

I. POWER SUPPLIES

General Description

There are three DC power supplies in the 9000; +5 volts, +12 volts and -12 volts. The +5 volts powers all logic circuits, and the +/-12 volts powers the analog circuitry. All power supplies use linear series-pass regulators.

A. +5 Volt SUPPLY

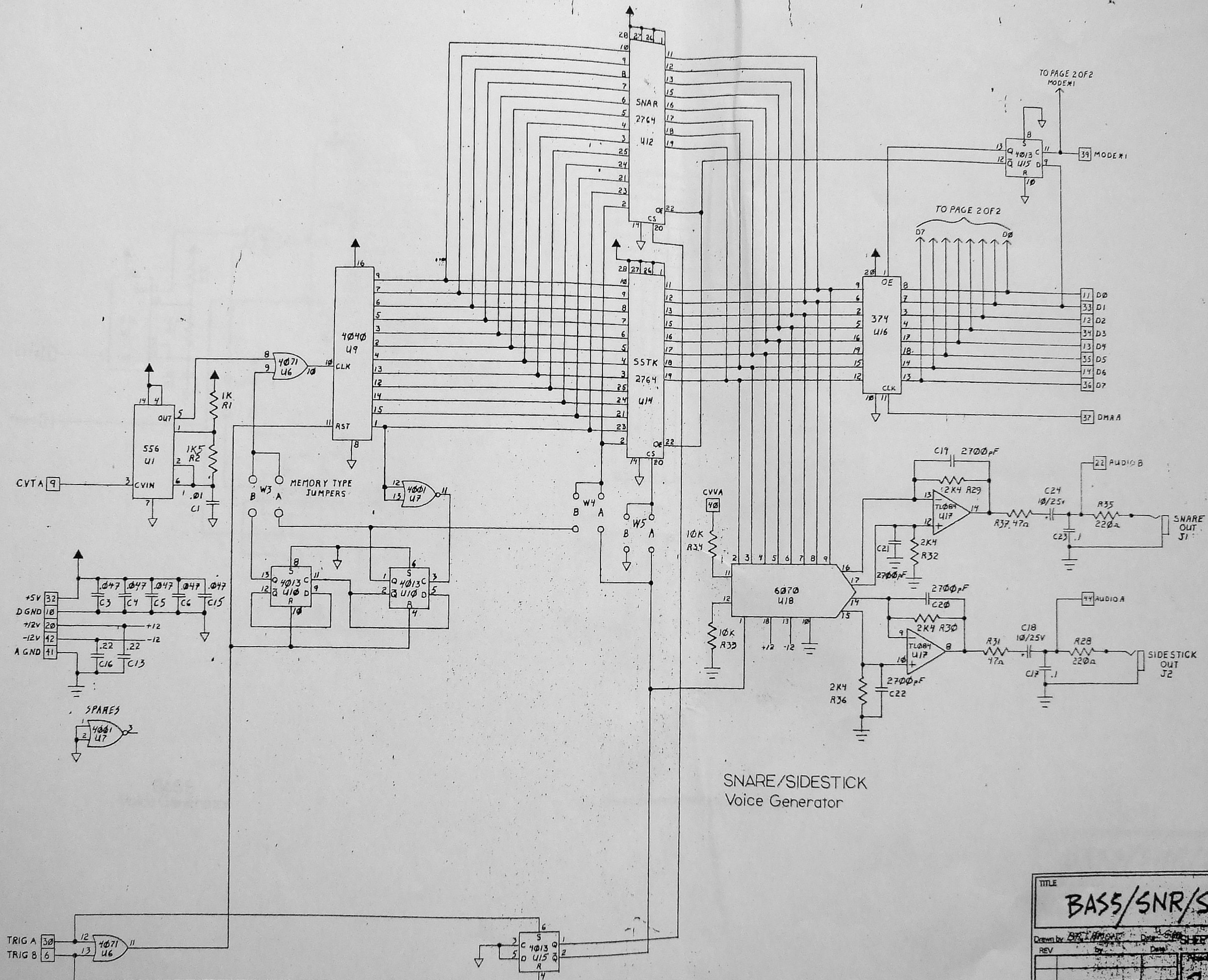
The +5V supply consists of a full-wave rectifier (CR13 & CR15), a filter capacitor (C96), and a series regulator consisting of U90, Q5 and one of the 2N3055's on the rear heatsink through connector "C". Current sensing and limiting is provided by R66 and R67. Trimmer R70 provides output voltage adjustment, and should be adjusted to +5.1V, measuring from pin 40 of U10 to pin 20 of U10.

B. +/- 12 V SUPPLY

The +/- 12 V supplies consist of a full-wave diode bridge rectifier (CR8 - CR11), filter capacitors (C95, C97), and 2 series-pass regulators. The -12V regulator is a 3 terminal IC regulator (VR1). The +12V regulator is designed for higher current rating than the -12V regulator, to accomodate the floppy disk drive. The +12V regulator consists of a 723 IC regulator (U18) and a 2N3055 pass transistor mounted on the rear panel below the 5V heatsink through connector "D".

C. BATTERY CIRCUIT

A 3.6 V battery supply is provided to power the CMOS memory chips when the AC power is turned off, and thus provide a non-volatile memory for the unit. The battery consists of 3 Ni-Cad cells which are re-charged from the +5V supply, though diode CR7, when the AC power is turned on. The battery charging current is limited by R68. With AC power applied, the CMOS memories are powered directly through CR7 from the +5V power supply.



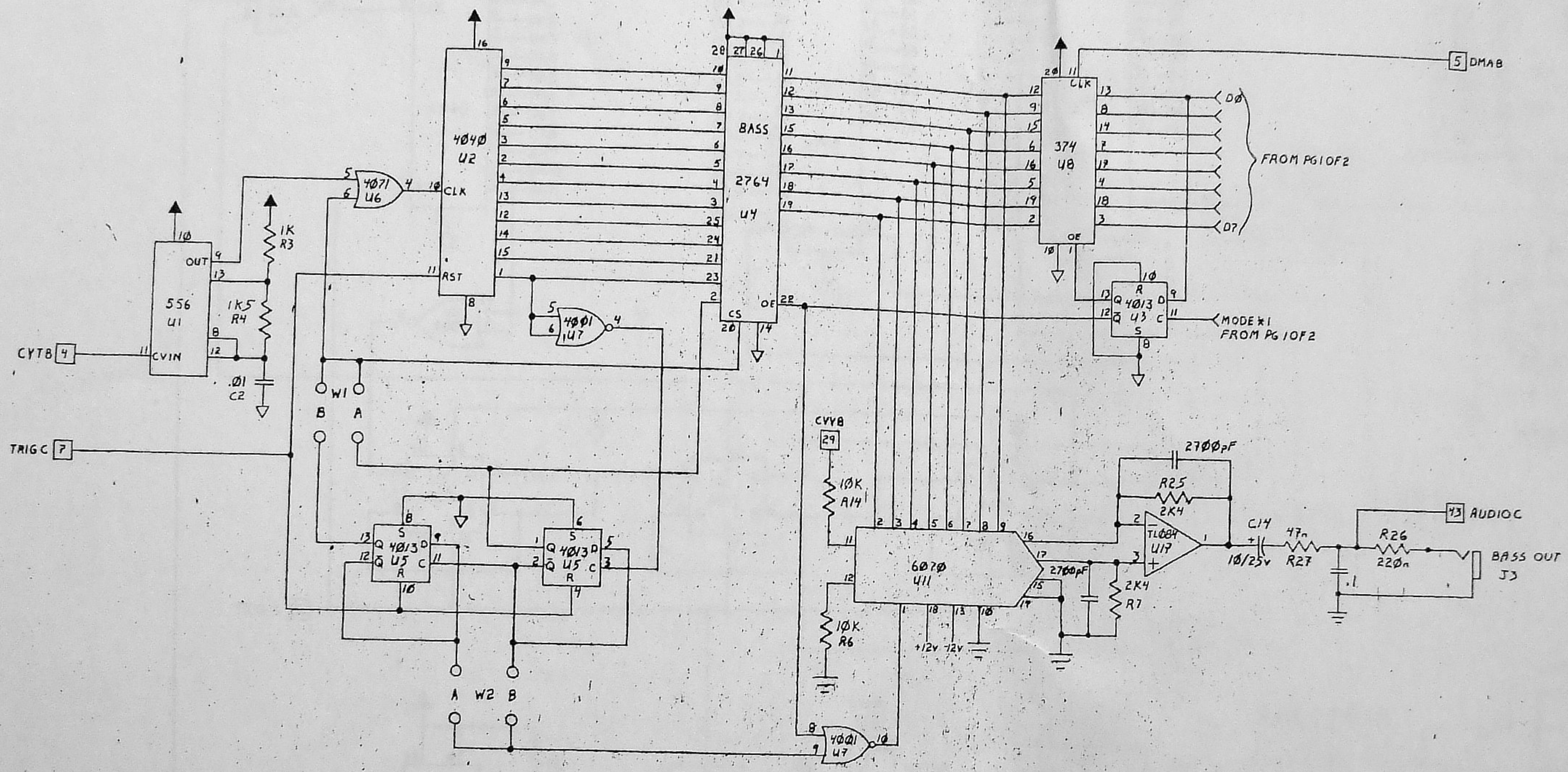
SNARE/SIDESTICK
Voice Generator

TITLE			
BASS/SNR/STK			
Drawn by: <i>DAVID</i>		Date: <i>5/81</i>	
REV		SHEET 1 of 2	
2 2 04			
Tinn Electronics, Inc			

II. PROCESSOR AND SUPPORT CIRCUITRY

D. POWER UP CIRCUIT

1. This power detection circuitry detects the presence or absence of AC power, and is used to reset the C^r and inhibit writing to the RAM's when the power is switched off, and put the CMOS RAM's into standby mode, so that they can be powered by the battery with minimal current consumption.
2. The circuitry works by detecting the AC power directly from the power transformer 5 volt secondary winding, and uses this signal reset the 8088 processor and to enable or disable the RAM address decoders.
3. The address decoders are high-speed CMOS devices which are powered from the battery. When AC power is not present, the decoders are disabled, thus pulling all RAM chip-select lines high, inhibiting operation and putting them in low-power standby mode. AC power from the 5v winding of the transformer is full wave rectified and smoothed by CR4, CR5, and C51.
4. This signal then charges C45 through R36 and R38. When C45 becomes charged (after timeconstant RC), it switches on Q2, which is also powered from the battery, enabling the RAM decoders. The large charging timeconstant RC is necessary to ensure that the power supplies have had time to come up and stabilize before enabling the RAM.
5. When AC power is removed, C45 discharges rapidly through CR3 and R37, turning off Q2 and disabling the RAMs before the stored charge on the front end to 5 volt supply has had time to decay below 4.5 volts.

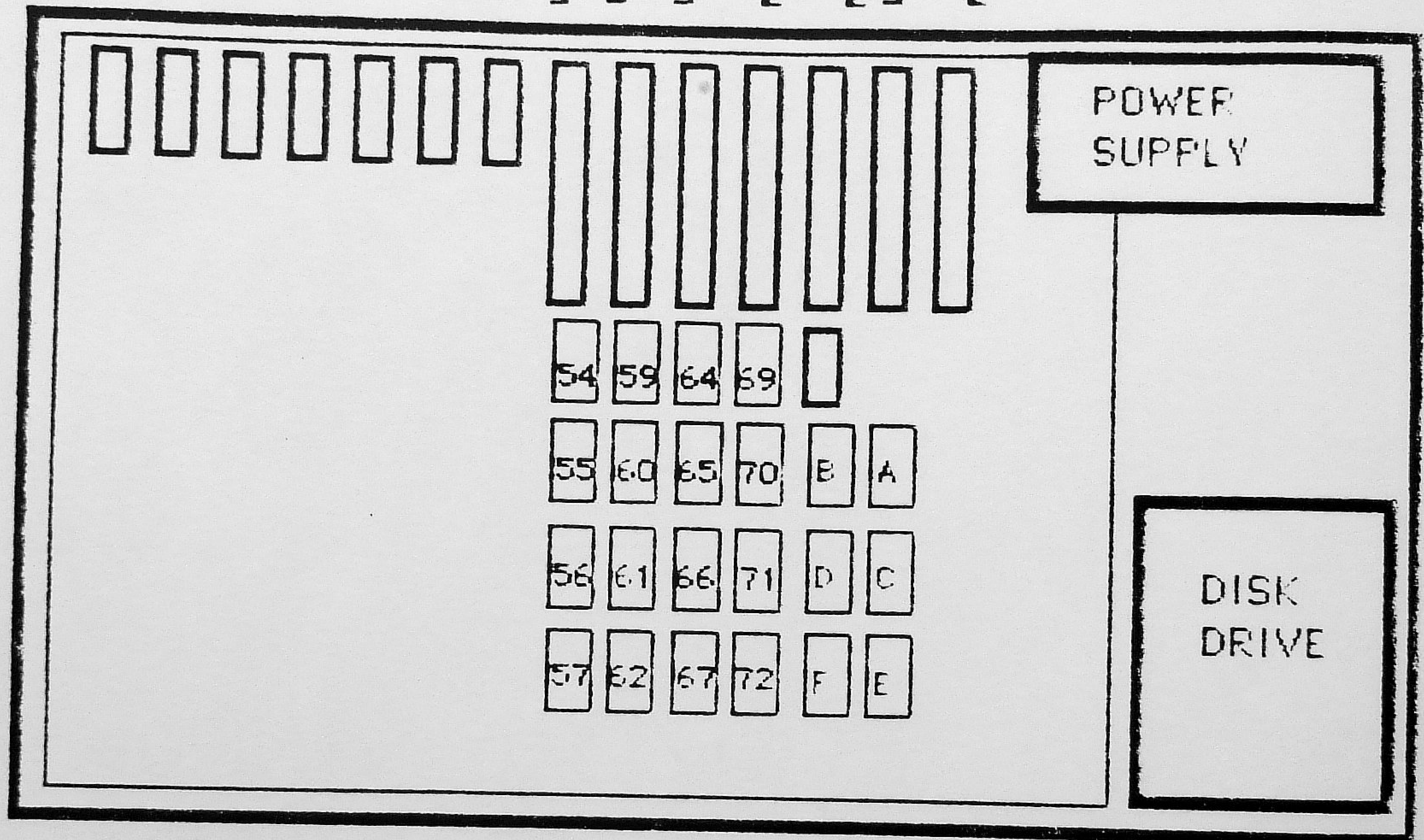
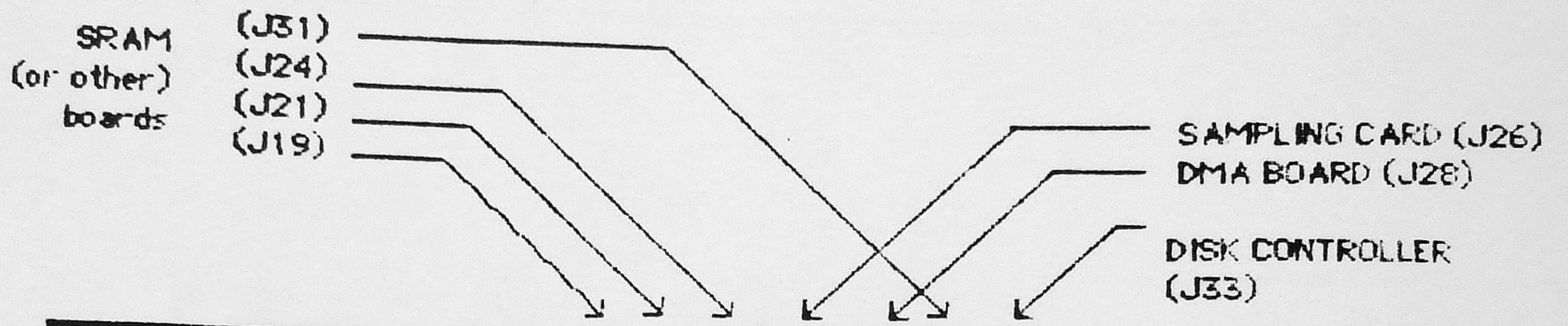


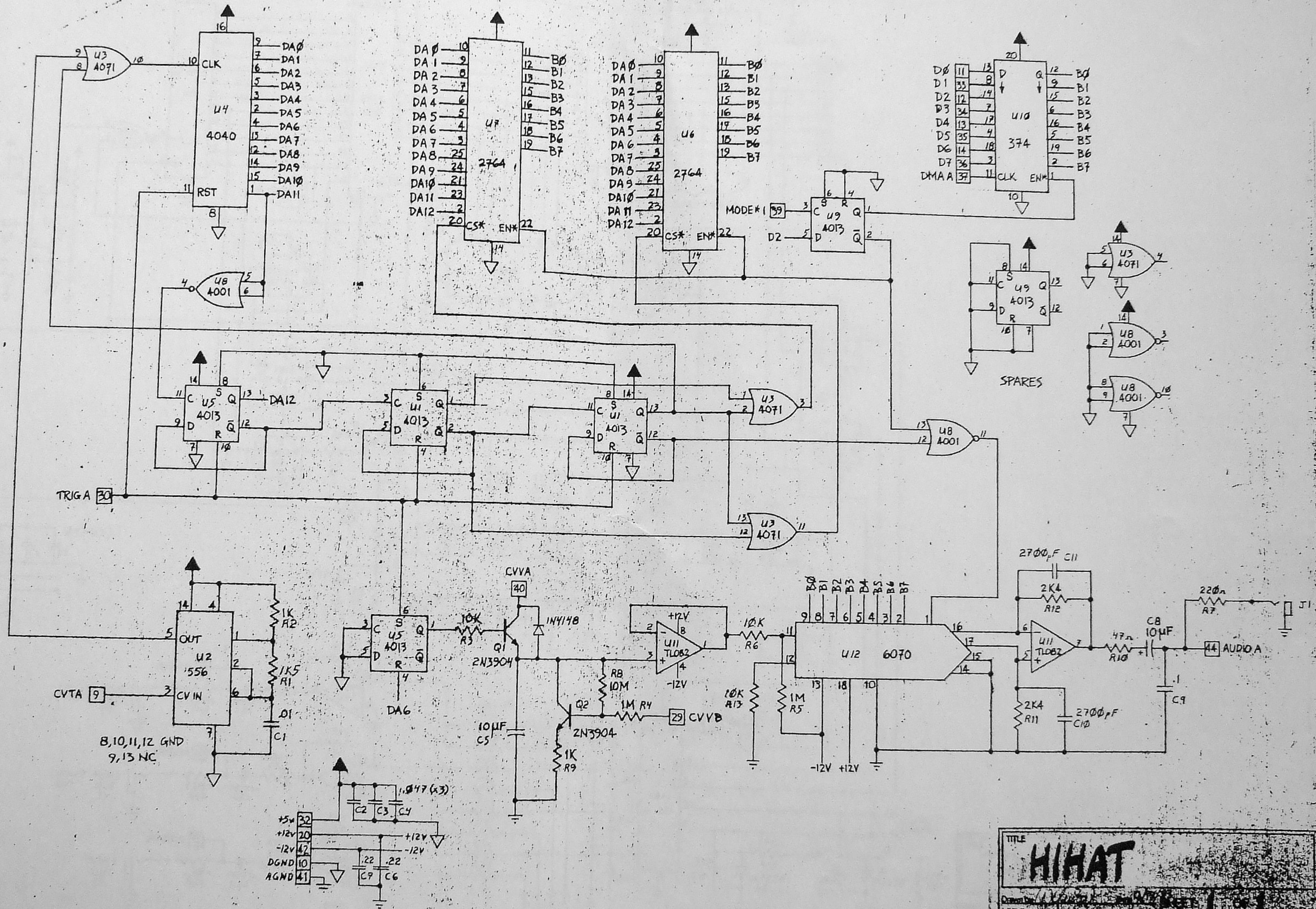
BASS
Voice Generator

ALL POWER CONNECTIONS FROM PAGE 1 OF 2

TITLE		BASS/SNR/STK	
Drawn by	DATE	SHEET 2 OF 2	
REV	by	2 2 01	
Linn Electronics, Inc.			
18720 OXNARD STREET TARZANA CA 91356 (818) 708-8131			

Linn 9000 Option Board Placement





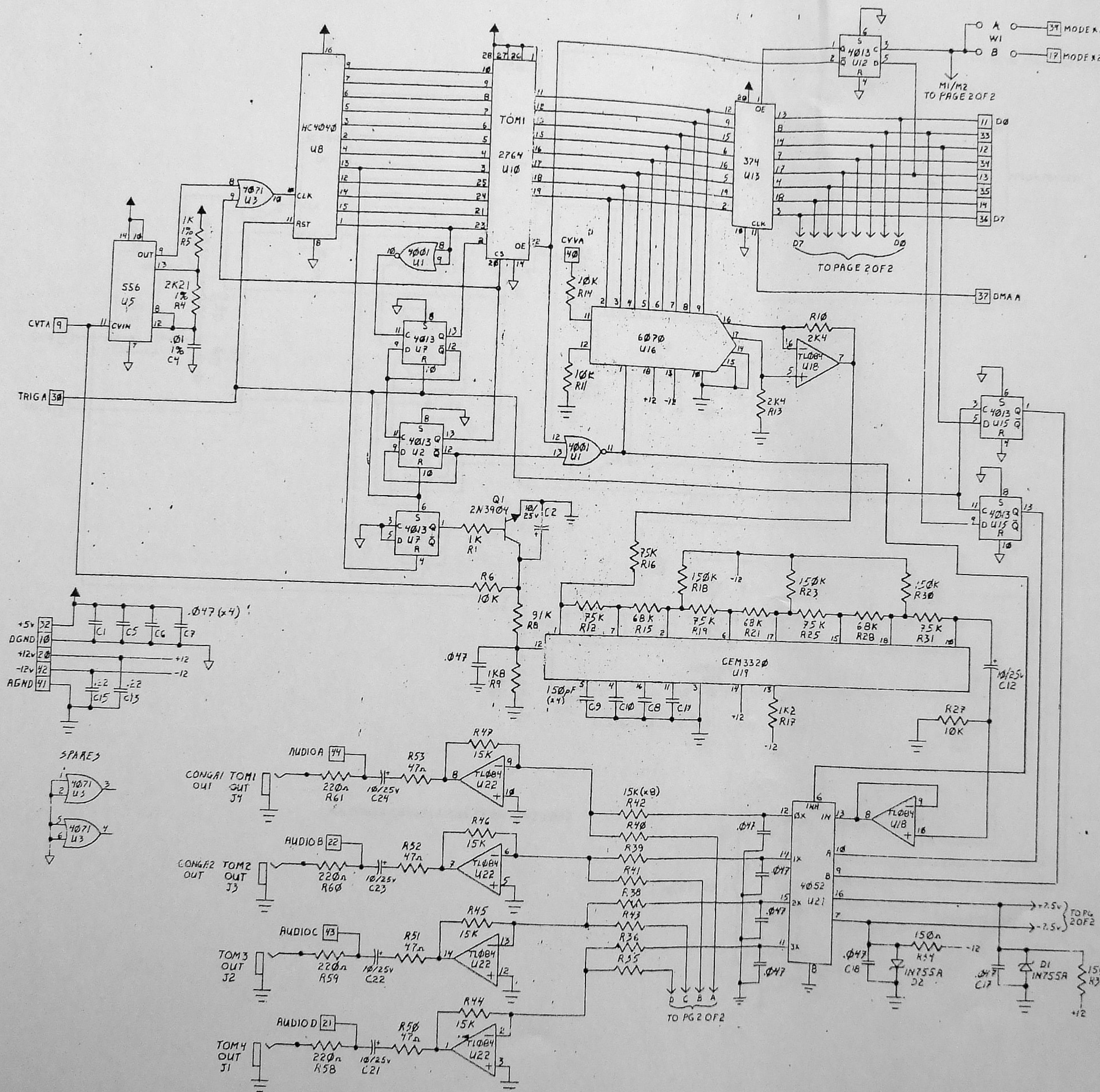
TITLE **HIHAT**

REV **1.1**

2205

Jim Electronics, Inc.

18720 CROWN STREET, FAYETTEVILLE, CA 95630

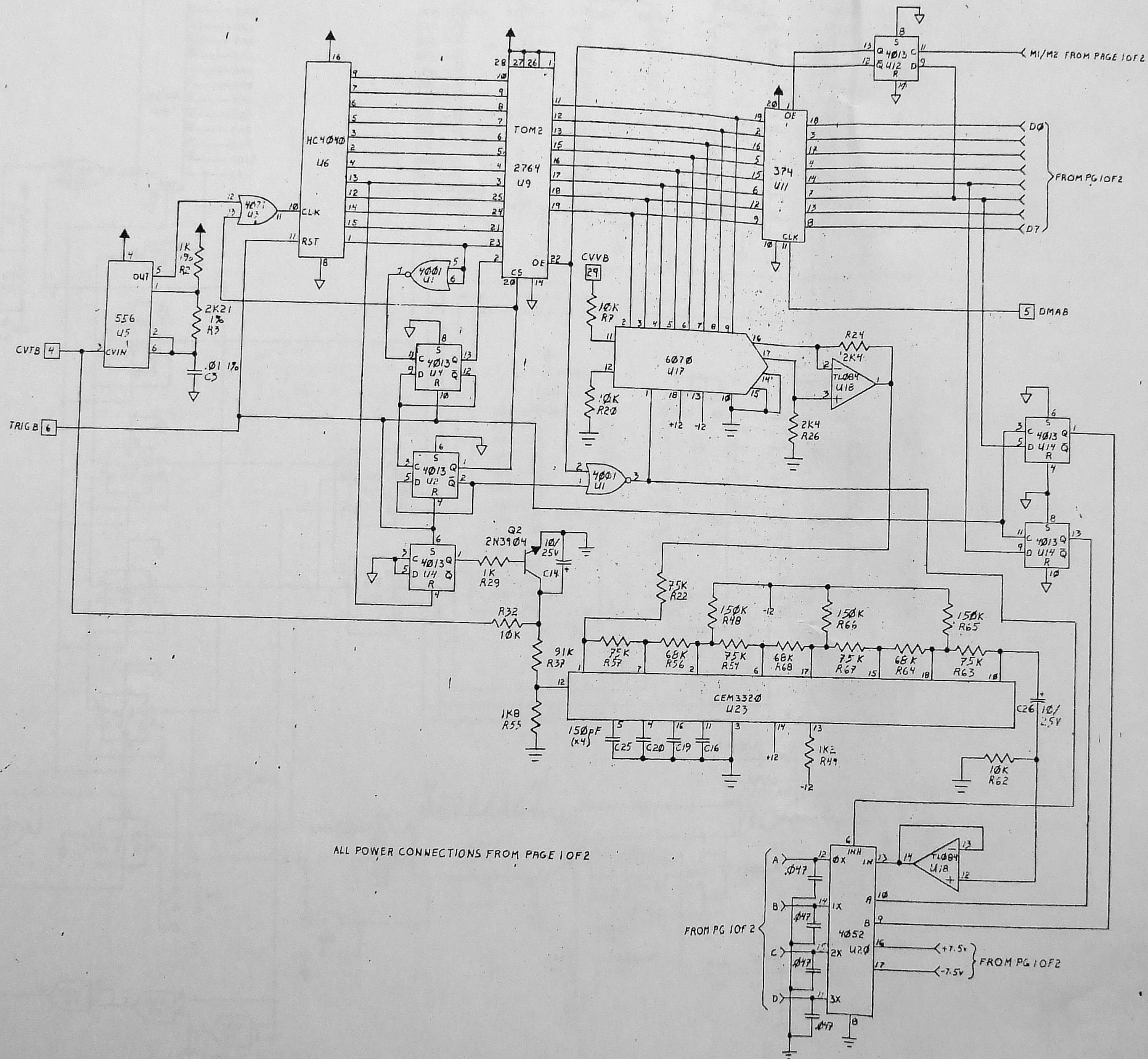


TITLE
TOM/CGA

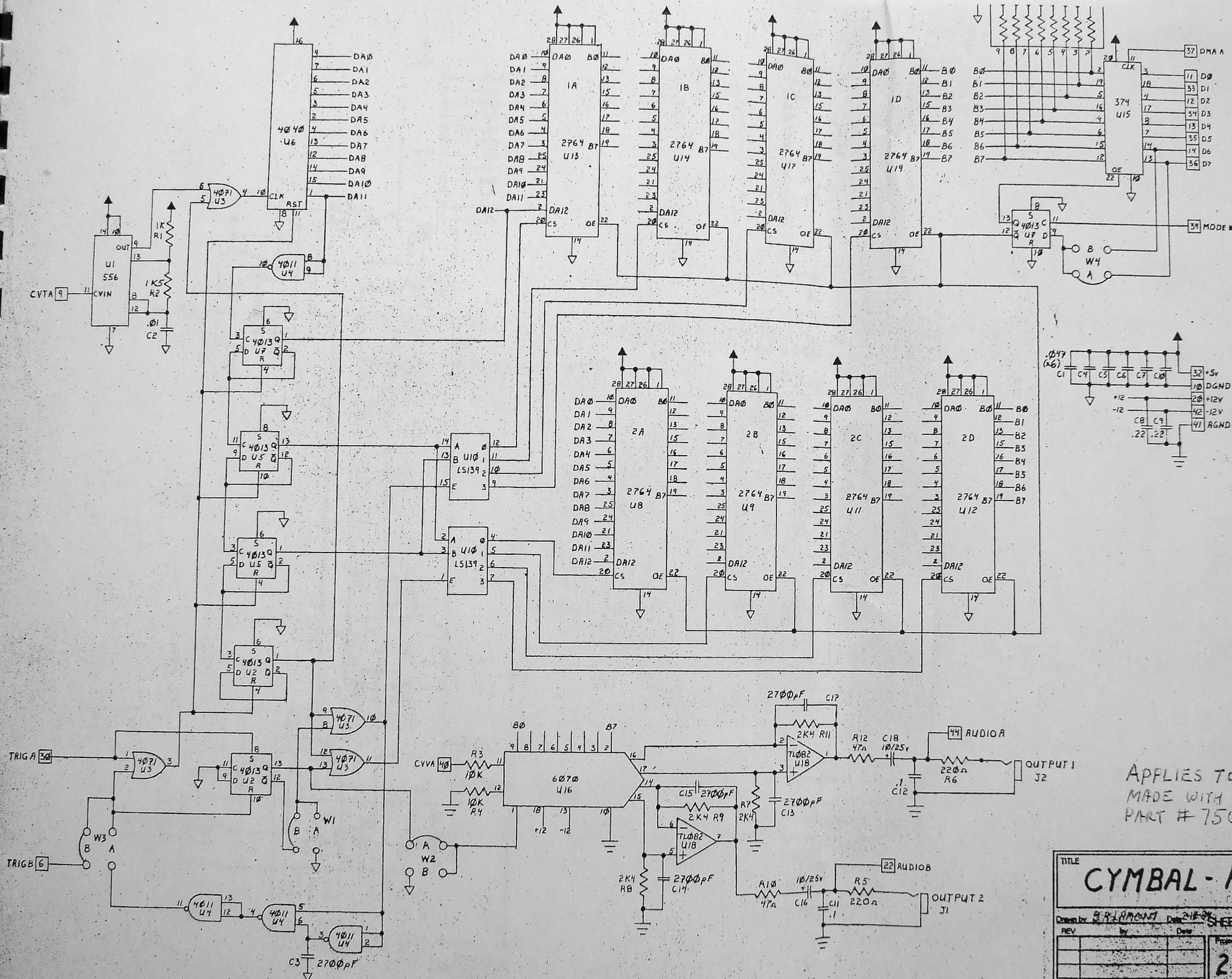
Drawn by **BRLAMONT** Date **2-9-81** SHEET **1** OF **2**

REV	BY	DATE	PROJECT	CATEGORY	NUMBER	REVISION
					2206	

Inn Electronics, Inc.
 18720 OXNARD STREET TARZANA CA 91358 (818) 708-8131

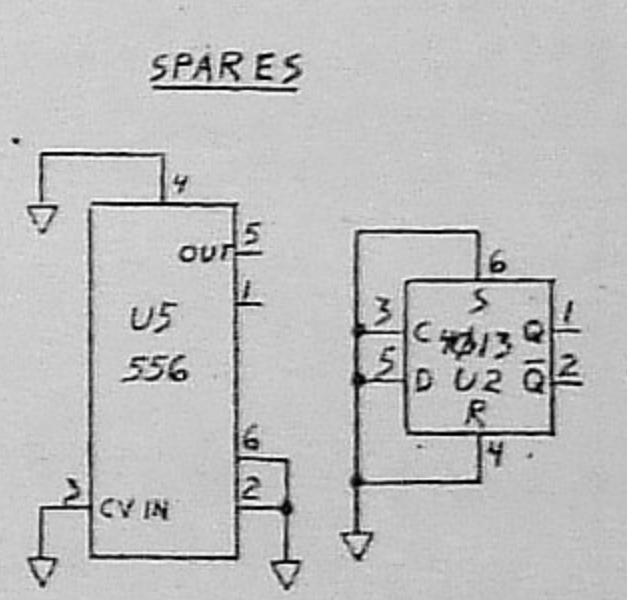
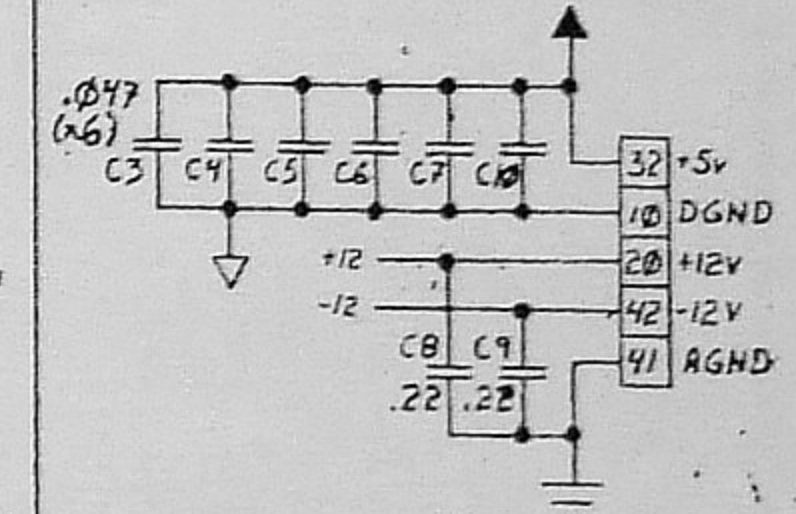
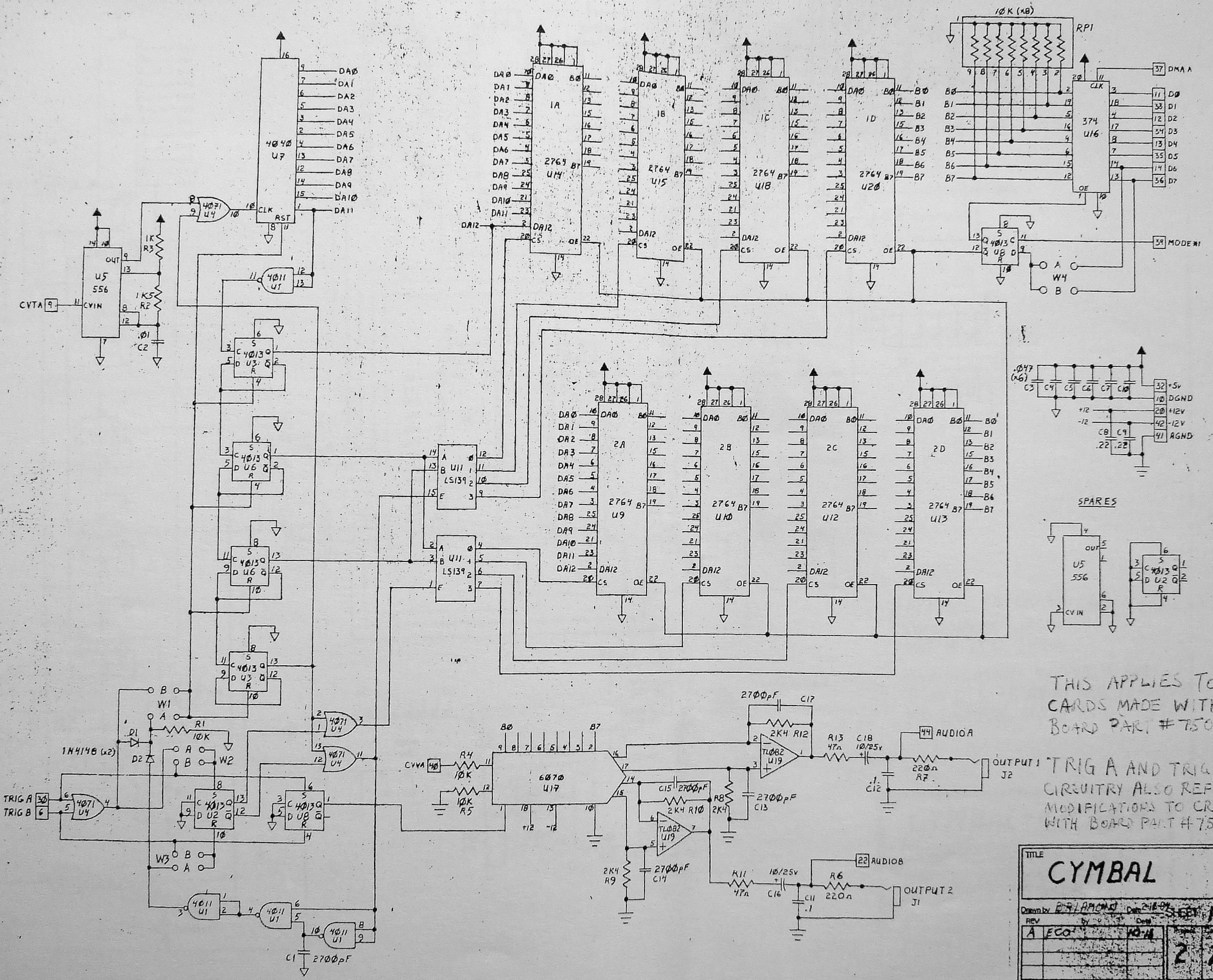


TITLE			
TOM/CGA			
Drawn by BRIAMONT		Date: 7/85	
REV	By	Date	Sheet 2 of 2
			2 2 06
Linn Electronics, Inc.			
18720 OXNARD STREET TARZANA CA 91356 (818) 708-8131			



APPLIES TO RIDE CARDS
MADE WITH CIRCUIT BOARD
PART # 750-1830

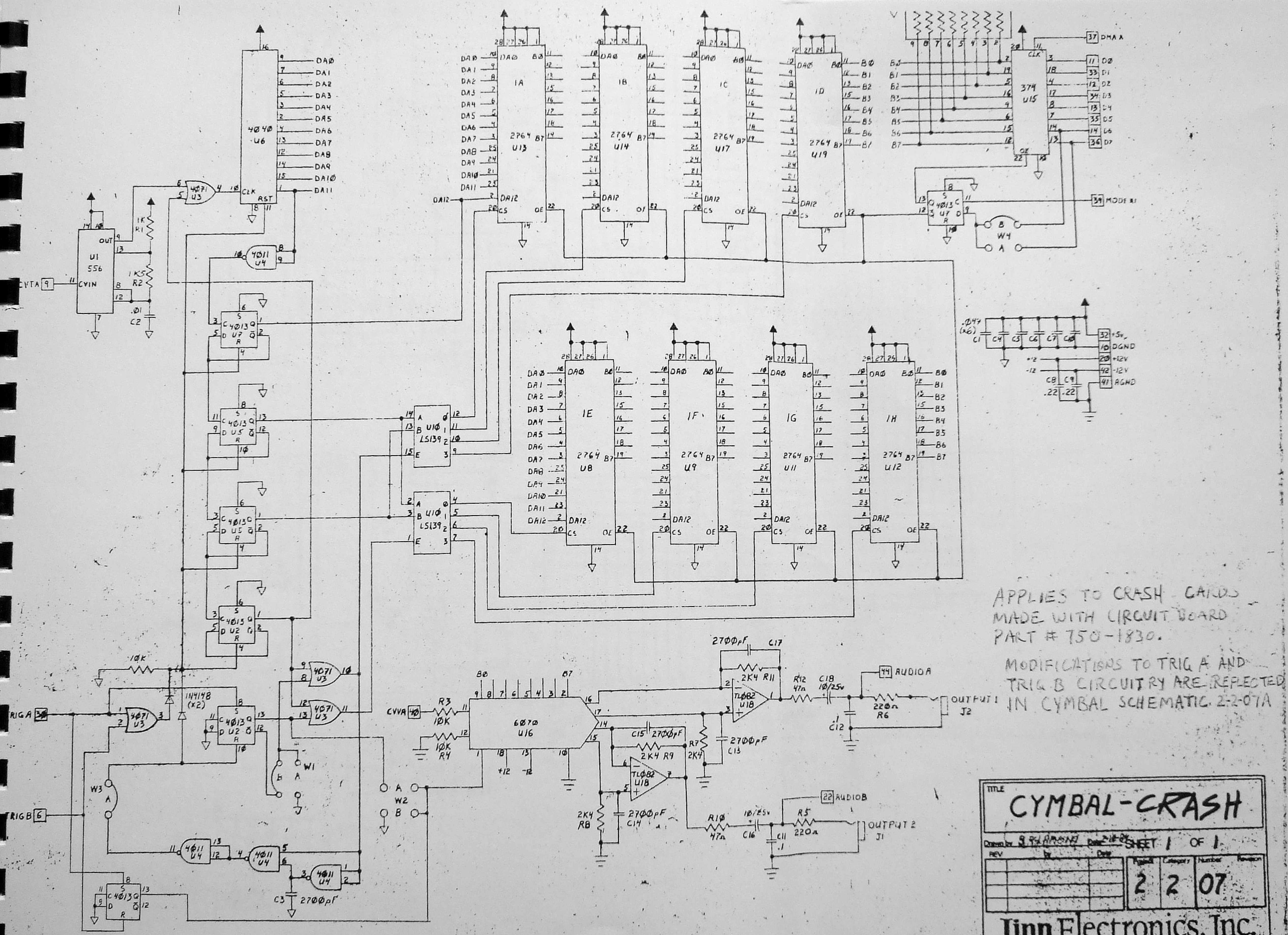
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CYMBAL-RIDE				
Drawn by <u>B. PLAMONT</u> Date <u>2-18-85</u>				
SHEET 1 OF 1				
REV	by	Date	Project	Category
			2 2	07
Inn Electronics, Inc.				
18720 OXNARD STREET TARZANA CA 91356 (818) 708-8131				



THIS APPLIES TO CYMBAL CARDS MADE WITH CIRCUIT BOARD PART # 750-1830A

TRIG A AND TRIG B INPUT CIRCUITRY ALSO REFLECTS MODIFICATIONS TO CRASH CARDS WITH BOARD PART # 750-1830

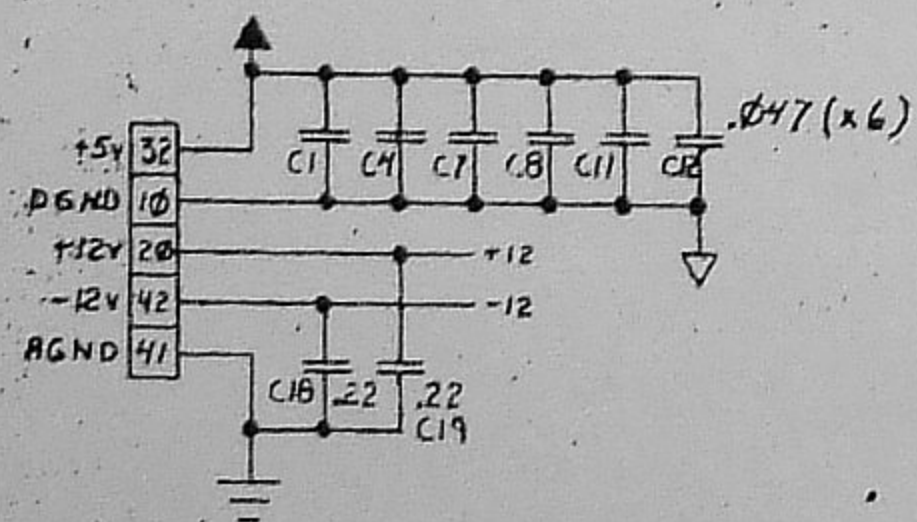
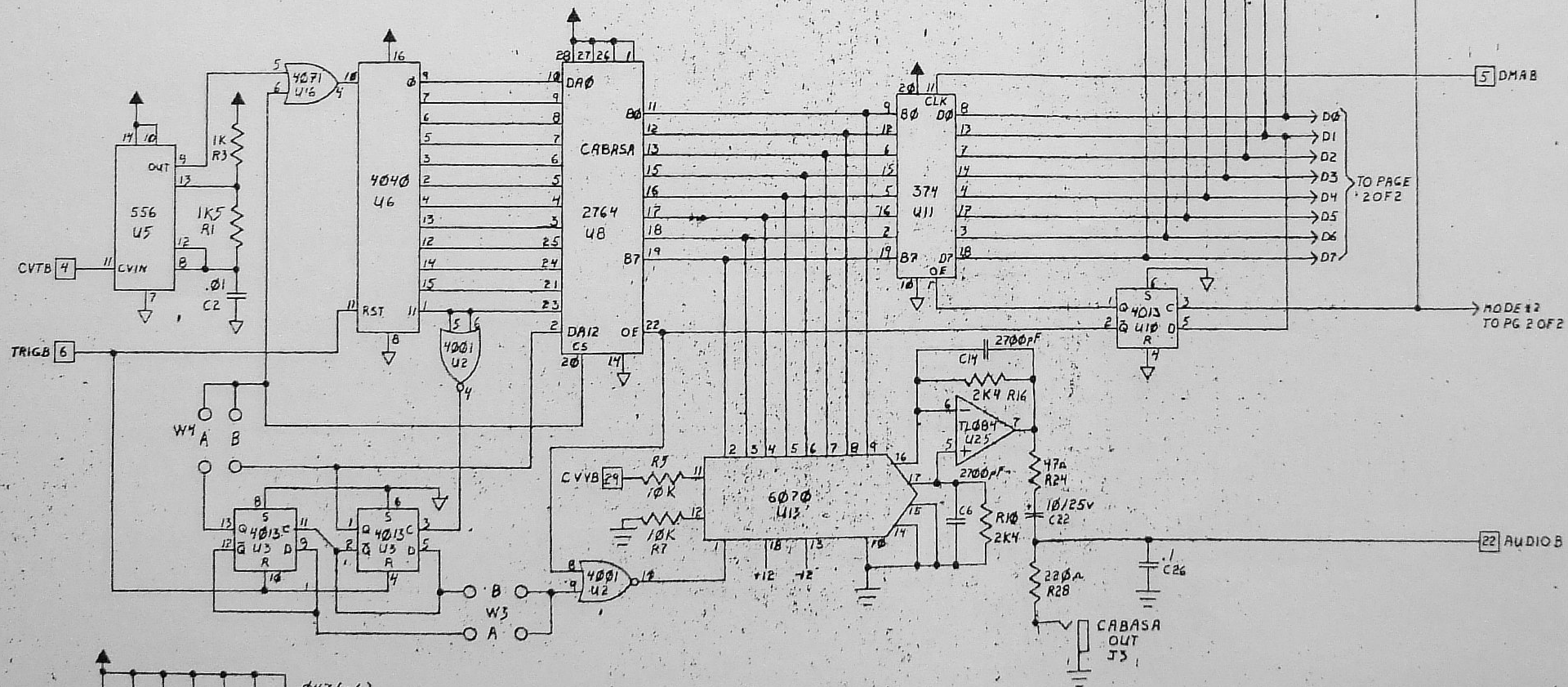
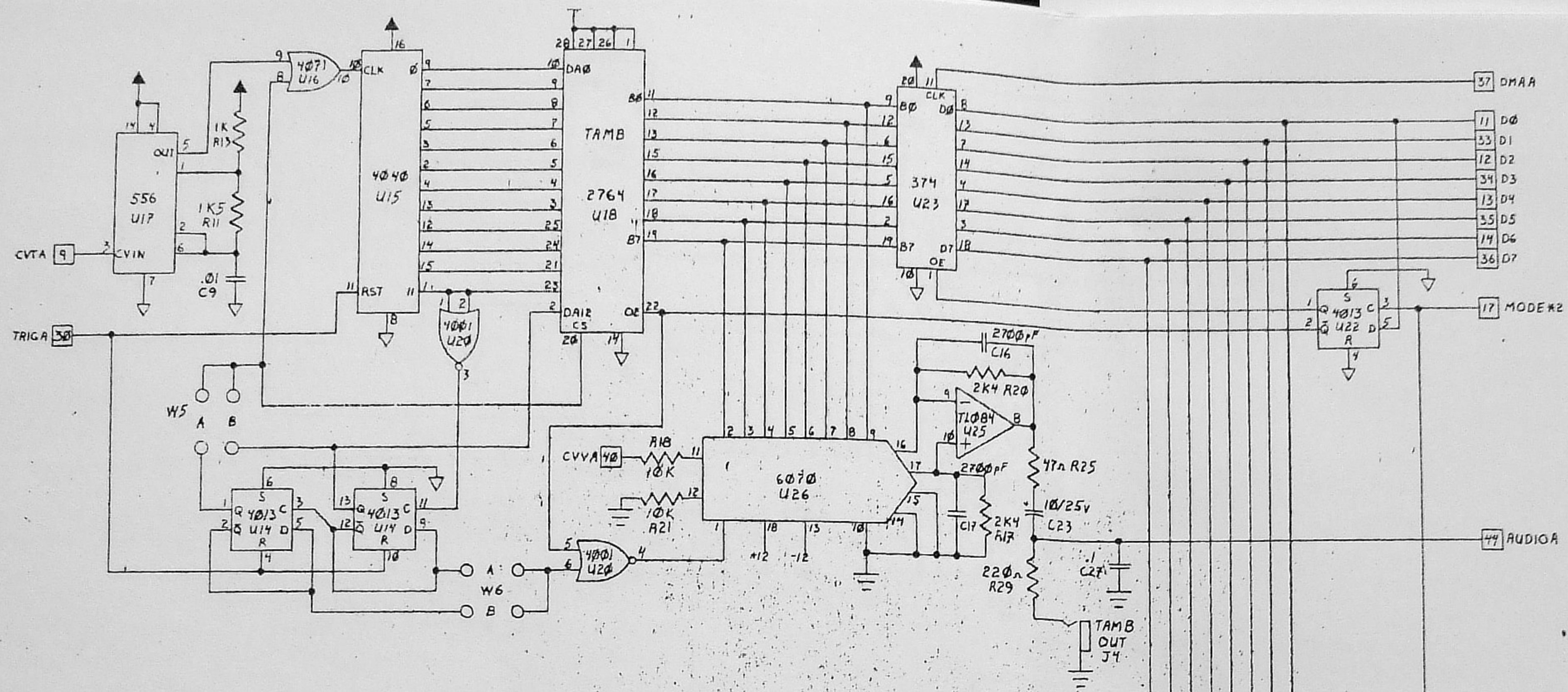
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REV		SHEET 1 OF 1	
A ECO		10-4	
		2 2 07A	
Inn Electronics, Inc.			
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APPLIES TO CRASH CARDS
 MADE WITH CIRCUIT BOARD
 PART # 750-1830.

MODIFICATIONS TO TRIG A AND
 TRIG B CIRCUITRY ARE REFLECTED
 IN CYMBAL SCHEMATIC 2-2-07A

TITLE					
CYMBAL-CRASH					
Designed by S. S. LARSON Date 2-2-07					
SHEET 1 OF 1					
REV	BY	DATE	QUANTITY	CATEGORY	NUMBER
			2	2	07
Linn Electronics, Inc.					
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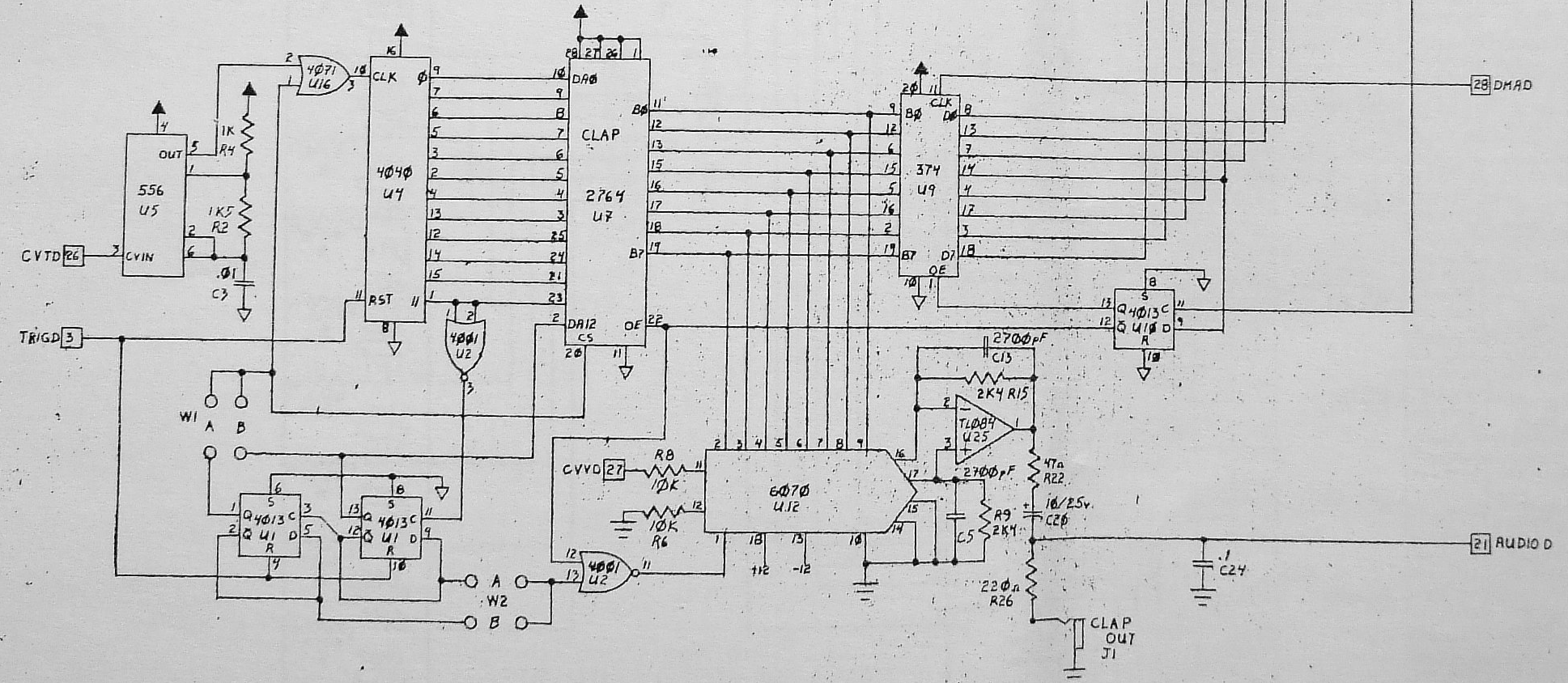
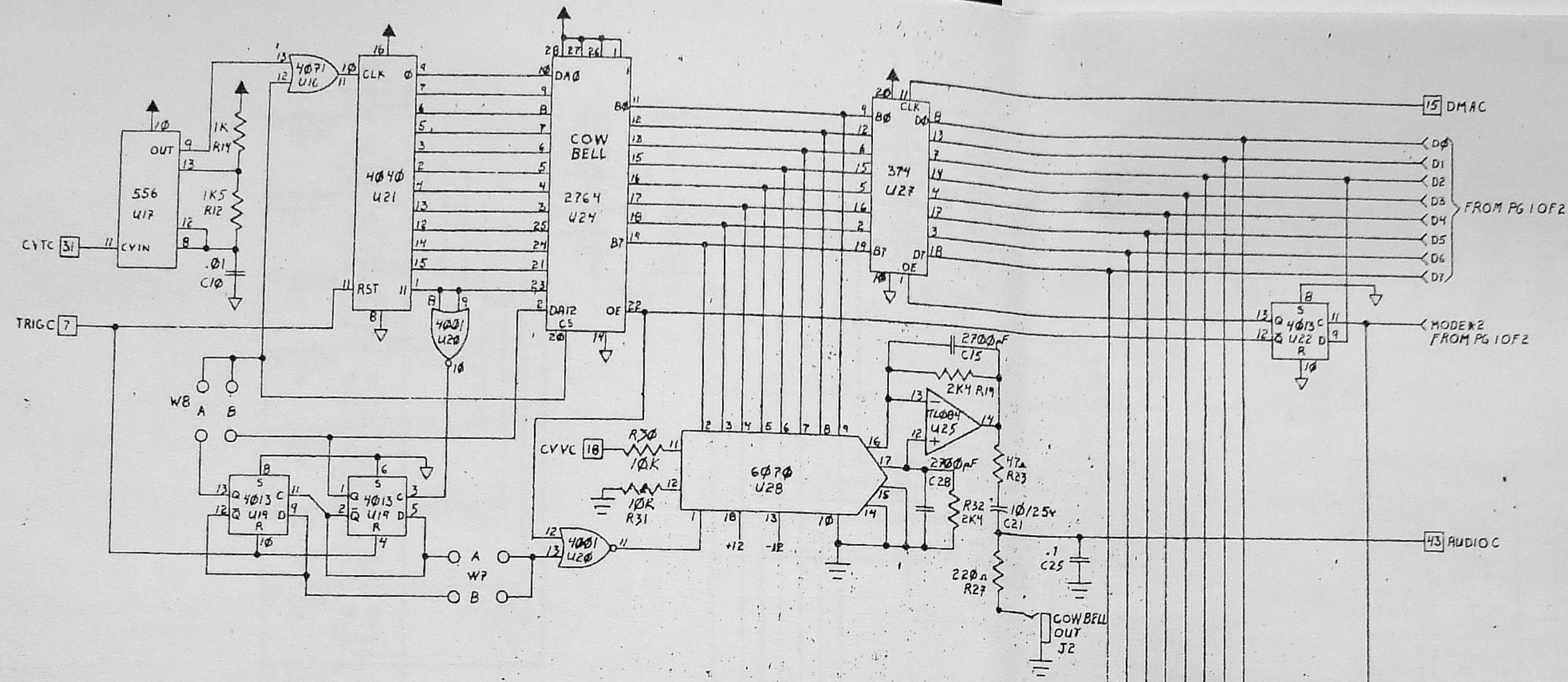


TITLE
PERCUSSION

Drawn by B.A. (AMC) Date 2-10-80
REV 1

SECT 1 OF 2
2 2 08

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ALL POWER CONNECTIONS FROM PAGE 1 OF 2

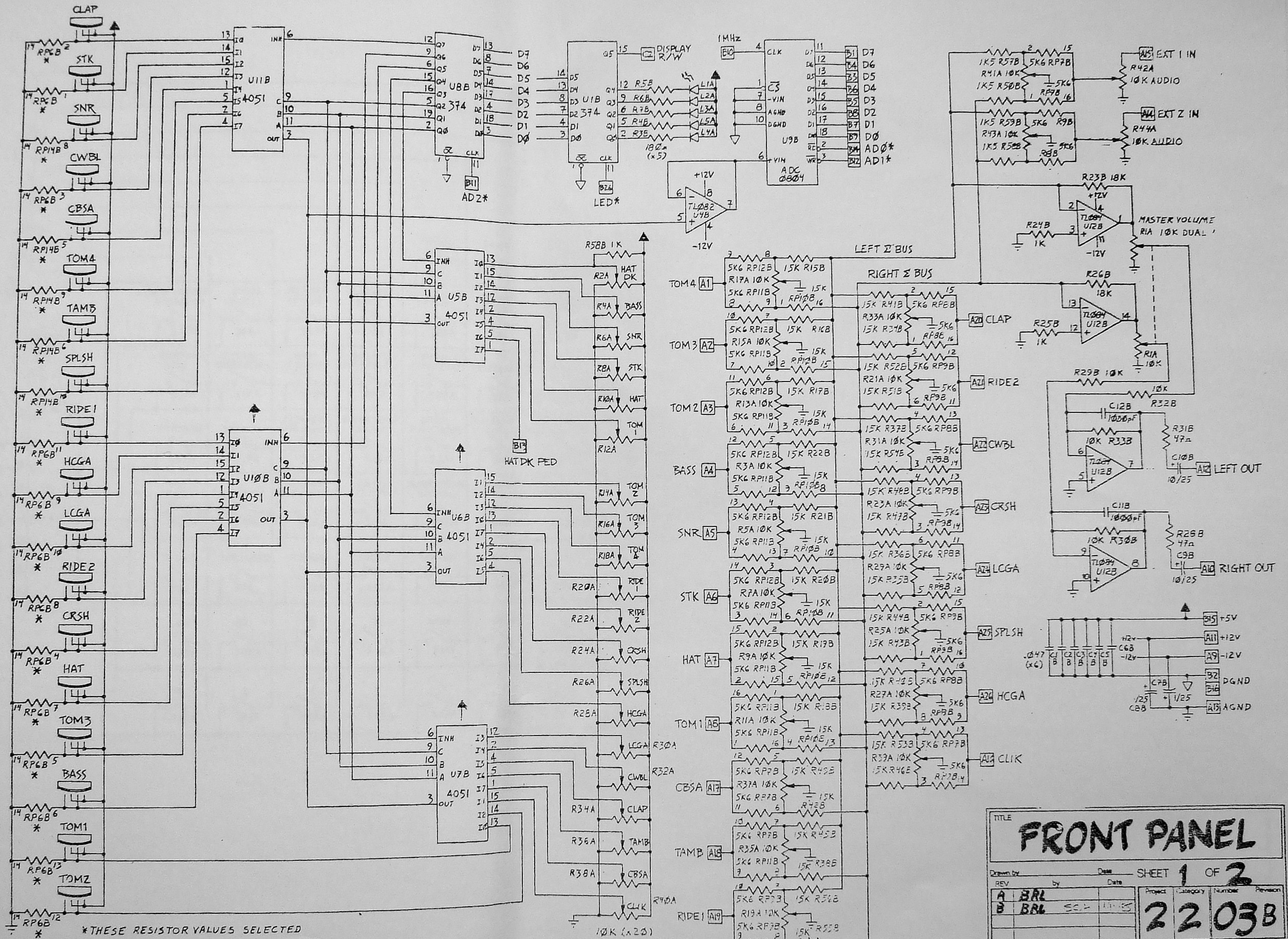
TITLE
PERCUSSION

Drawn by B. J. BROWN Date: 11/18/88 SHEET 2 OF 2

REV by Date: 11/18/88

2 2 08

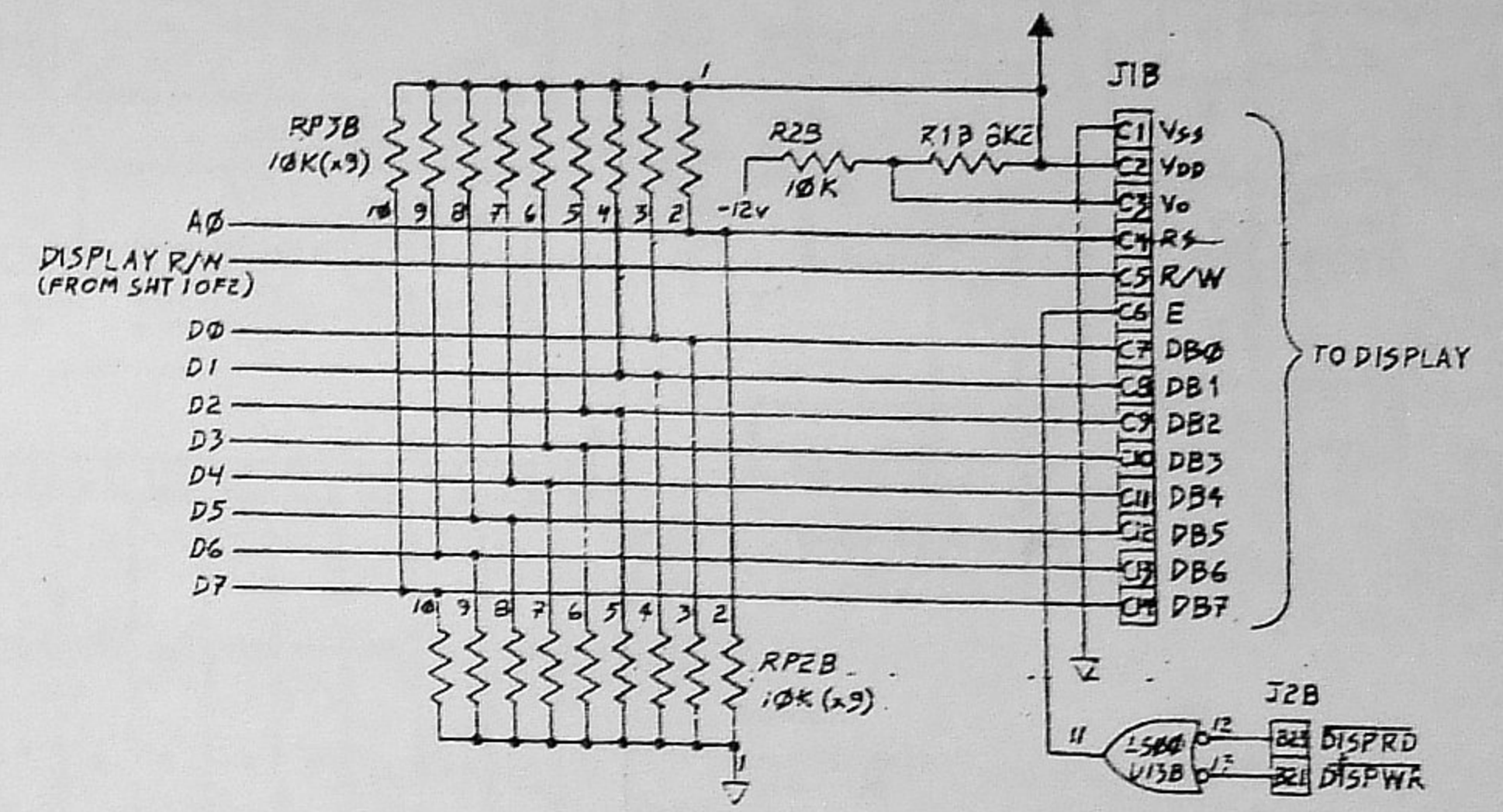
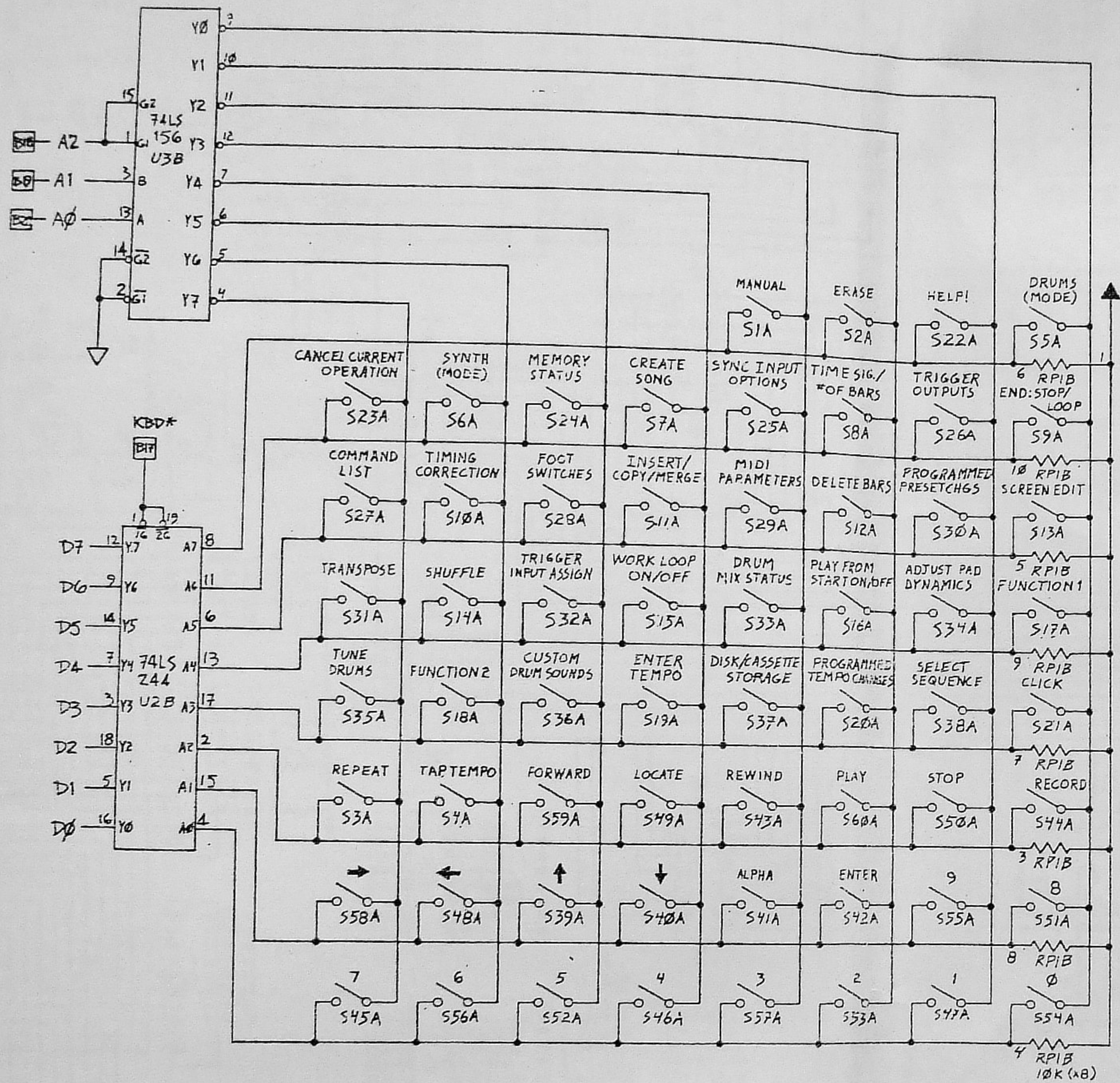
Linn Electronics, Inc.
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*THESE RESISTOR VALUES SELECTED

10K (x20)
PROGRAMMED VOLUME CONTROLS
(ALL TAPERS LINEAR EXCEPT
CLICK CONTROL)

TITLE			
FRONT PANEL			
Drawn by	Date	SHEET 1 OF 2	
REV	by	Date	Revision
A	BRL	SC	11/85
B	BRL	SC	11/85
2203B		Project	Category
Linn Electronics, Inc.			
18720 OXNARD STREET TARZANA CA 91356 (818) 708-8131			

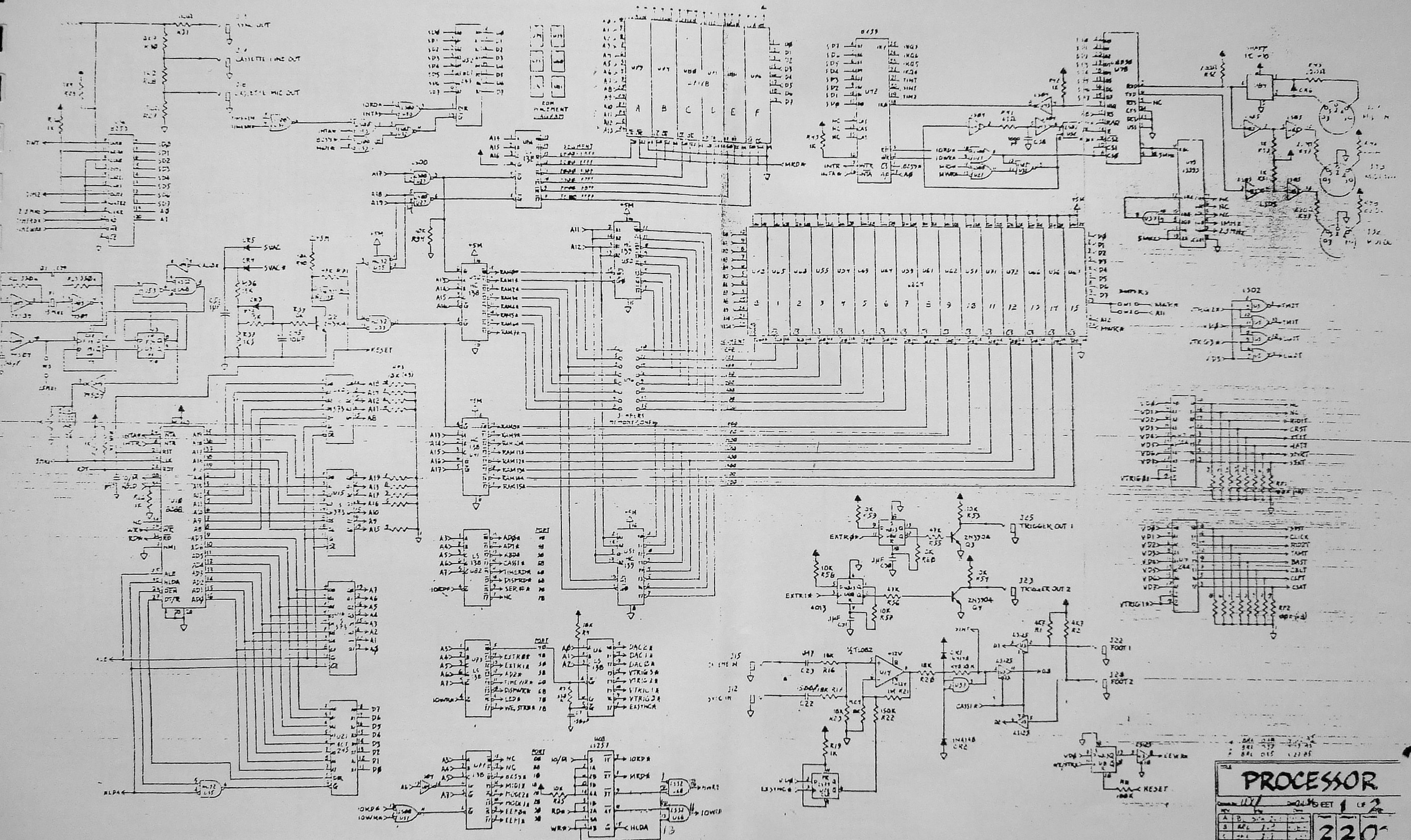


TITLE
FRONT PANEL

Drawn by: [Signature] Date: 1/1/85 SHEET **2** OF **2**

REV	by	Date	Project	Category	Number	Revision
	SLSCA	1/1/85			2203B	

Linn Electronics, Inc.
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PROCESSOR

DESIGNED BY: [Signature]

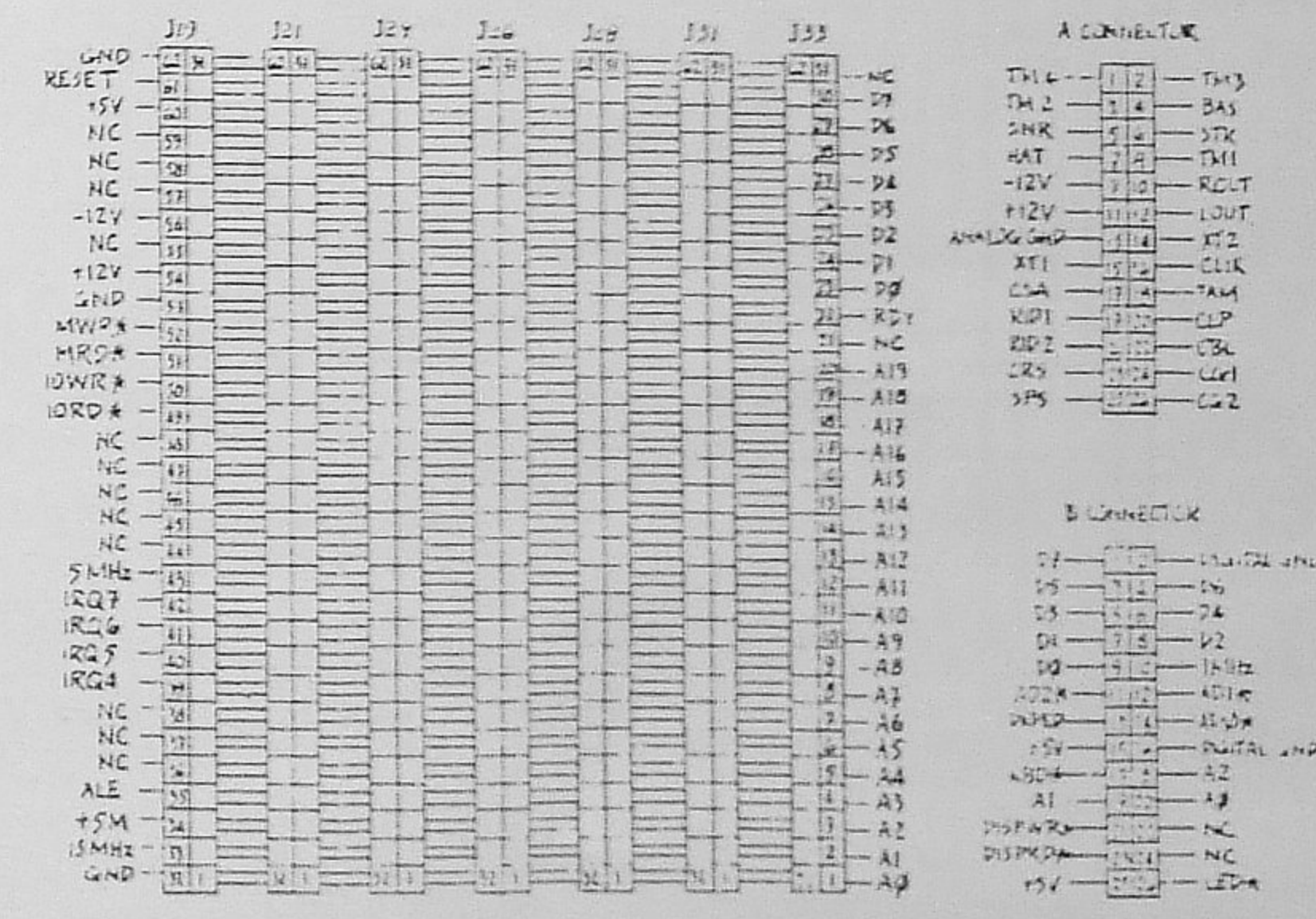
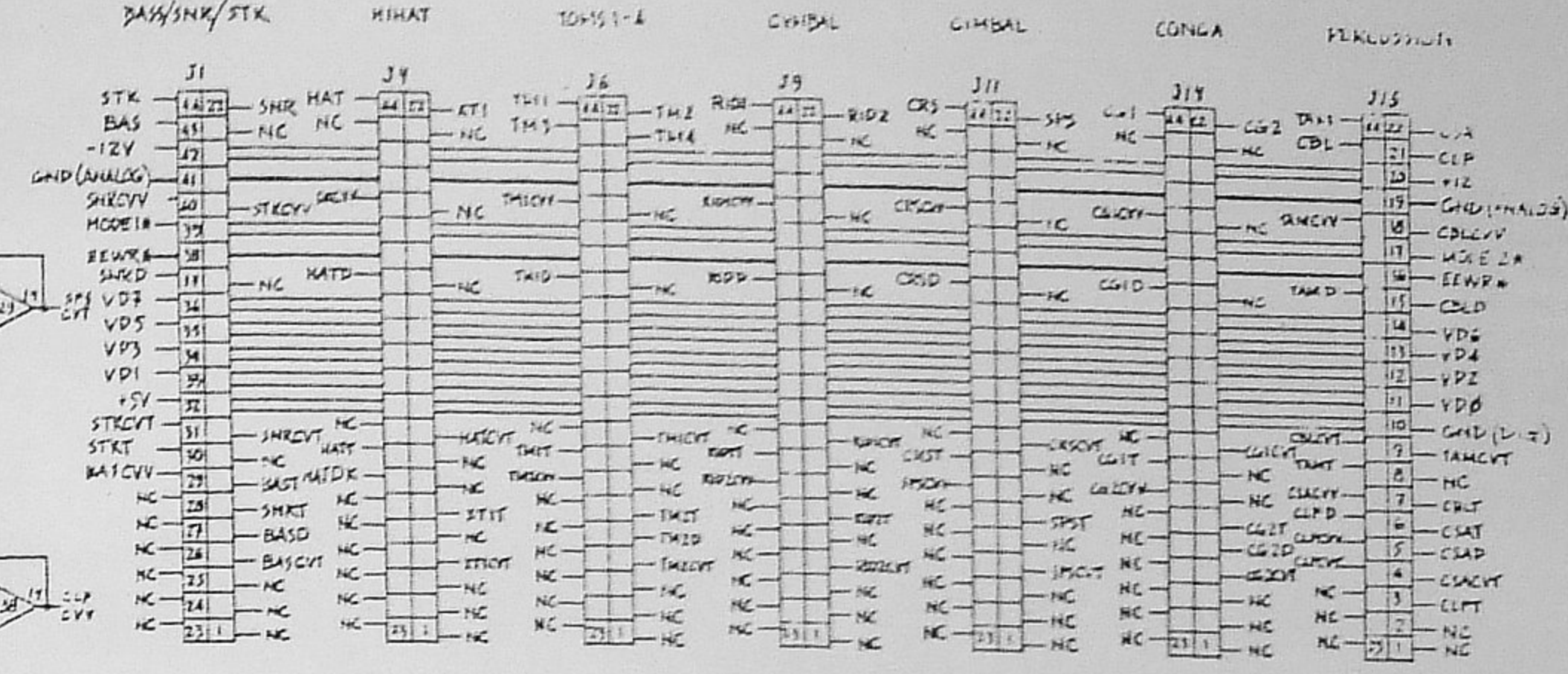
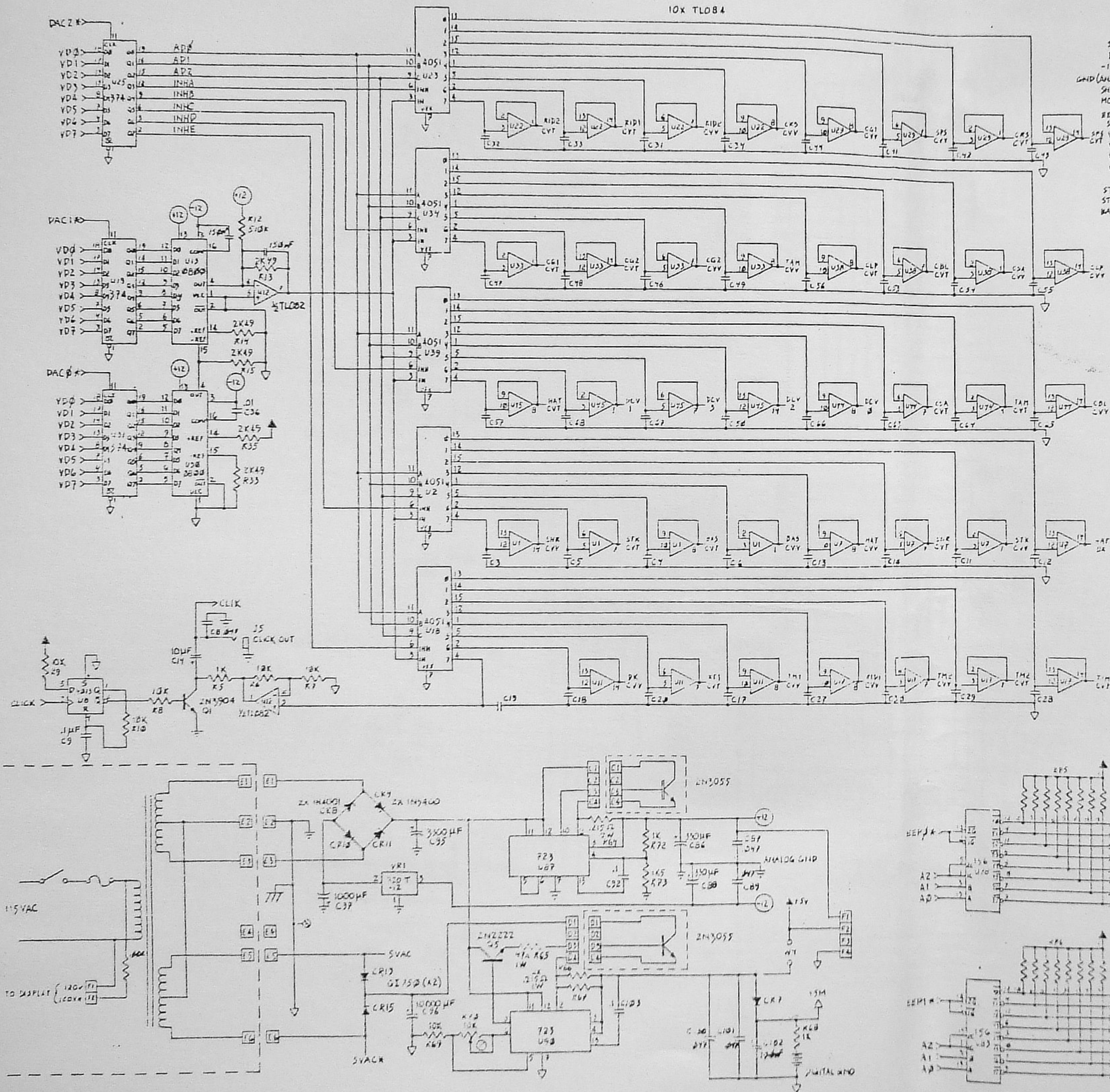
A	B	C
D	E	F
G	H	I
J	K	L

220

Linn Electronics

1700 DUNDAS STREET EAST, TORONTO, CANADA

CONTROL VOLTAGE DEMULTIPLEXER, OUTPUTS CONNECT TO CVV (40 PLACES) & CVT (14 PLACES) PINS, J19-25,
AND PCVO-3, PINS 17-20, J31



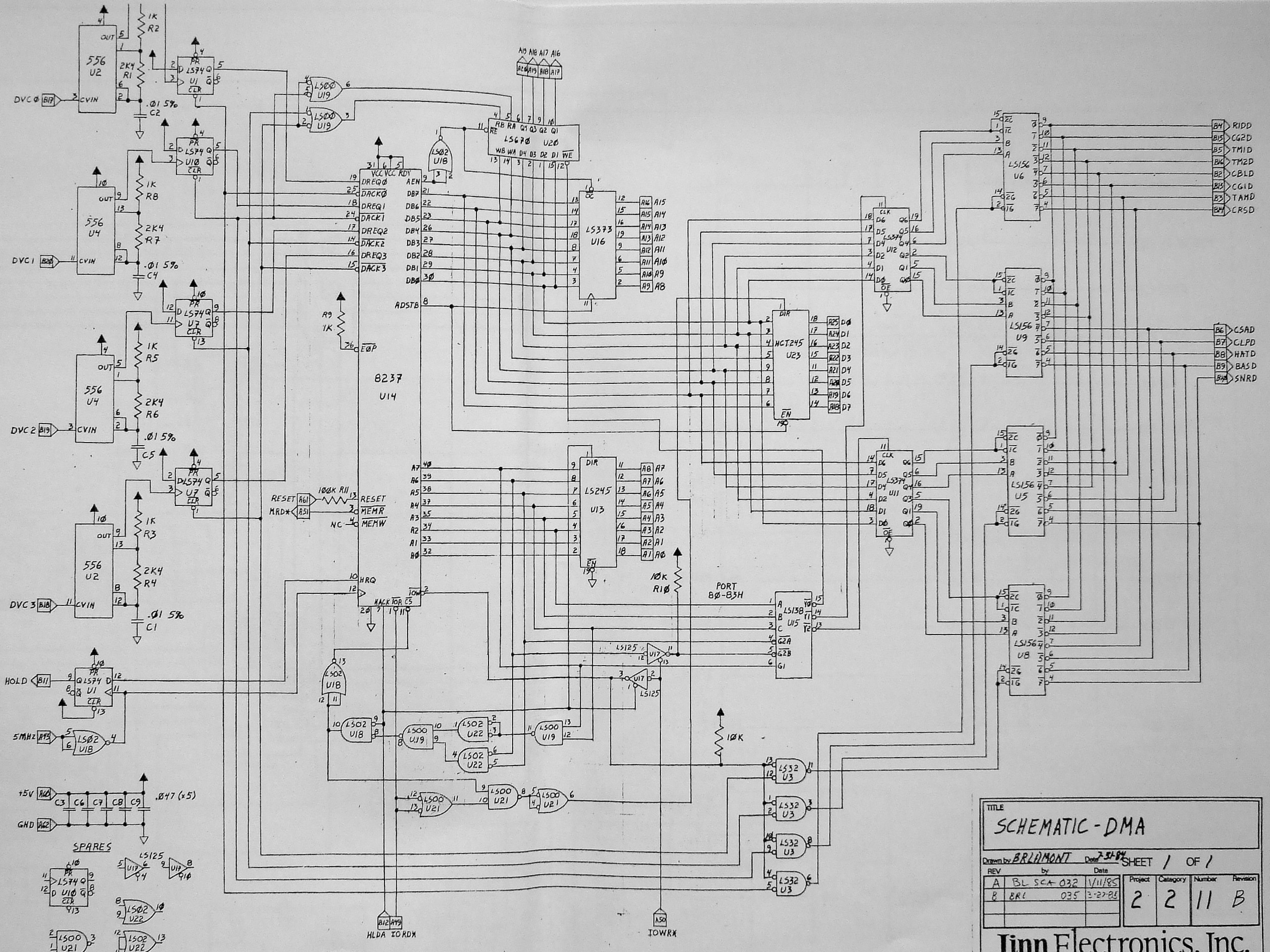
PROCESSOR

DATE: 11/11/81

REV: 2 OF 2

2202

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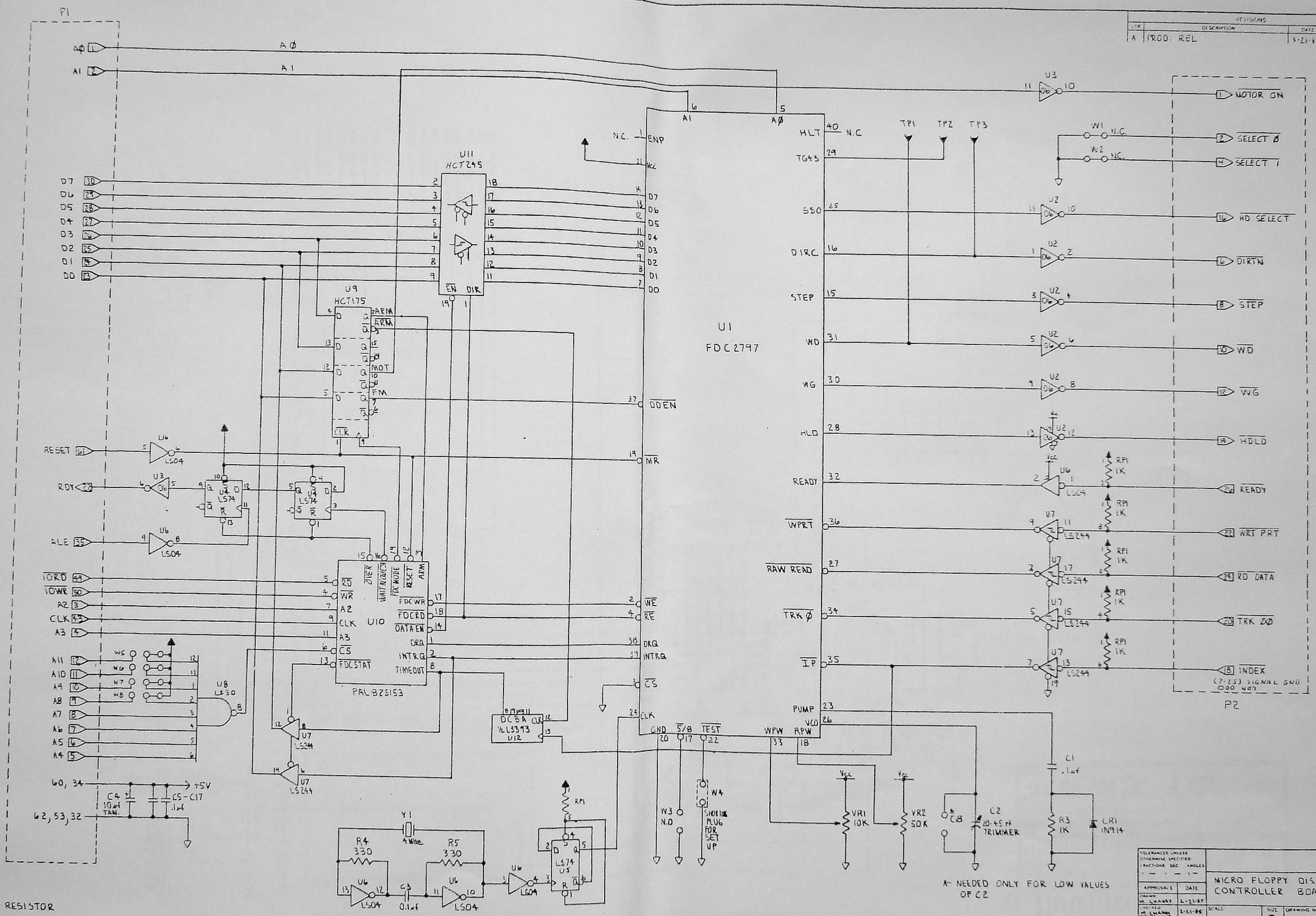
TITLE
SCHEMATIC - DMA

Drawn by **BRLMONT** Date **3-27-85** SHEET 1 OF 1

REV	by	Date	Project	Category	Number	Revision
A	BL SCA-032	1/11/85				
B	BRL	035	2	2	11	B

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REV	DESCRIPTION	DATE	APPROV
A	PROD. REL	3-21-85	MC



* FULL UP RESISTOR

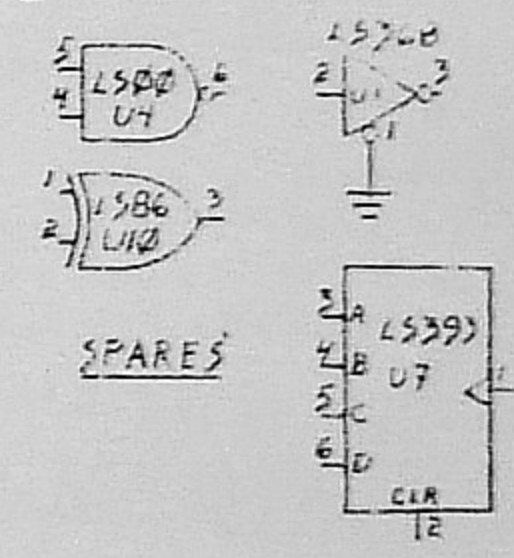
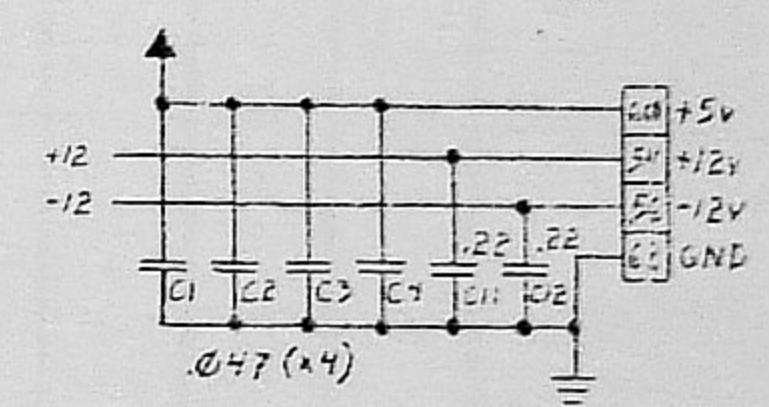
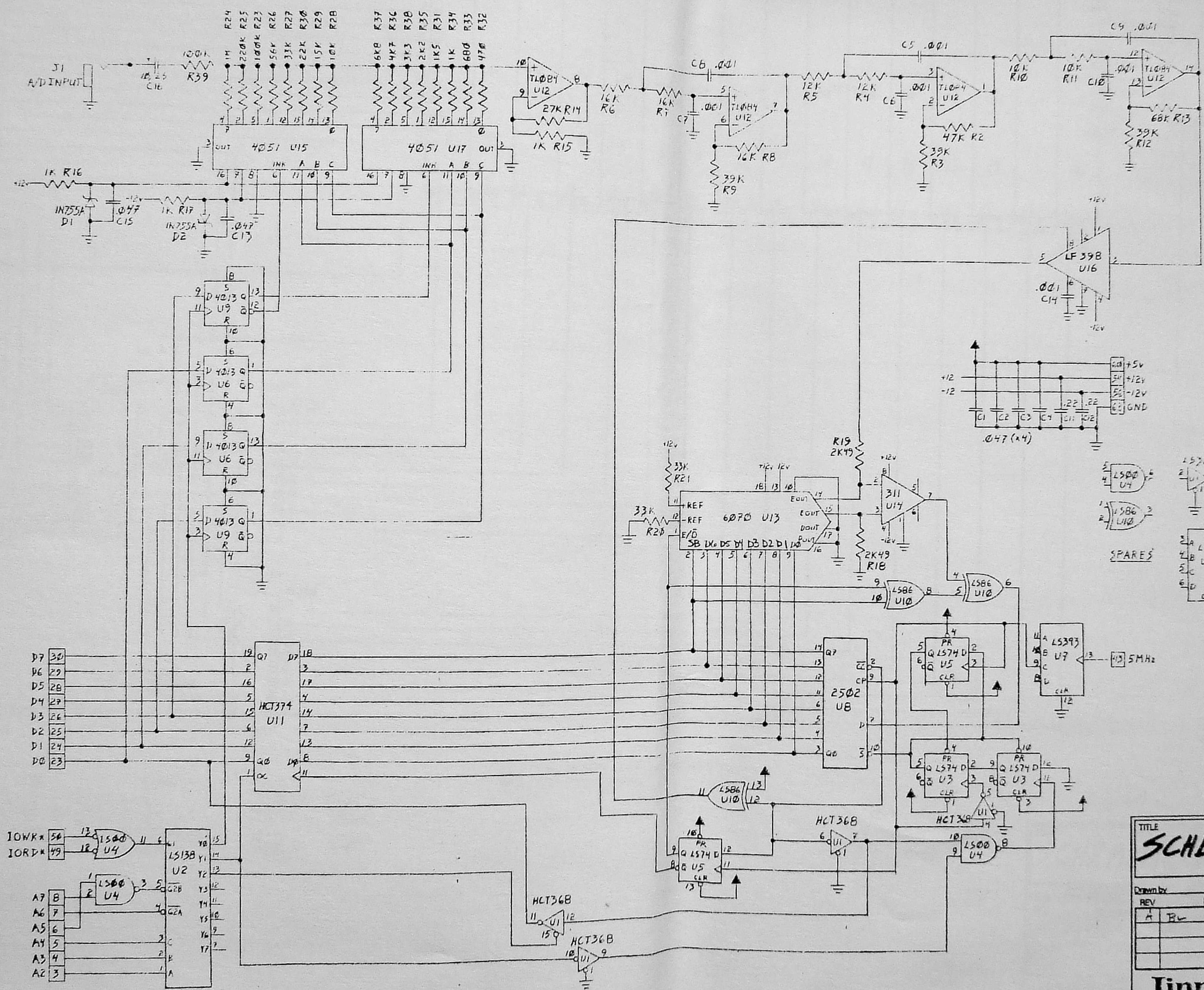
A- NEEDED ONLY FOR LOW VALUES OF C2

TOLERANCES UNLESS OTHERWISE SPECIFIED		FRACTIONS DEC ANGLES	
APPROVALS	DATE	SCALE	SIZE
DESIGNED BY	DATE	SCALE	SIZE
CHECKED BY	DATE	SCALE	SIZE
DRAWN BY	DATE	SCALE	SIZE

MICRO FLOPPY DISK CONTROLLER BOARD

SCALE	SIZE	DRAWING NO.
	D	-0167

DO NOT SCALE DRAWING SHEET 1 OF 1



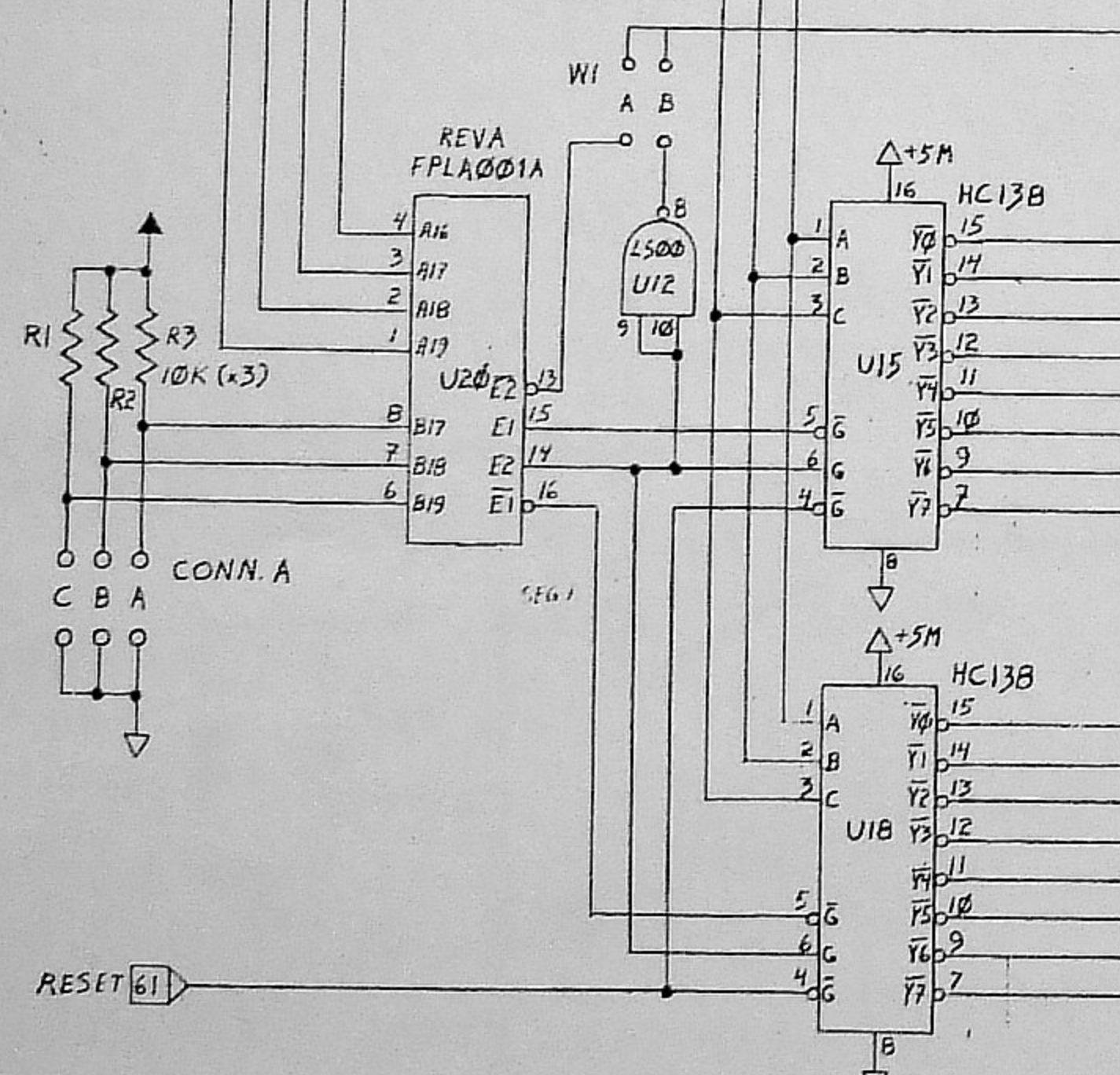
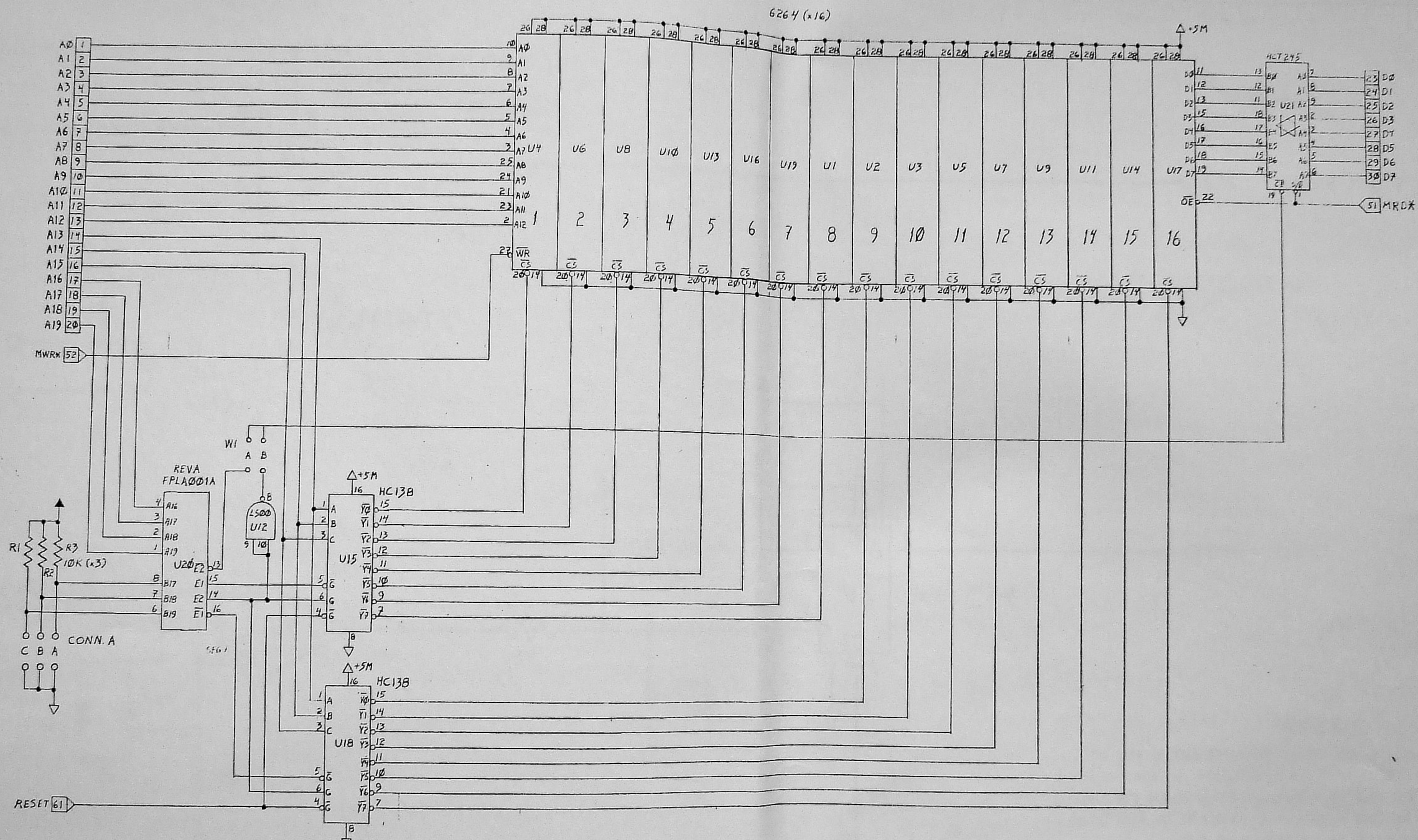
TITLE
SCHEMATIC-A/D

Drawn by _____ Date _____ SHEET 1 OF 1

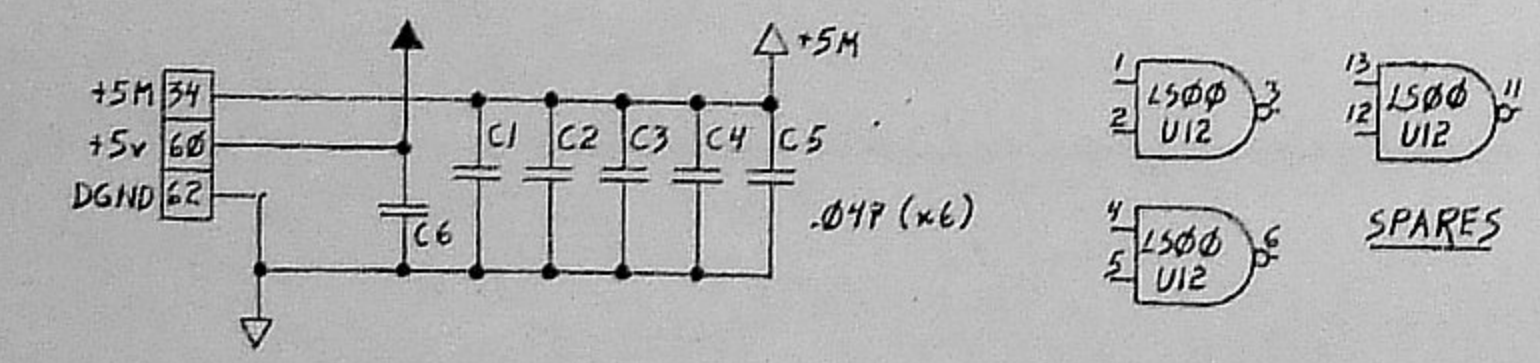
REV _____ by _____ Date _____

Project	Category	Number	Revision
2	2	12	A

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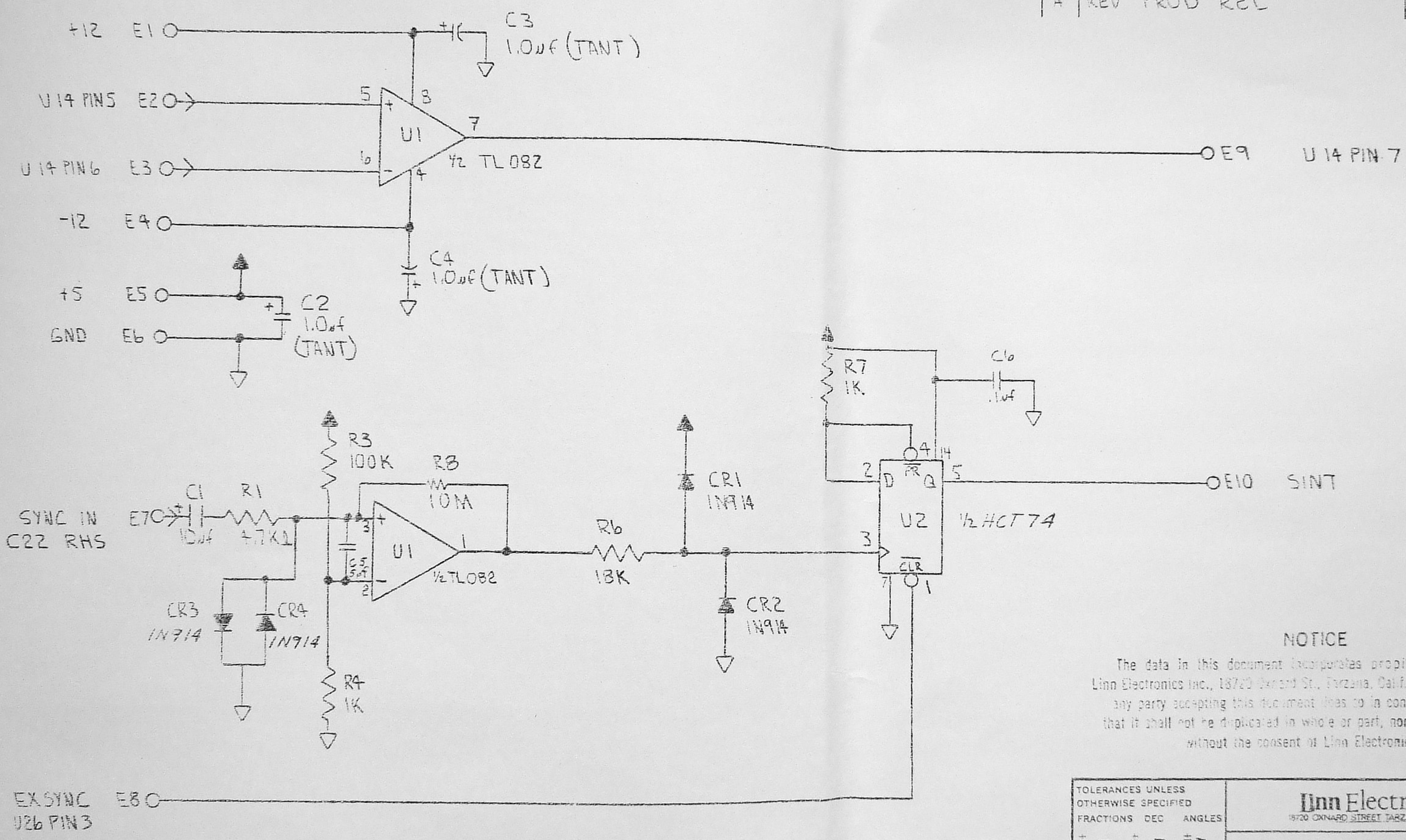


WI A = FPLA UPDATE REVA (DO NOT LOAD U12)
 WI B = FPLA FIRST RELEASE



TITLE		SCHEMATIC-SRAM	
Drawn by	DATE	SHEET 1 OF 1	
REV	by	Date	Number
A	PL SCA 730	1/1/85	2210A
Project		Category	Number
22		10	A
Linn Electronics, Inc.			
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REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	REV PROD REL	8-9-85	EF



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TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC ANGLES ± — ± — ± —		Linn Electronics, Inc. 18720 OXFORD STREET TARZANA, CA 91356 (818) 708-4131			
APPROVALS		DATE		9000 EXT SYNC MOD	
DRAWN M. CHANCEY		5-15-85		SCALE	SIZE
CHECKED M. CHANCEY		5-15-85		—	B
DRAWN C. ELSON		5-15-85		DRAWING NO.	REV
				935-0592	A
DO NOT SCALE DRAWING				SHEET 1 OF 1	