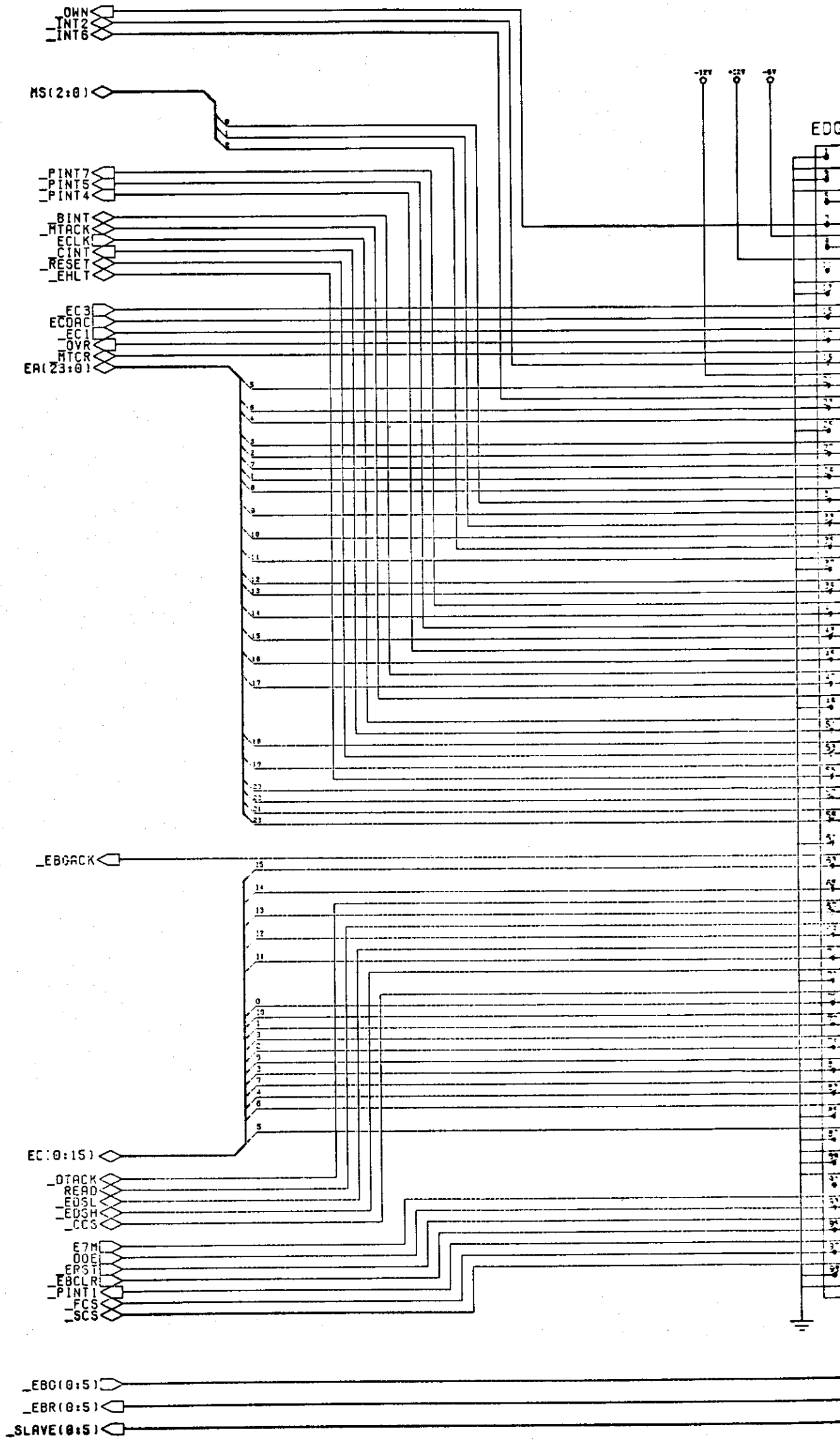
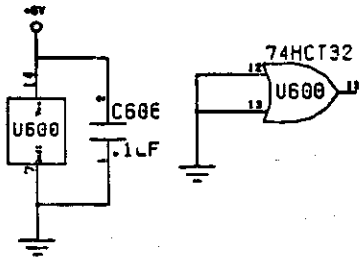
Schematic #313311, Rev. A  
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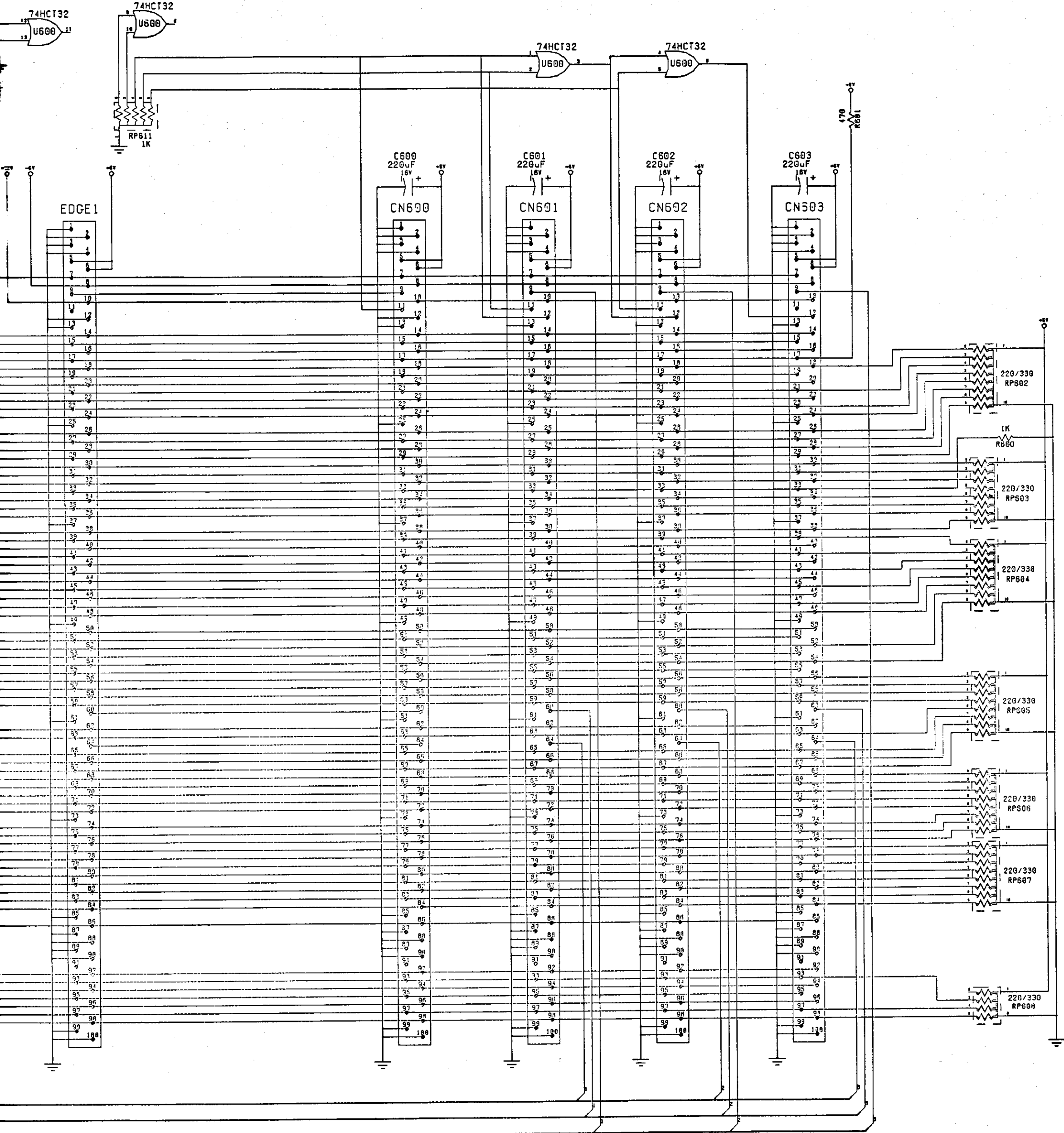
# A3000 SYSTEM SCHEMATICS



**Schematic #313251, Rev. A**  
**Sheet 1 of 2**

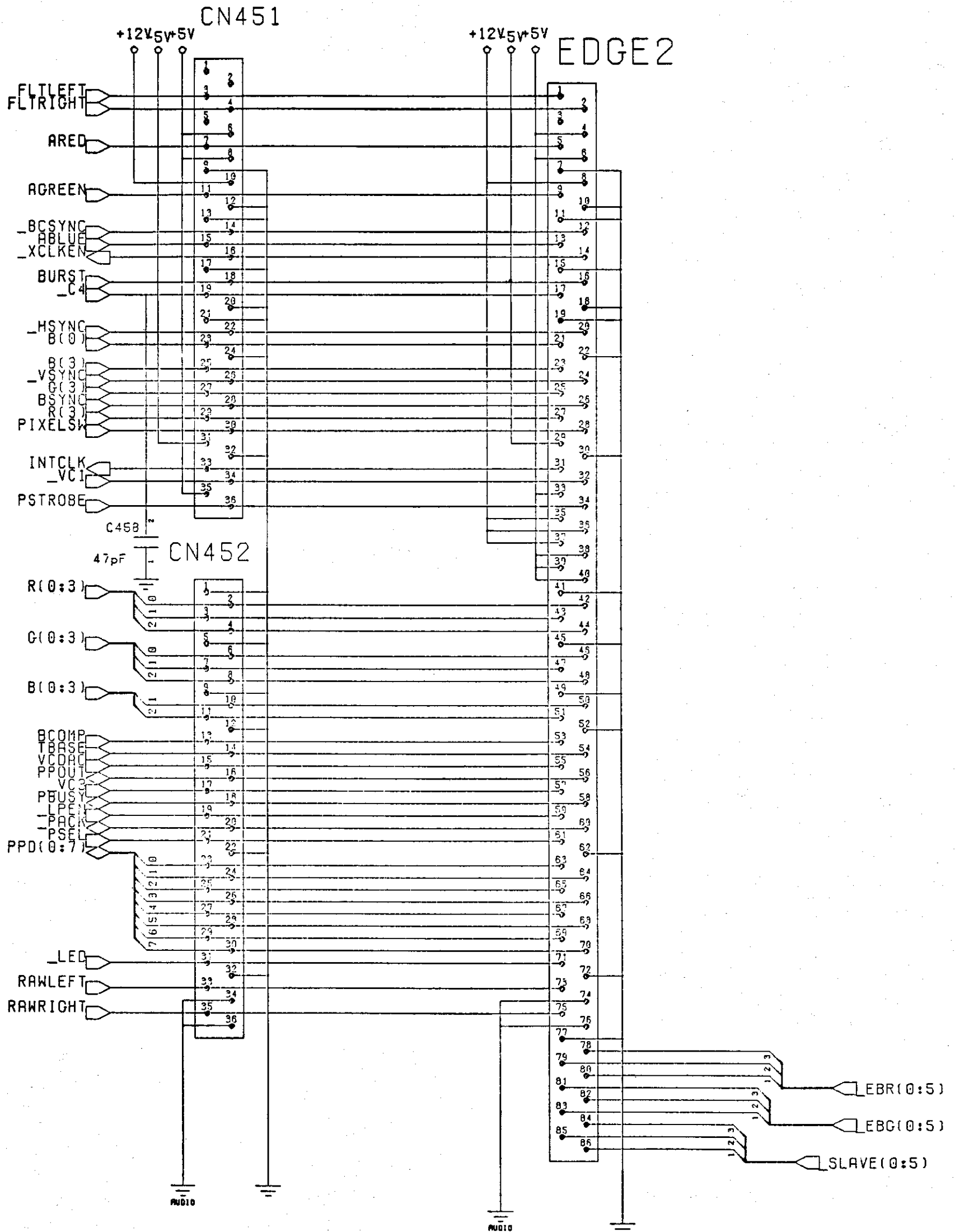


A3000 SYSTEM SCHEMATICS

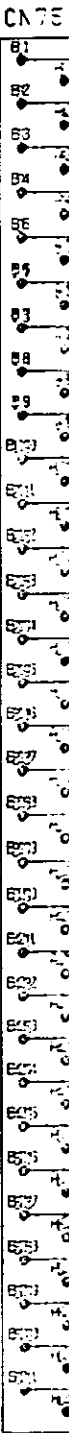


# Schematic #313251, Rev. A

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IBM 8 E



C751  
22uF  
16V

8 BIT SLOTS

IBM 16 BIT EXTENSION SLOTS

