

**TAITO AMERICA CORPORATION**

**CONVERSION KIT**

304

**FOR**



**UNIVERSAL KIT**



© 1983 Trade Marks of Taito America Corporation

72-10017-001

## WARNING

The parts contained in this game conversion kit must be installed in accordance with the instructions contained in this Service Manual. Failure to follow these instructions in every detail could result in the creation of illegal interference to radio and TV reception.

Taito America Corporation has verified that, when this conversion kit is installed without deviation from these instructions, the equipment will then comply with the requirements of Part 15 of FCC Rules for a Class A computing device. The manufacturer will not be responsible for incomplete or improper conversions.

After such installation in accordance with the instructions, the enclosed NOTICE AFTER CONVERSION should be applied to the back of the game cabinet so as to cover up any previous notice regarding FCC Rules.

## TABLE OF CONTENTS

CONVERSION INSTRUCTIONS . . . . .	1
REPLACEMENT PARTS LIST . . . . .	2,3
CABINET INTERIOR . . . . .	4
GROUND PLATE ASSEMBLY DETAIL . . . . .	5
JOYSTICK TEMPLATE . . . . .	6
WIRING DIAGRAM . . . . .	7
SCHEMATICS . . . . .	8-12

This manual will guide you in the conversion of your color monitor upright video game into a EXERION game. We urge you to read through the instructions and study the drawings before beginning the conversion.

Perform the instruction steps in the order presented.

1. Check the parts supplied in this kit against the parts list included in this manual.
2. Cabinet preparation.
  - a. Remove the existing logic boards from cabinet.
  - b. EXERION requires a vertically mounted monitor. Mount the monitor in the best possible way.
  - c. EXERION requires a power supply with the following ratings: +5 volts @ 4 amps +12 volts @ 1 amp
  - d. EXERION requires a speaker with a nominal impedance of 8 ohms.
3. Install Ground Plate, filter board and PCB.
  - a. Locate the the Ground Plate on the left cabinet wall. Use the holes in the plate as a template and screw the top and bottom PCB mounting brackets into the cabinet using the #8 x11/16" screws provided. SEE FIGURE 1 and 2.
  - b. Using the holes in the ground plate as a template, screw the filter board into the cabinet using the #6 x 1" screws provided. Screw the braided wires from the sides of the filter board into the cabinet using the #8 x 11/16" screws provided. SEE FIGURE 2.
  - c. Slide the PCB into the guides with the edge connector facing the front of the cabinet and the component side of the PCB facing outward. SEE FIGURE 2.
  - d. Screw the two "L" brackets into the cabinet, using the #6 x 1/2" screws provided, on the left and right sides of the PCB to keep it from sliding. SEE FIGURE 2.
  - e. Connect the interface harness to the PCB ( note the keying plug) and the filter board. Connectors on the harness and filter board are marked accordingly on the connectors themselves. SEE FIGURE 2.
4. Connect the main harness.
  - a. Connect the main harness to the filter board along the top of the ground plate PCB assembly. The cable connectors are marked with numbers corresponding to numbers on the filter board connectors. SEE FIGURE 2.
  - b. Using the supplied wiring diagram as a guide, connect up the power supply, coin door and speaker to the harness.
  - c. Connect the gray video cable to the monitor. The connectors will mate with most Wells Gardner and Eletrohome monitors. If using a different monitor, use the wiring diagram as a guide in wiring the video cable to the monitor.
5. Rework control panel. This kit supplies all the necessary parts needed to wire a control panel for EXERION.
  - a. Strip the control panel of all buttons and/or joysticks.
  - b. Locate and drill the holes needed for the joystick and buttons. Use template supplied with kits to locate holes for the joystick. Clean any burrs from around holes.
  - c. Remove any soil and/or grime from the front of the panel.
  - d. Cut the lexan to the approximate size needed to cover the panel. If possible, leave enough lexan to wrap a small lip around the top and bottom of the panel.
  - e. Peel the backing off the lexan and apply it to the control panel. Cut the lexan out for the holes needed for the joystick and buttons.
  - f. Install joystick, buttons and any hardware that might have been removed on the panel.
  - g. Using the supplied wiring diagram as a guide, connect the joystick and buttons to the control panel cable.
  - h. Mount the control panel back on the cabinet.
6. Install marquee.
  - a. Remove the present marquee.
  - b. Cut the new marquee to the same size as the old one.
  - c. Install the new marquee back on the cabinet.
7. Install Ground Braids.
  - a. Connect the 16 inch ground braid to the Ground Plate with a screw in the hole near the lower right corner. Connect the other end of the ground braid to a convenient point on the the power supply chassis.
  - b. Connect the 28 inch ground braid from a convenient point on the power supply chassis to a convenient point on the monitor chassis.
8. Adjust Game Settings.
  - a. Consult the dip switch settings sheet and adjust the DIP switches as desired.
  - b. Turn the game ON and play a "2-PLAYER" game. Adjust the volume controls as desired.
9. Attach FCC Compliance Label. Affix the new self-adhesive FCC Compliance label OVER the original label on the rear of the cabinet.
10. Attach the FBI Warning label. Affix the self-adhesive FBI label on the outside of the rear door near the top in the center.
11. Attach the Instruction card. An instruction card is included and should be affixed to the coverglass.
12. Attach the cabinet decals.
  - a. The sides of the cabinet must be clean and free of grease, dirt, and old decals where applicable.
  - b. Apply warm soapy water to the side of the cabinet in the area where the decal will be.
  - c. Remove the backing from the decal and apply warm soapy water to the adhesive side of the decal.
  - d. Locate the decal on the side of the cabinet. The decal should slide easily into position.
  - e. Use a small type window squeegee to "squeeze" out the water between the decal and the cabinet.
  - f. Allow sufficient time for the decal to dry.
  - g. Repeat the above procedure on the other side of the cabinet. The conversion is complete.

ACCESSORY AND HARDWARE PACK

DESCRIPTION	QUANTITY	PART NUMBER
Braided Cable, 16"	1	09-00260-002
Braided Cable, 28"	1	09-00260-003
PCB mtg. bracket	2	07-00248-001
Screw #8x11/16	9	51-00005-001
Screw #6x1"	6	51-01012-011
Screw #6x1/2	6	51-01012-006
"L" bracket	2	61-00014-001

MANUAL PACK

DESCRIPTION	QUANTITY	PART NUMBER
Switch Setting Card	1	79-00088-001
Instruction card	1	79-50036-001
Conversion manual	1	72-10017-001
FCC Generic Compliance Label	1	79-00070-001
FBI Warning label	1	79-00074-001

CONVERSION KIT

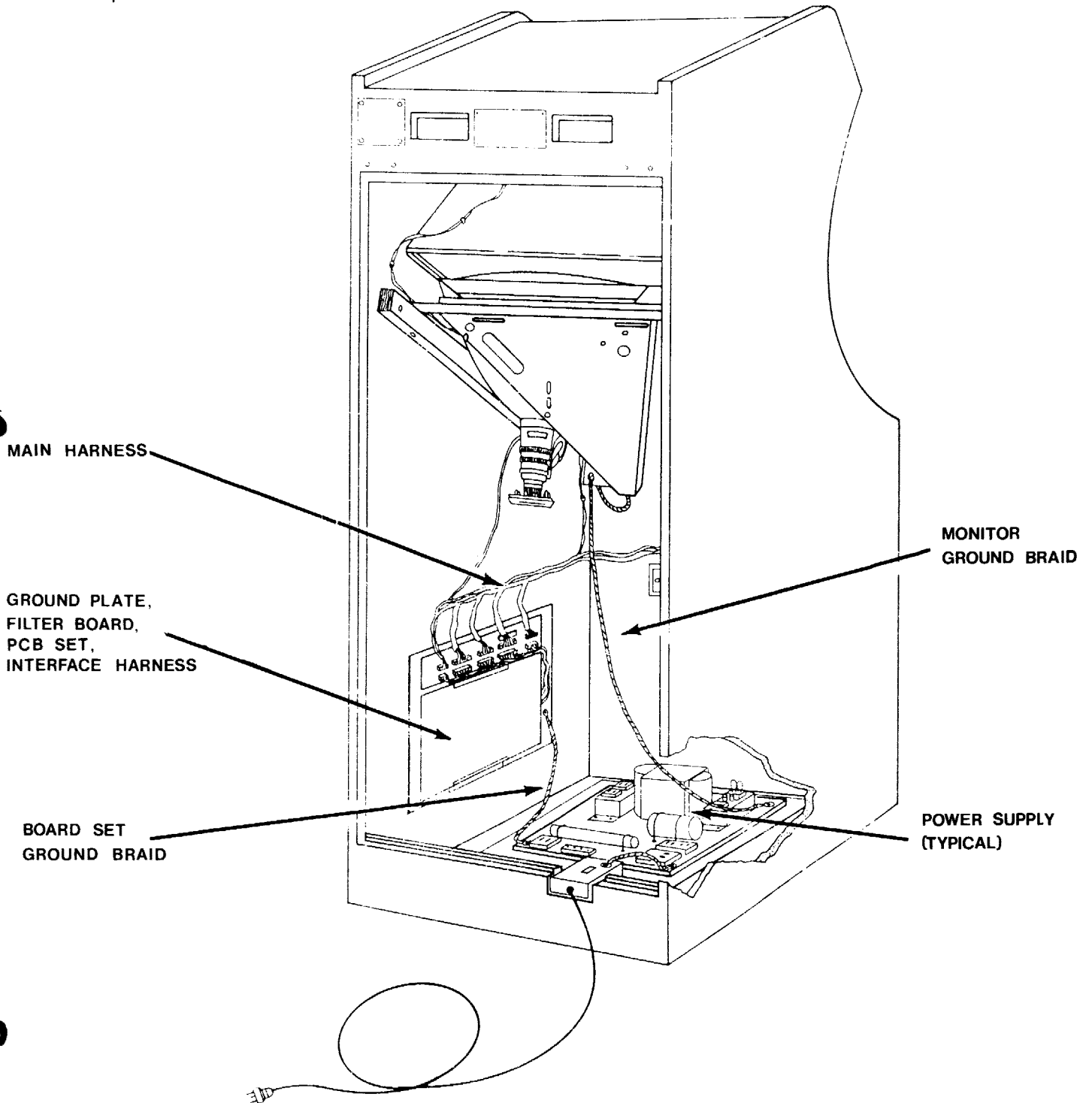
DESCRIPTION	QUANTITY	PART NUMBER
PCB set	1	08-00137-001
Filter Board	1	08-00138-001
Ground plate	1	61-00354-001
Marquee, EXERION	1	47-00032-001
Control panel overlay	1	66-00011-001
Side decal	2	66-00012-001
Main Harness	1	09-00306-001
Interface harness	1	09-00305-001

CONTROL PANEL PACK

DESCRIPTION	QUANTITY	PART NUMBER
Fire button	1	63-00156-001
Fast fire button	1	63-00156-003
1 player button	1	63-00176-001
2 player button	1	63-00176-002
P.B. Switch	4	29-00020-001
Stamped nut	4	54-07001-008
Ball and Shaft	1	63-00031-001
Mask	1	63-00033-001
E ring	1	59-00020-017
8 way leaf switch	1	63-00032-006
8 way actuator	1	63-00030-001
#10x24 carriage bolt	4	51-03004-013
#10x24 keps nut	4	54-02004-001

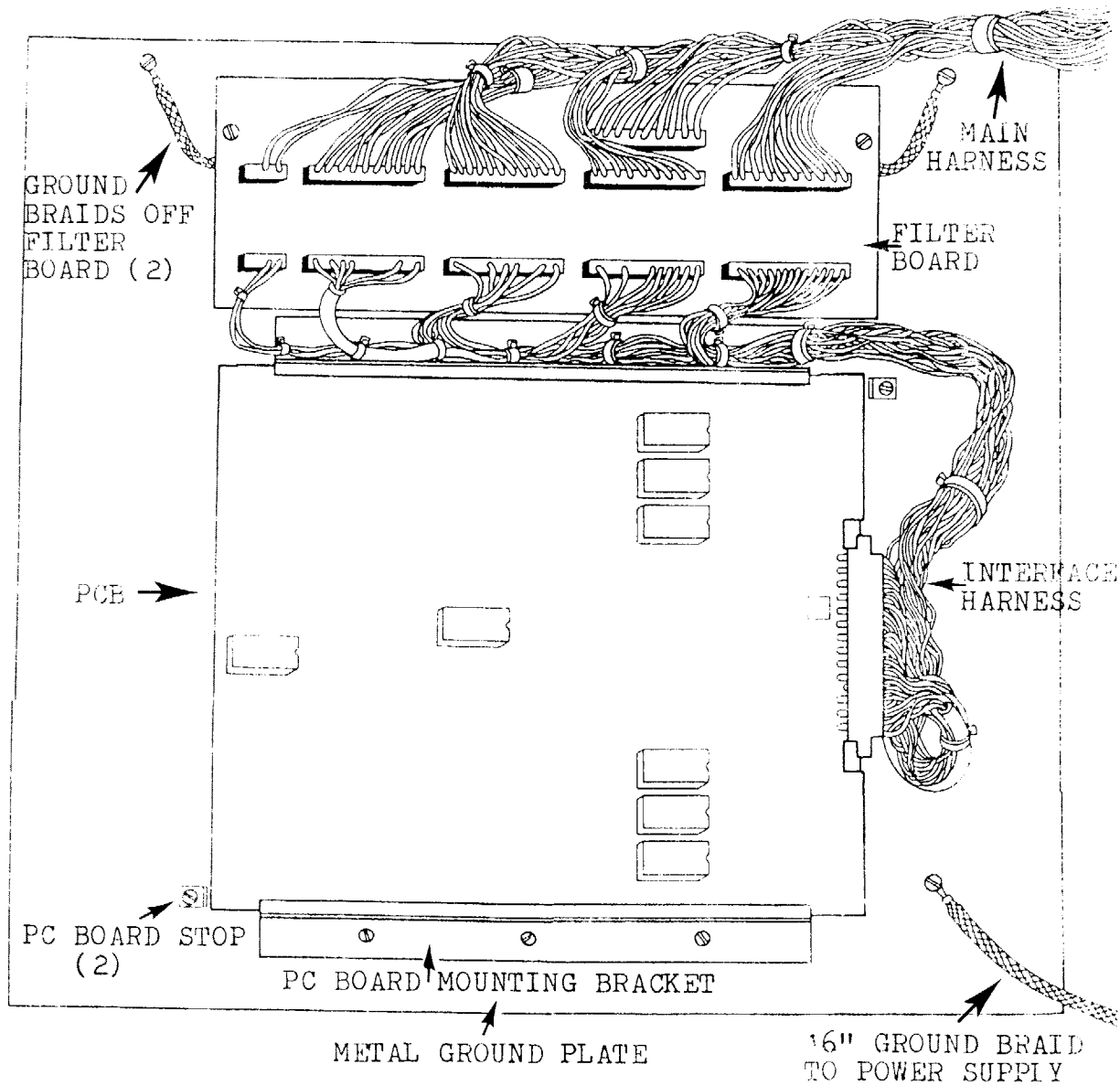
# CABINET INTERIOR

FIGURE 1



# GROUND PLATE ASSEMBLY DETAIL

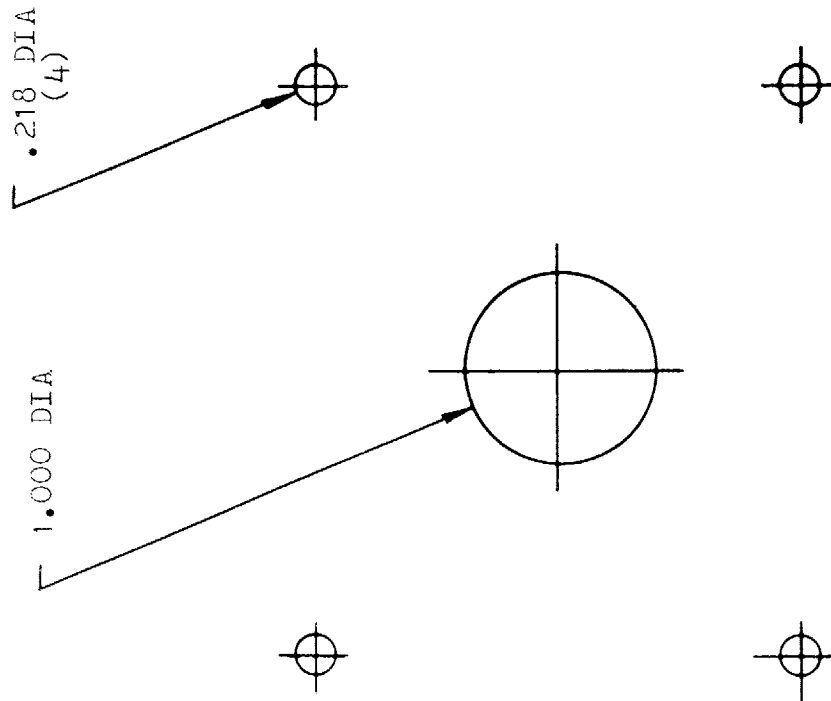
FIGURE 2





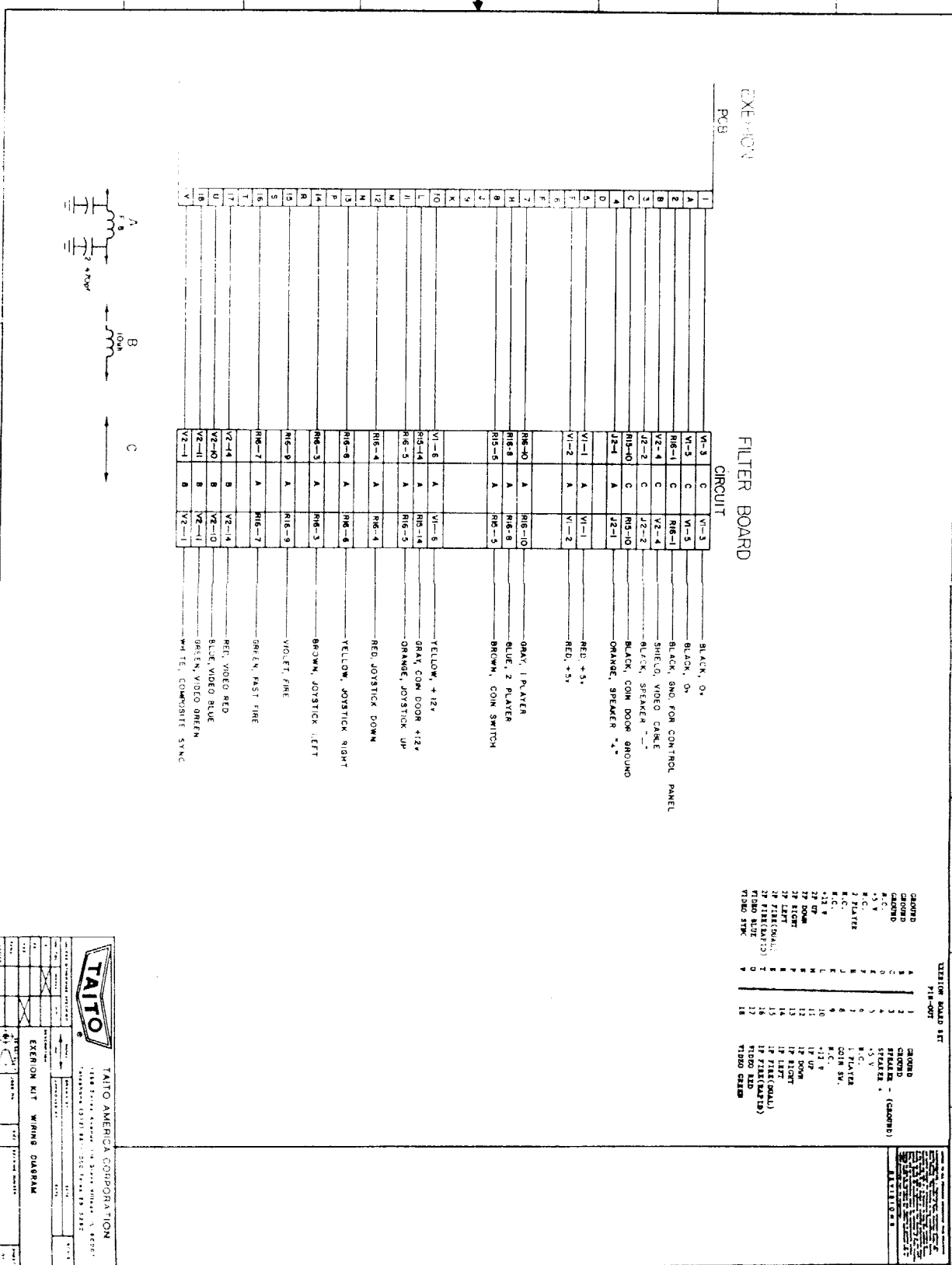
# JOYSTICK TEMPLATE

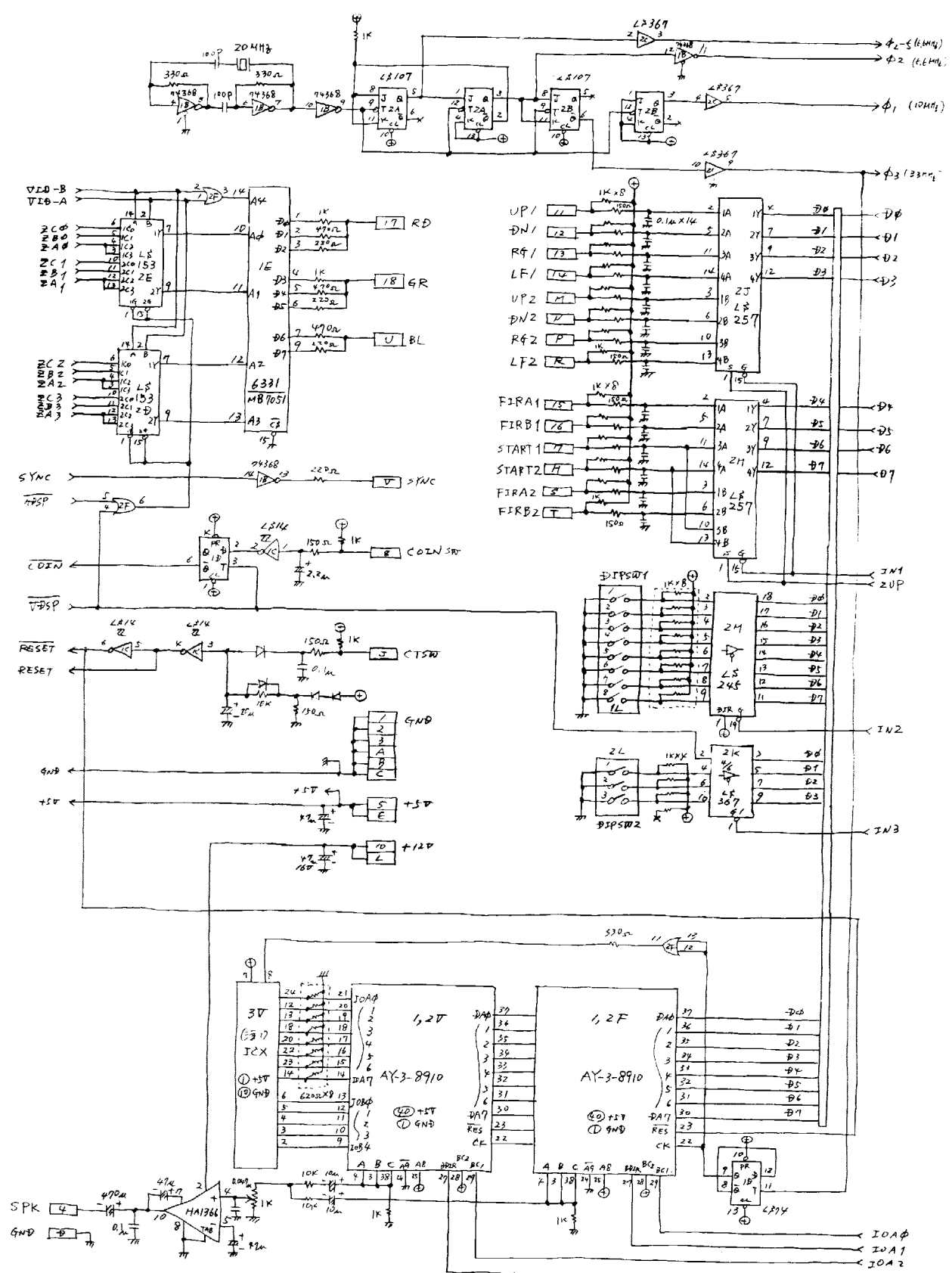
FIGURE 3



# WIRING DIAGRAM

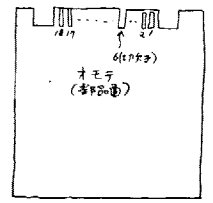
## FIGURE 4



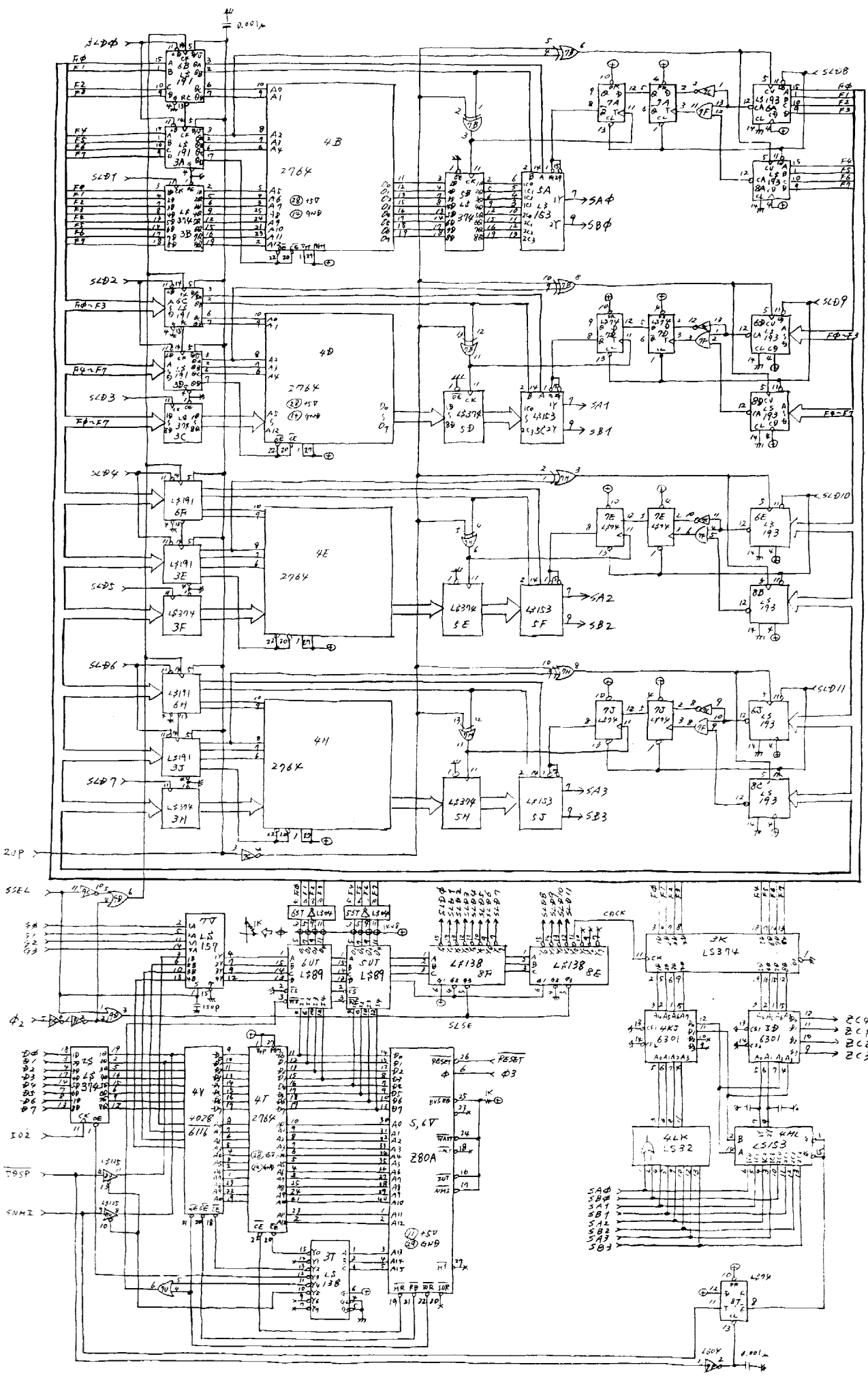


<36P>の端子表

端子	記号
1	GND
2	GND
3	GND
4	SPK
5	+5V
6	(NC)
7	START1
8	COIN50
9	(NC)
10	+12V
11	UP1
12	DN1
13	RF1
14	LF1
15	FIR1
16	FIR1
17	RD
18	GR

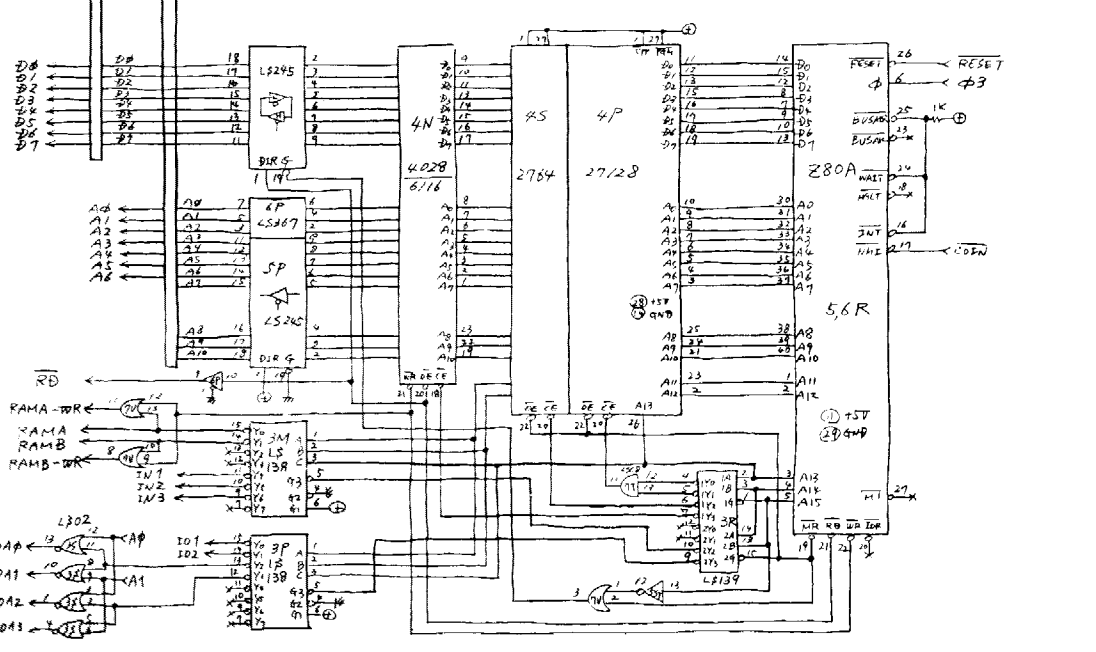
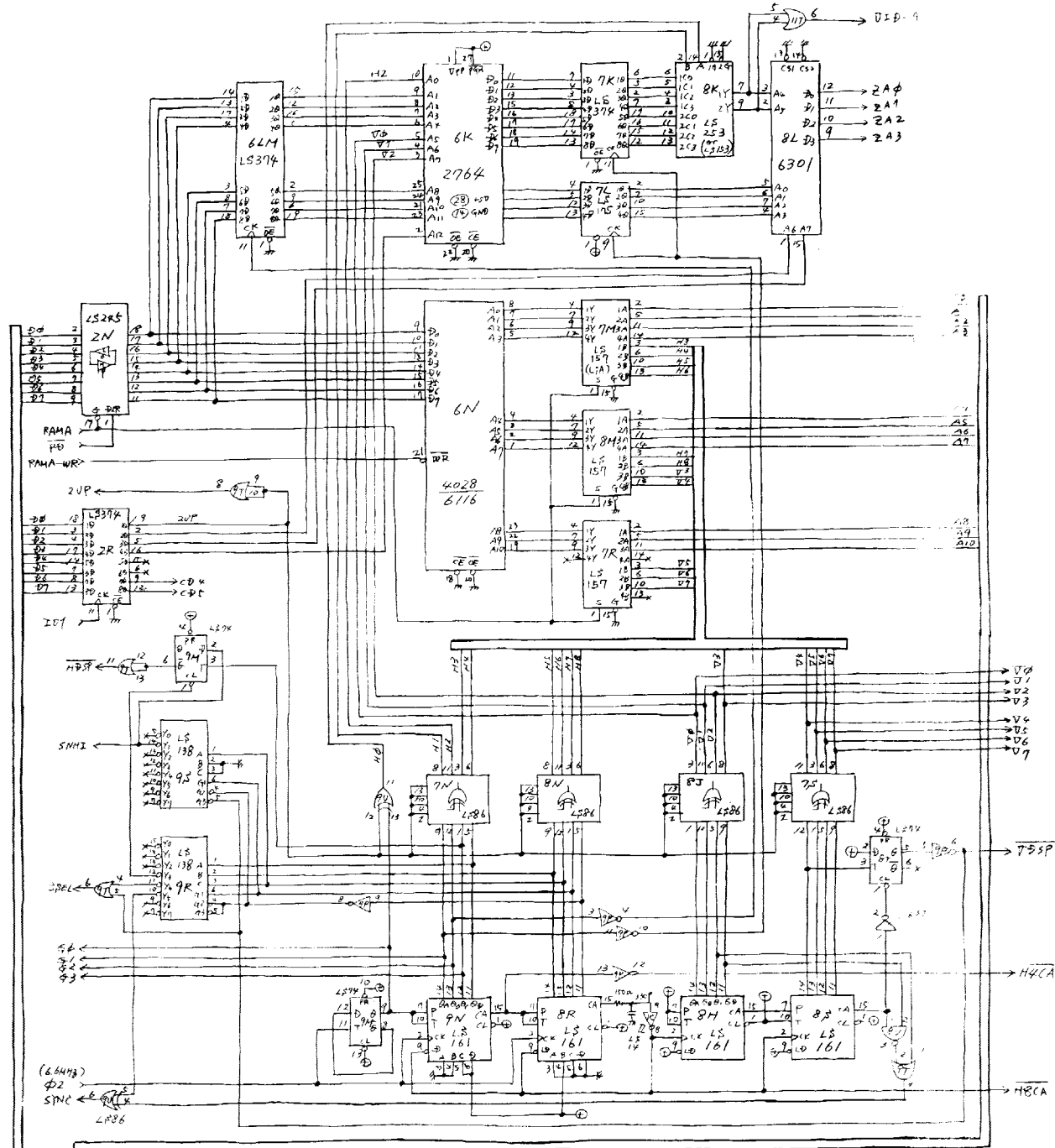


NOTICE TO ALL PERSONS RECEIVING THIS DRAWING  
 CONFIDENTIAL : Reproduction forbidden without the specific written permission of Taito America Corp., Elk Grove Village, IL. The drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown therein, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Taito America Corp., and for manufacture under the corporation's written license, no right to reproduce this drawing is granted or the subject matter thereof unless by written agreement with or written permission from the corporation.

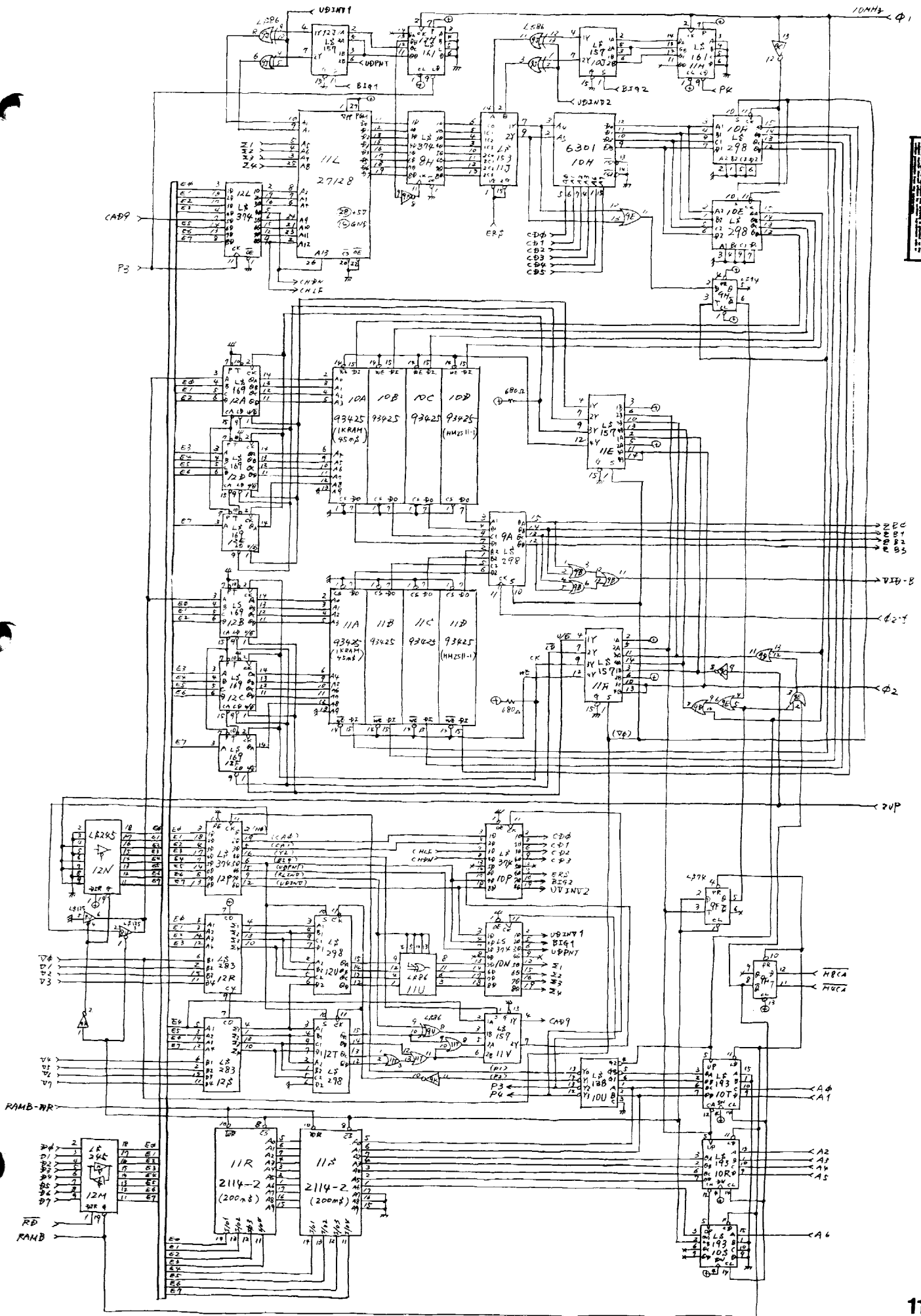


REVISIONS

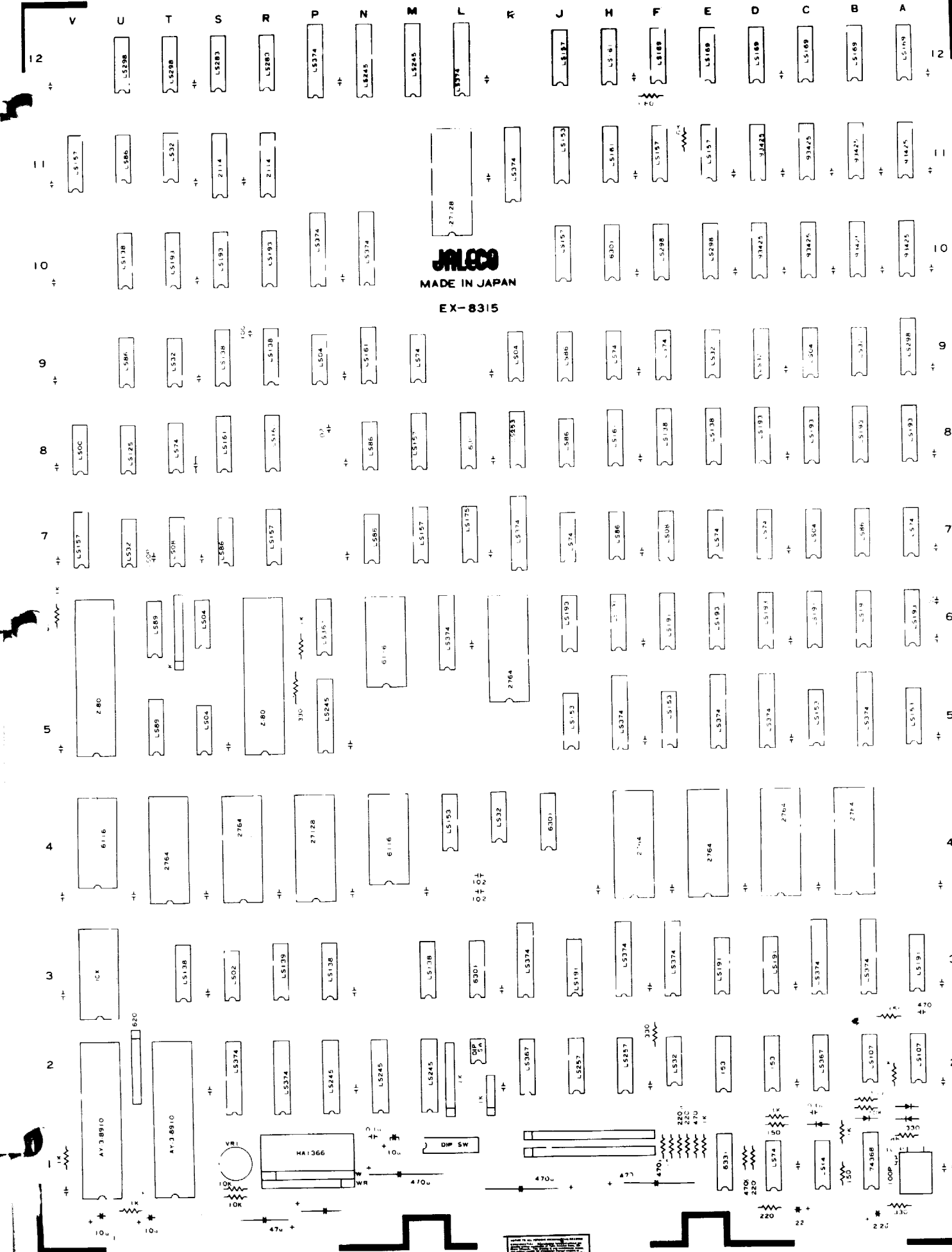
NO.	DESCRIPTION	DATE
1	...	...
2	...	...
3	...	...
4	...	...
5	...	...
6	...	...
7	...	...
8	...	...
9	...	...
10	...	...
11	...	...
12	...	...
13	...	...
14	...	...
15	...	...
16	...	...
17	...	...
18	...	...
19	...	...
20	...	...
21	...	...
22	...	...
23	...	...
24	...	...
25	...	...
26	...	...
27	...	...
28	...	...
29	...	...
30	...	...
31	...	...
32	...	...
33	...	...
34	...	...
35	...	...
36	...	...
37	...	...
38	...	...
39	...	...
40	...	...
41	...	...
42	...	...
43	...	...
44	...	...
45	...	...
46	...	...
47	...	...
48	...	...
49	...	...
50	...	...
51	...	...
52	...	...
53	...	...
54	...	...
55	...	...
56	...	...
57	...	...
58	...	...
59	...	...
60	...	...
61	...	...
62	...	...
63	...	...
64	...	...
65	...	...
66	...	...
67	...	...
68	...	...
69	...	...
70	...	...
71	...	...
72	...	...
73	...	...
74	...	...
75	...	...
76	...	...
77	...	...
78	...	...
79	...	...
80	...	...
81	...	...
82	...	...
83	...	...
84	...	...
85	...	...
86	...	...
87	...	...
88	...	...
89	...	...
90	...	...
91	...	...
92	...	...
93	...	...
94	...	...
95	...	...
96	...	...
97	...	...
98	...	...
99	...	...
100	...	...



NOTICE TO ALL PERSONS RECEIVING THIS DRAWING  
 CONFIDENTIAL: Reproduction, transmission, or disclosure of this drawing is prohibited without the written permission of the Corporation. This drawing is the property of the Corporation and is loaned to you for your use only. It is to be returned to the Corporation when no longer needed. No part of this drawing is to be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of the Corporation.



10MHz  
 2Vp  
 CAD9  
 P3  
 P4  
 P5  
 P6  
 P7  
 P8  
 P9  
 P10  
 P11  
 P12  
 P13  
 P14  
 P15  
 P16  
 P17  
 P18  
 P19  
 P20  
 P21  
 P22  
 P23  
 P24  
 P25  
 P26  
 P27  
 P28  
 P29  
 P30  
 P31  
 P32  
 P33  
 P34  
 P35  
 P36  
 P37  
 P38  
 P39  
 P40  
 P41  
 P42  
 P43  
 P44  
 P45  
 P46  
 P47  
 P48  
 P49  
 P50  
 P51  
 P52  
 P53  
 P54  
 P55  
 P56  
 P57  
 P58  
 P59  
 P60  
 P61  
 P62  
 P63  
 P64  
 P65  
 P66  
 P67  
 P68  
 P69  
 P70  
 P71  
 P72  
 P73  
 P74  
 P75  
 P76  
 P77  
 P78  
 P79  
 P80  
 P81  
 P82  
 P83  
 P84  
 P85  
 P86  
 P87  
 P88  
 P89  
 P90  
 P91  
 P92  
 P93  
 P94  
 P95  
 P96  
 P97  
 P98  
 P99  
 P100



**JALCO**  
MADE IN JAPAN

EX-8315