

ext. delay control

repeat hold

105-125 Volts AC, 50-80Hz, 0.3 Amp, 37.5 Watts

13000731

DIGITAL DELAY SYSTEM model No. 113 CAUTION: To Prevent Electrical Shock, Do Not Remove Back Cover. No User Serviceable Parts Inside. Refer All Servicing To Qualified Service Personnel. WARNING: To Prevent Fire Or Shock Hazard, DO NOT Expose This Appliance to Rain or Moisture.

# digital delay

.31 — .63 — 1.3 — 2.5 — 5 — 10 — 20 — 40 — 80 — 160 — Delay Range x1 msec

20 — 10 — 5 — 2.5 — Bandwidth : KHz

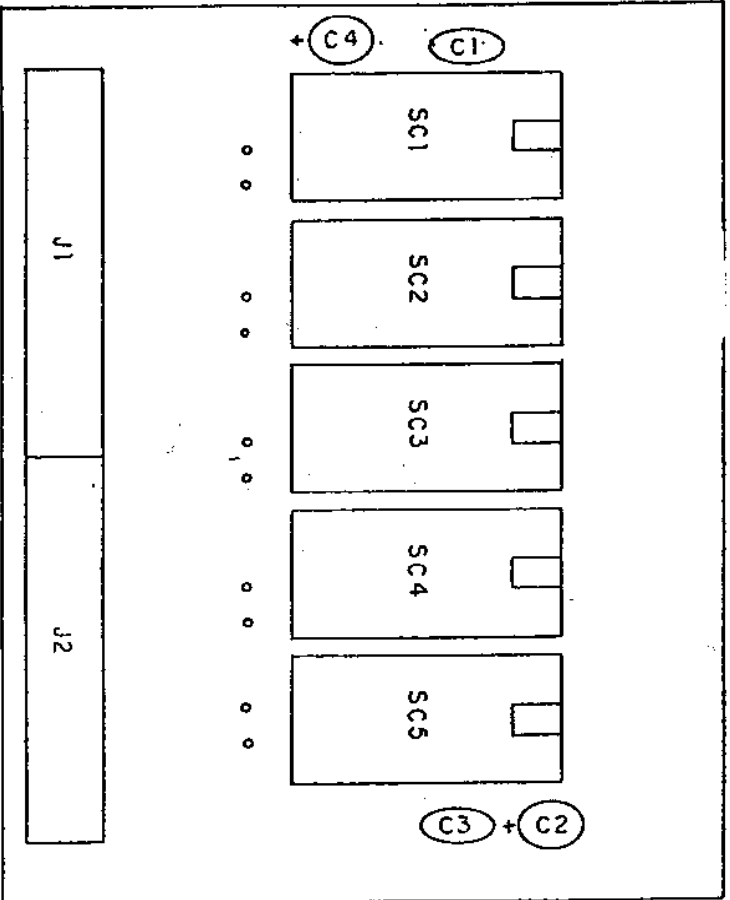
**Delay Time**  +2 x2

**Sweep**  Width 0 % 100  Frequency .1 Hz 10 (Pull x 100)

**Mix**  dry delay (Pull: invert delay phase)

**Regen.**  Level  off ∞ -15 dB +15

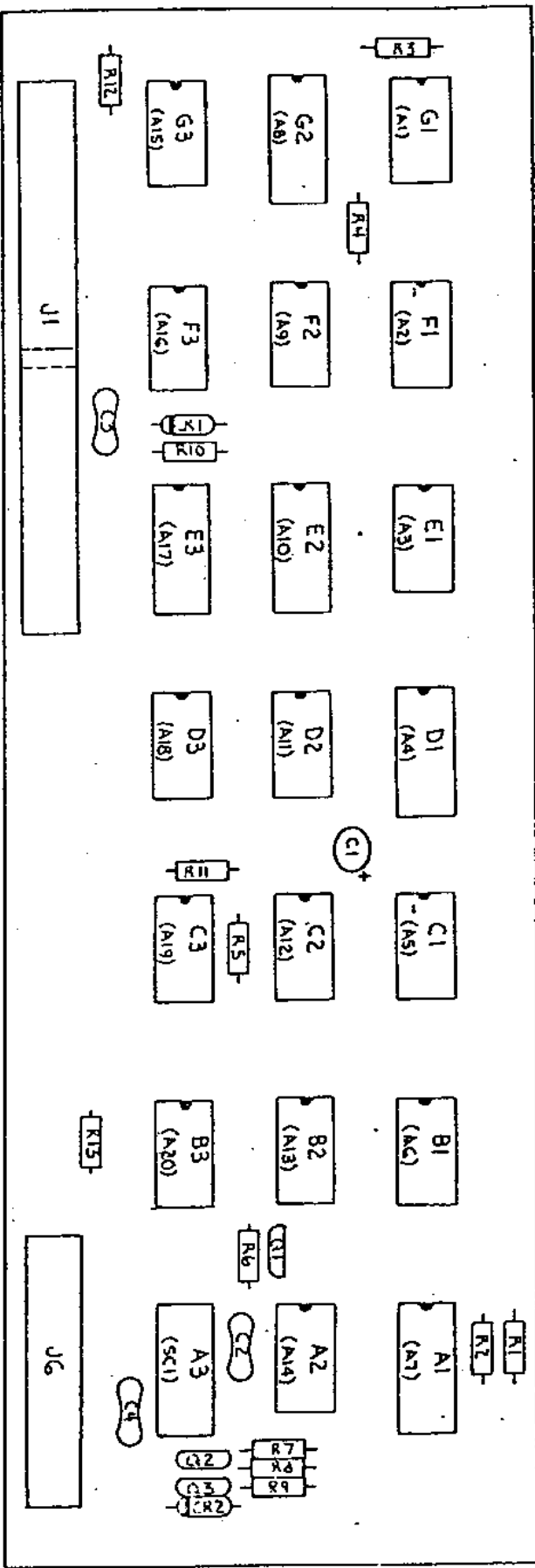
Over Load



VIEW OF COMPONENT SIDE OF BOARD

NOTE:  
USE LATEST REV OF 113-3002-100  
LEVEL PER REV LOG.

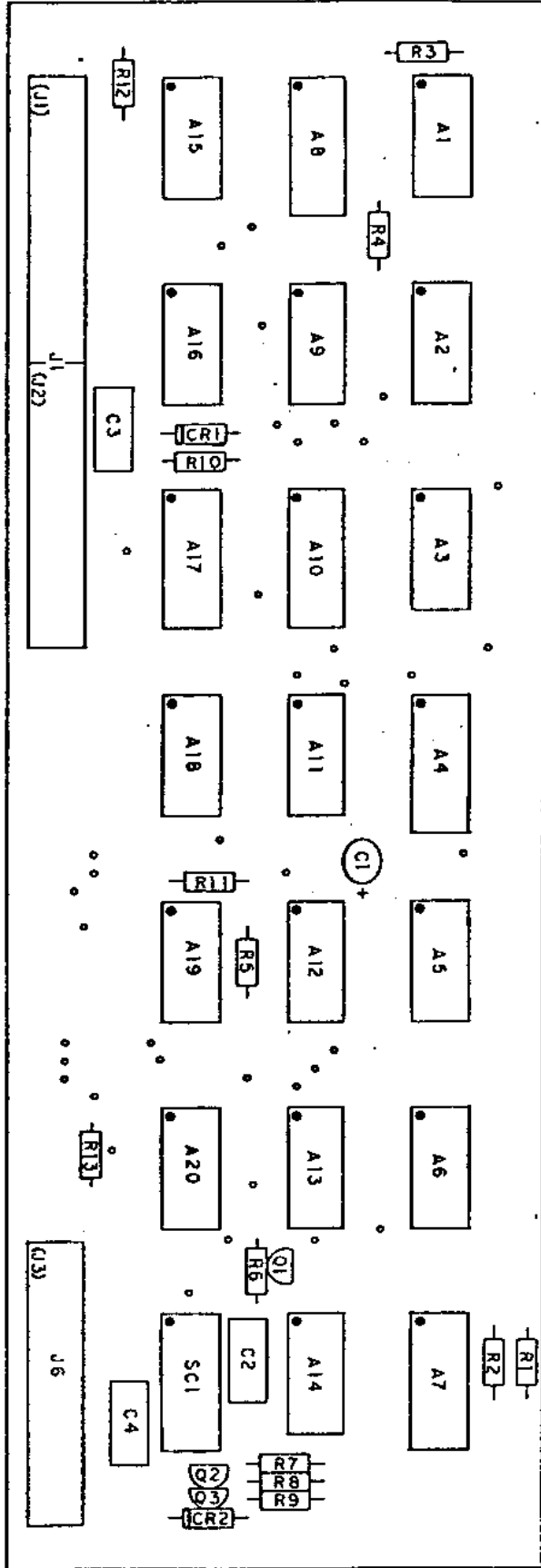
3/7/80		REDRAWN NO./CHG	H.M.H.	
2/5/78		DELETED "K" ADDR'S "J"	B.K.	D.Y.
LEVEL	DATE	PCN NO. OR CHANGE REMARKS	DRAWN	APP'D
REVISION LOG				
TOLERANCES: PRIMARY DATE: <b>MXR</b> MXR Innovations Inc. Rochester, New York				
DECIMAL: <input type="checkbox"/> ANGULAR: <input type="checkbox"/>				
SCALE: 2:1 DO NOT SCALE DRAWING				
DATE: 4/11/78		DATE: 4/11/78	DATE: 4/11/78	DATE: 4/11/78
TITLE: COMPONENT PLACEMENT				
MEMORY MODULE-DIGITAL DELAY				
DWG. NO. B		113-3002		REV. LEVEL 301



VIEW OF COMPONENT SIDE OF BOARD

P.C.B. NO. 113-5001-103

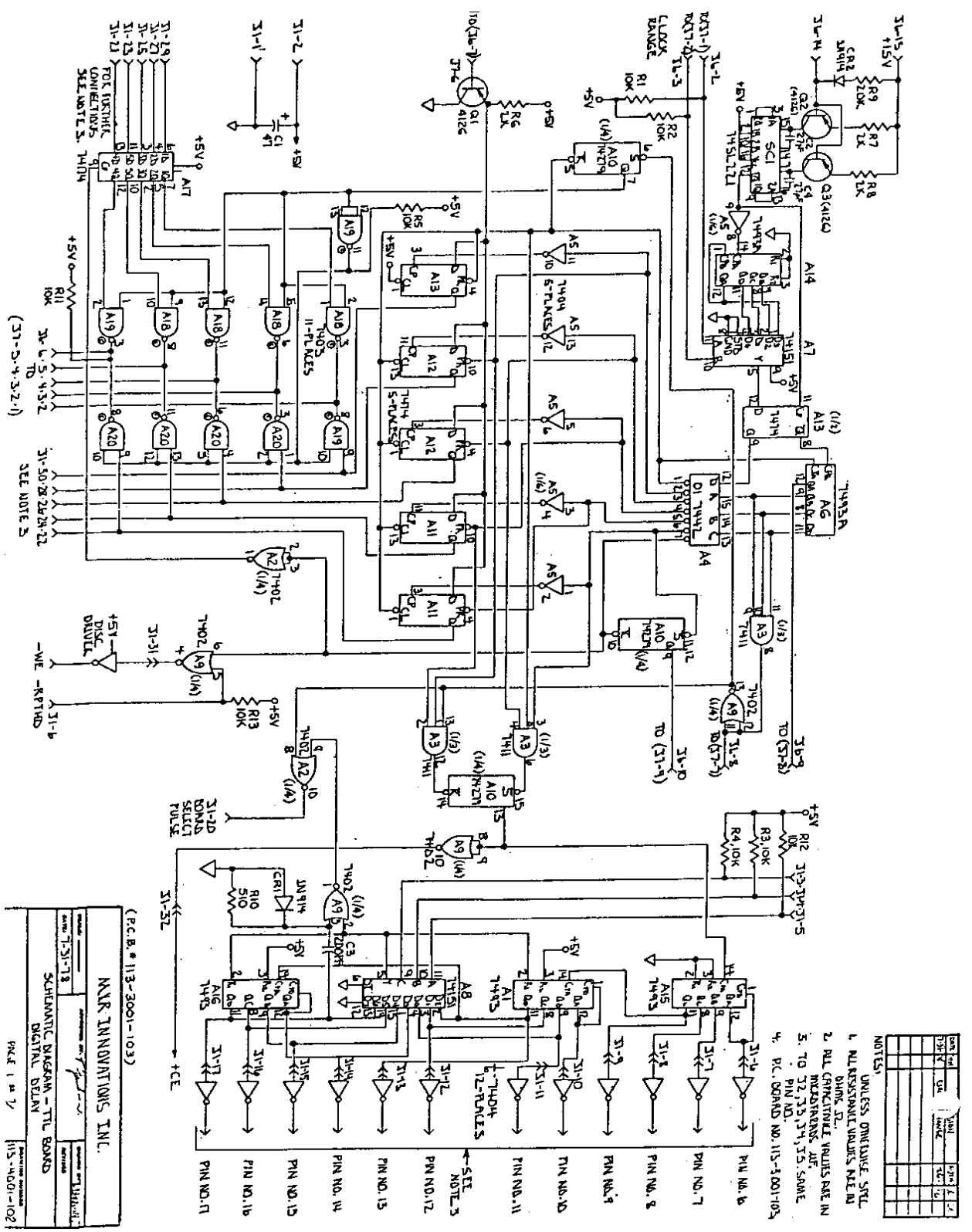
DATE	4-4-70	REVISED	113-5001-102
DESIGNED BY	W. J. B. / J. S. B.	DESIGNED BY	W. J. B. / J. S. B.
CHECKED BY	W. J. B. / J. S. B.	CHECKED BY	W. J. B. / J. S. B.
APPROVED BY	W. J. B. / J. S. B.	APPROVED BY	W. J. B. / J. S. B.
MIR INNOVATIONS INC.			
TTL BOARD - DIGITAL SIM			



NOTE:  
 USE LATEST REV OF 113-3001-100  
 LEVEL PER REV LOG.

VIEW of COMPONENT SIDE of BOARD

REVISION LOG		MIXER	
REV	DATE	REV	DATE
302	12/8/78	302	12/8/78
REV COMP DESIGNATIONS		REV COMP DESIGNATIONS	
REV NO. OR CHANGE REVISION		REV NO. OR CHANGE REVISION	
DESIGNER		DESIGNER	
CHECKER		CHECKER	
DATE		DATE	
APPROVED		APPROVED	
<p>TOLERANCES UNLESS OTHERWISE SPECIFIED:</p> <p>FRACTIONAL DECIMALS</p> <p>ANGULARS</p>			
<p>STANDARD: 2:1</p> <p>GENERAL DIMENSIONS: 2:1</p> <p>FRAC DIMENSIONS: 2:1</p> <p>ANGULARS: 2:1</p>			
<p>YIELD: COMPONENT PLACEMENT</p> <p>TTL BOARD-DIGITAL DELAY</p>			
REV LEVEL		REV LEVEL	
113-3001		302	



REV.	DATE	BY	CHKD.	APP'D.

- NOTES:
- UNLESS OTHERWISE SPEC.
  - ALL RESISTOR VALUES ARE IN OHMS, E.T.
  - ALL CAPACITOR VALUES ARE IN MICROFARADS, U.F.
  - TO 32, 33, 34, 35, SAME PIN NO.
  - D.C. BOARD NO. 115-3001-103

(P.C.B. # 115-3001-103)

**MAX. INNOVATIONS INC.**

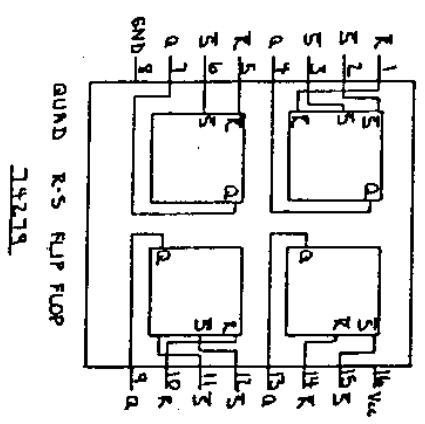
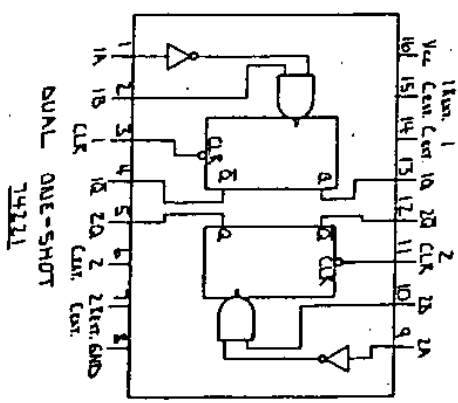
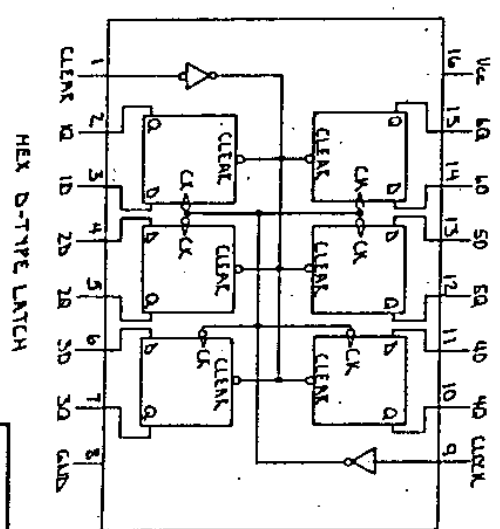
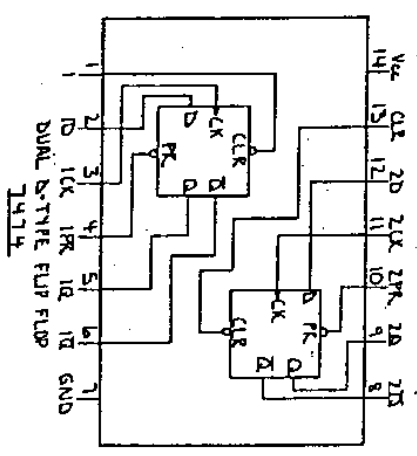
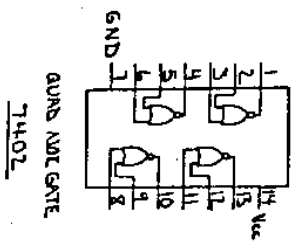
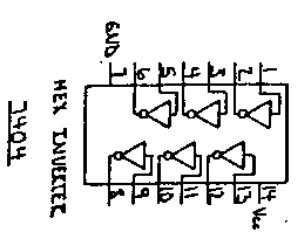
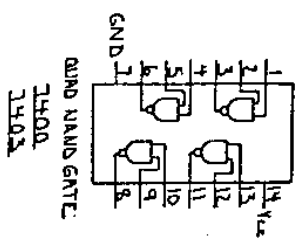
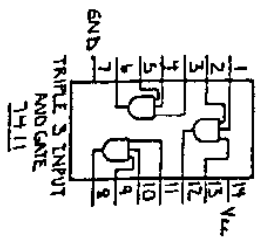
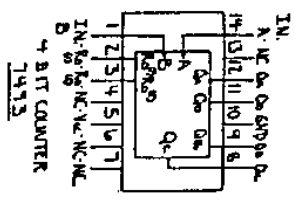
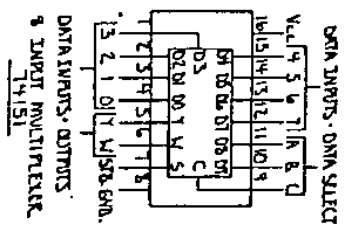
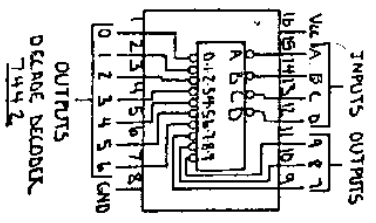
115-3001-103

**SCHWARTZ DIAGRAM - TTL BOARD**

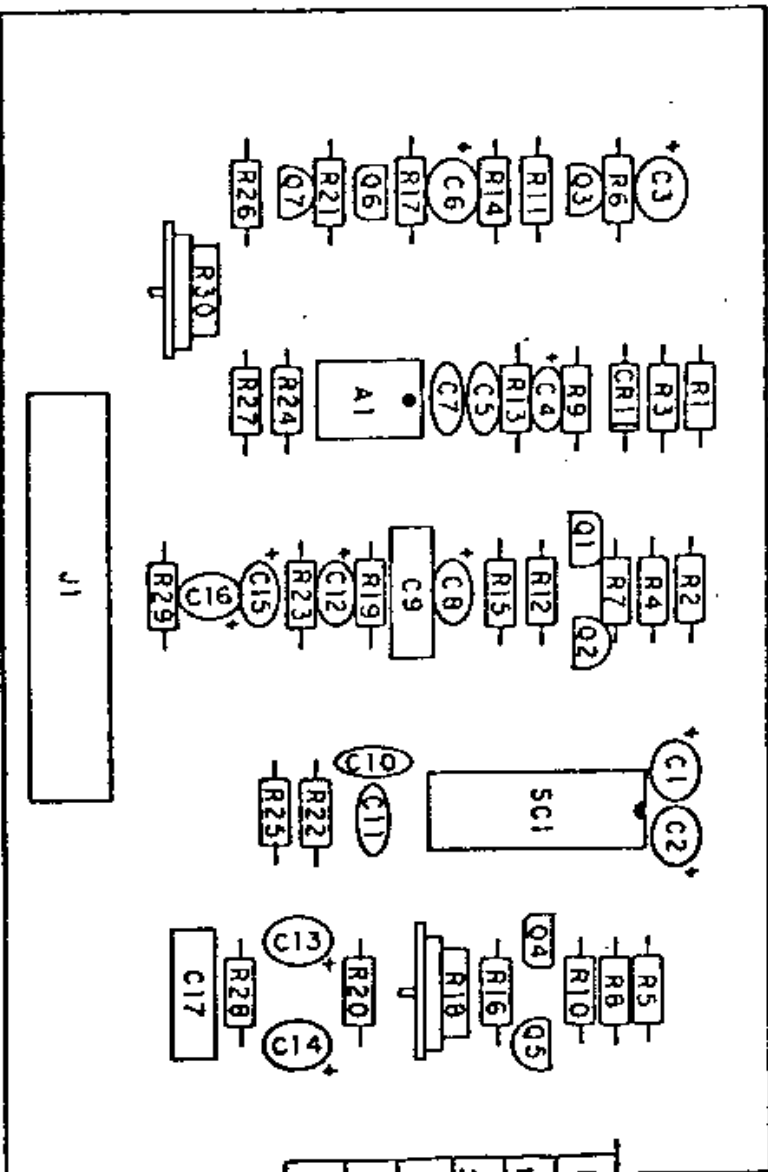
DIGITAL DELTA

DATE 1 2 7

115-3001-103



<b>MYR INNOVATIONS INC.</b>	
Model: 8-24-75	Revision: 1
COMPONENT PIN OUT - SCHEMATIC	
TTL BOARD - DIGITAL DELAY	
Part No: 102	113-001-102



VIEW OF COMPONENT SIDE OF BOARD

NOTE:  
USE LATEST REV OF 113-3004-100  
LEVEL PER REV LOG.

PARTS LIST		PART NO.	QTY.
ITEM	DESCRIPTION		

DATE	SYM.	REVISION	APPR.	DRW. CHG.
10-12-78		C12 15MF - 47MF	DY	(Signature)
5-6-79		SEE PAGE 104	PL	(Signature)

LEVEL	DATE	REV. NO. OR CHANGE REMARKS	DRAWN	APP'D
303	3/1/80	REDRAWN NO/CHG	H.M.H.	ALL
302	10/2/78	QUARTER C12 15MF APPROX. 47MF	B.K.	D.Y.

REVISION LOG

TOLERANCES: POINT DATA  
IN PARENTS: (SEE NOTE)  
DECIMALS

SCALE: 2:1

FRACTIONALS: 1/16, 1/8, 1/4, 1/2, 3/4, 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 25, 30, 40, 50, 60, 75, 100

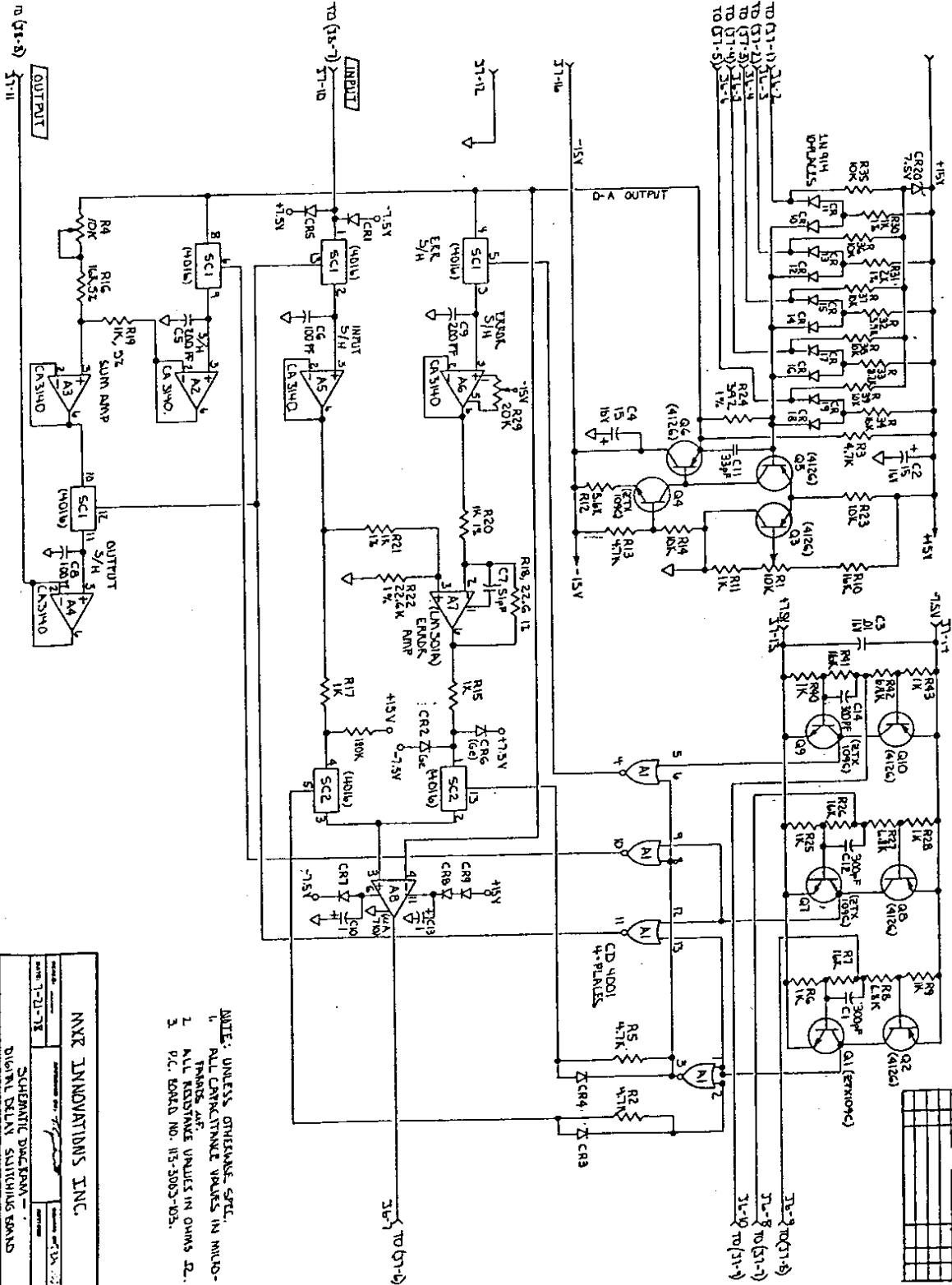
ANGULARS: 1/16, 1/8, 1/4, 1/2, 3/4, 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 25, 30, 40, 50, 60, 75, 100

TITLE: COMPONENT PLACEMENT  
COMPANION BOARD-DIGITAL DELAY

DWG. NO. 113-3004

REV. LEVEL 303

MXR MXR Innovations Inc. ROCHSTER, NEW YORK



NOTE: UNLESS OTHERWISE SPECIFIED,  
 1. ALL COMPONENT VALUES IN MILIOHMES ARE  
 2. ALL RESISTANCE VALUES IN OHMS Ω.  
 3. P.C. BOARD NO. H3-5005-005.

**MAXX INNOVATIONS INC.**

SCHWAB ELECTRONICS

DATE: 7-21-78

SCHEMATIC DOC NO. H3-5005-005

DIGITAL DELAY SWITCHING BOARD

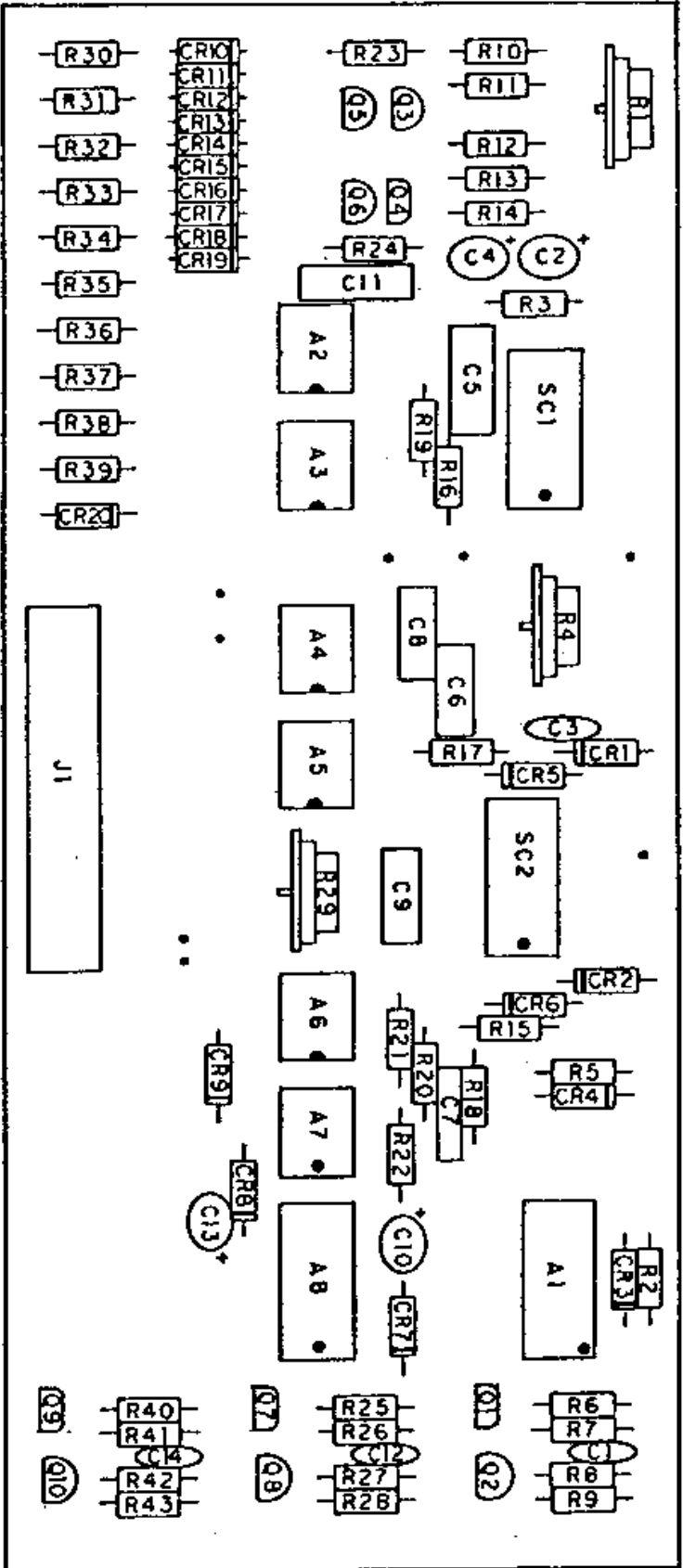
REVISION: 1

DATE: 7-21-78

BY: [Signature]

113-4003-102

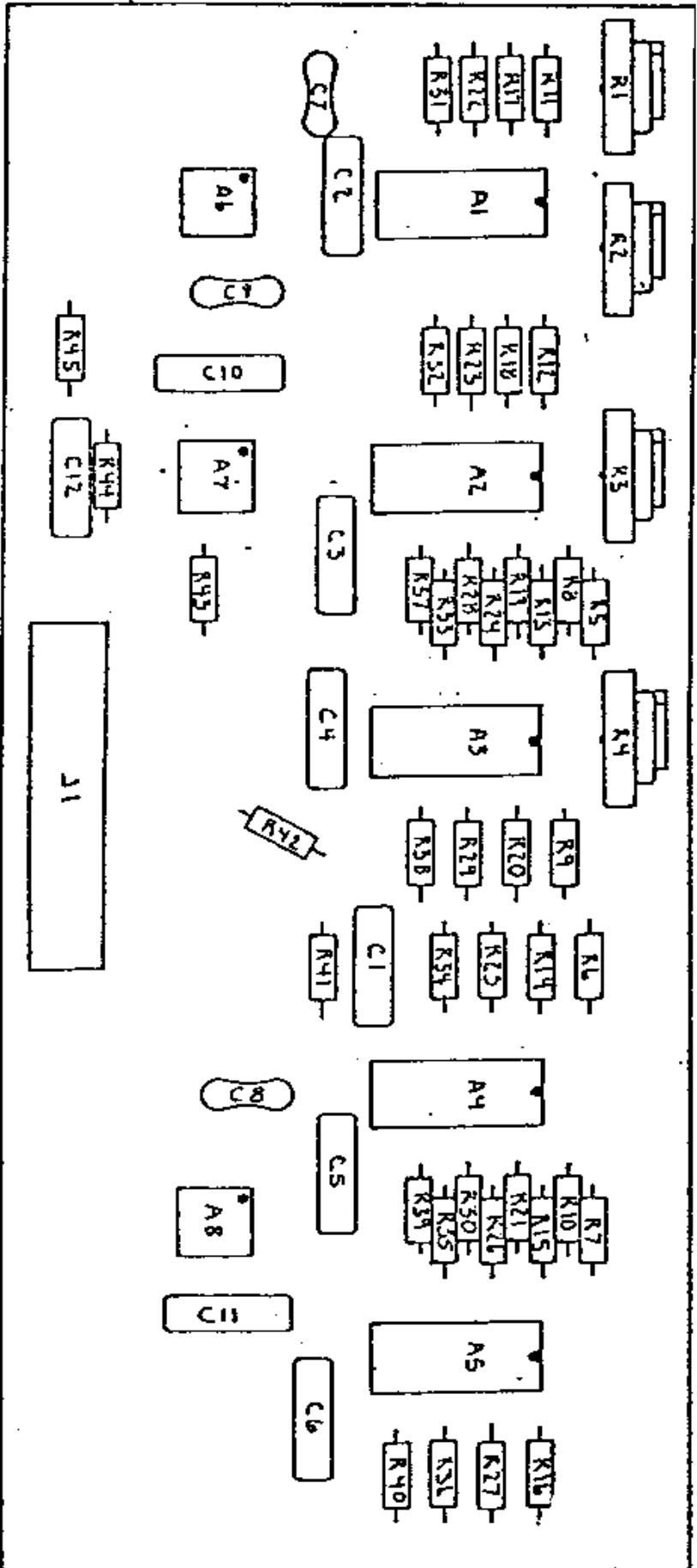




VIEW OF COMPONENT SIDE of BOARD

NOTE:  
USE LATEST REV OF 113-3003-100  
LEVEL PER REV LOG.

TO: ENGRS:		PRINT DATE:		M/R	
DATE:		DATE:		DATE:	
302		10/8/70		302	
LEVEL		DATE		DATE	
302		10/8/70		302	
REVISION LOG		PCN NO. OR CHANGE REMARKS		DRAWN	
1		302		302	
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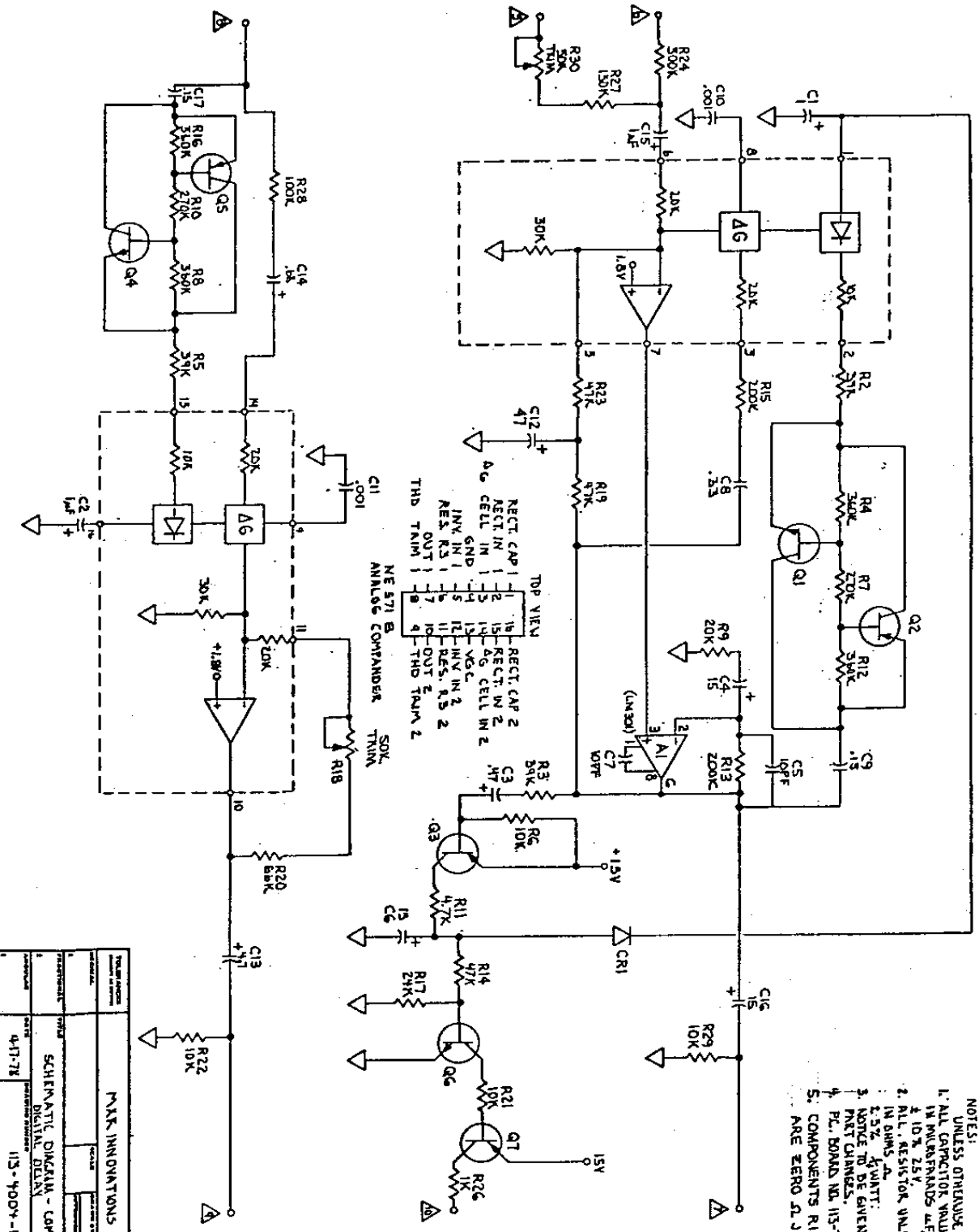


## Filter Board

VIEW OF COMPONENT SIDE OF BOARD

P.C.B. NO. 113-3005-103

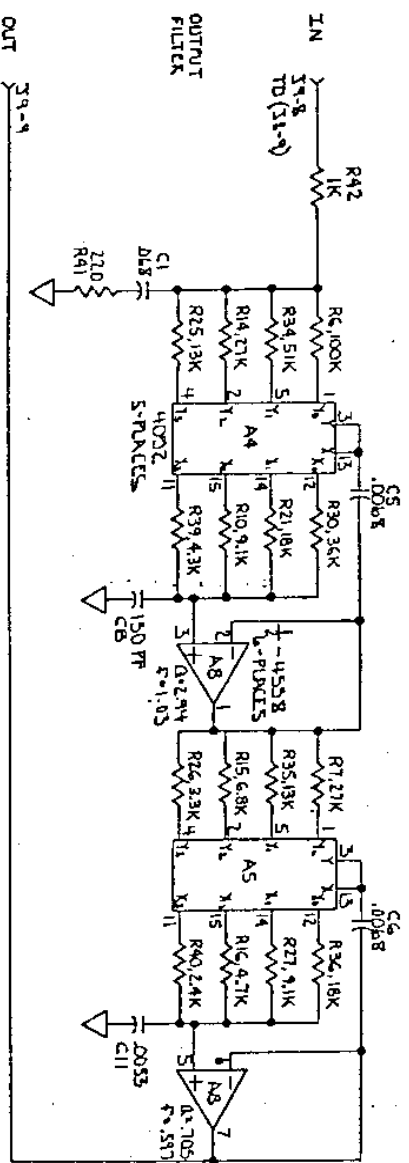
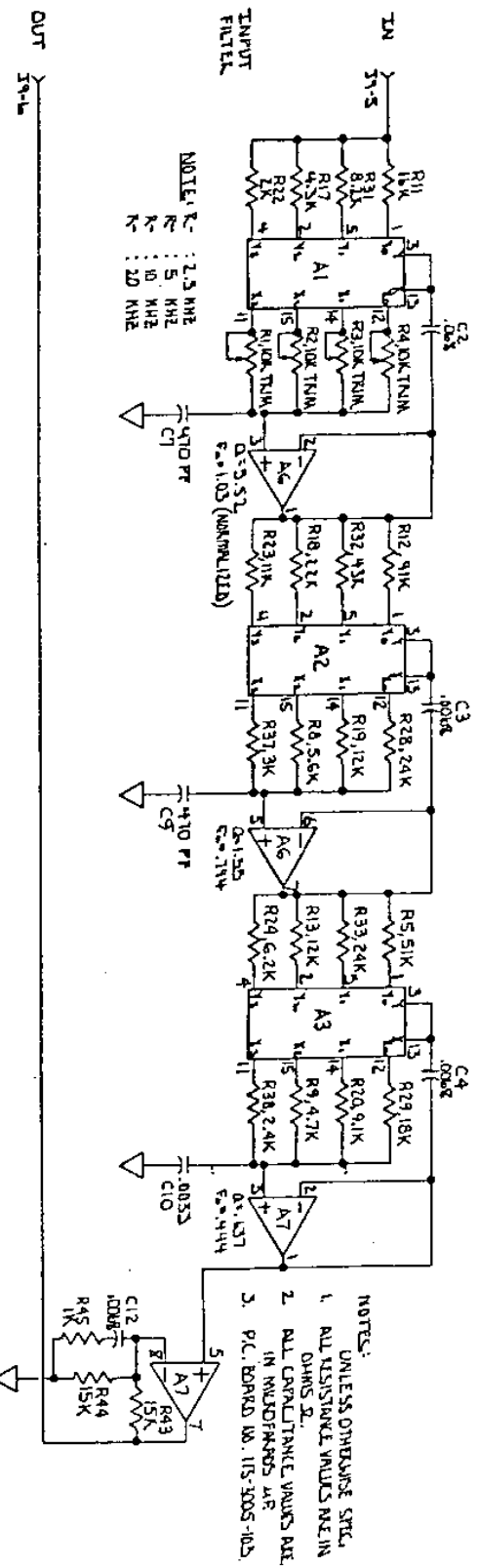
TOLERANCES UNLESS SPECIFIED		MFR. DIMENSIONS UNLESS SPECIFIED	
RESISTORS	±1%	WAVELENGTH	2.11
CAPACITORS	±5%	TEMPERATURE	25°C
INDUCTORS	±5%	ENVIRONMENTAL	50°C
DIODES	±5%	TEST METHOD	113-3005-103
TRANSISTORS	±5%	DATE	4-11-78
IC'S	±5%	DESIGNED BY	113-3005-103
CONNECTORS	±5%	APPROVED BY	
RELAYS	±5%	DATE	
SWITCHES	±5%	DESIGNED BY	
MECHANICAL PARTS	±0.005"	APPROVED BY	
WELDING	±0.005"	DATE	
PRINTING	±0.005"	DESIGNED BY	
ASSEMBLY	±0.005"	APPROVED BY	
TESTING	±0.005"	DATE	



- NOTES:
- UNLESS OTHERWISE SPEC.
  - ALL CAPACITOR VALUES ARE IN MICROFARADS  $\mu F$ .
  - ALL RESISTOR VALUES ARE IN OHMS  $\Omega$ .
  - 5% TOL. UNLESS OTHERWISE SPEC.
  - NOTICE TO BE GIVEN ON ANY PART CHANGES.
  - PC BOARD NO. 115-300A-105.
  - COMPONENTS R1 & R25 ARE ZERO  $\Omega$  JUMPERS.

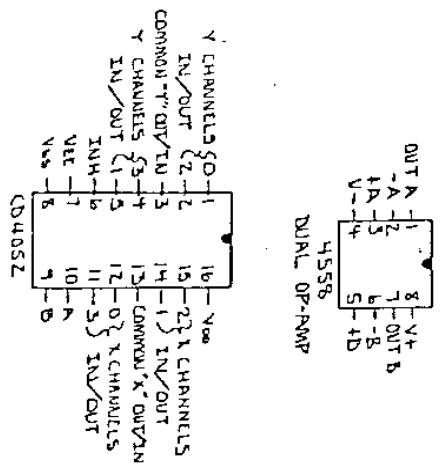
REV.	DATE	BY	CHKD.	DESCRIPTION
1	11/15/78	...	...	...
2	...	...	...	...
3	...	...	...	...
4	...	...	...	...
5	...	...	...	...

P.A.K. INNOVATIONS INC.	
DESIGNED BY	...
SCHEMATIC DIAGRAM - COMPANDER	...
DATE	4-17-78
...	115-700A-105



MULTIPLIER	F CUTOFF	FMS SELECTED
1	20K HE	11
1	10K HE	15
0	5K HE	14
0	2.5K HE	12

FMS SELECTED  
X - PINS 11  
Y - PIN 5  
PINS 9 (VSS) AND 6 (INH.) TO GND.



OUT 39-4 → TO PIN 9 ON ALL 4052'S

F SELECT 39-11 → TO PIN 10 ON ALL 4052'S

39-15 → TO PIN 8 ON ALL 4558'S

39-16 → TO PIN 4 ON ALL 4558'S

39-13 → TO PIN 16 ON ALL 4052'S

39-14 → TO PIN 7 ON ALL 4052'S

39-3, 4, 7, 10 - NO CONNECTION

(P.C.B. # 113-3005-103)

**MKR INNOVATIONS INC.**

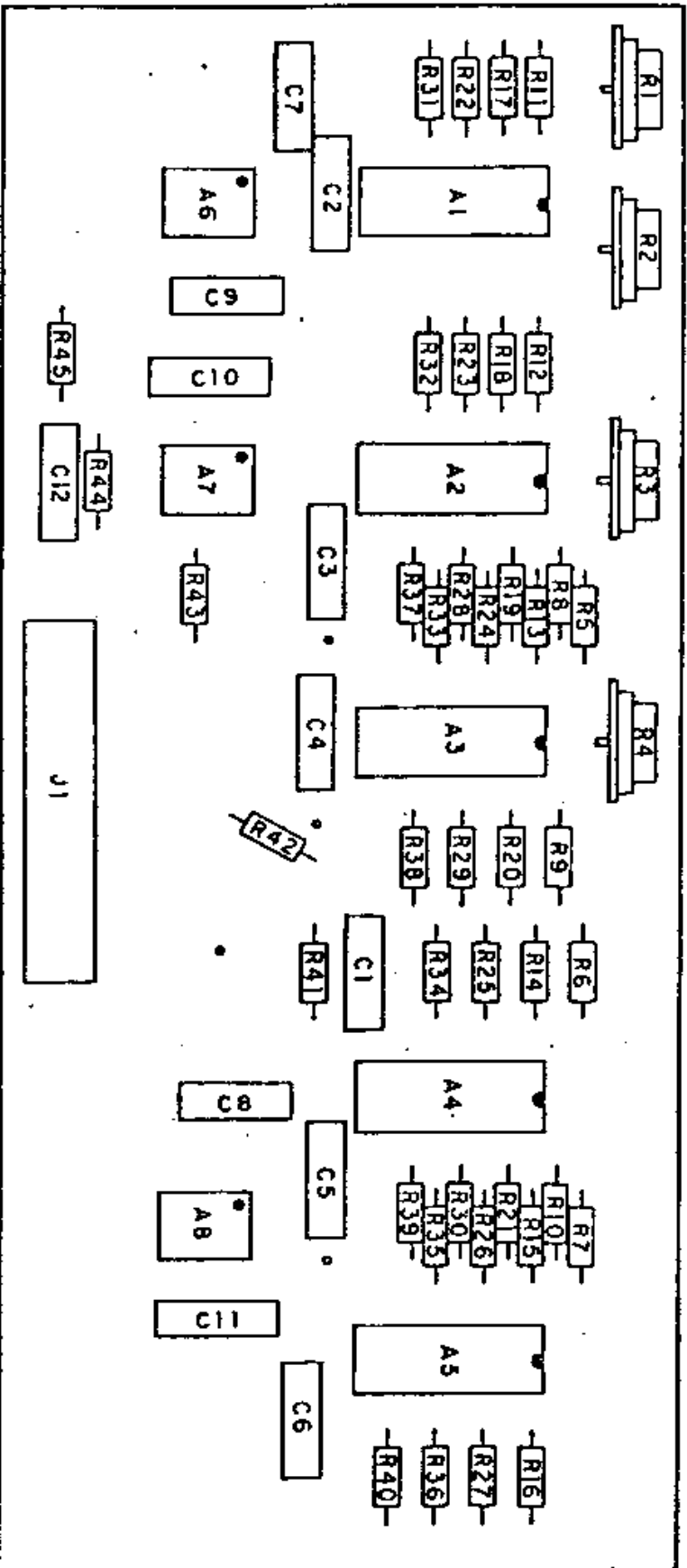
DESIGNED BY: [Signature]

DATE: 8-1-78

SCHEMATIC DRAWING - FILTER BOARD - DIGITAL DELAY

DATE: 8-1-78

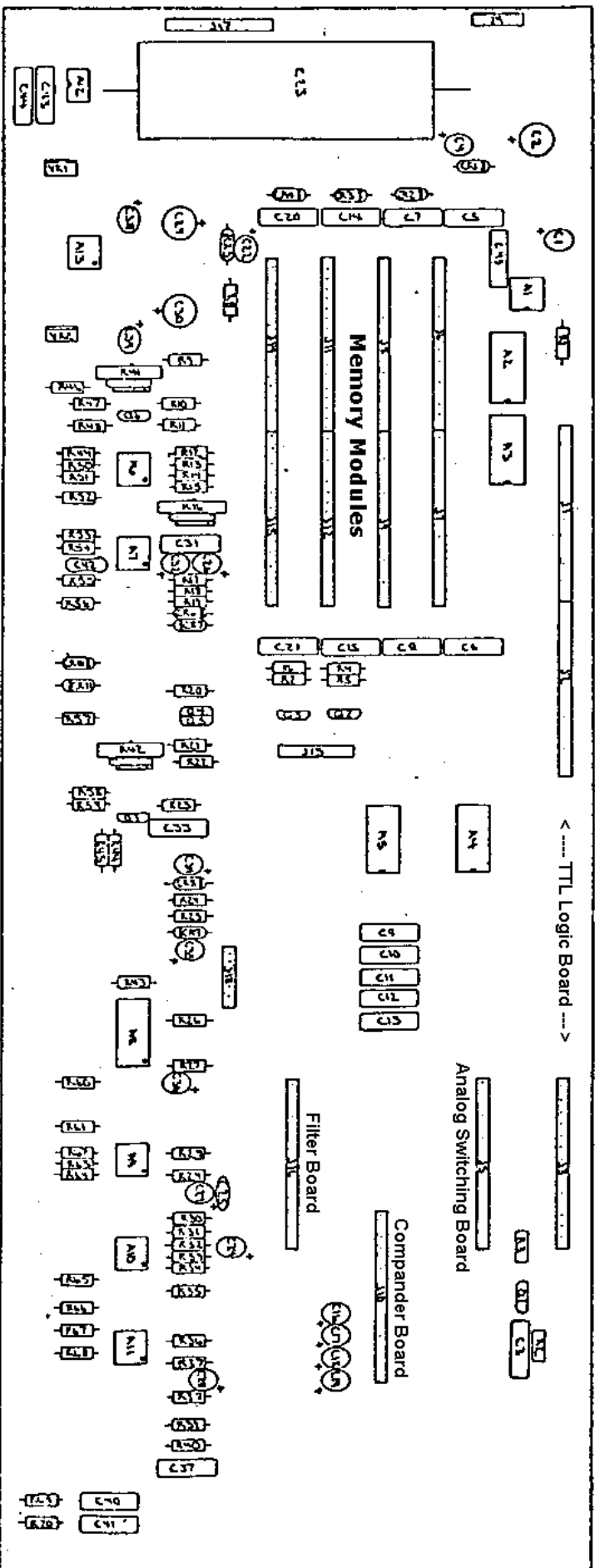
REV: 113-4005-101



VIEW OF COMPONENT SIDE OF BOARD

NOTE:  
 USE LATEST REV OF 113-3005-10C  
 LEVEL PER REV LOG.

LEVEL	DATE	BY	APP'D
—	3/11/60	BEDRAWN MCKMG	H.H.H.
TOLERANCES:		UNLESS OTHERWISE SPECIFIED	
RESISTORS:	1% 2:1		
CAPACITORS:	5% 2:1		
ANGULARS:	2:1		
REVISION LOG			
MATERIALS:		MXXR	
COMPONENT PLACEMENT FILTER BOARD DIGITAL DELAY			
DRAWN:		REV LEVEL:	
112		2001	

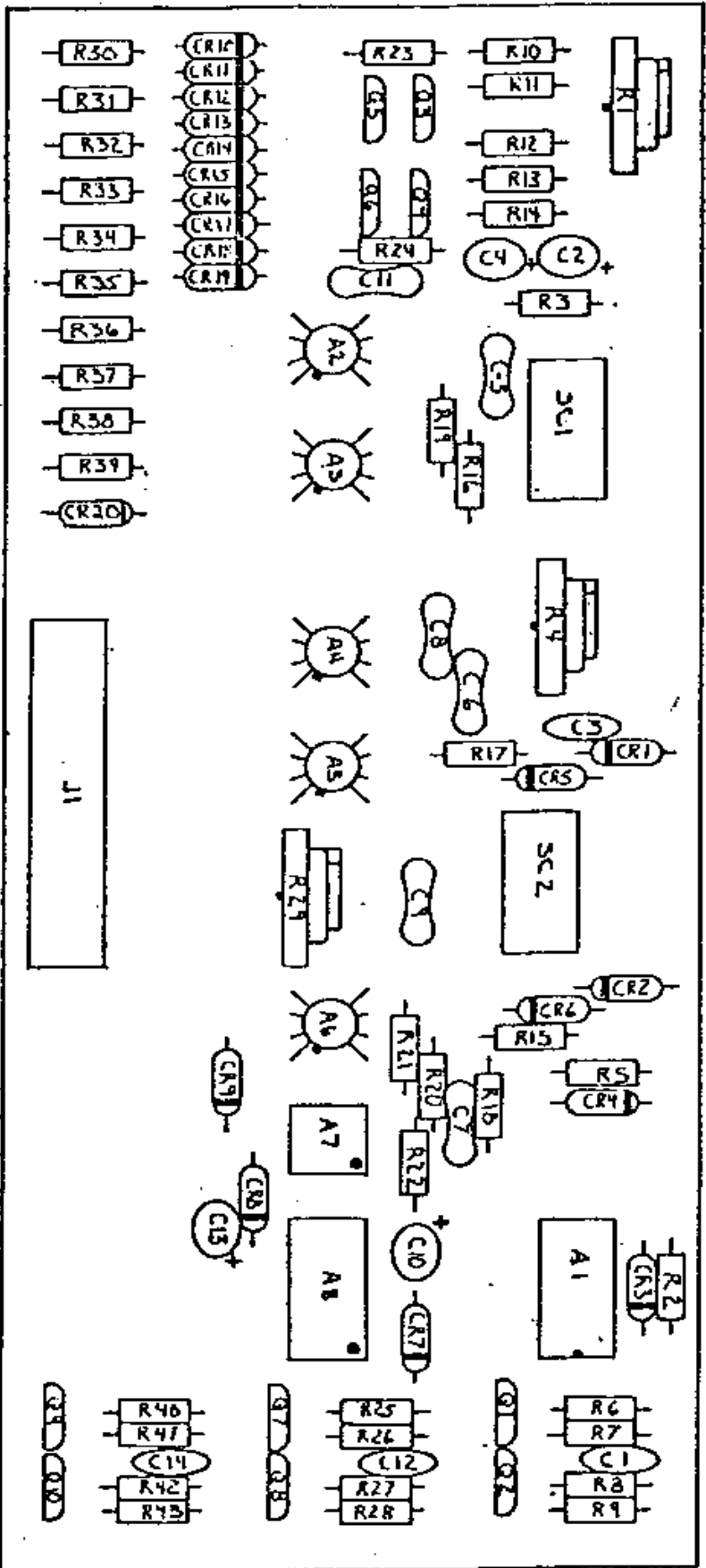


### Main Board

VIEW 2 (COMPONENT 200L & BOARD)  
 PLS NO. 115 300W-10L

ANAL INNOVATIONS, INC.	
Part No.	115 300W-10L
Rev.	1.1
Author	CH. FLETCHER
Checked	W. B. BROWN
Date	11/10/78
Drawn	W. B. BROWN
Scale	
Material	
Notes	





# Analog Switching Board

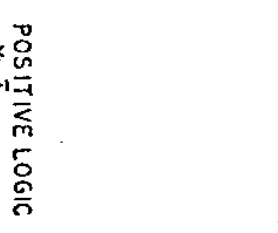
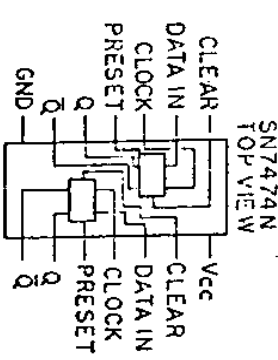
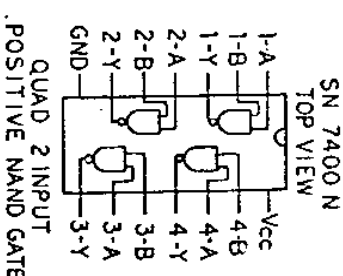
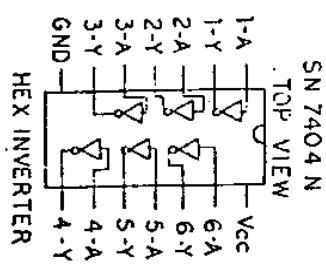
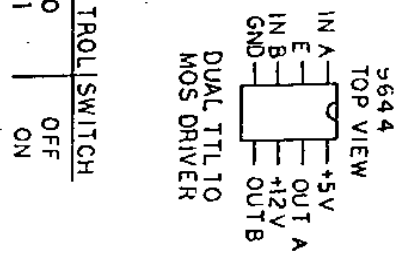
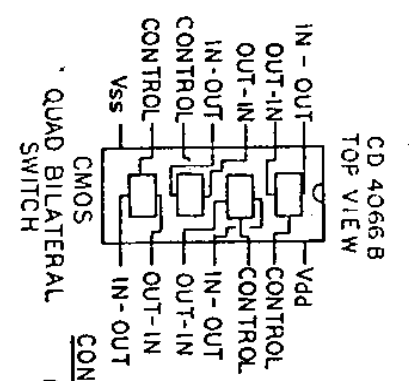
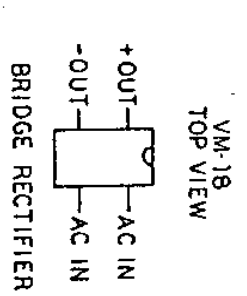
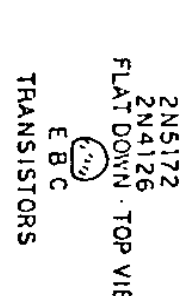
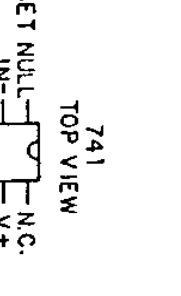
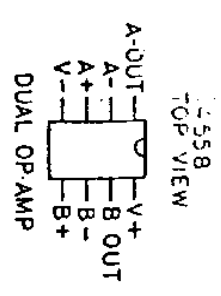
VIEW OF COMPONENT SIDE OF BOARD

P.C.B. NO. 115-5003-103

<p>THOMSON  <small>Division of</small>  <small>General Electric</small></p>	<p>RAY INNOVATIONS INC.</p>	
<p>DATE: _____</p>	<p>REV: 001</p>	<p>DATE: _____</p>
<p>TITLE</p>	<p>COMPONENT SIDE OF</p>	
<p>ANALOG SWITCHING BOARD - DIGITAL RELAY</p>	<p>ANALOG SWITCHING BOARD - DIGITAL RELAY</p>	
<p>DATE: 4-3-78</p>	<p>BY: _____</p>	<p>115-5003-302</p>



REVISION LOG				
LEVEL	DATE	REMARKS	AUTH.	CHK.

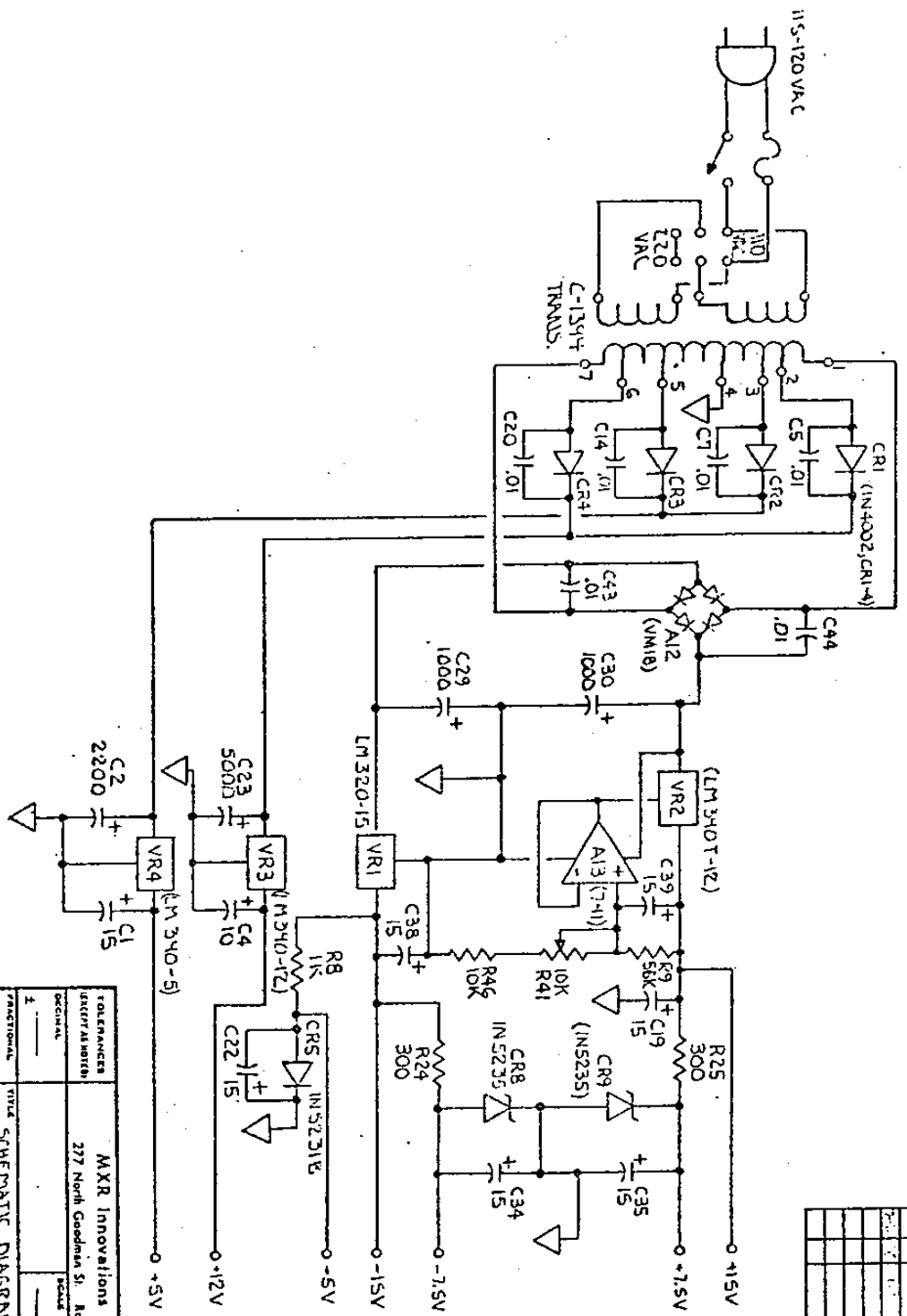


DUAL D TYPE  
 POSITIVE EDGE TRIGGERED  
 FLIP-FLOP W/PRESET & CLEAR.

PRESET	CLEAR	CLOCK	D	Q	Q	Q
0	1	0	X	0	1	0
1	0	0	X	0	1	1
0	0	0	X	1	0	1
1	0	0	X	1	1	0
1	1	0	X	0	0	1
1	1	1	X	0	0	0

NOTE: THIS CONFIGURATION IS NON-STABLE. IT WILL NOT PERSIST WHEN PRESET AND CLEAR INPUTS RETURN TO THEIR INACTIVE (HIGH) LEVEL.

<b>MXR Innovations Inc.</b> DRAWN BY: <i>B. Kelly</i> APPROVED BY: <i>SB</i> 12/4/11		DATE: 10-16-79	PRINT DATE:
		TOLERANCE: (unless otherwise noted)	
ORIGINAL: _____	SCALE: _____	TITLE: COMPONENT PIN OUT SCHEMATIC	
FRACTIONAL: _____	MOTHER BOARD DDL PAGE 3 OF 3		
LANGUAGE: _____	DRAWING NUMBER: 113 4006	REVISION LEVEL: 103	



DATE	REVISION	BY	CHKD

TOLERANCES (UNLESS NOTED)	MXR Innovations Incorporated
1	277 North Goodman St., Rochester, N.Y. 14607
2	
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