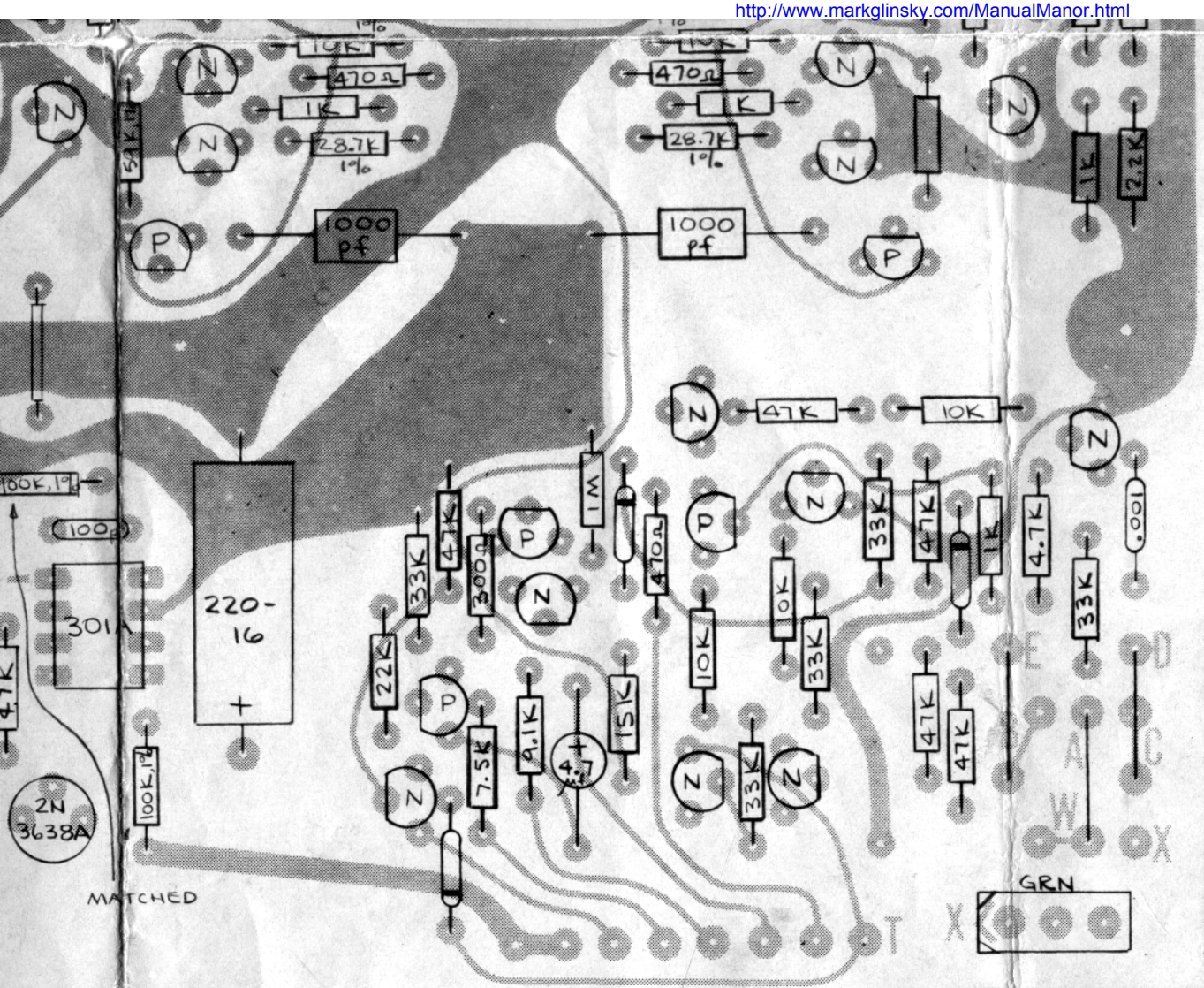


FOR INFORMATION ONLY

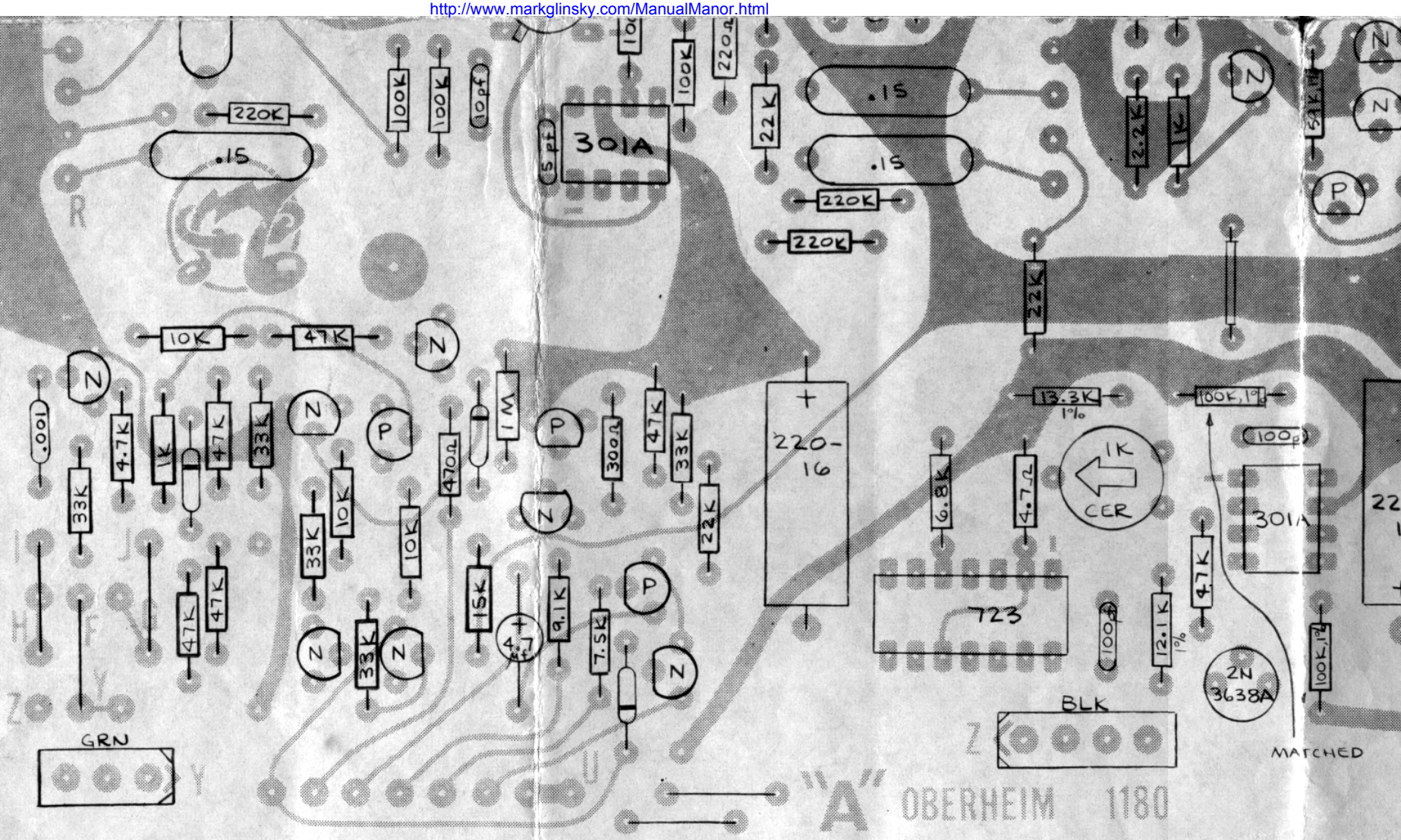
This document contains proprietary information which shall not be disclosed to others, or used for manufacturing or any other purpose without prior written permission of Oberheim Electronics, Inc. Service performed by any person other than factory authorized repair stations may void the warranty.

OBERHEIM ELECTRONICS, INC.

SCALE:	APPROVED BY:	DRAWN BY AEO
DATE: 5-4-76		REVISED 3-29-77

PARTS PLACEMENT - SEMIA ELECT. BD.

DRAWING NUMBER 1204 A

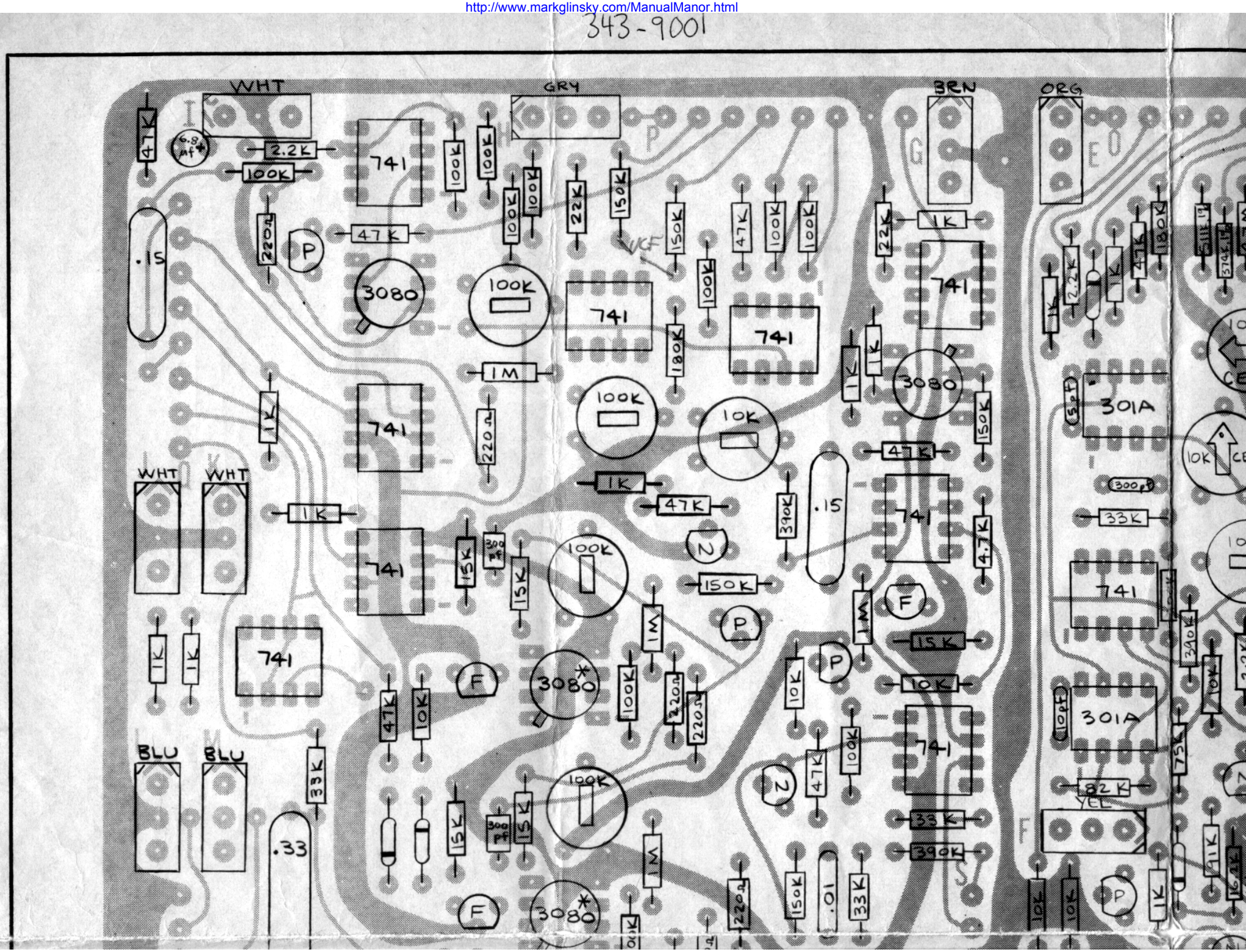


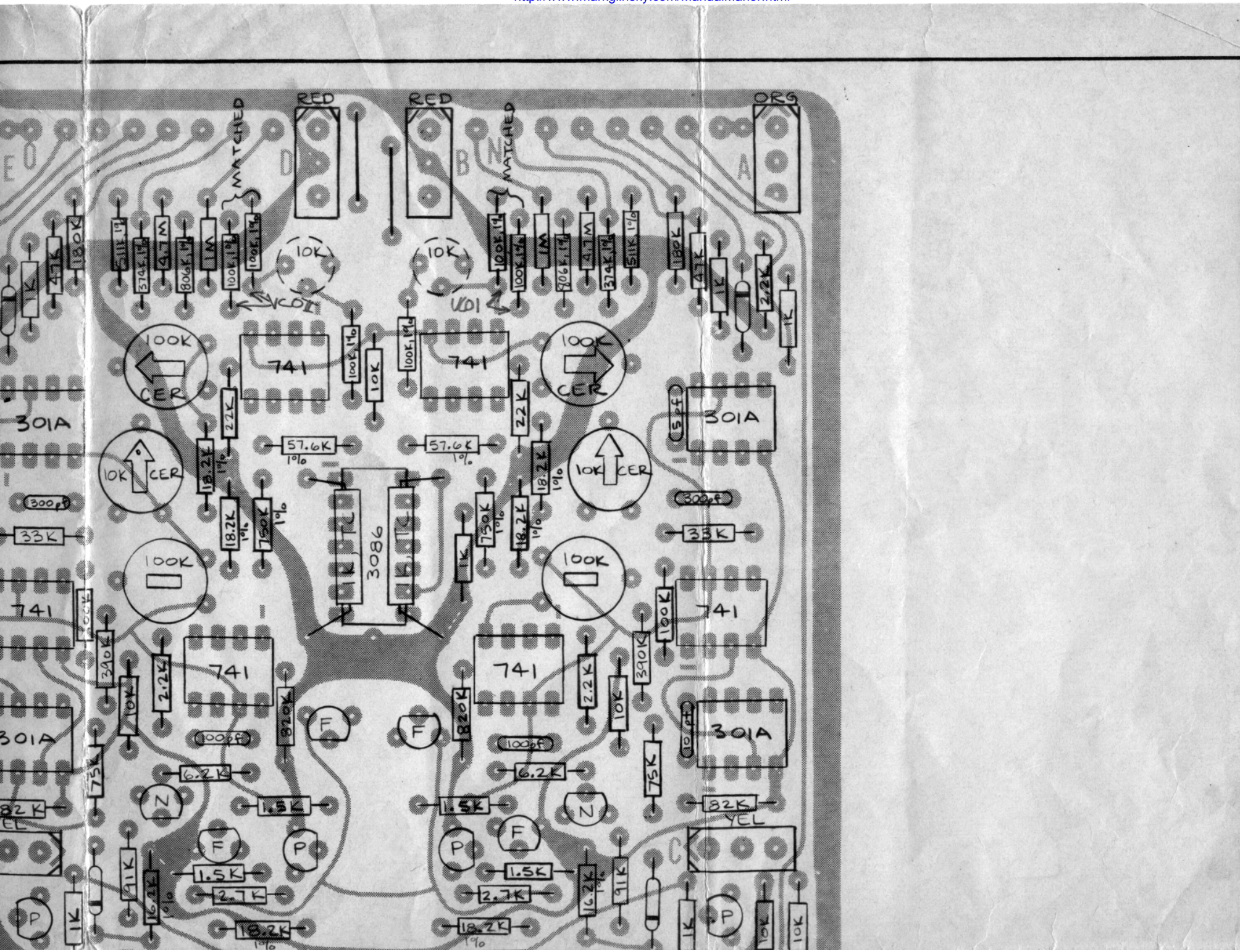
NOTES:

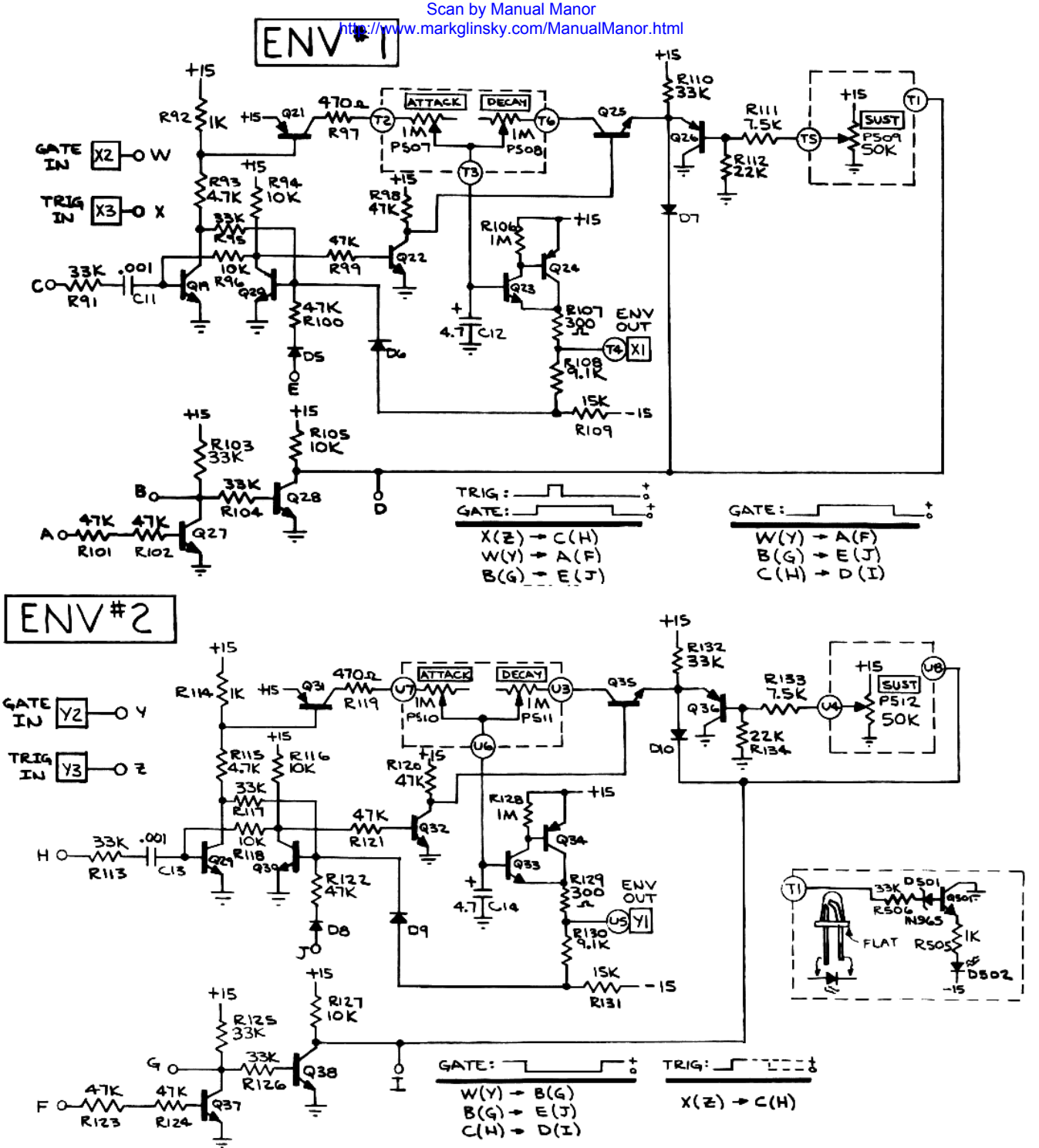
1. ALL "N" TRANSISTORS - 2N5172 (485003)
2. ALL "P" TRANSISTORS - 2N3905 (486002)
3. ALL "F" TRANSISTORS - 2N4302
4. ALL DIODES - IN4148 (481001)
5. * - SELECTED 3080 (313201)
6. MOUNT ALL TRIMMERS OFF BOARD ($\frac{1}{16}$")

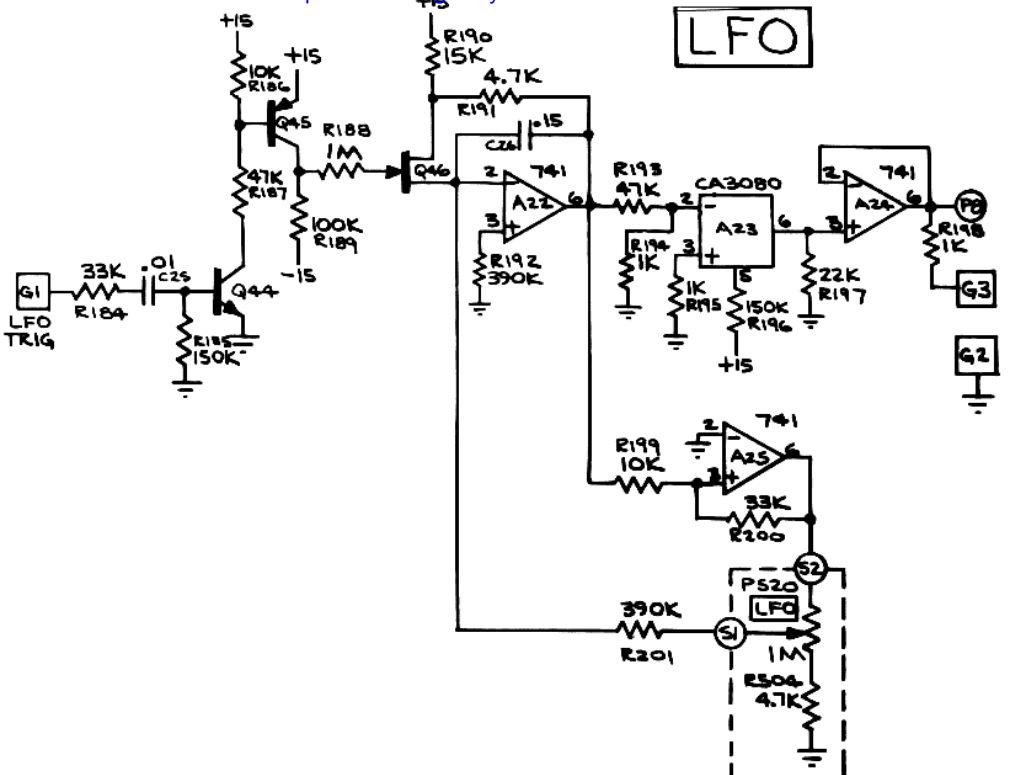
17X22 PRINTED ON NO. 1000H CLEARPRINT

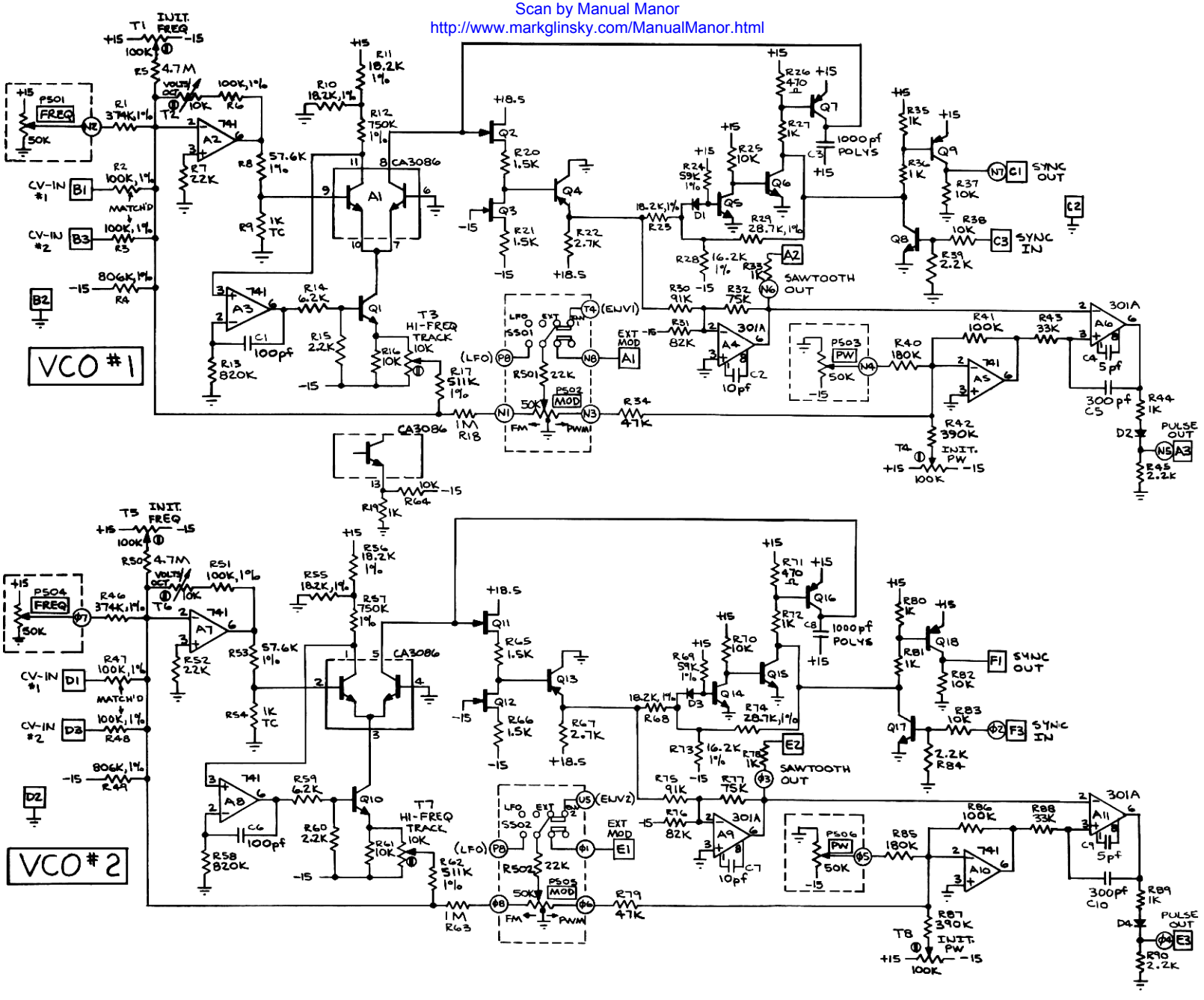
343-9001



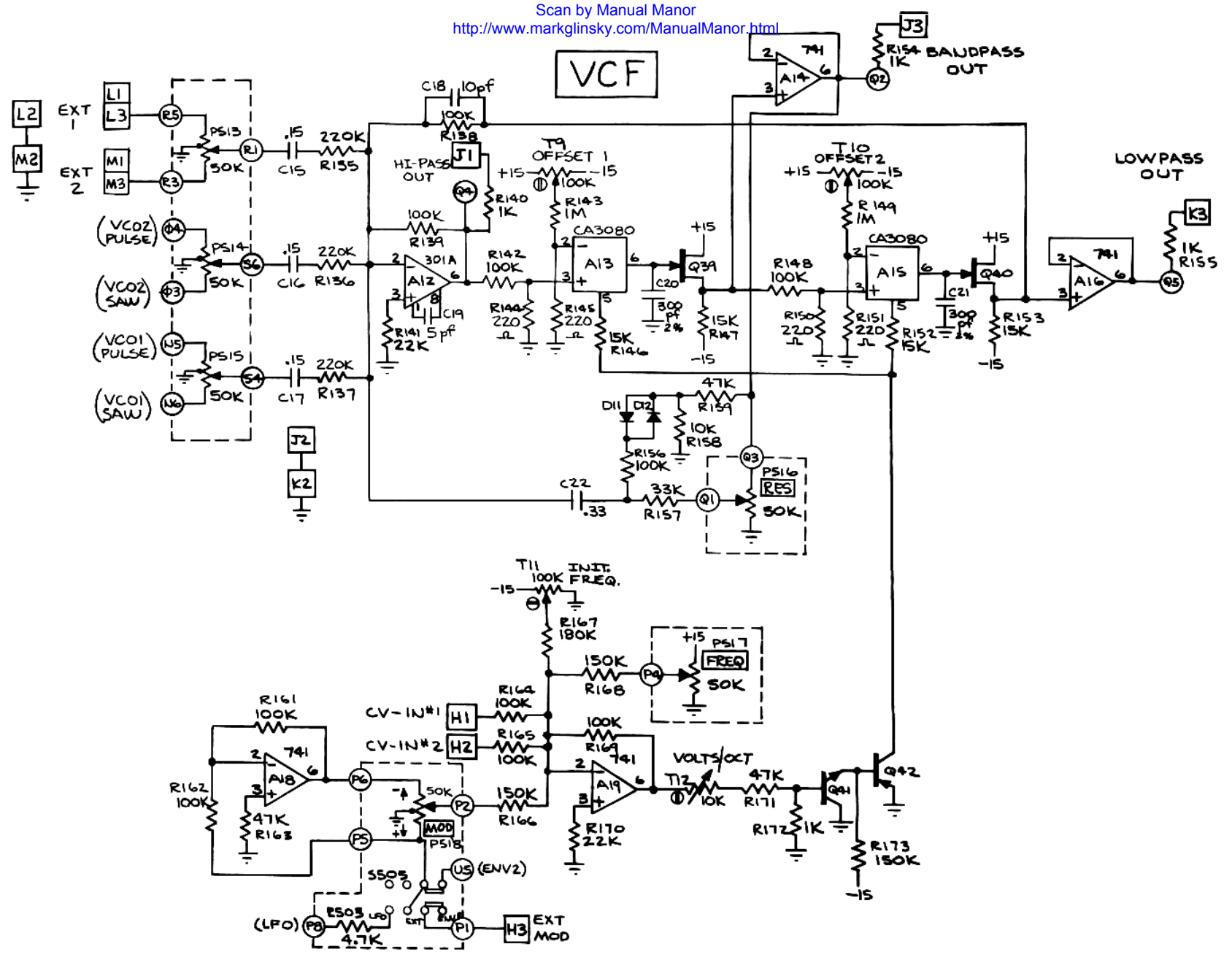


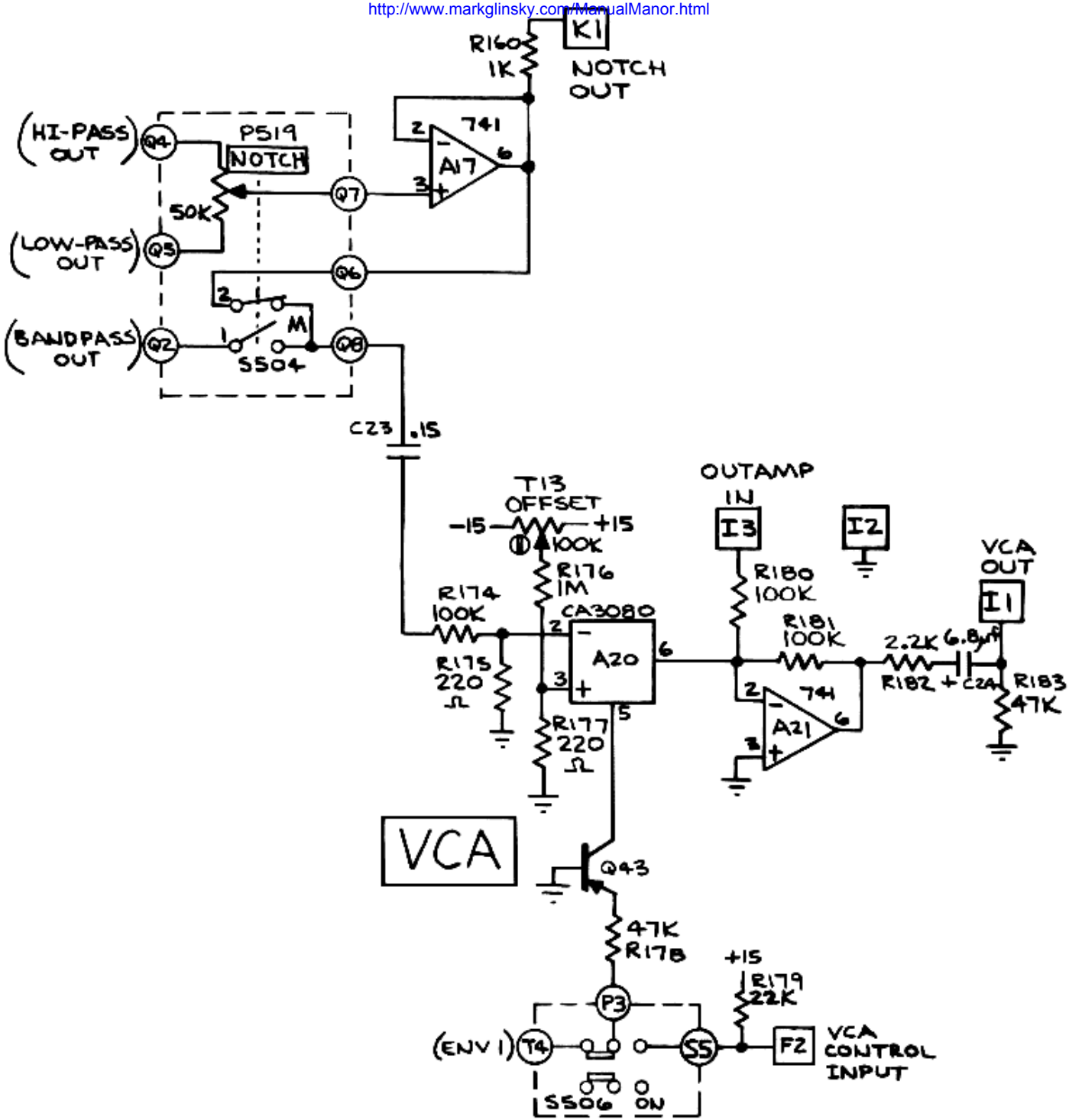






VCF

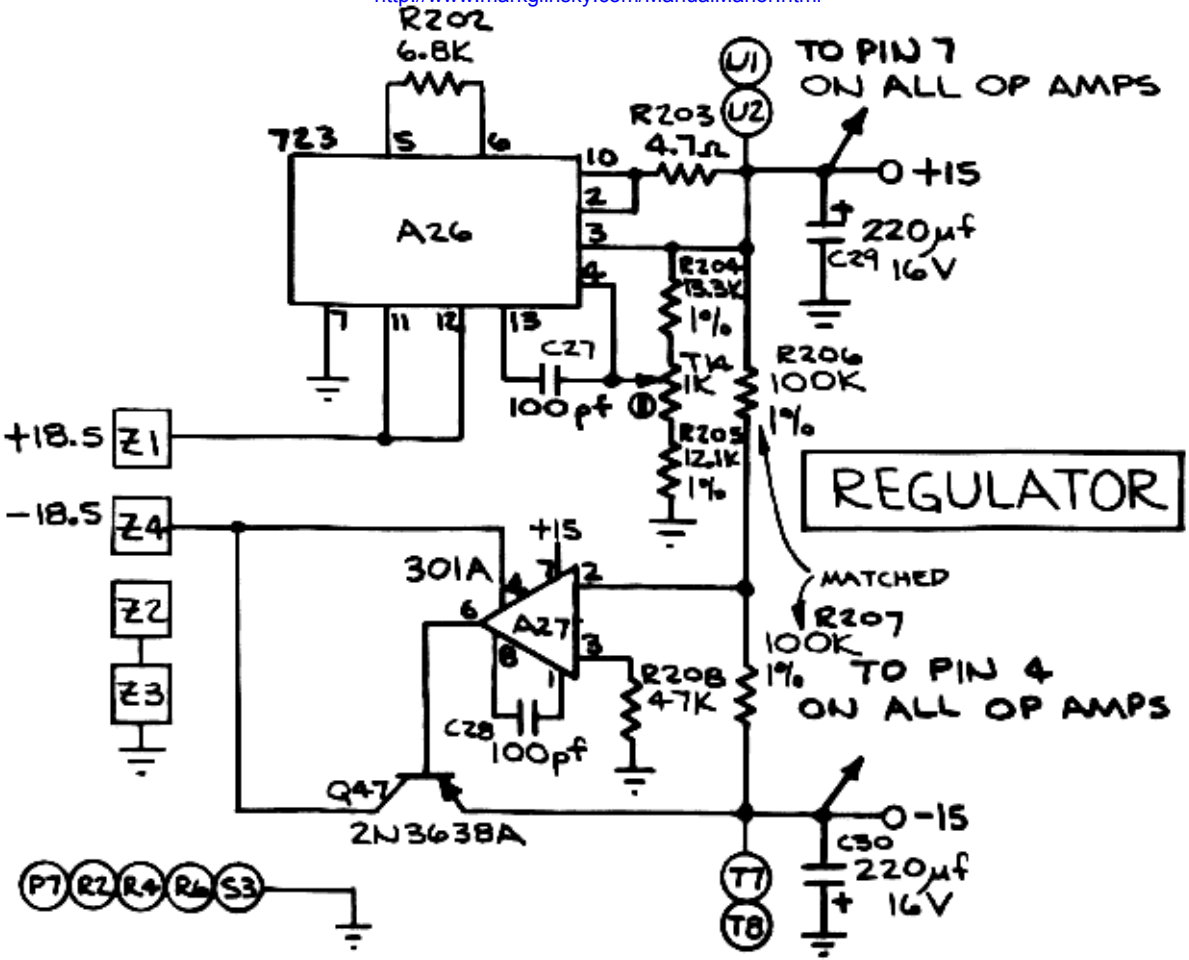


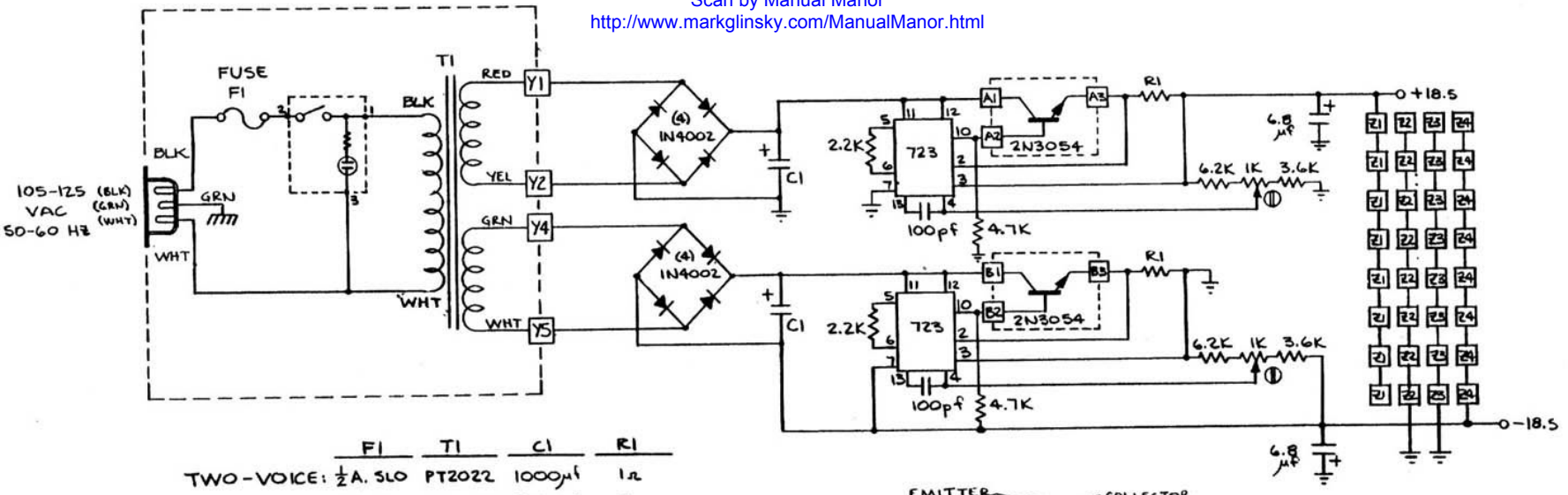


NOTES:
(UNLESS SPECIFIED OTHERWISE)

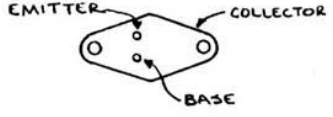
1. ALL RESISTORS ARE ¼W, 5%
2. ALL CAPACITORS IN μf.
3. ALL NPN TRANSISTORS - 2N5172
4. ALL PNP TRANSISTORS - 2N3905
5. ALL DIODES - 1N4148
6. ALL FET'S - 2N4302

LAST	LAST (POT BD)
R208	R506
T14	P520
C30	
D12	D502
Q47	Q501
A27	S506





	F1	T1	C1	R1
TWO-VOICE:	½A. SLO	PT2022	1000µf	1Ω
FOUR-VOICE:	1A. SLO	PT2054	2000µf	.5Ω



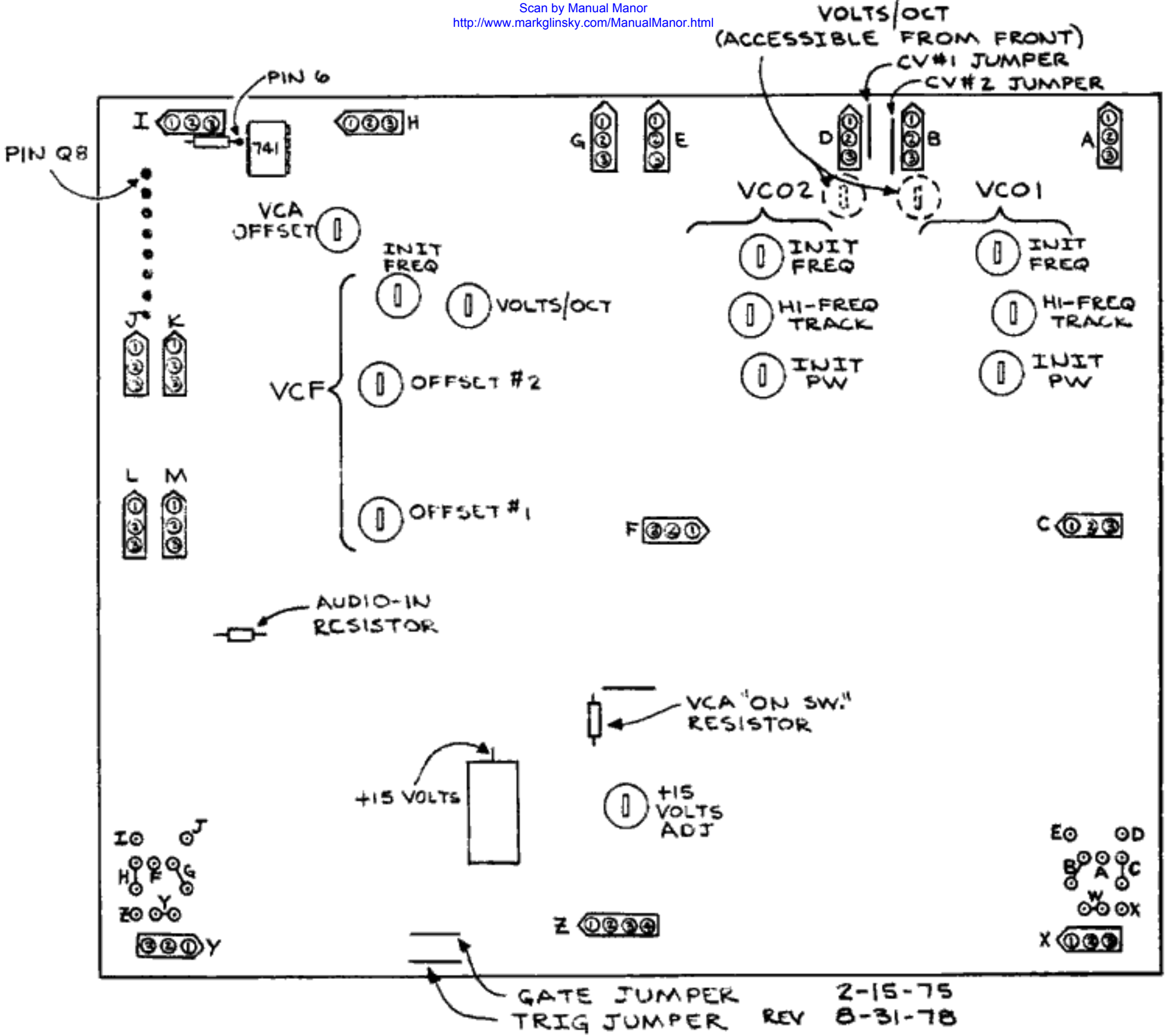
OBERHEIM ELECTRONICS, INC

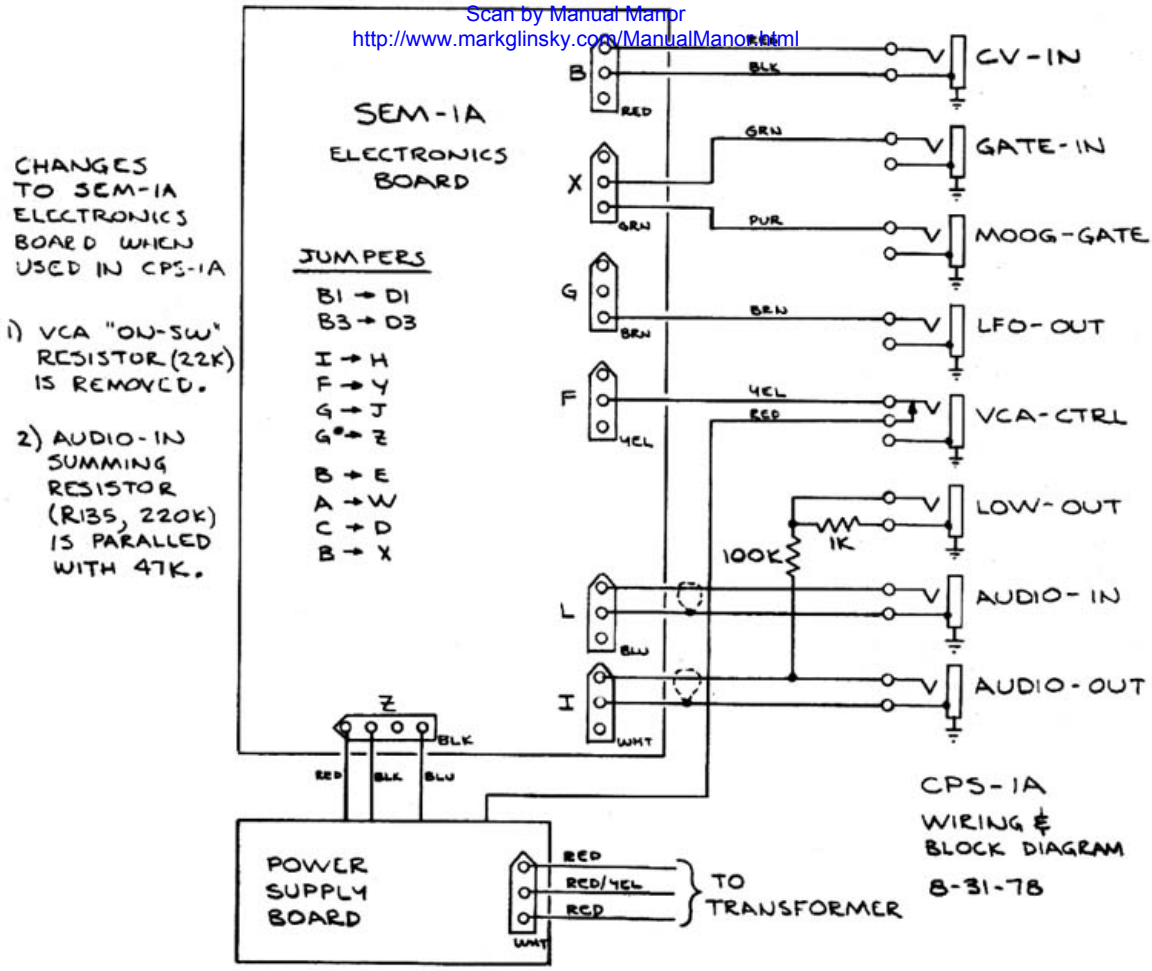
- SCHEMATIC -

SYNTHESIZER
POWER SUPPLY

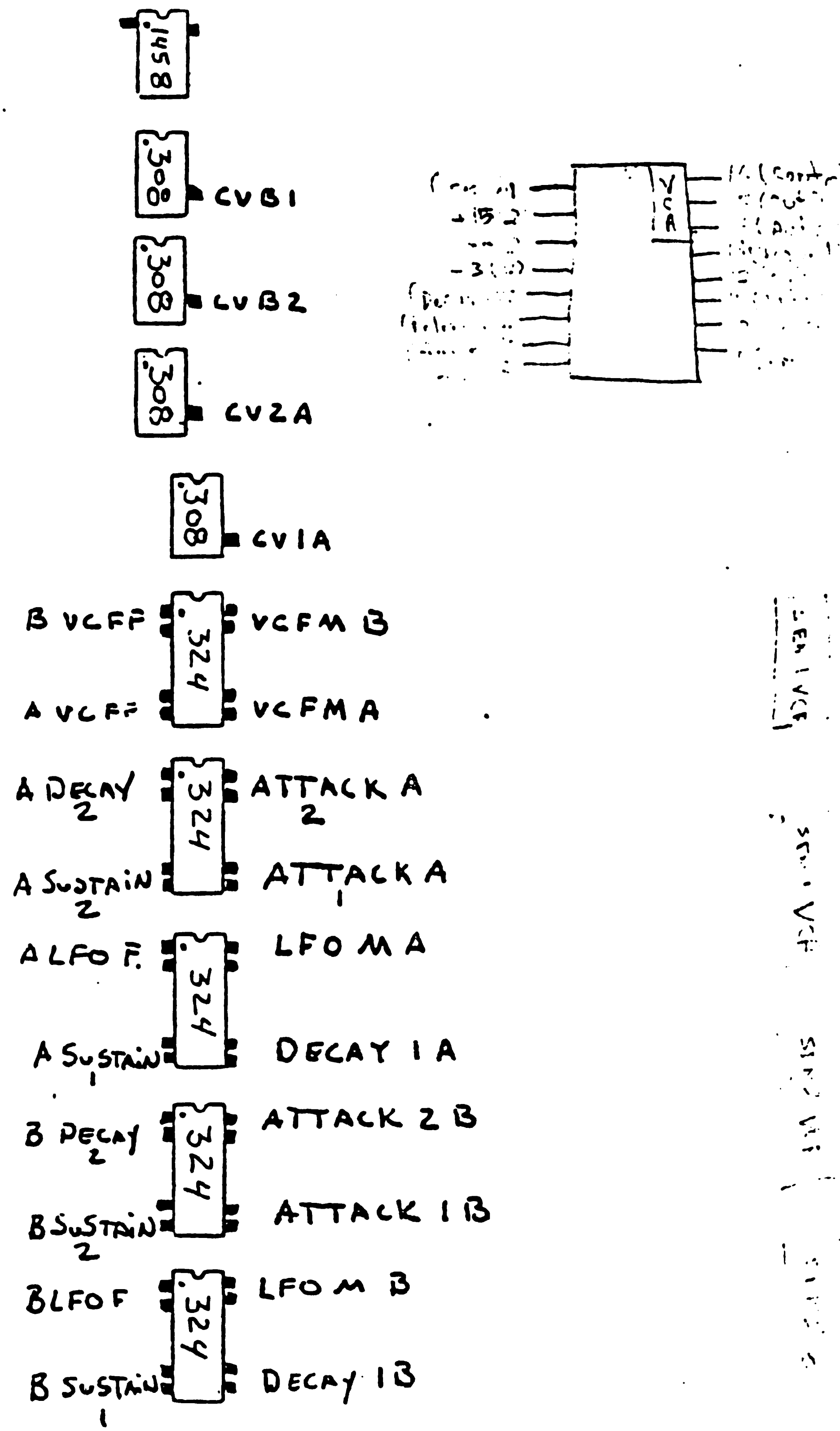
NOV. 11, 1975
REV 5-30-78

114



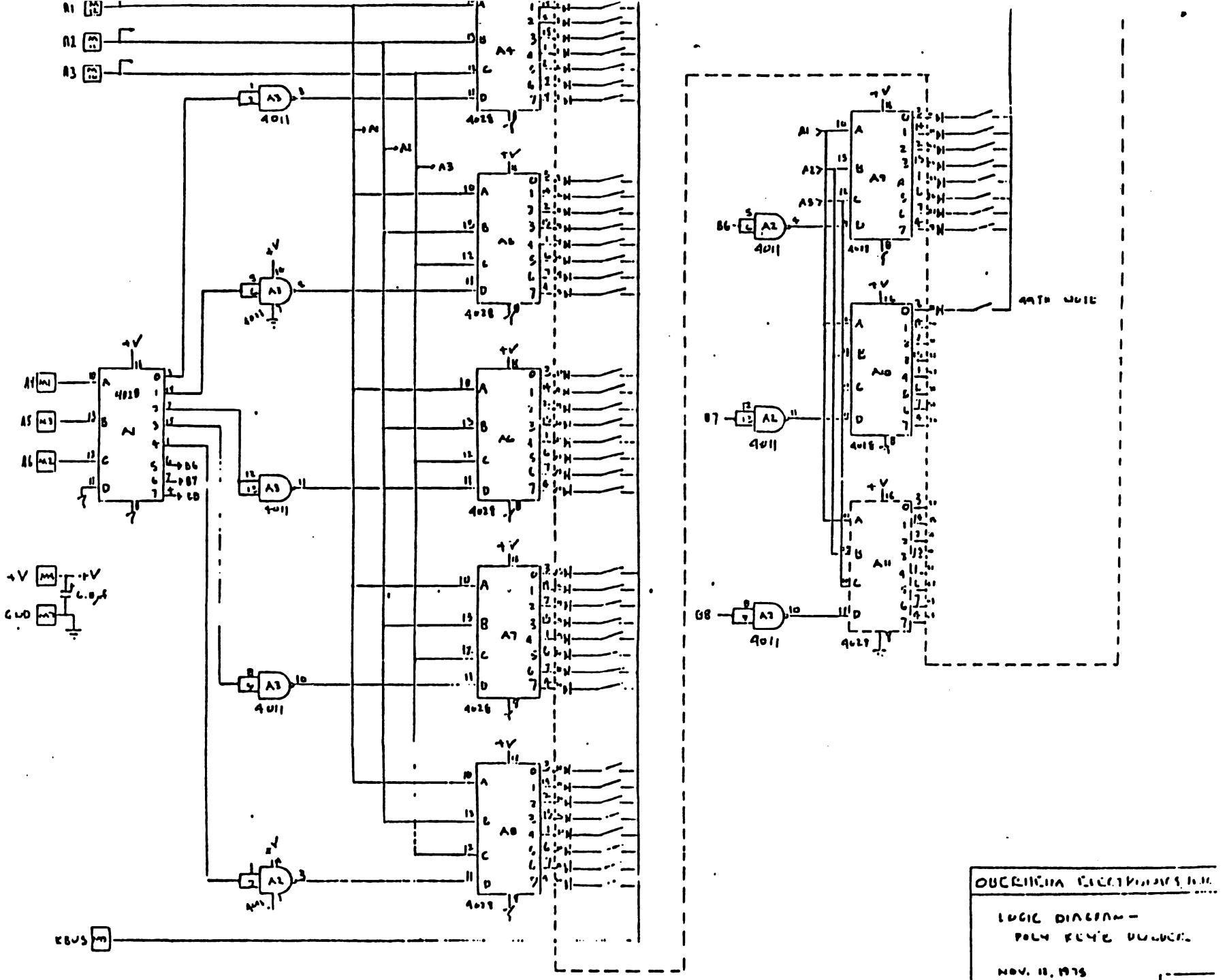


mc14028



PSP S&H 12163
Pin Out
6-5-78
T.S.

FV



LOGIC DIAGRAM —
POLY ECHO BOARD

NOV. 11, 1975

1126

FOUR VOICE INTER-CONNECT CABLE

(12 PIN MOLEX)

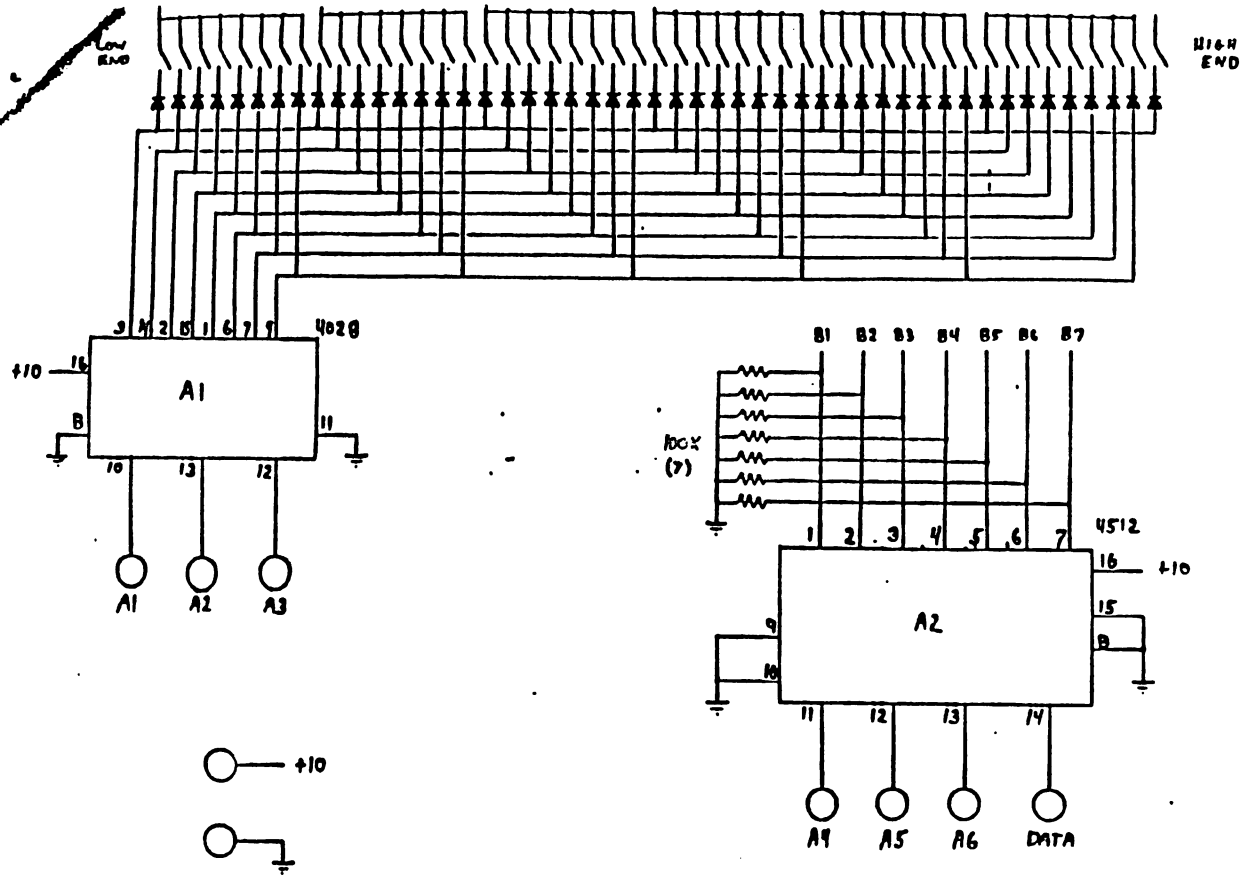
FUNCTION	PIN
CV #1	1
GATE #1	2
CV #2	3
GATE #2	4
CV #3	5
GATE #3	6
CV #4	7
GATE #4	8
GND	9
GND	10
VCO TUNE	11
VCF TUNE	12

① KB MODULE
SET DAC REF TO 11.02 VOLTS
PIN 14 OF 4041 (U14-U15) [illegible]
SET BY 723 ON OVERHEAD BOARD
SIDE MULTI-TURN

② SEN V/OCT WITH KB MODULE
IN MIDDLE TRANSPOSE —
HI NOTE INITIAL_ KB CV ONLY

③ TRANSPOSE (KB MODULE) CAL_
MULTI TURN

④ PROGRAMMER MODULE V/8VA
VCO 1:2 FREQ CONTROLS ONLY

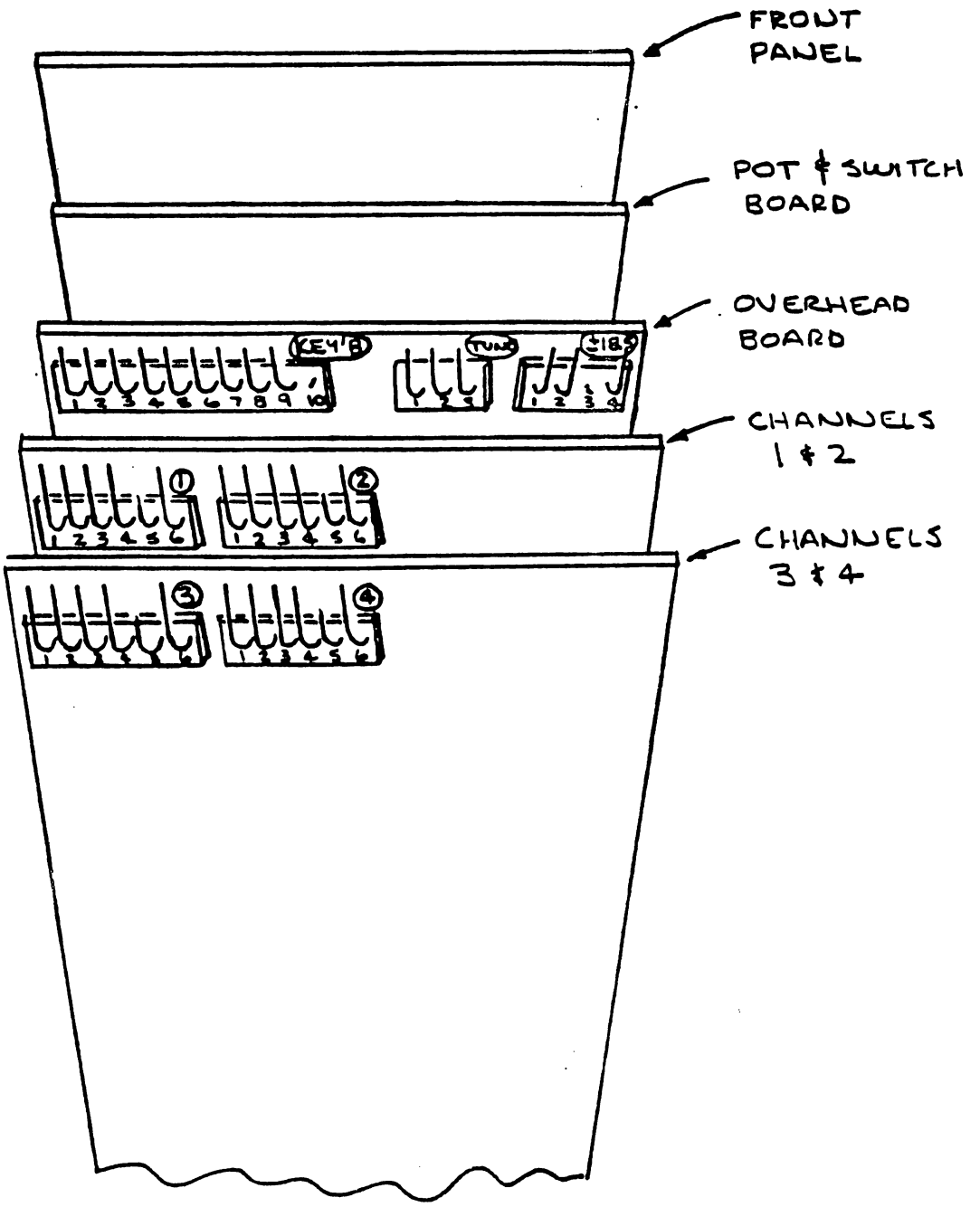


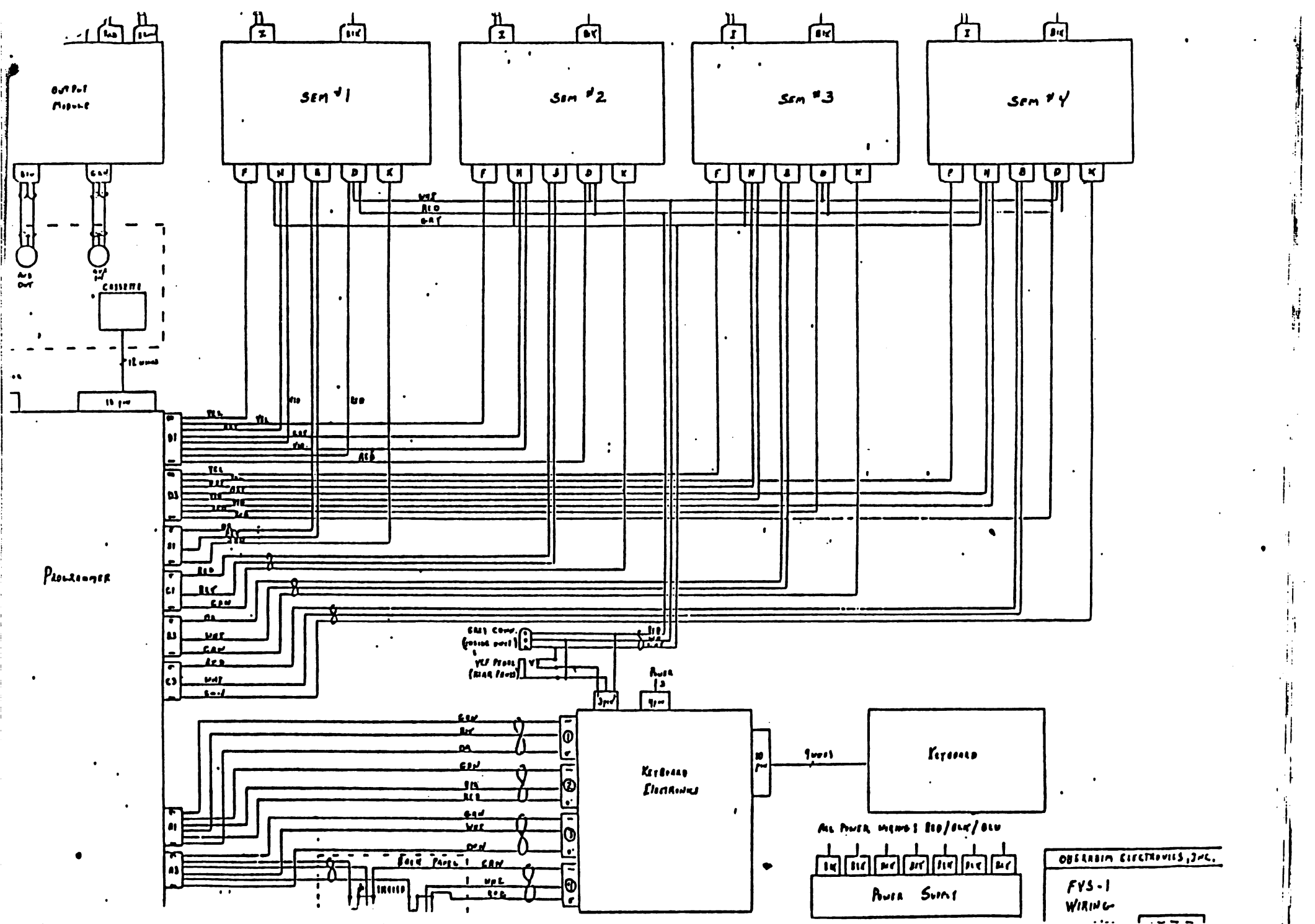
NOTES:

1) A1 AND A2 TO BE MOUNTED IN SOCKETS
2) ○— DENOTES SOLDERABLE PINS ON P.C BOARD
3) ALL RESISTORS 5% ¼ OR ½ WATT

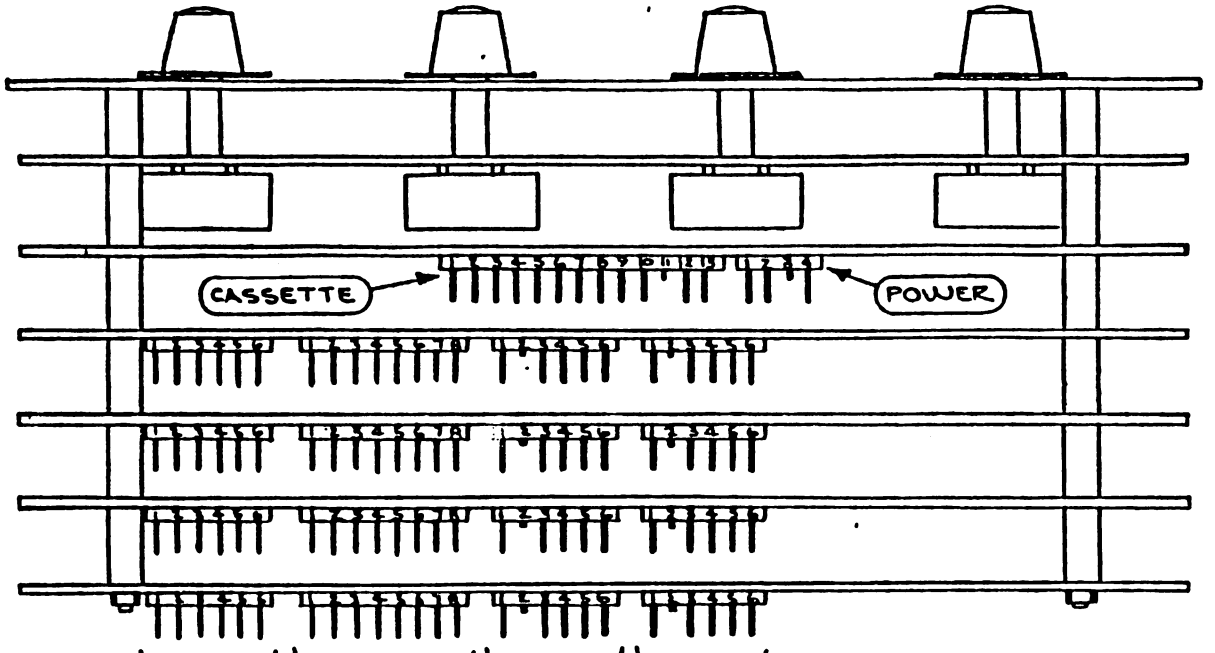
OBERHEIM ELECTRONICS, INC
49 NOTE KEYBOARD WITH DECODER
7/77

FOUR VOICE ELECTRONICS CONNECTIONS





TOP VIEW



FRONT PANEL

POT BOARD

OVERHEAD BOARD

CHANNEL BOARD #1 (CHANNELS 1 & 2)

CHANNEL BOARD #2 (CHANNELS 3 & 4)

CHANNEL BOARD #3 (CHANNELS 5 & 6)

CHANNEL BOARD #4 (CHANNELS 7 & 8)

A CONNECTOR

PIN		FUNCTION
1	—	KEY'B CV "A" (CH'S 1,3,5,7)
2	—	KEY'B CV "B" (CH'S 2,4,6,8)
3	—	GND
4	—	GND
5	—	KEY'B GATE "B" (CH'S 2,4,6,8)
6	—	KEY'B GATE "A" (CH'S 1,3,5,7)

D CONNECTOR

PIN		FUNCTION
1	—	VCO 2 CV "B" (CH'S 2,4,6,8)
2	—	VCO 2 CV "A" (CH'S 1,3,5,7)
3	—	VCF ENV "B" (CH'S 2,4,6,8)
4	—	VCF ENV "A" (CH'S 1,3,5,7)
5	—	VCF CV "B" (CH'S 2,4,6,8)
6	—	VCF CV "A" (CH'S 1,3,5,7)
7	—	VCA ENV "B" (CH'S 2,4,6,8)
8	—	VCA ENV "A" (CH'S 1,3,5,7)

B CONNECTOR

PIN		FUNCTION
1	—	GATE "A" (CH'S 1,3,5,7)
2	—	KEY
3	—	GND
4	—	NOT USED
5	—	NOT USED
6	—	VCO 1 CV "A" (CH'S 1,3,5,7)

C CONNECTOR

PIN		FUNCTION
1	—	GATE "B" (CH'S 2,4,6,8)
2	—	KEY
3	—	GND
4	—	NOT USED
5	—	NOT USED
6	—	VCO 1 CV "B" (CH'S 2,4,6,8)

POWER CONNECTOR

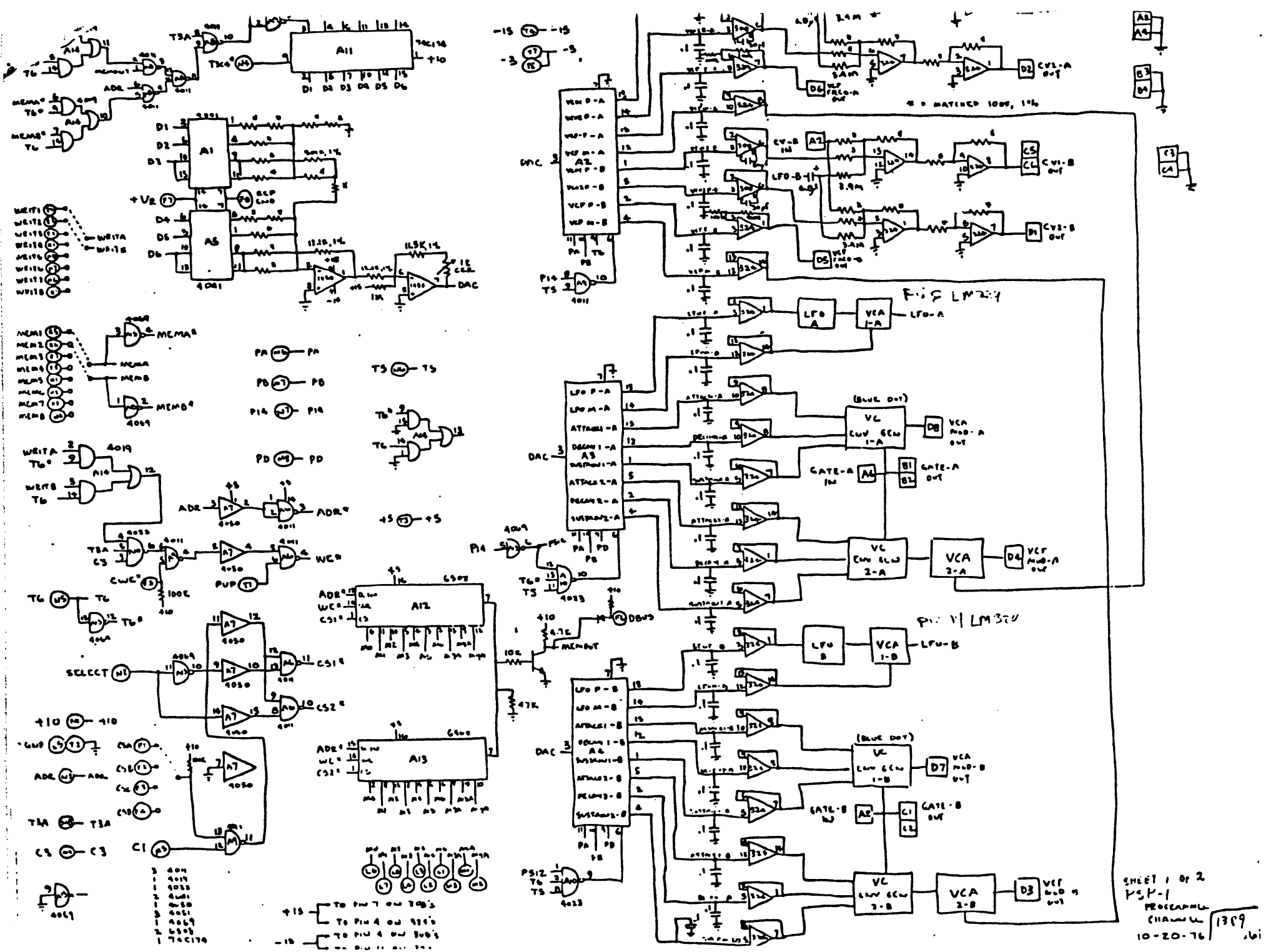
PIN	FUNCTION
1	+18.5 V
2	GND
3	KEY
4	-18.5 V

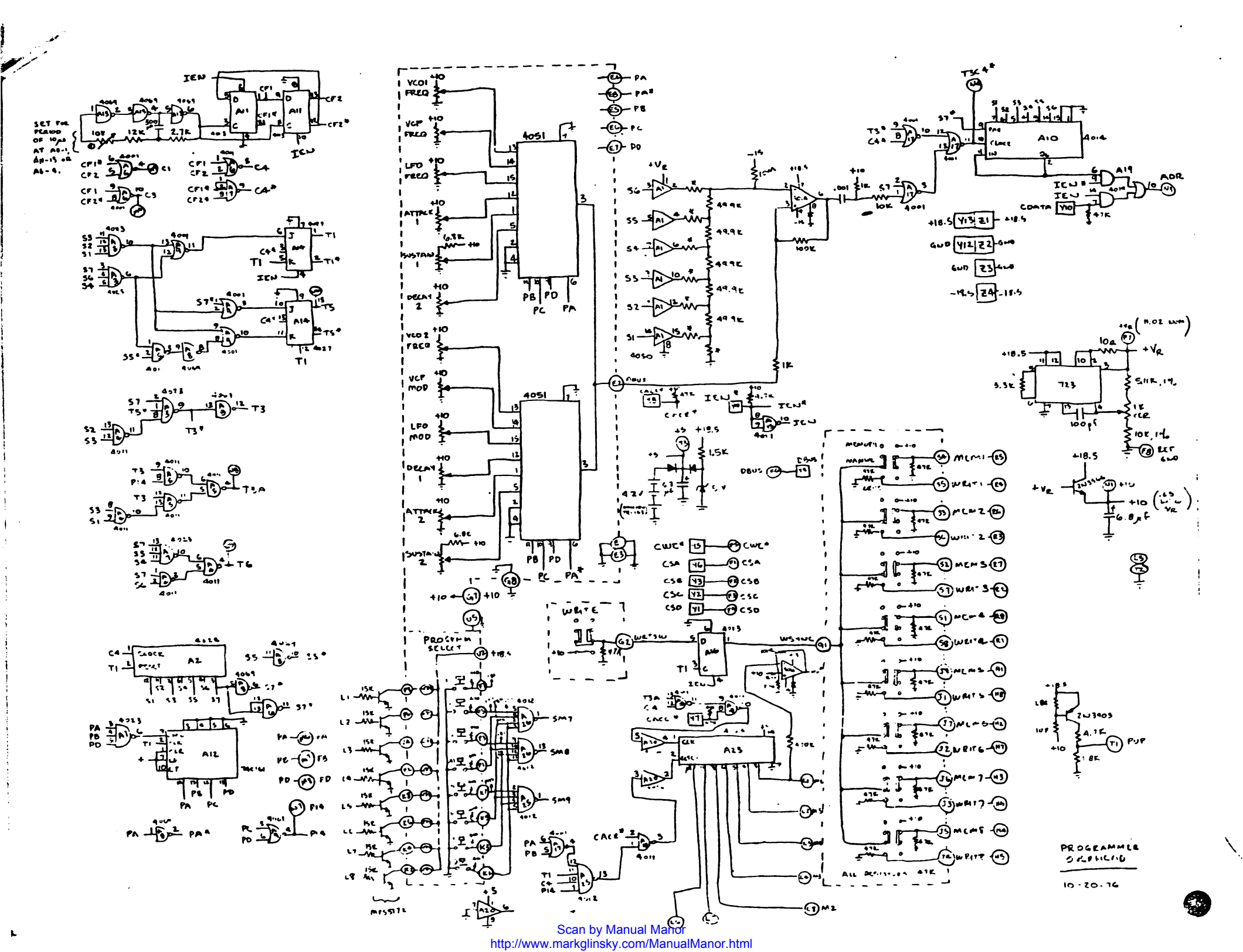
OBERHEIM ELECTRONICS, INC

PROGRAMMER

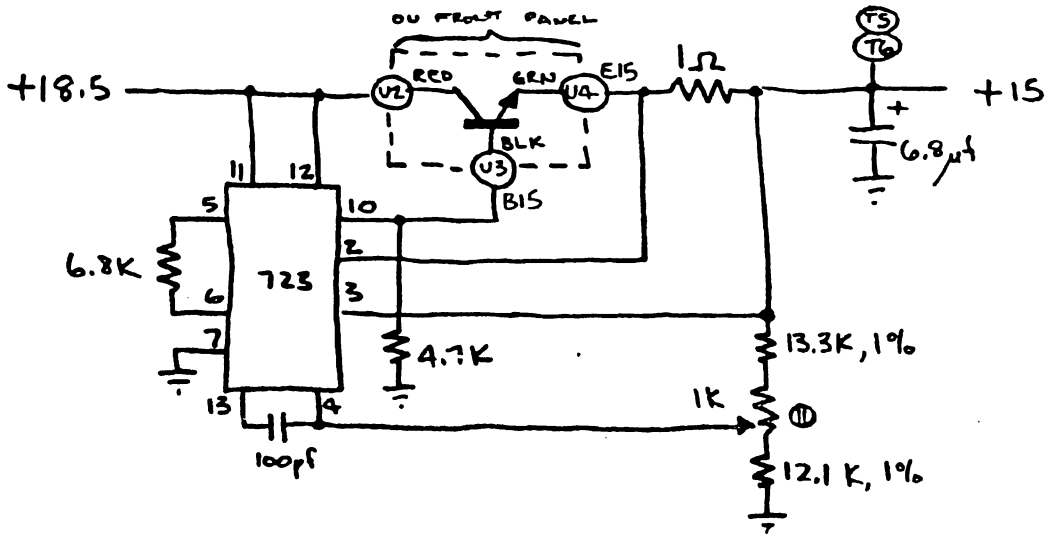
INPUT-OUTPUT CONNECTOR PLACEMENTS

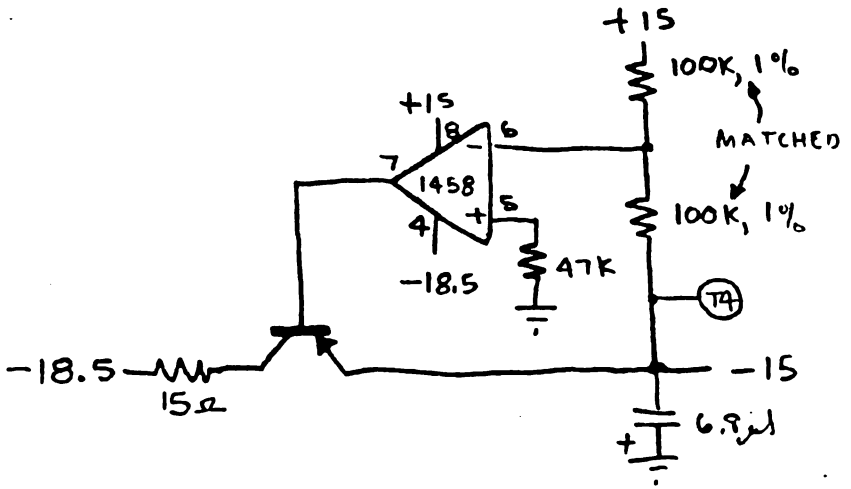
DEC. 15, 1976

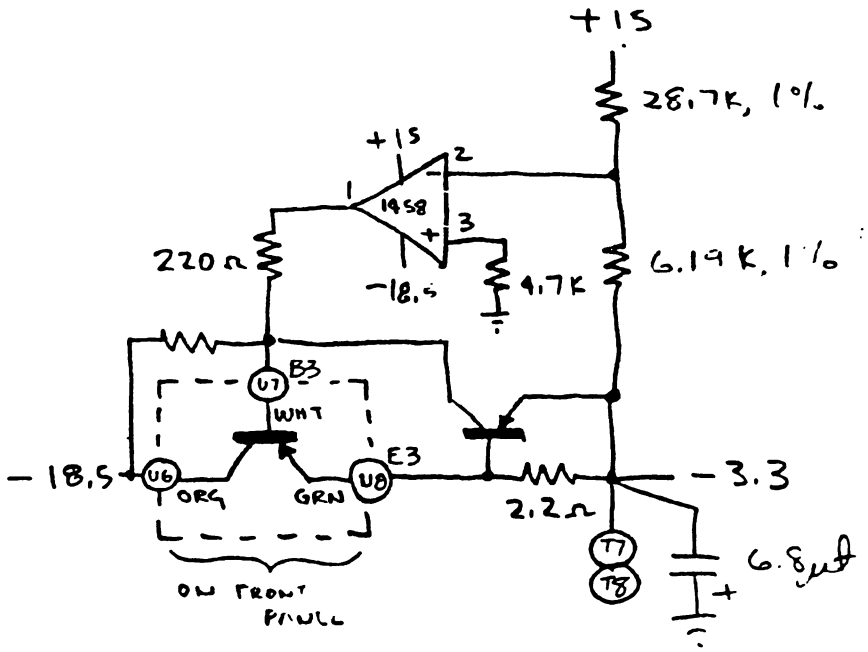




PROGRAMMER POWER SUPPLIES (ON OVERHEAD BD)

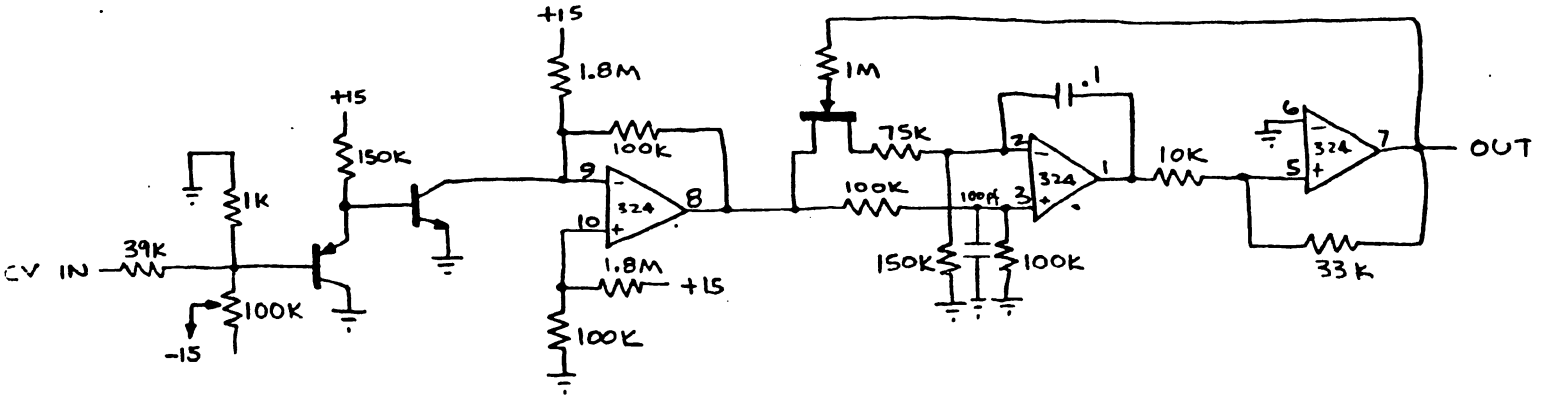


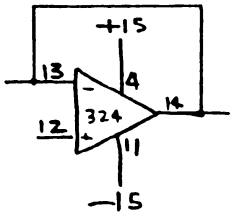




10-20-76

PROGRAMMER LFO





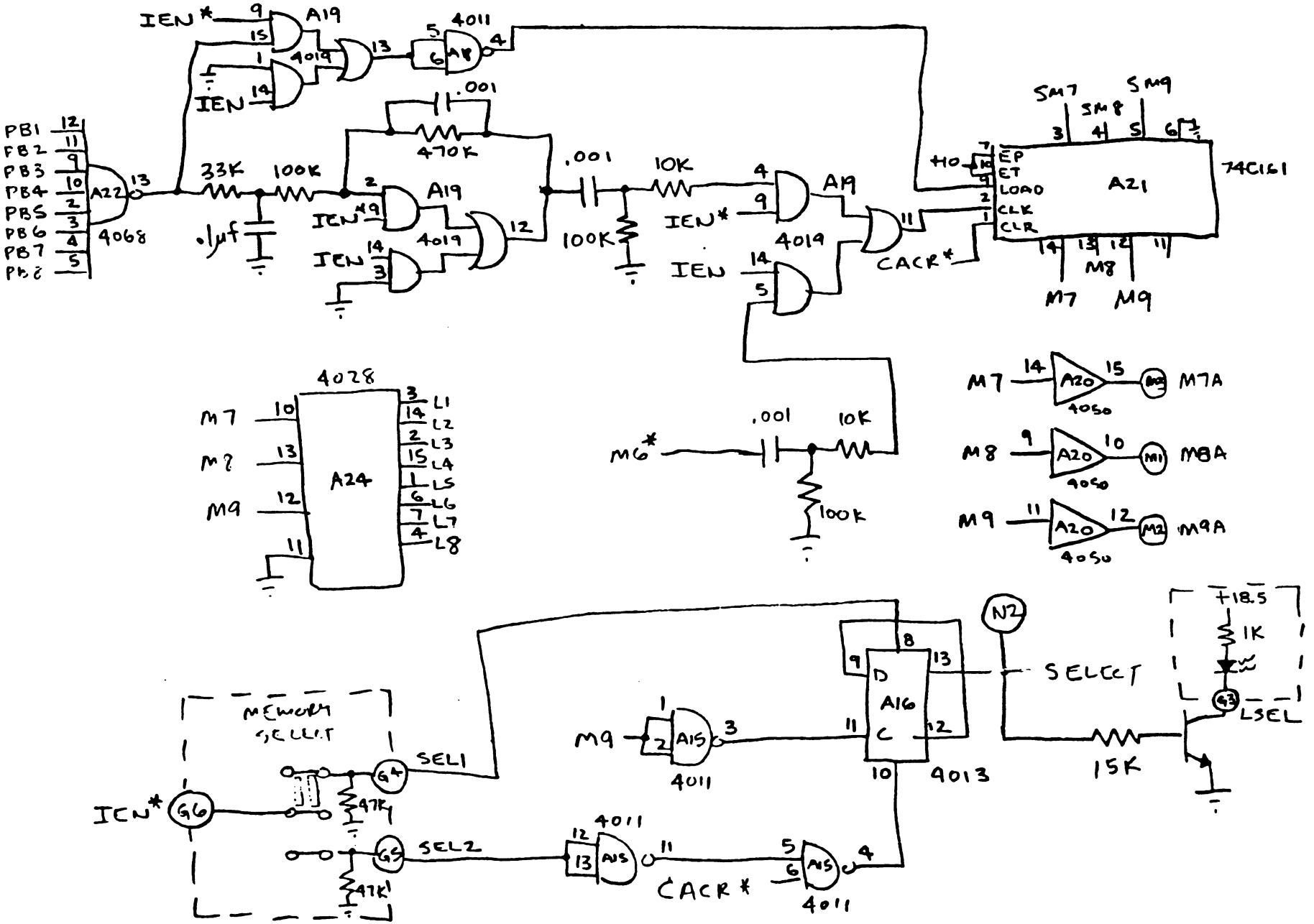
NOTES:
(UNLESS SPECIFIED OTHERWISE)
1. ALL RESISTERS ARE ¼W, 5%
2. ALL CAPACITORS IN μf.
3. ALL NPN TRANSISTORS · 2N5172
4. ALL PNP TRANSISTORS · 2N3905
5. ALL DIODES · 1N4148
6. ALL FET'S · 2N4302

10-20-76

A

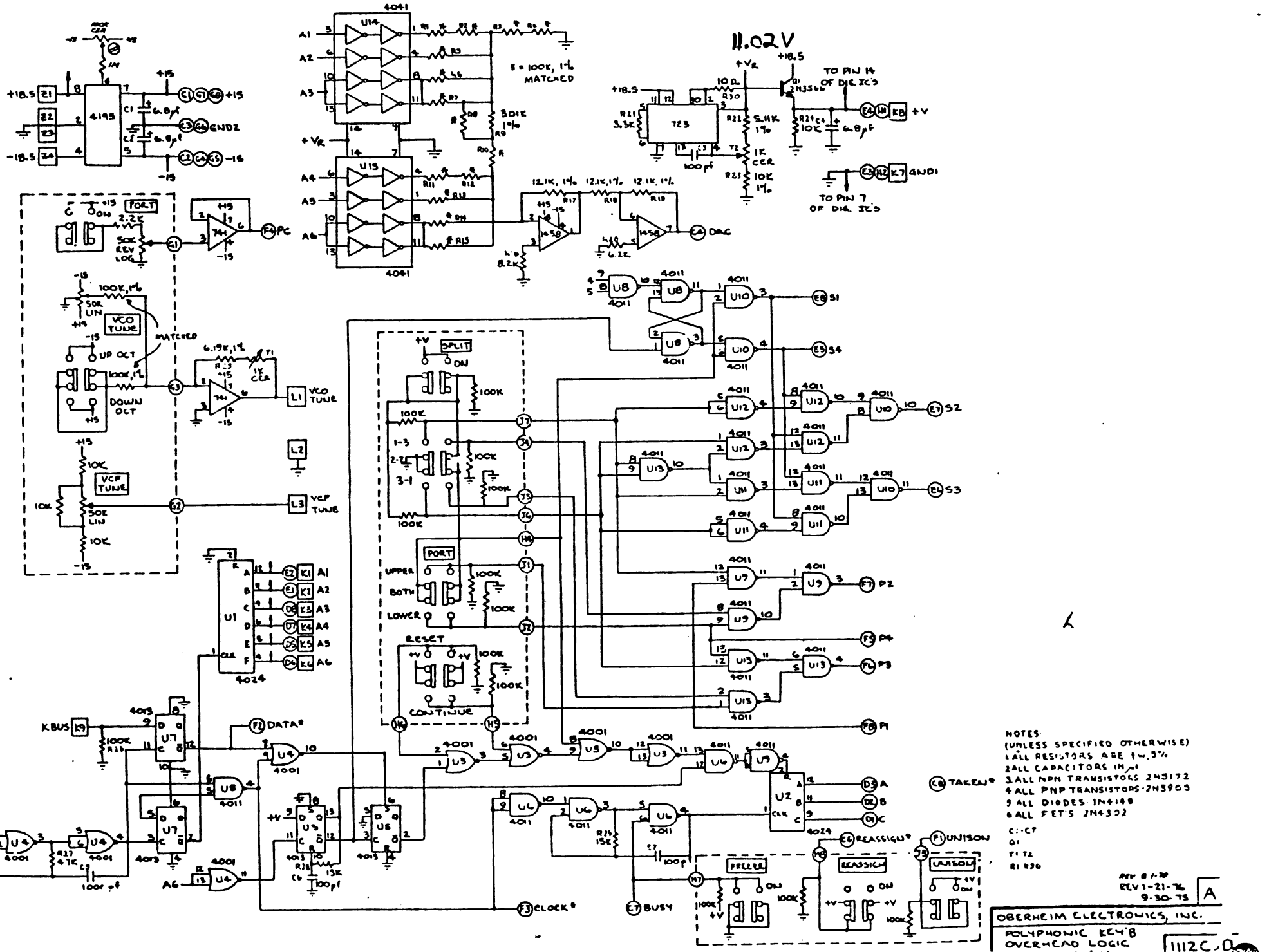
PSP-1 SHEET 2 of 2

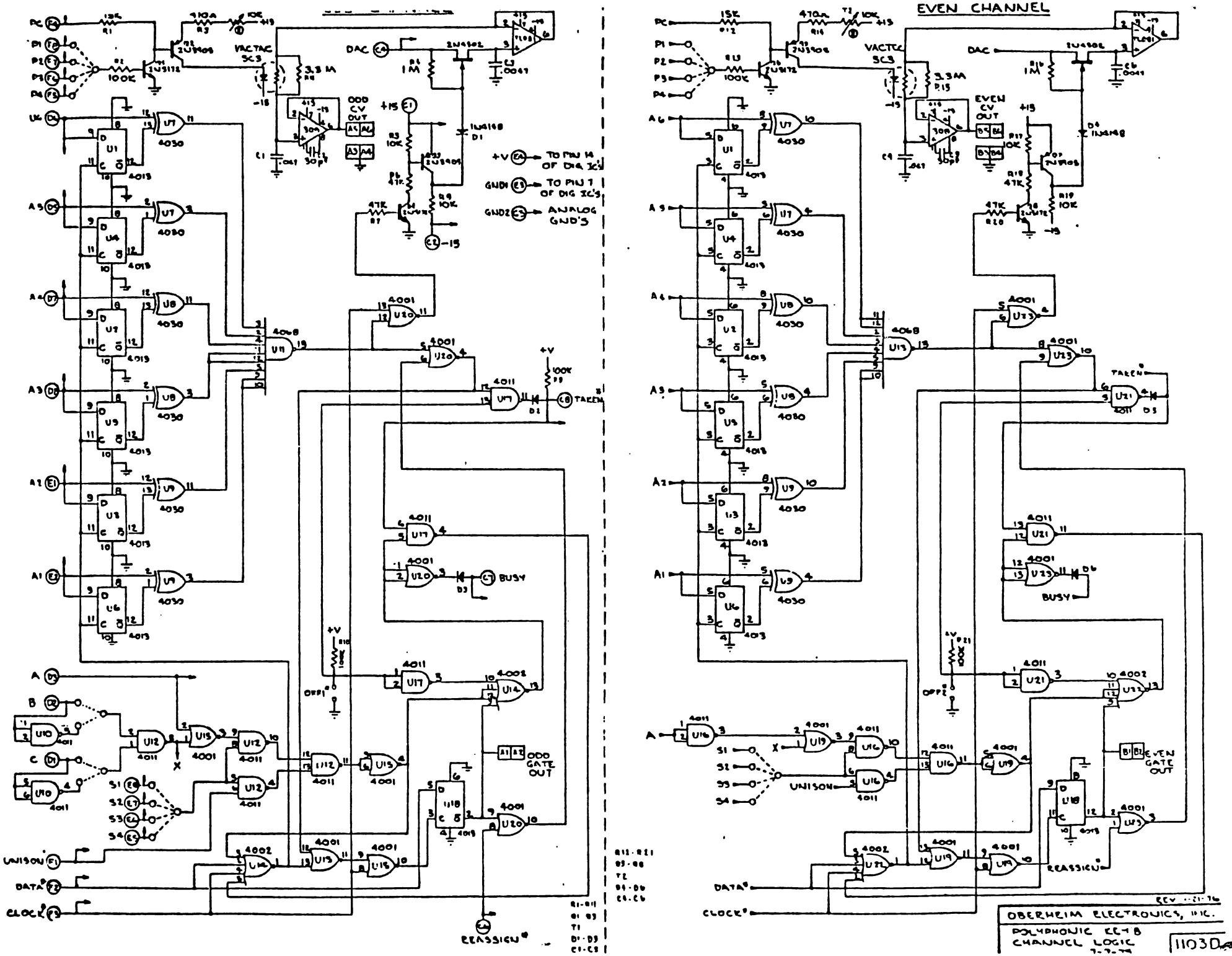
1389

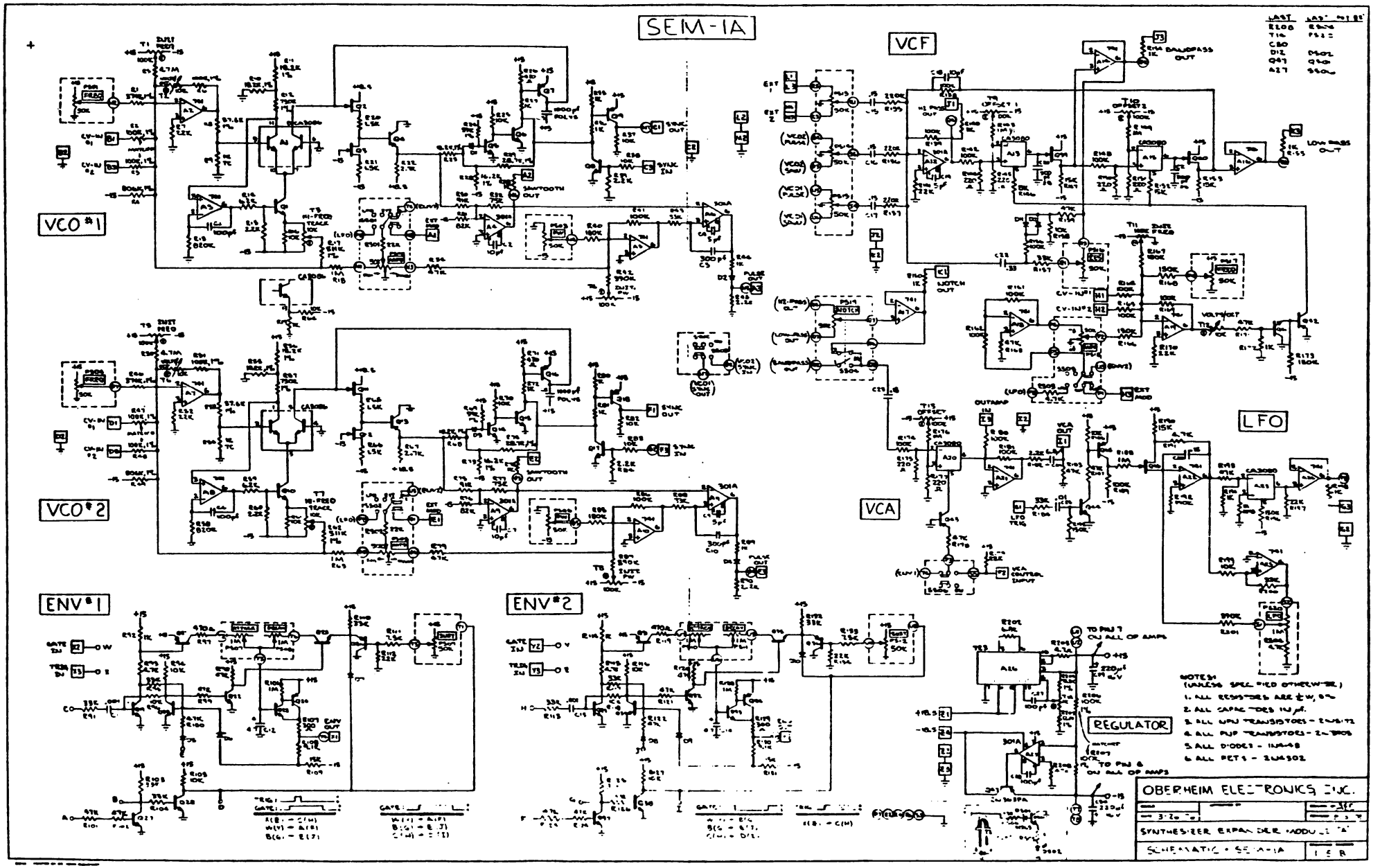


10-20-76

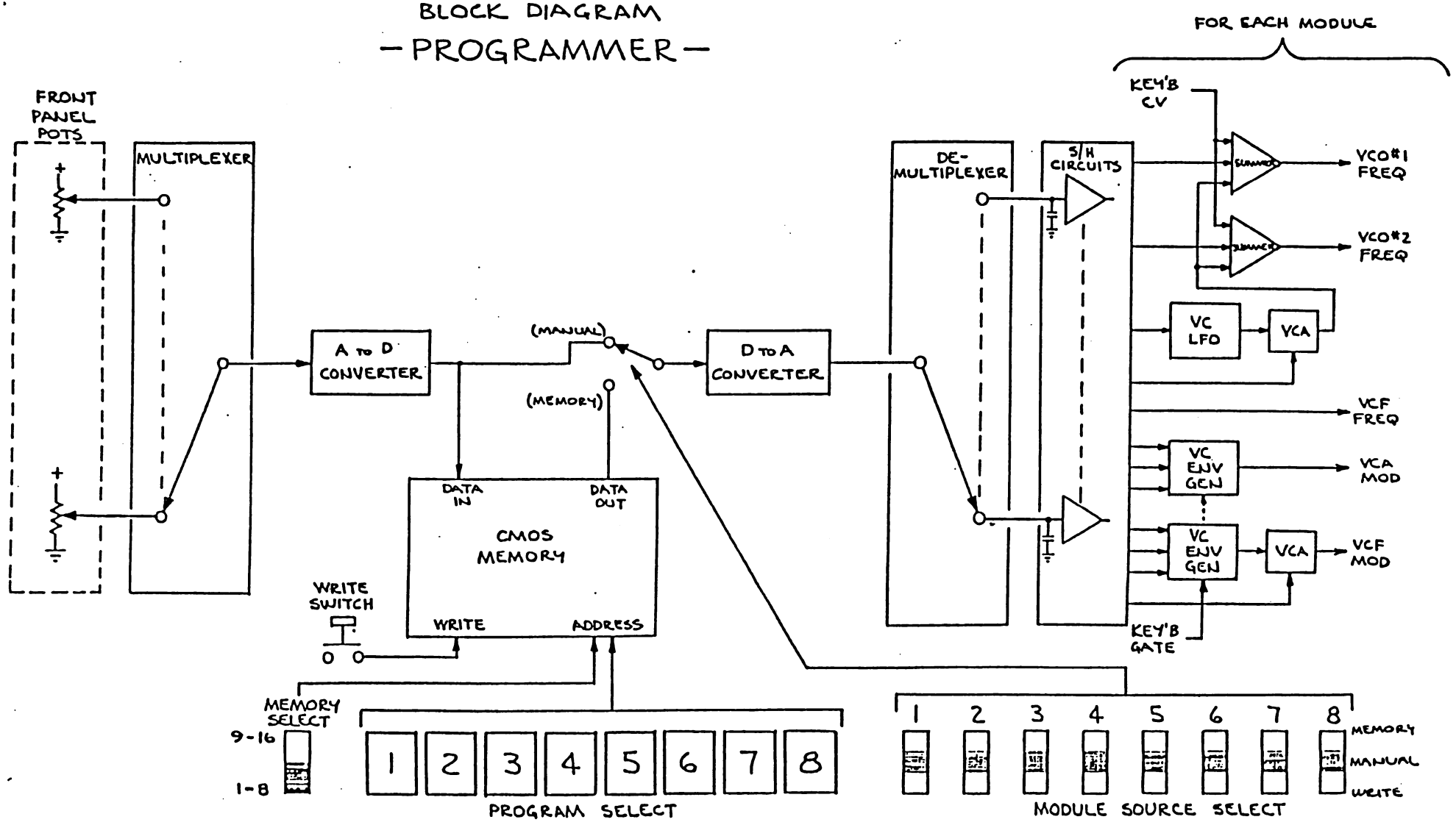
PROGRAMMER OVERHEAD

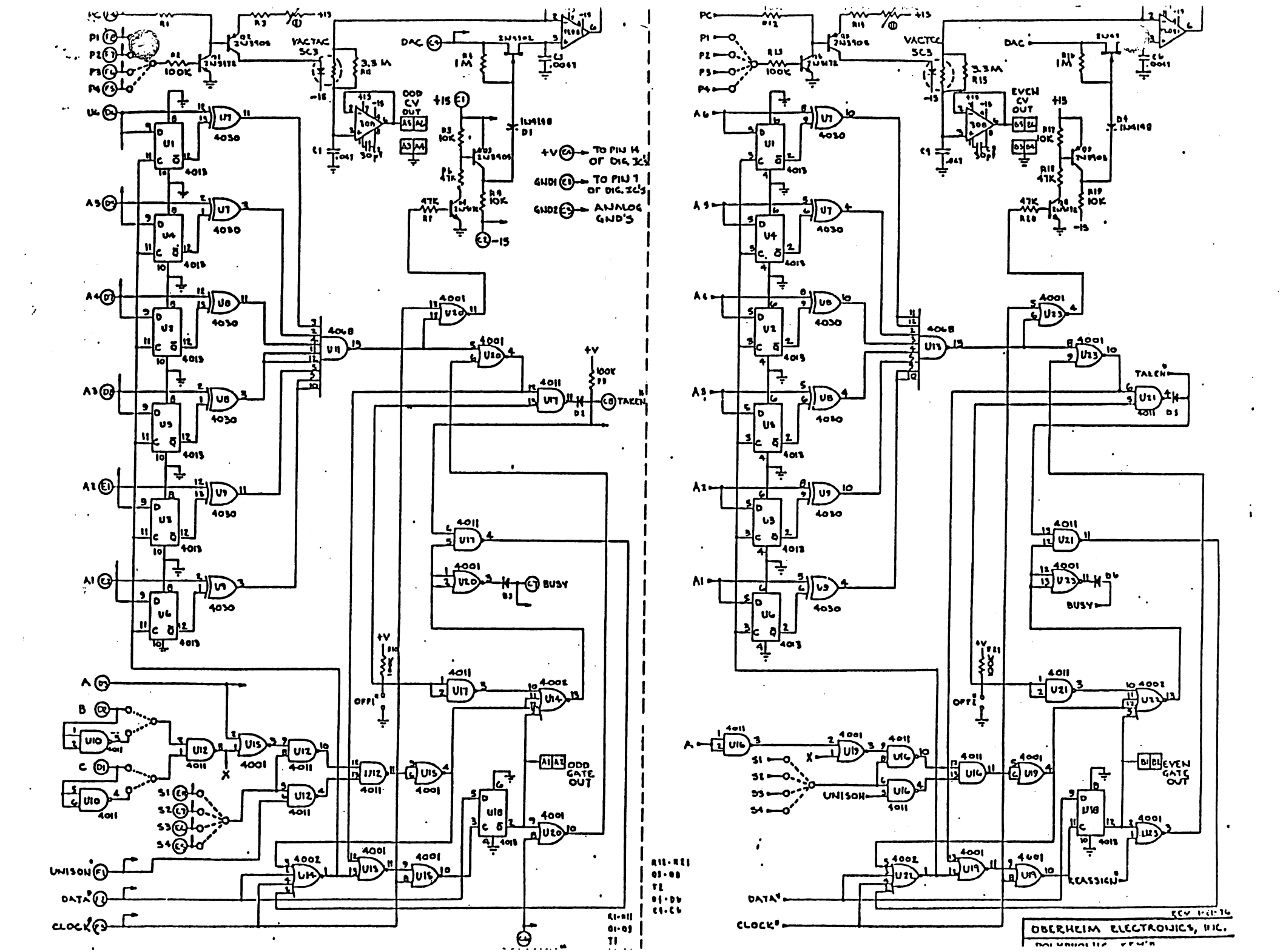


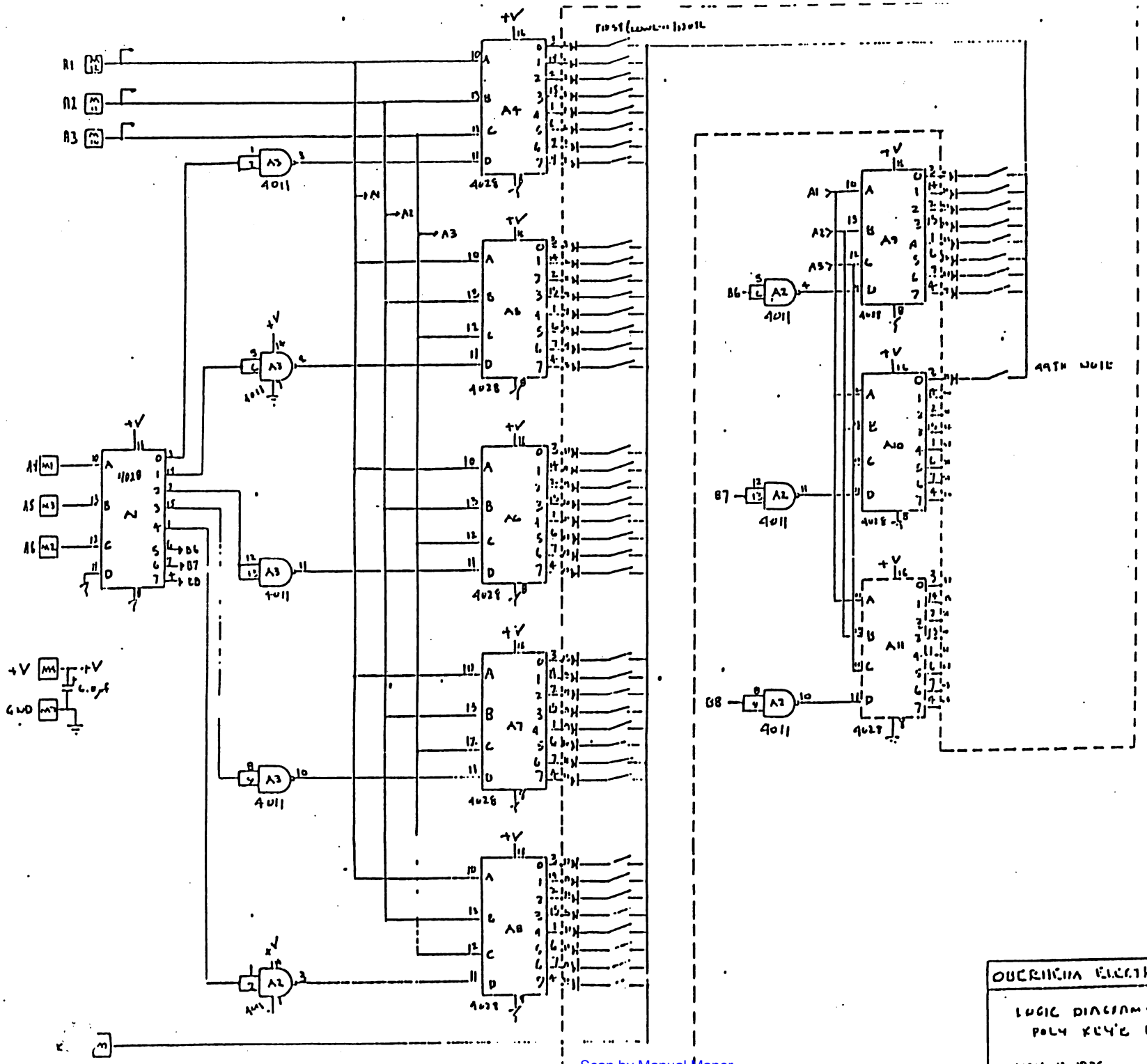




BLOCK DIAGRAM
-PROGRAMMER-





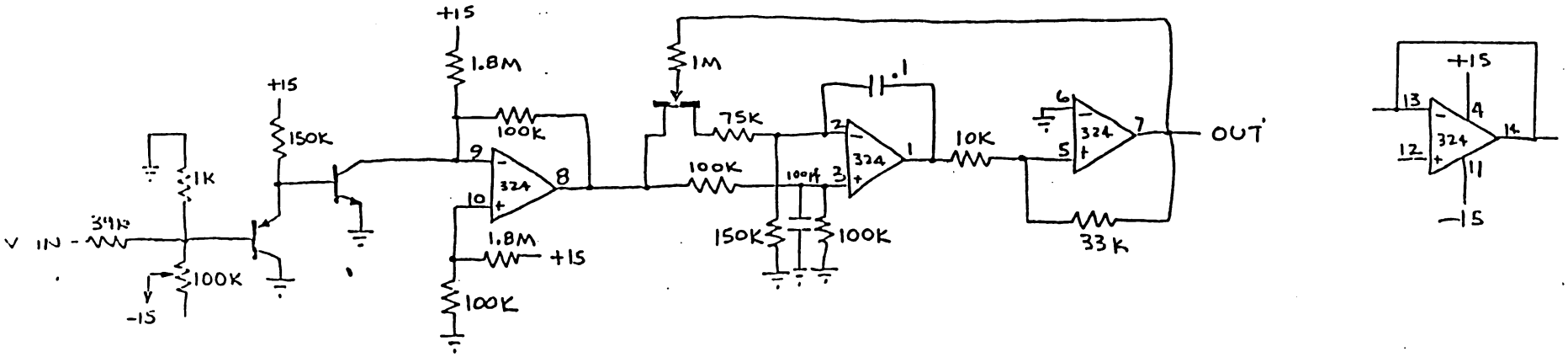


FOUR VOICE INTER-CONNECT CABLE

(12 PIN MOLEX)

FUNCTION	PIN
CV #1	1
GATE #1	2
CV #2	3
GATE #2	4
CV #3	5
GATE #3	6
CV #4	7
GATE #4	8
GND	9
GND	10
VCO TUNE	11
VCF TUNE	12

PROGRAMMER LFO



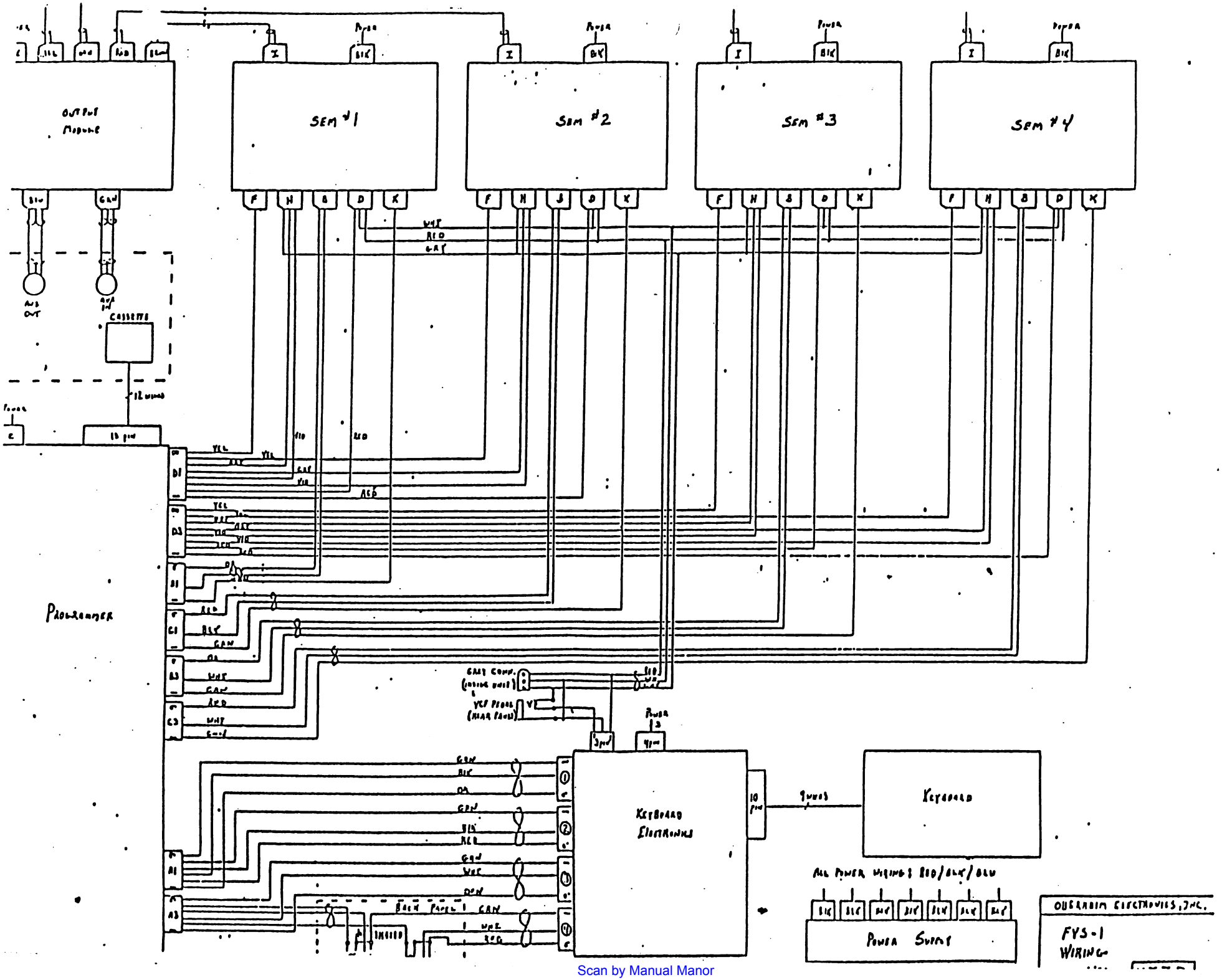
NOTES:
(UNLESS SPECIFIED OTHERWISE)
1. ALL RESISTERS ARE ¼W, 5%
2. ALL CAPACITORS IN μf.
3. ALL NPN TRANSISTORS - 2N5172
4. ALL PNP TRANSISTORS - 2N3905
5. ALL DIODES - 1N4148
6. ALL FET'S - 2N4302

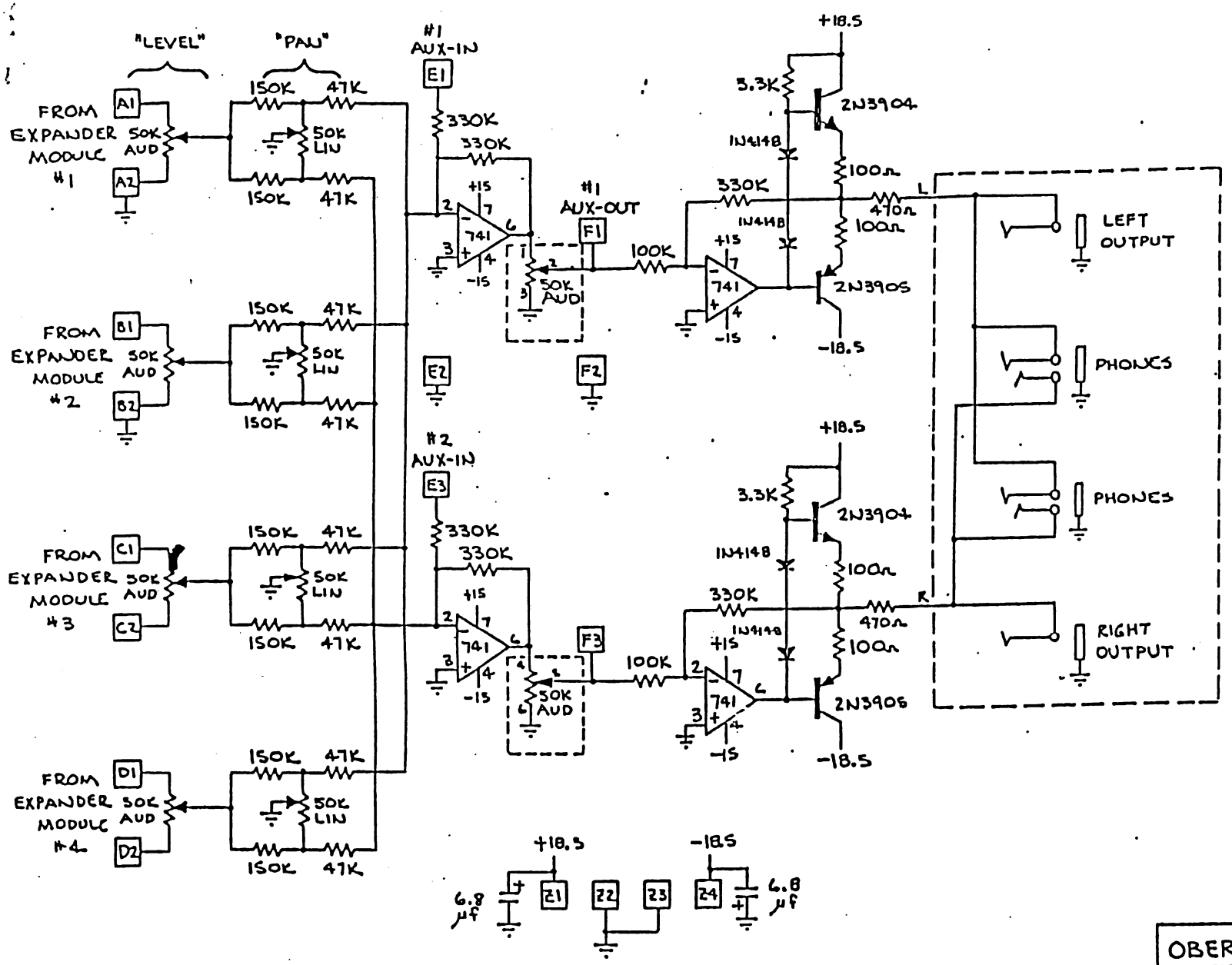
10-20-76

A

PSP-1 SHEET 2 of 2

1389





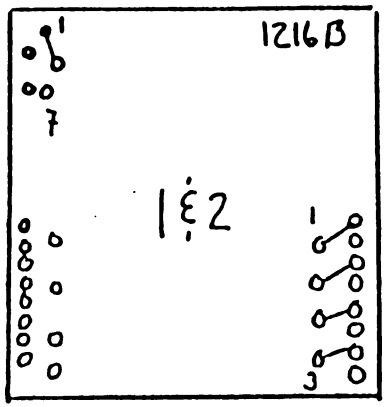
OBERHEIM ELECTRONICS, INC

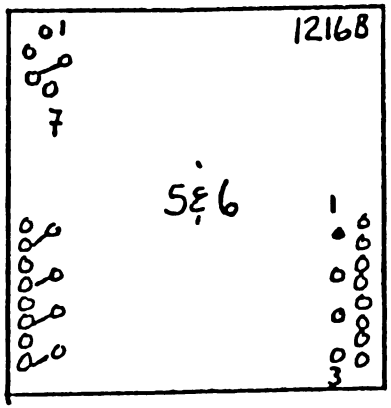
- SCHEMATIC -

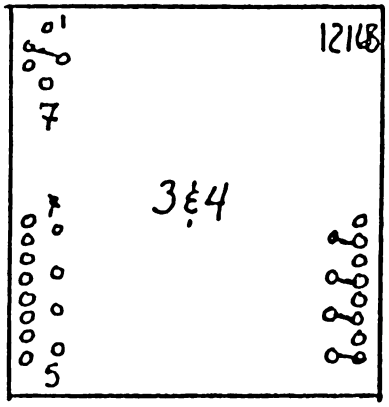
4 VOICE OUTPUT MODULE

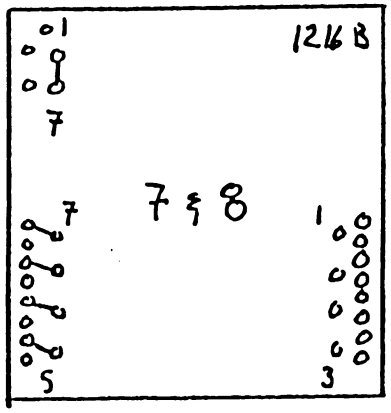
MAR. 8, 1976

1173



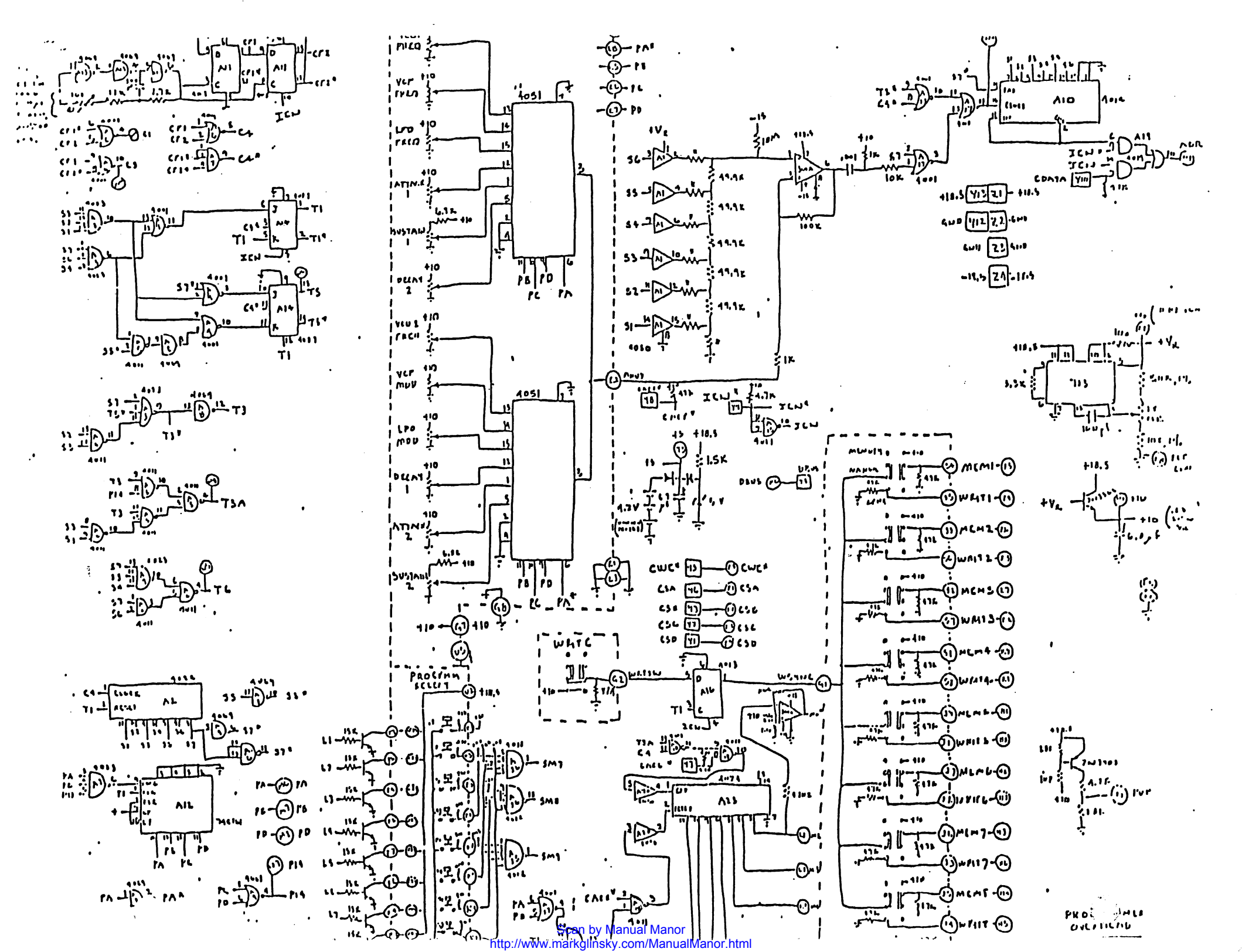




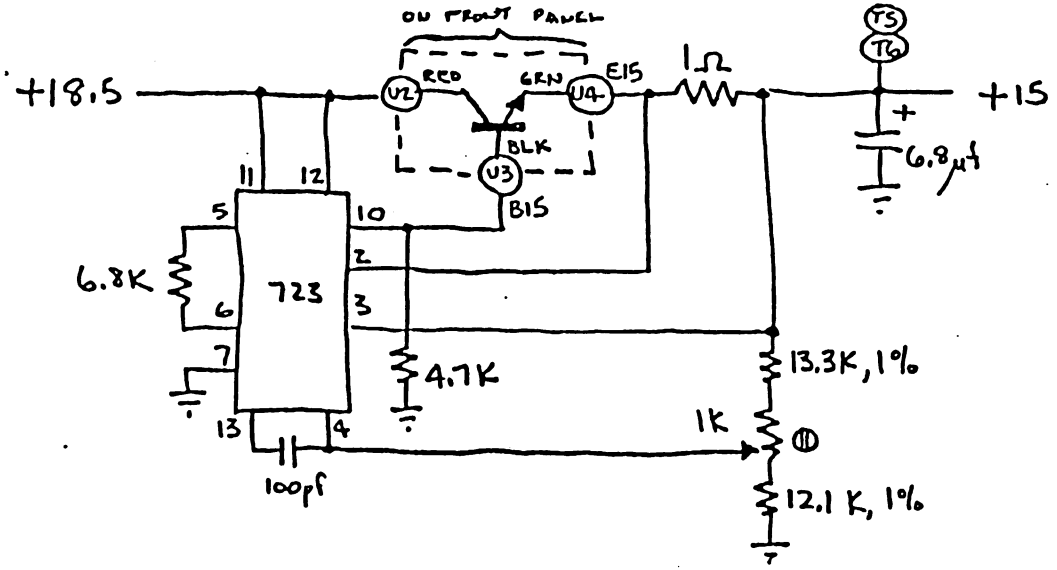


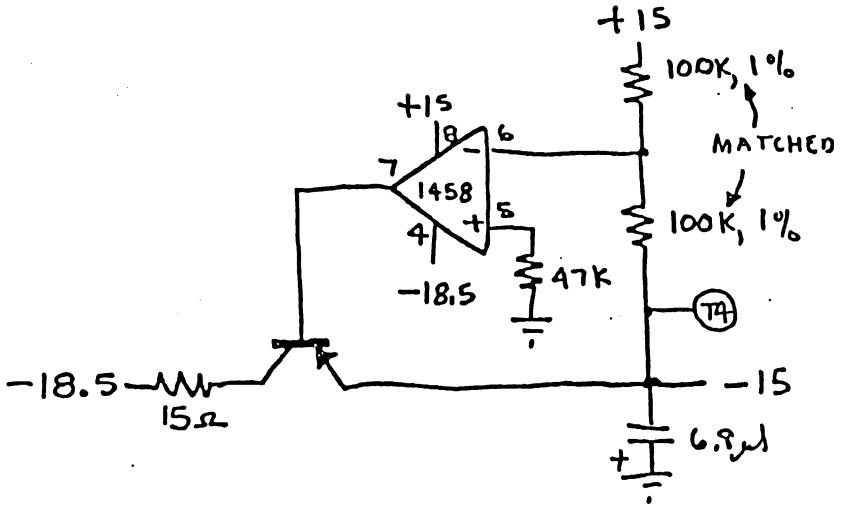
CHANNEL JUMPERING
PSP-1

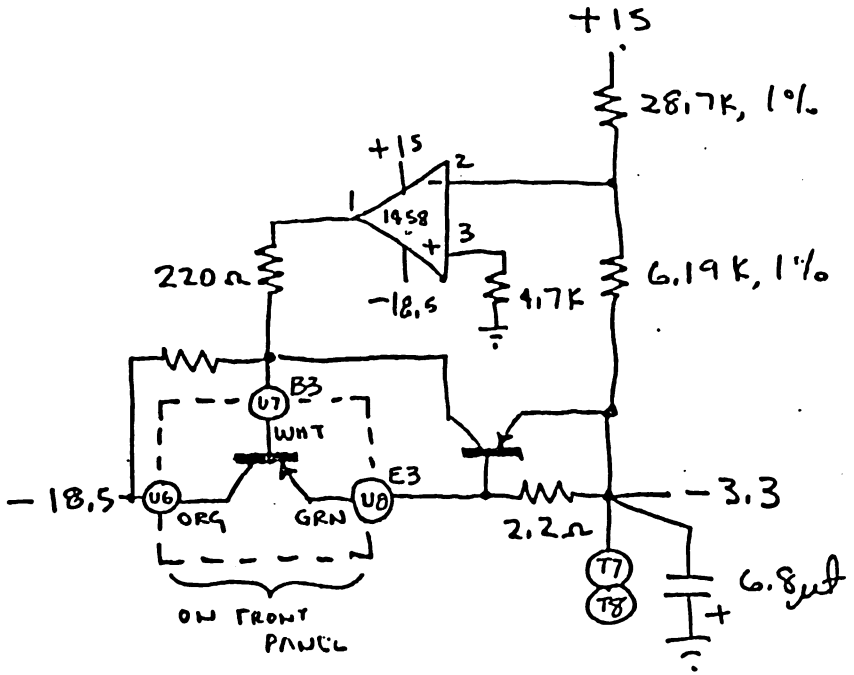
T.S.



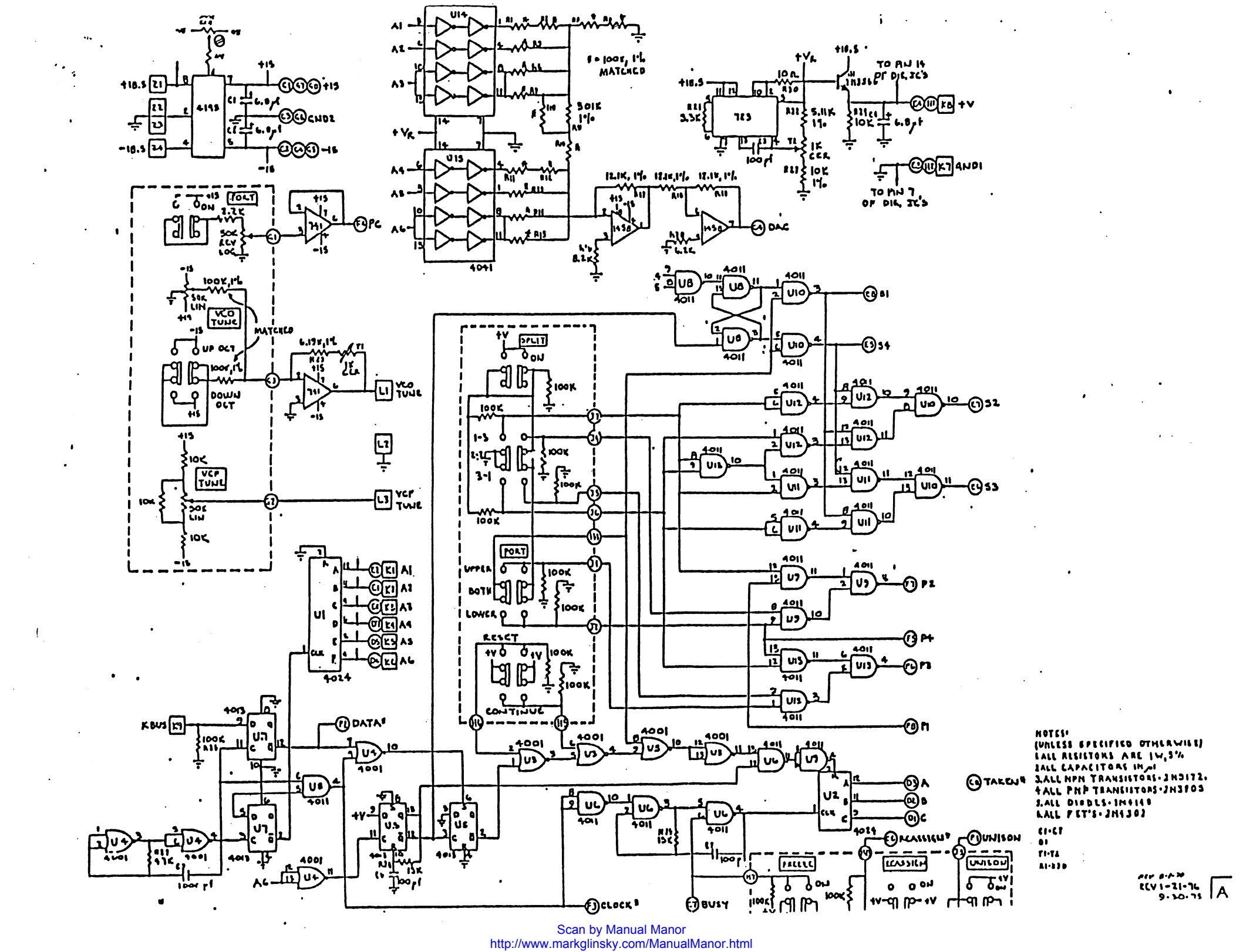
PROGRAMMER POWER SUPPLIES (ON OVERHEAD BD)







10-20-76

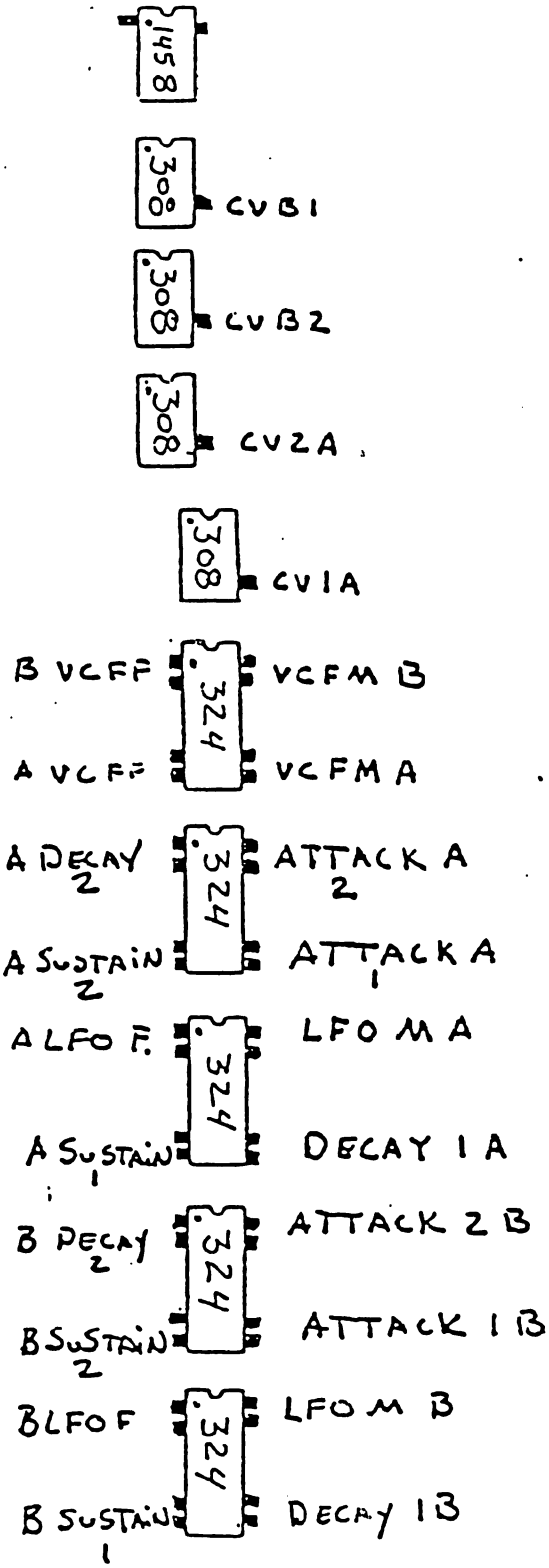


NOTES:
(UNLESS SPECIFIED OTHERWISE)
1. ALL RESISTORS ARE 1W, 5%
2. ALL CAPACITORS IN μf
3. ALL NPN TRANSISTORS: 2N3172.
4. ALL PNP TRANSISTORS: 2N3905
5. ALL DIODES: 1N4148
6. ALL FET'S: 2N4302

C1-C7
D1
F1-F4
A1-A30

ECV 1-21-76
9-20-75

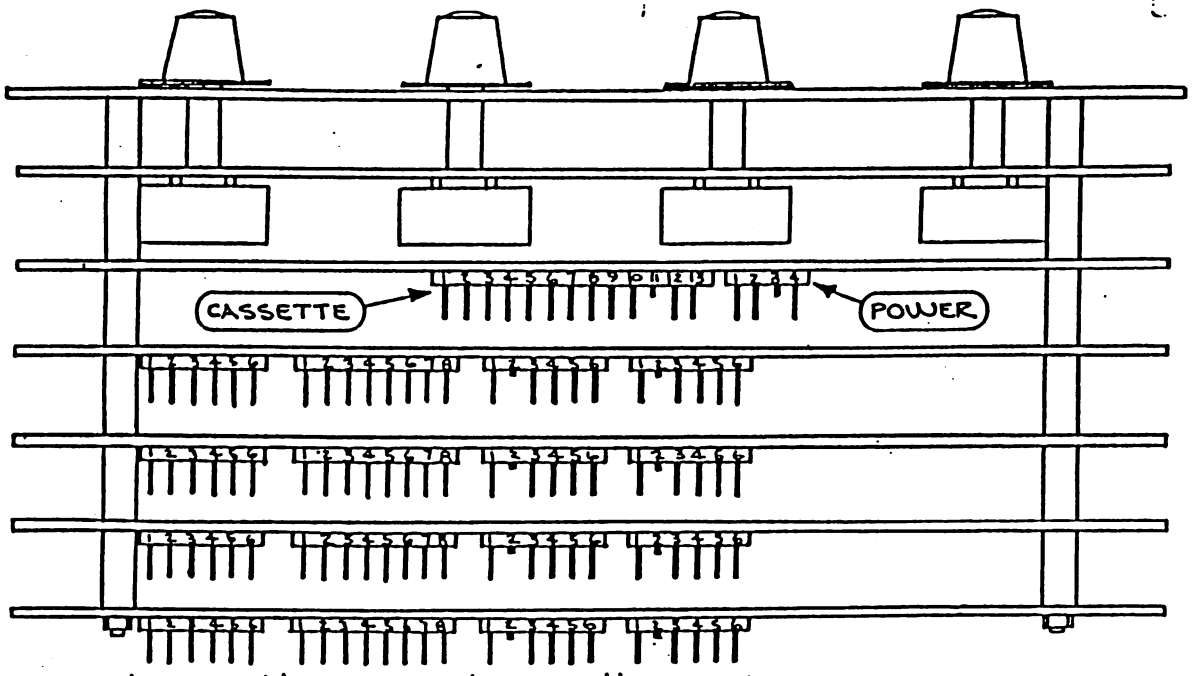
A



PSP SiH 12/63
PIN OUT
6-5-78 T.S.

FVS

TOP VIEW



FRONT PANEL

POT BOARD

OVERHEAD BOARD

CHANNEL BOARD #1 (CHANNELS 1 & 2)

CHANNEL BOARD #2 (CHANNELS 3 & 4)

CHANNEL BOARD #3 (CHANNELS 5 & 6)

CHANNEL BOARD #4 (CHANNELS 7 & 8)

A CONNECTOR

PIN	FUNCTION
1	KEY'B CV "A" (CH'S 1,3,5,7)
2	KEY'B CV "B" (CH'S 2,4,6,8)
3	GND
4	GND
5	KEY'B GATE "B" (CH'S 2,4,6,8)
6	KEY'B GATE "A" (CH'S 1,3,5,7)

D CONNECTOR

PIN	FUNCTION
1	VCO 2 CV "B" (CH'S 2,4,6,8)
2	VCO 2 CV "A" (CH'S 1,3,5,7)
3	VCF ENV "B" (CH'S 2,4,6,8)
4	VCF ENV "A" (CH'S 1,3,5,7)
5	VCF CV "B" (CH'S 2,4,6,8)
6	VCF CV "A" (CH'S 1,3,5,7)
7	VCA ENV "B" (CH'S 2,4,6,8)
8	VCA ENV "A" (CH'S 1,3,5,7)

B CONNECTOR

PIN	FUNCTION
1	GATE "A" (CH'S 1,3,5,7)
2	KEY
3	GND
4	NOT USED
5	NOT USED
6	VCO 1 CV "A" (CH'S 1,3,5,7)

C CONNECTOR

PIN	FUNCTION
1	GATE "B" (CH'S 2,4,6,8)
2	KEY
3	GND
4	NOT USED
5	NOT USED
6	VCO 1 CV "B" (CH'S 2,4,6,8)

POWER CONNECTOR

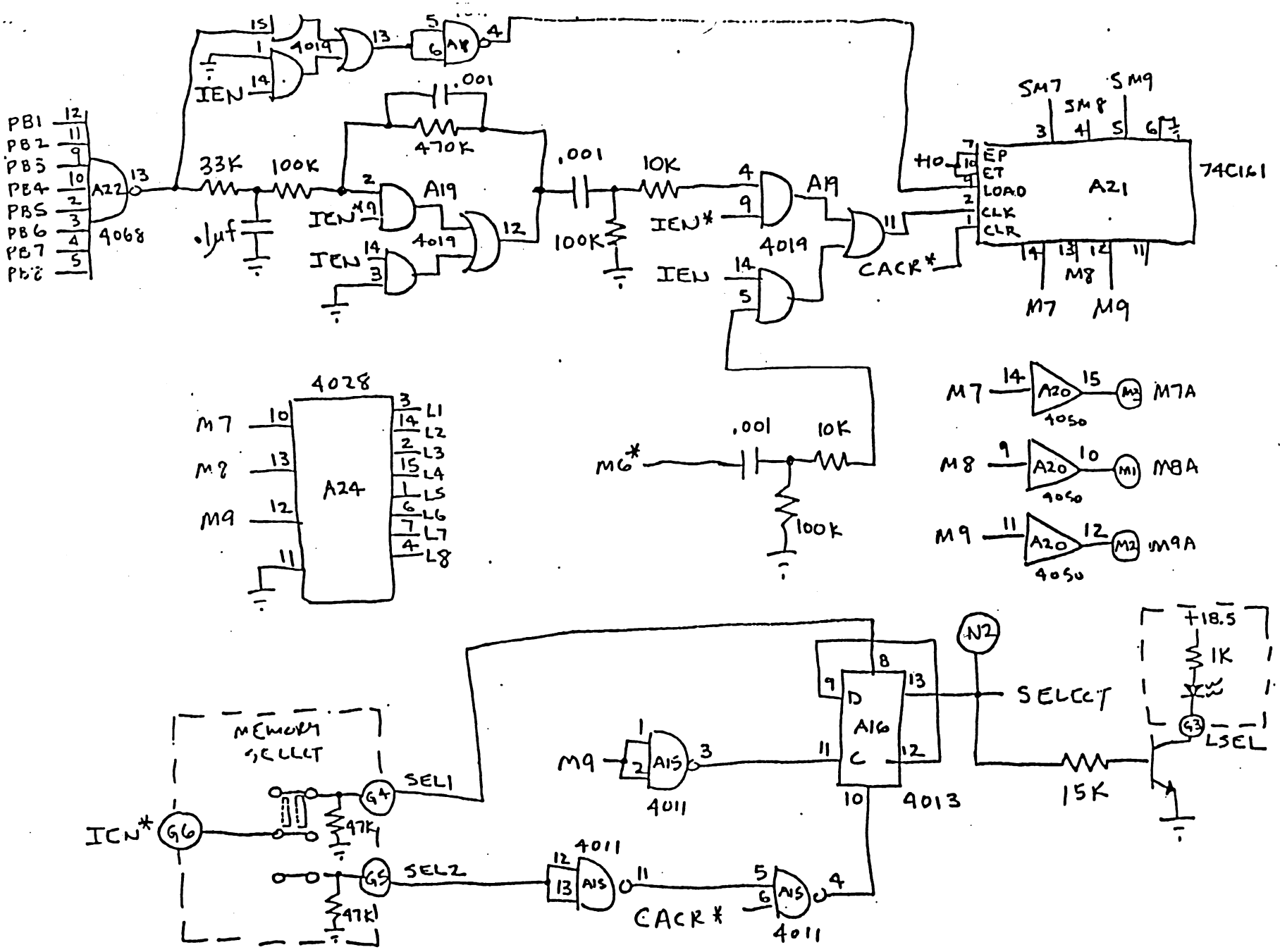
PIN	FUNCTION
1	+18.5 V
2	GND
3	KEY
4	-18.5 V

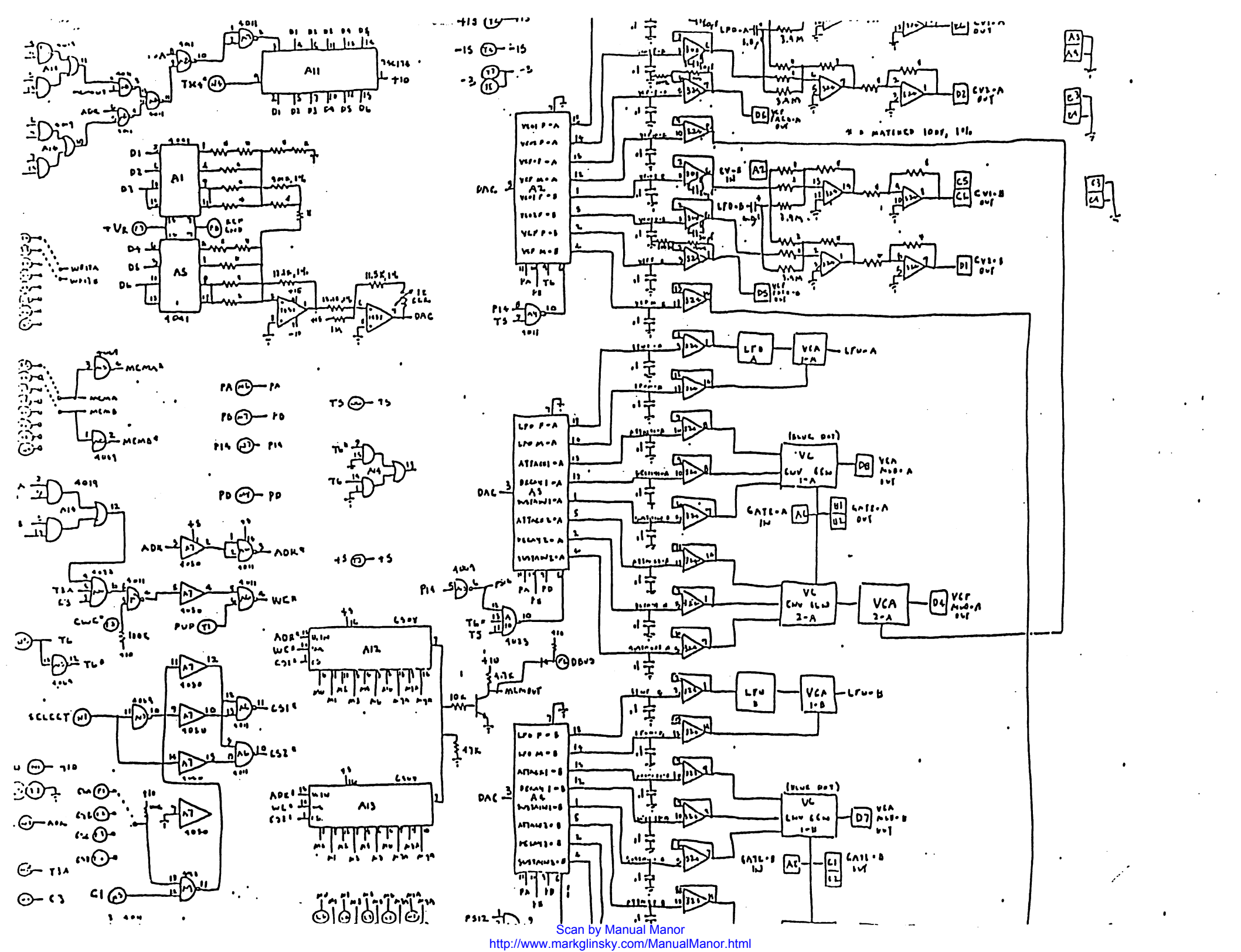
OBERHEIM ELECTRONICS, INC

PROGRAMMER

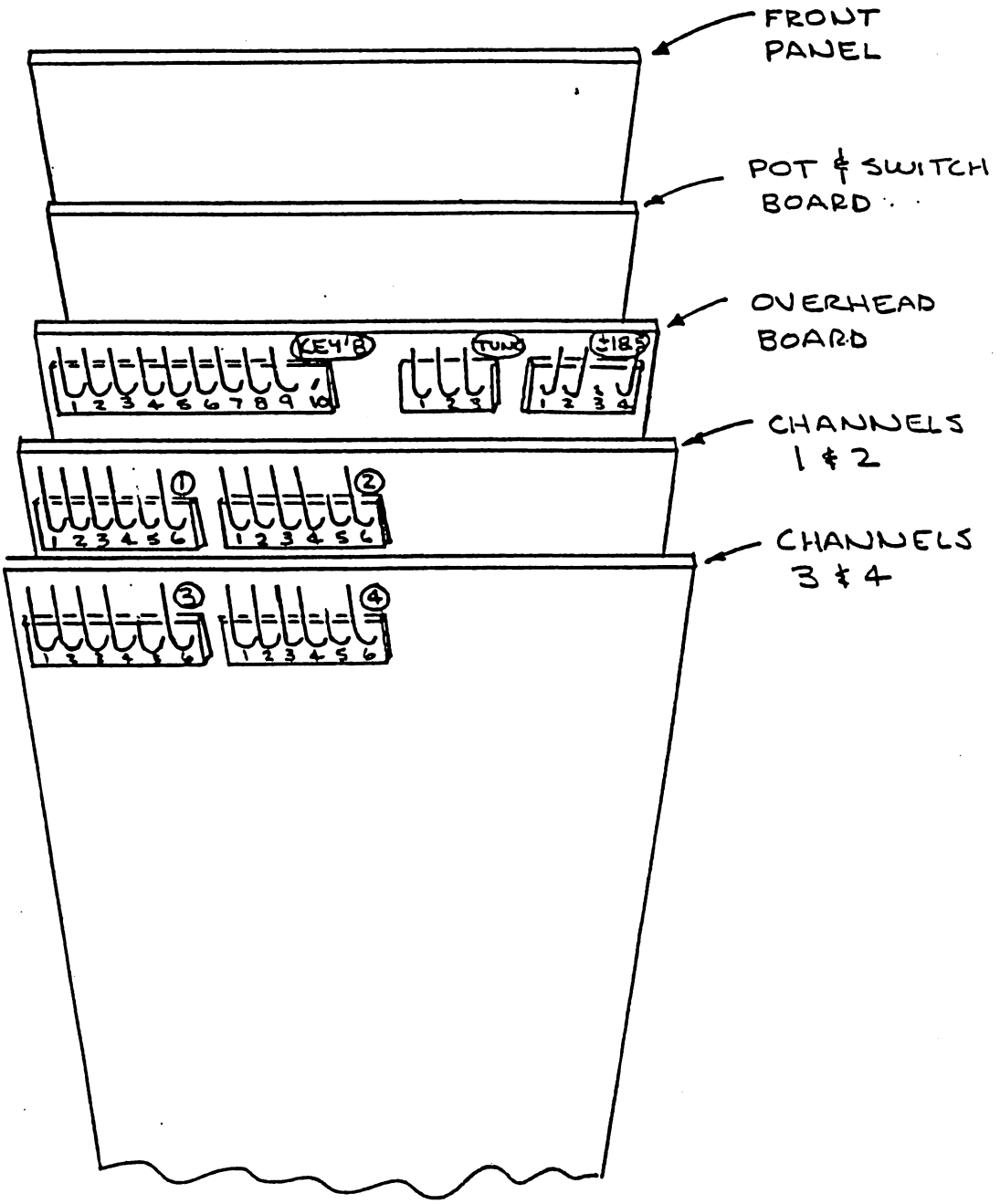
INPUT-OUTPUT CONNECTOR PLACEMENTS

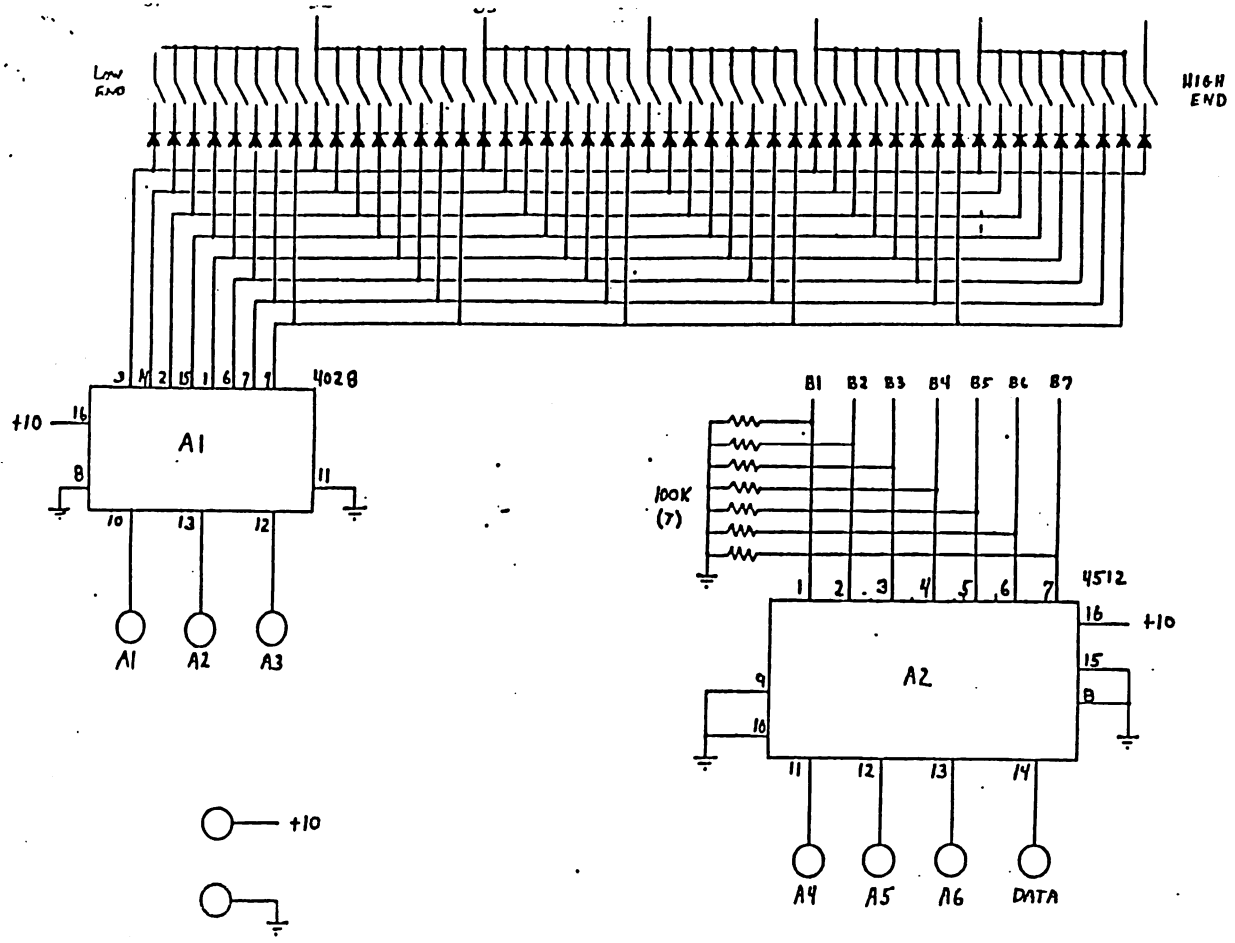
DEC. 15, 1976





FOUR VOICE ELECTRONICS CONNECTIONS





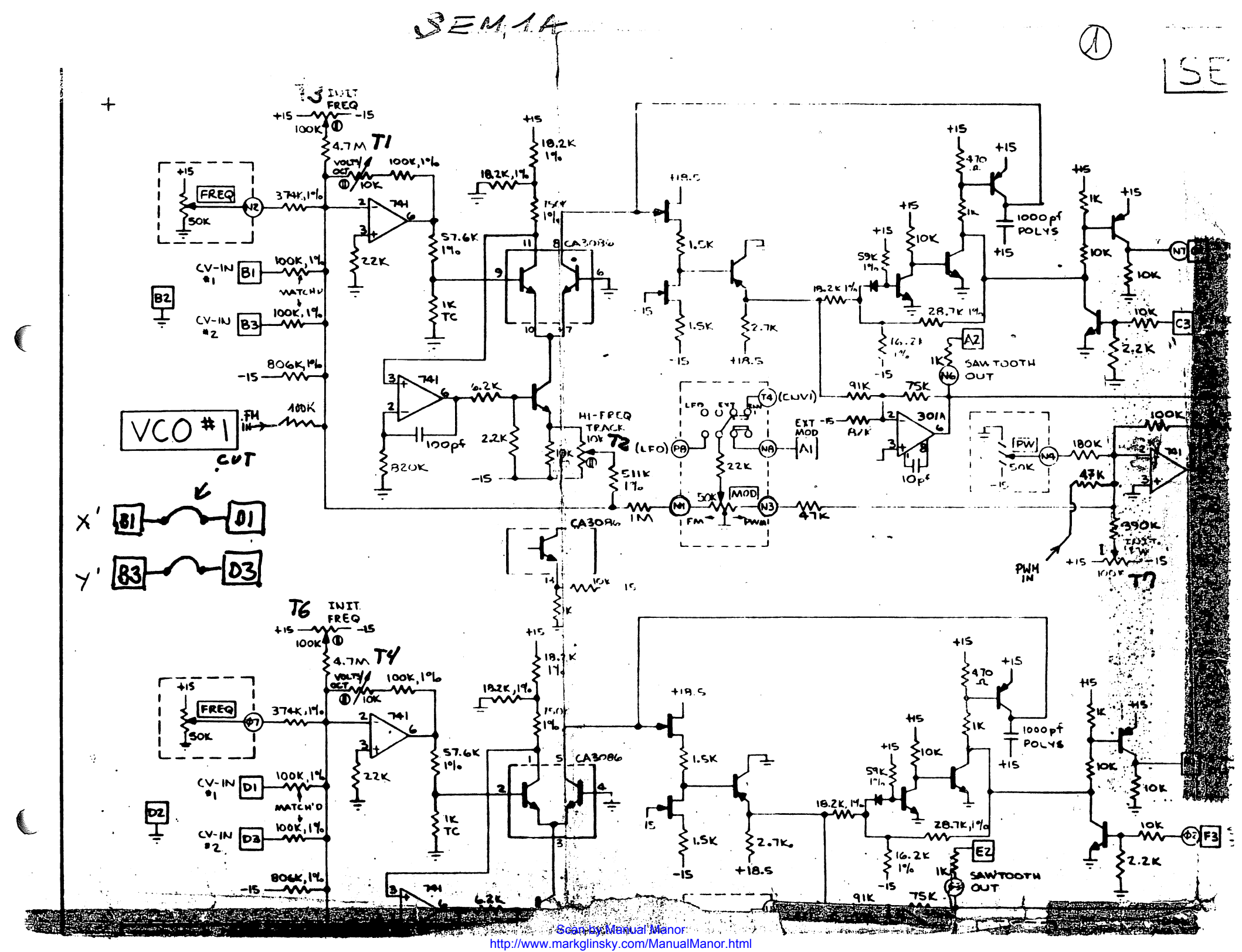
NOTES:

1) A1 AND A2 TO BE MOUNTED IN SOCKETS
2) ○— DENOTES SOLDERABLE PINS ON P.C BOARD
3) ALL RESISTORS 5% ¼ OR ½ WATT

OBERHEIM ELECTRONICS, INC.

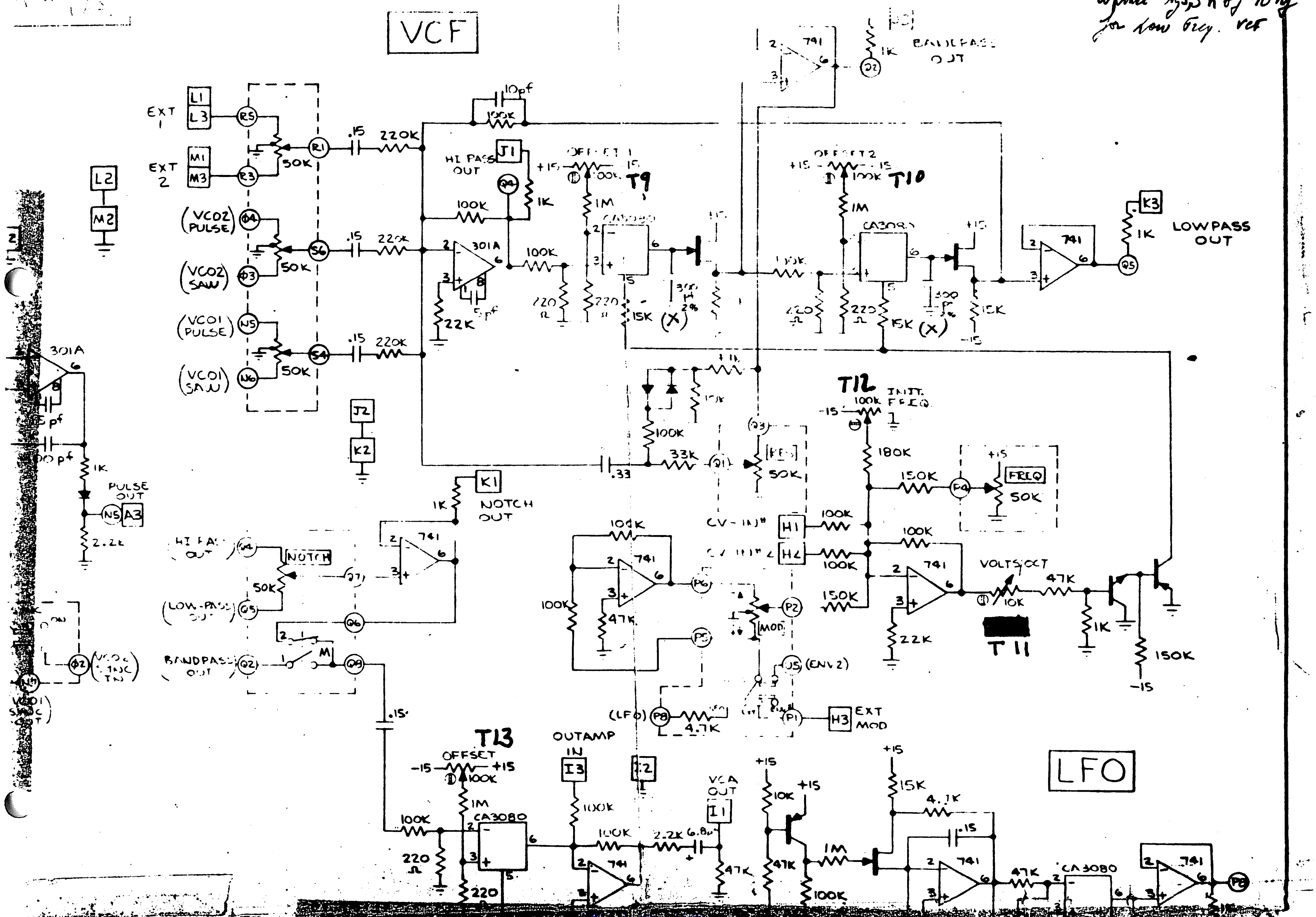
49 NOTE KEYBOARD WITH DECODER

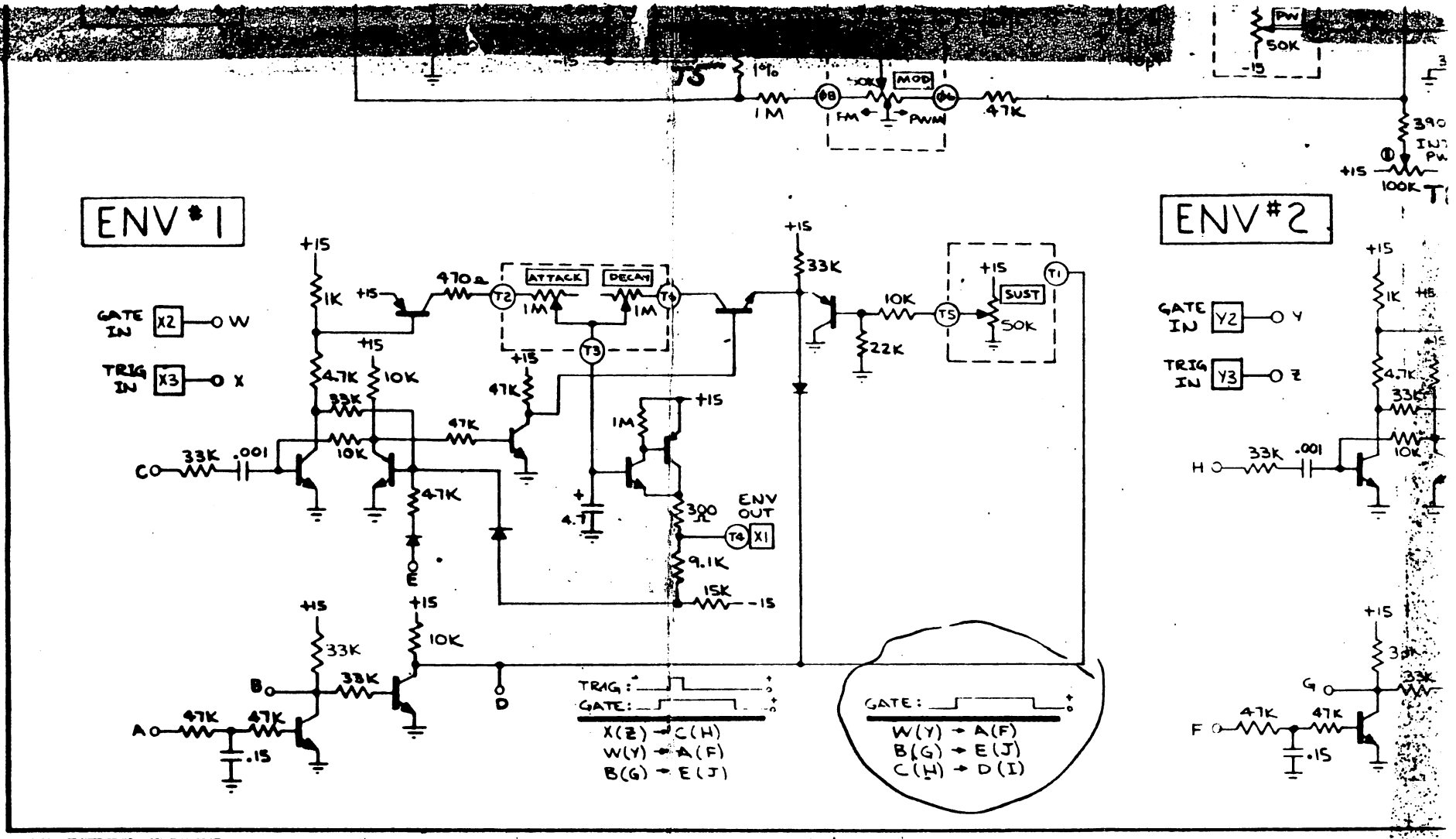
7/77



(2)

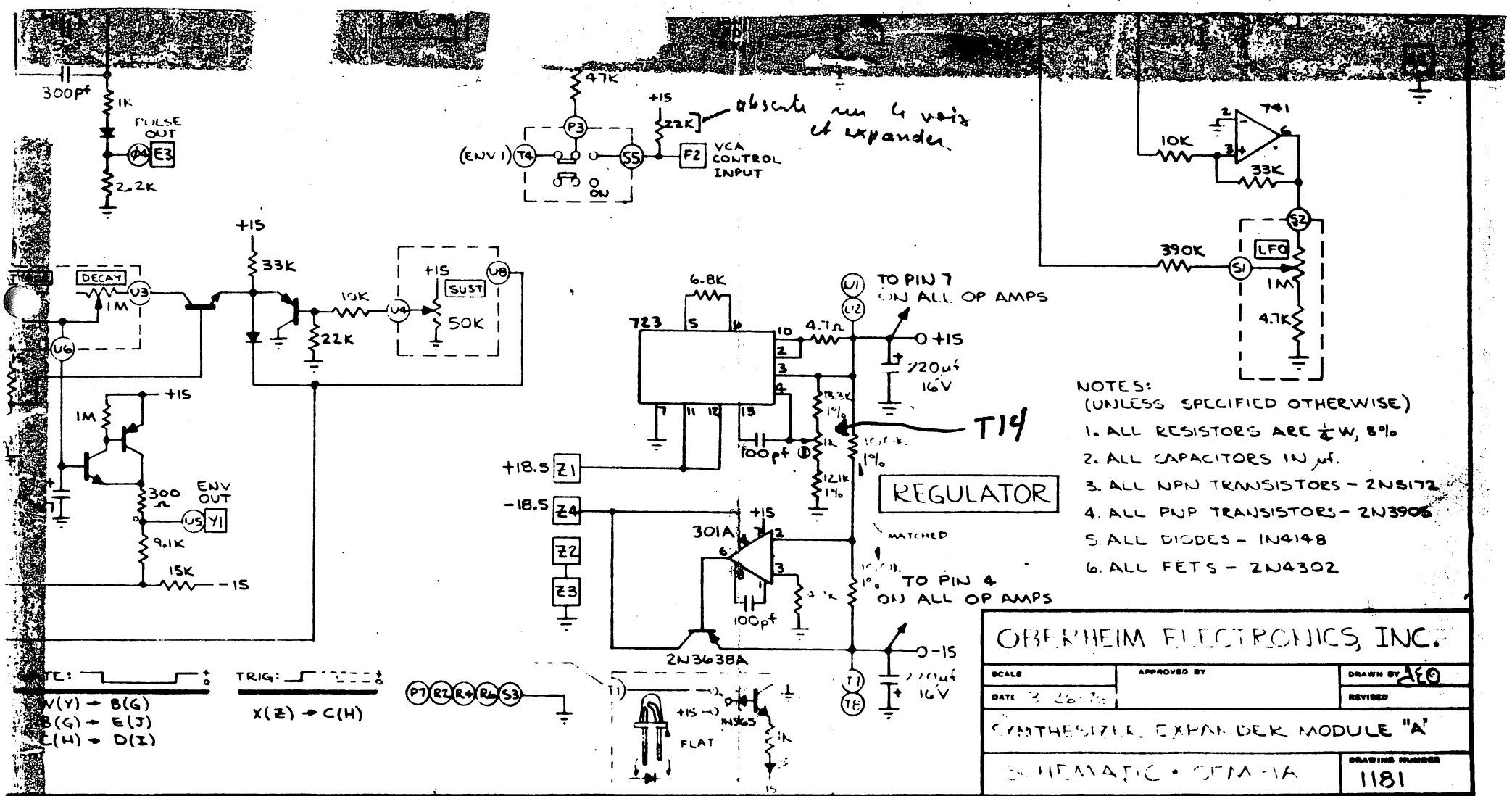
(X) Switch. Place 3,3 n of 10 nf for low freq. vcf

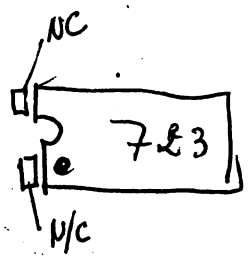




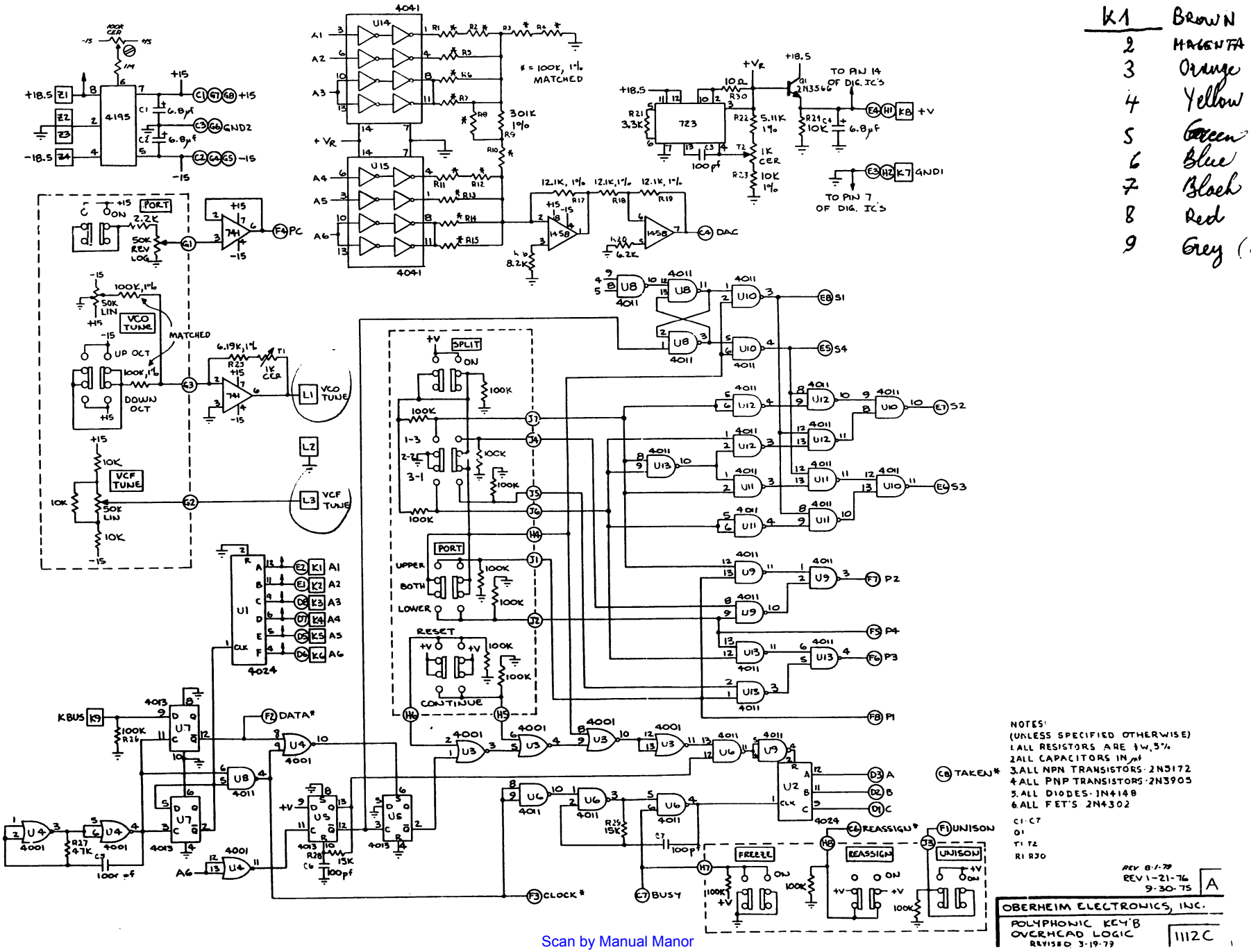
	X'	Y'	22K VCA	gate and trigger
4 voices :	out	on	out	out
2 voices	on	on	on	out Z → G on X → B on
P. S	on	on	out	

B input for Mod
A gate input 0 → 5 V
C trigger input 0 → 5





8 Voice KB



Connector "K"

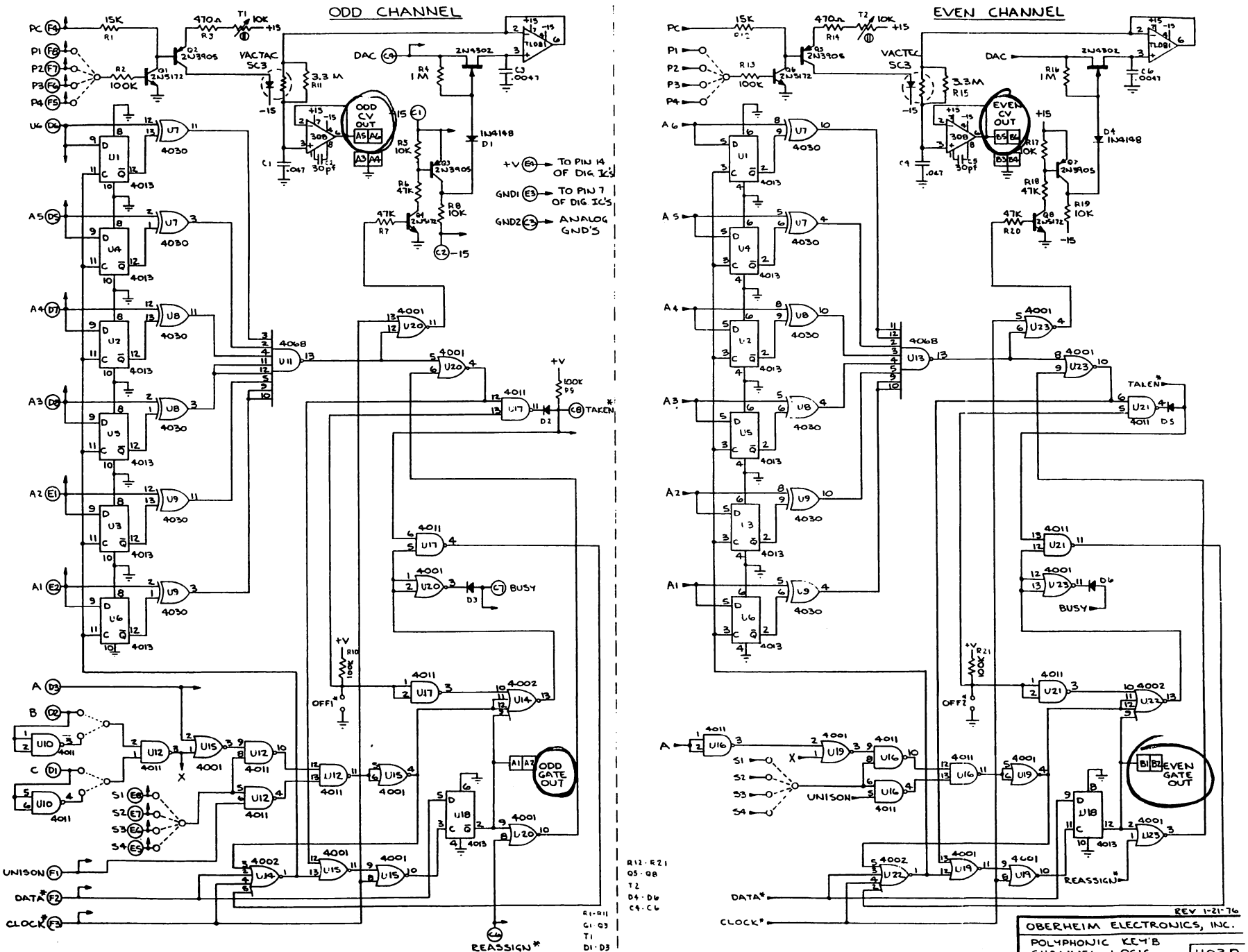
K1	BROWN
2	MAGENTA
3	Orange
4	Yellow
5	Green (light)
6	Blue (light)
7	Black
8	Red
9	Grey (light)

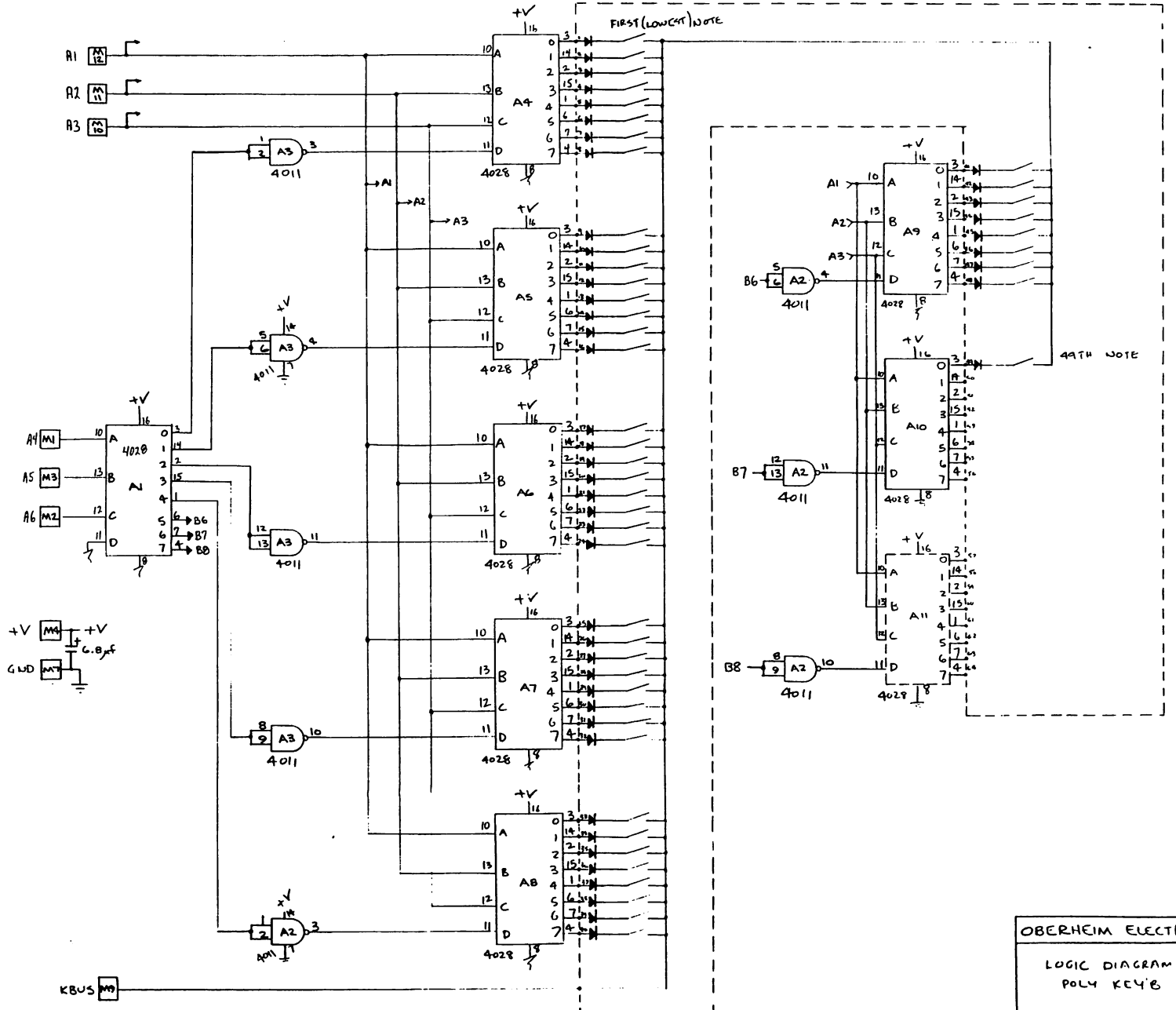
NOTES:
(UNLESS SPECIFIED OTHERWISE)
1. ALL RESISTORS ARE ¼W, 5%
2. ALL CAPACITORS IN μf
3. ALL NPN TRANSISTORS 2N3172
4. ALL PNP TRANSISTORS 2N3905
5. ALL DIODES 1N4148
6. ALL FET'S 2N4302

C1-C7
Q1
T1 T2
R1 R30

REV 8-1-79
REV 1-21-76
9-30-75
A

OBERHEIM ELECTRONICS, INC.
POLYPHONIC KEY'B OVERHEAD LOGIC
REVISED 3-19-79
1112C



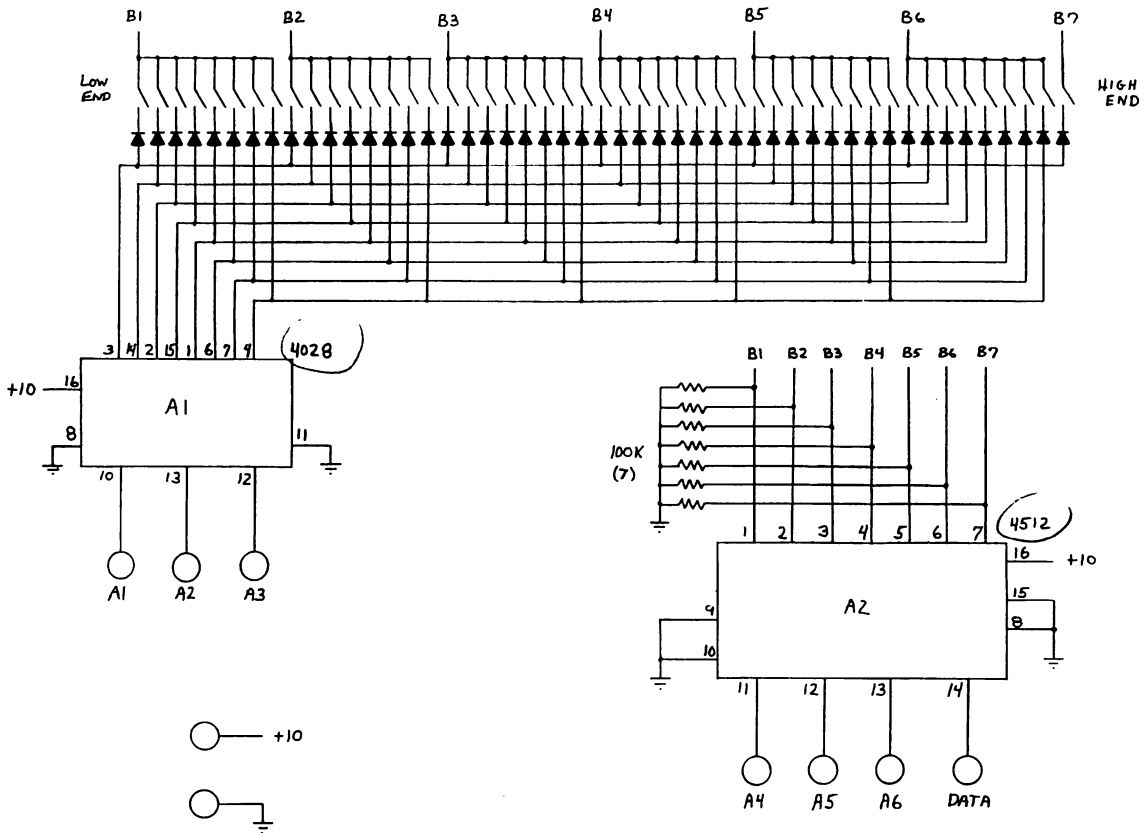


OBERHEIM ELECTRONICS, INC

LOGIC DIAGRAM —
POLY KEY'B DECODER

NOV. 12, 1975

1126



NOTES:

1) A1 AND A2 TO BE MOUNTED IN SOCKETS
2) ○— DENOTES SOLDERABLE PINS ON P.C BOARD
3) ALL RESISTORS 5% ¼ OR ½ WATT

OBERHEIM ELECTRONICS, INC

49 NOTE KEYBOARD WITH DECODER

7/77