KONAMI ®

METAMORPHIC FORCE ™

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Service & Parts

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INSTRUCTION MANUAL

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Part No. 224400

MetamorphicForce PARTS LIST

Part #	Description
224003	PCB
224100	Control Panel Overlay
224101	Player Instructions
224200	Marquee
224300	Upper Side Decal
224301	Lower Side Decal
224400	Manual
30255	Red Buttons
30256	Yellow Buttons
30258	Blue Buttons
30259	Green Buttons
30261	Micro Switches
30262	Palnuts
30335	Joysticks
40901	Speaker Harness
40906	3 & 4 Player Harness

METAMORPHICFORCE WIRING HARNESS

Solder Side ← | → Parts Side

Solder Side	Pin	Pin	Parts Side
GND	A	1	GND
GND	B	2	GND
+5V DC	C	3	+5V DC
+5V DC	D	4	+5V DC
NOT USED	E	5	NOT USED
+12V DC	F	6	+12V DC
*KEY	H	7	*KEY
(EMPTY)	J	8	COIN COUNTER
(EMPTY)	K	9	(EMPTY)
SPEAKER (−)	L	10	SPEAKER (+)
(EMPTY)	M	11	(EMPTY)
VIDEO GREEN	N	12	VIDEO RED
VIDEO SYNC	P	13	VIDEO BLUE
(EMPTY)	R	14	VIDEO GROUND
(EMPTY)	S	15	TEST SWITCH
COIN 2	T	16	COIN 1
*2P START	U	17	1P START*
2P UP	V	18	1P UP
2P DOWN	W	19	1P DOWN
2P LEFT	X	20	1P LEFT
2P RIGHT	Y	21	1P RIGHT
2P ATTACK	Z	22	1P ATTACK
2P JUMP	a	23	1P JUMP
NOT USED	b	24	NOT USED
NOT USED	c	25	NOT USED
NOT USED	d	26	NOT USED
GND	e	27	GND
GND	f	28	GND

(BASE COLOR/LINE COLOR)

*Start buttons are not used with 4 player 4 coin slot setting. See page 5.

METAMORPHICFORCE SUB HARNESS (For 3 Players & 4 Players)

CN3
3P
CONTROLS

1	Coin 3
2	Empty
3	3P Left
4	3P Right
5	3P Up
6	3P Down
7	3P Attack
8	3P Jump
9	Not Used
10	3P Start*
11	Empty
12	Empty
13	Empty
14	Ground
15	Ground

CN4
4P
CONTROLS

1	Coin 4
2	Empty
3	4P Left
4	4P Right
5	4P Up
6	4P Down
7	4P Attack
8	4P Jump
9	Not Used
10	4P Start
11	Empty
12	Empty
13	Empty
14	Ground
15	Ground

*Start buttons are not used with 4 player 4 coin slot setting.

MetamorphicForce TECHNICAL INFORMATION

TECHNICAL INFORMATION

(1) Required power capacity
   GND-Vcc 5V 4A or more
   GND-(+ 12V)
   *See the Wiring Diagram.
(2) Output
   R (red) analog, positive
   G (green) analog, positive
   B (blue) analog, positive
   SYNC. H-V complexed, negative
   (3) The monitor should be installed horizontally.
   (4) There is no sound volume knob on the PCB. Sound level should be adjusted in the Manual Test mode. (See page 5.)
   (5) Handle with care.

PLAYING INSTRUCTION

• This game can be adjusted for both 2 Player or 4 Player simultaneous play mode. Choose which mode you would like with the DIP Switch, when installed on site. (See page 8 on DIP Switch setting.)

• In 2 Player mode select the character you want to control on the screen. In 4 Player mode the control panel against the cabinet dictates the character you will control.

• Player(s) can join in at any time. You can continue to play by depositing additional coin(s) when the game is over.

• The character's energy is decreased when damaged by enemy's attack. When the energy points reach 0, the game is over. The quantity of energy you will get by depositing 1 coin can be adjusted in the GAME OPTION. You can also collect bonus points as well as more energy when depositing coin(s).

• By getting item(s) that appear during the game, you obtain a special bonus, like regaining energy, etc.

• The biggest feature of this game is the metamorphoses of characters into Beasts by getting Statues. At this point they can become the strongest Golden Beast by getting additional Statues.

• When characters change into Beasts there appears a "Beast Energy Meter." When this meter reaches the bottom the character dies, unless you deposit additional coin(s) to continue to play (this makes your character human again).

HOW TO CONTROL

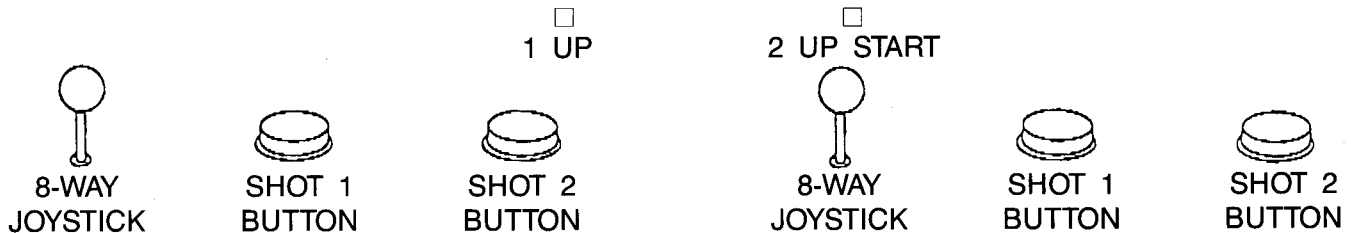• Control your character's movements by using the 8-way Joystick.

• Attack enemies with BUTTON 1. Combination of movement and/or timing of Joystick and BUTTON 1 makes the character attack in special ways.

• Press BUTTON 2 to make your character JUMP. Pressing both buttons enables character to make special attacks.

CONTROL PANEL INFORMATION

• Use control panel with sufficient sets (2 or 4) of an 8-way Joystick and 2 buttons for each player. If the setting is COMMON coin slot mode, SHOT button can be used as START button.

<table>
<tr><td></td><td></td><td>□
1 UP</td><td>□
2 UP START</td><td></td><td></td></tr>
<tr><td>8-WAY
JOYSTICK</td><td>SHOT 1
BUTTON</td><td>SHOT 2
BUTTON</td><td>8-WAY
JOYSTICK</td><td>SHOT 1
BUTTON</td><td>SHOT 2
BUTTON</td></tr>
</table>

SELF TEST

Normal: "OK" will be displayed. Then the game will start.
Abnormal: "BAD" will be displayed and self test will repeat. If "VERSION ERROR" is displayed, switch off and switch on again while continually pressing down on the TEST SWITCH on the PCB. Switching on with TEST SWITCH pressed causes the settings of the manual test to be initialized to default.

MANUAL TEST

(1) HOW TO START
   After switching on the power, press the TEST SWITCH on the PCB or on the cabinet, and you will get the MAIN MENU of the Manual Test.
   NOTE: Switching on with TEST SWITCH pressed causes the program in the EEPROM to be initialized to default.
(2) HOW TO RETURN TO THE GAME MODE
   Select "GAME MODE" on the MAIN MENU then press Player 1 SHOT 1 button to return to the game mode.
(3) ITEMS AND HOW TO SELECT
   Use player 1 JOYSTICK to move arrow to desired test and press player 1 SHOT button to initiate testing. Press player 1 SHOT button during or at the end of each test to return to the MAIN MENU.

```
          MAIN MENU

      I/O CHECK
      SCREEN CHECK
      COLOR CHECK
      MASK ROM CHECK
      GAME OPTIONS
      COIN OPTIONS
      SOUND OPTIONS
      DIP SWITCH OPTIONS
      GAME MODE          ·            . . . Return to GAME MODE

   PLAYER 1 JOYSTICK=SELECT ITEM
     PLAYER 1 SHOT=DO CHECK
```

(4) EXPLANATION OF THE ITEMS
The following screen below will appear. Select item to be modified with Player 1 JOYSTICK up/down and move JOYSTICK right/left to modify setting. Factory settings are shown in green, and modified results in red. After modification is completed, select "SAVE AND EXIT" and press Player 1 START button to save and return to MAIN MENU.

* If you select "EXIT" instead of "SAVE AND EXIT" after modifying some settings, the message appears; "YOU DID NOT SAVE. DO YOU WANT TO SAVE? YES/NO." When you choose "YES," the screen shows "NOW SAVING" and returns to MAIN MENU. If you select "NO," "NO MODIFICATION" is shown and then MAIN MENU appears.

1. I/O CHECK
   Check the JOYSTICK and all buttons to see "1" when switched on. Press Player 1 and 2 SHOT buttons at the same time to return to MAIN MENU.
2. SCREEN CHECK
   Adjust focus, alignment, size, etc. using the cross-hatch screen.
3. COLOR CHECK
   Adjust color brightness so that the specified area will be colorless.
4. MASK ROM CHECK
   Roms will be checked one after another, and the message "OK" or "BAD" will be displayed on the screen.
5. GAME OPTIONS
   The following screen below will appear.

```
              GAME OPTIONS

  PLAYER'S ENERGY LEVEL    100          ...Player's energy level for 1 coin (50 to 400)

  DIFFICULTY LEVEL         4/MEDIUM     ...Select out of 8 levels
  VIDEO SCREEN FLIP        NORMAL       ..."NORMAL" or "UPSIDE DOWN"
  LOOP SETTING             GAME OVER AFTER  ..."GAME OVER AFTER FINAL STAGE"
                           SECOND ROUND     "GAME OVER AFTER SECOND ROUND"
                                            or "ENDLESS"
  FACTORY SETTINGS                       ...Returned to factory settings
  SAVE AND EXIT
  EXIT

    PLYR 1 JOYSTICK UP/DOWN=SELECT OPTION
       JOYSTICK RIGHT/LEFT=MODIFY SETTING
```

(Settings above are not always the factory settings.)

(6) COIN OPTIONS

When you select this item, the following screen will appear. The specifications are for COMMON coin slot (DIP SW2 off) and for INDEPENDENT coin slot (DIP SW2 on).

(INDEPENDENT)

```
                COIN OPTIONS

COIN MECHANISM          INDEPENDENT

PREMIUM START           NO

STARTING                1 COIN 1 CREDIT
CONTINUATION            1 COIN 1 CREDIT

FACTORY SETTINGS
SAVE AND EXIT
EXIT

   PLYR 1 JOYSTICK UP/DOWN=SELECT OPTION
      JOYSTICK RIGHT/LEFT=MODIFY SETTING
```

...Indication for INDEPENDENT setting. Modified with DIP Switch.
...Set for PREMIUM START. "NO" or "YES 1" to "YES 4."
...Set the number of credit for Start and Continue (1-8).

} Same as above "GAME OPTION"

(COMMON)

```
                COIN OPTIONS

FREE PLAY               NO
COIN MECHANISM          COMMON

COIN SLOT 1             1 COIN 1 CREDIT
COIN SLOT 2             1 COIN 1 CREDIT

FACTORY SETTINGS
SAVE AND EXIT
EXIT

   PLYR 1 JOYSTICK UP/DOWN=SELECT OPTION
      JOYSTICK RIGHT/LEFT=MODIFY SETTING
```

...Set for Free Play. "YES" or "NO"
...Indication for COMMON setting. Modified with DIP Switch.
...Set the number of credit for Start and Continue (1-8).

} Same as above "GAME OPTION"

*COIN SETTING OPTIONS

COIN(S)	1	1	1	1	1	1	1	2	2	2	3	3	3	4	4	4
CREDIT(S)	1	2	3	4	5	6	7	1	3	5	1	2	4	1	3	5

(7) SOUND OPTIONS
The following screen below will appear.

```
              SOUND OPTION

SOUND IN ATTRACT MODE ALL THE TIME


SOUND SCALE CHECK
SOUND VOLUME=25
                        ┌──────────┬───┐
                        │          │   │
FACTORY SETTING         └──────────┴───┘
SAVE AND EXIT
EXIT


PLYR 1 JOYSTICK UP/DOWN=SELECT OPTION
JOYSTICK RIGHT/LEFT=MODIFY SETTING
```

...Select out of the following 4 types
"ALL THE TIME," "ONCE EVERY 3 CYCLES,"
"ONCE EVERY 5 CYCLES," "COMPLETELY OFF"
..."Do re mi...do" will sound
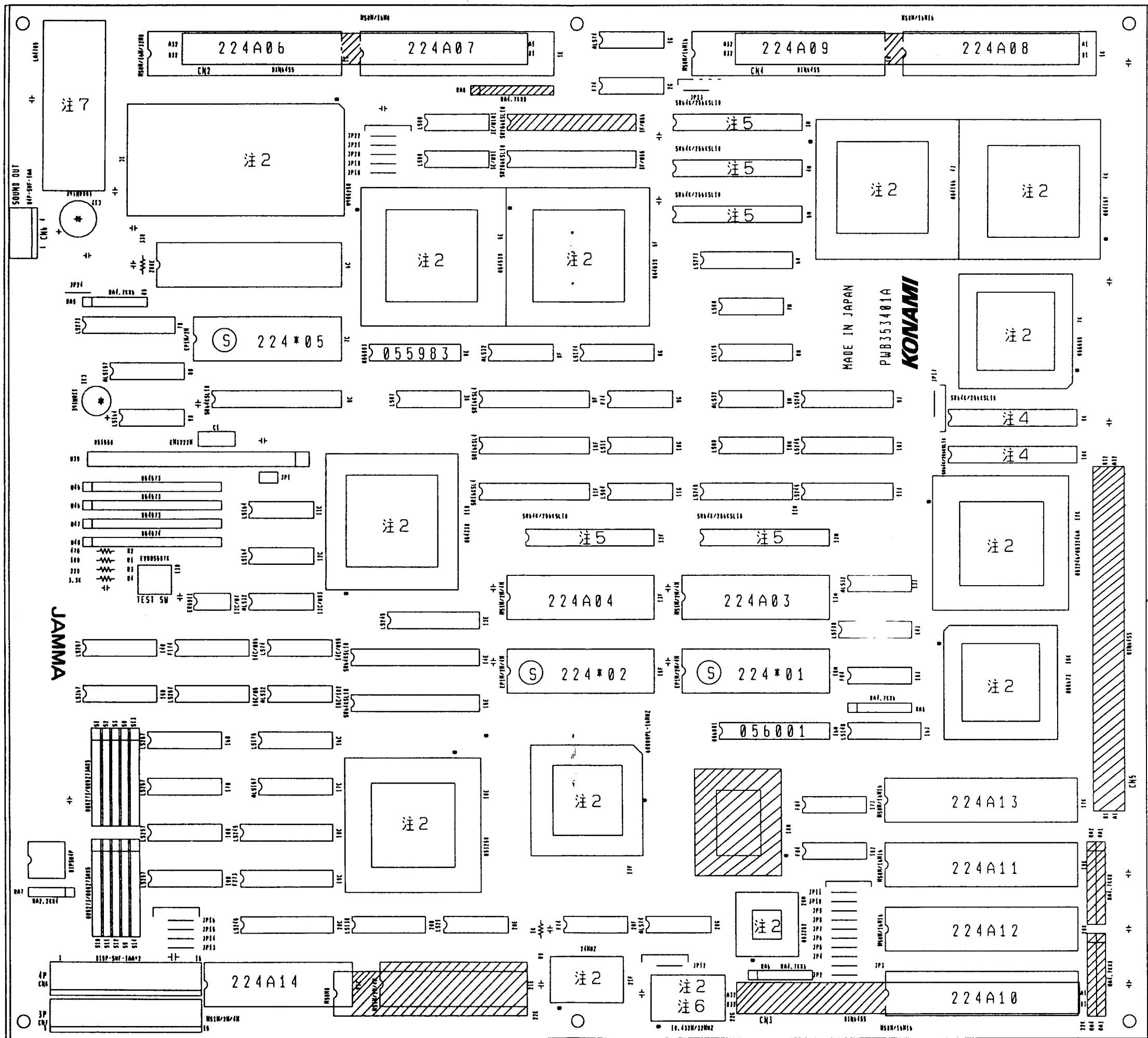...Sound Volume adjustment (0-29)

...Returned to Factory Settings

(Settings above are not always the factory settings.)

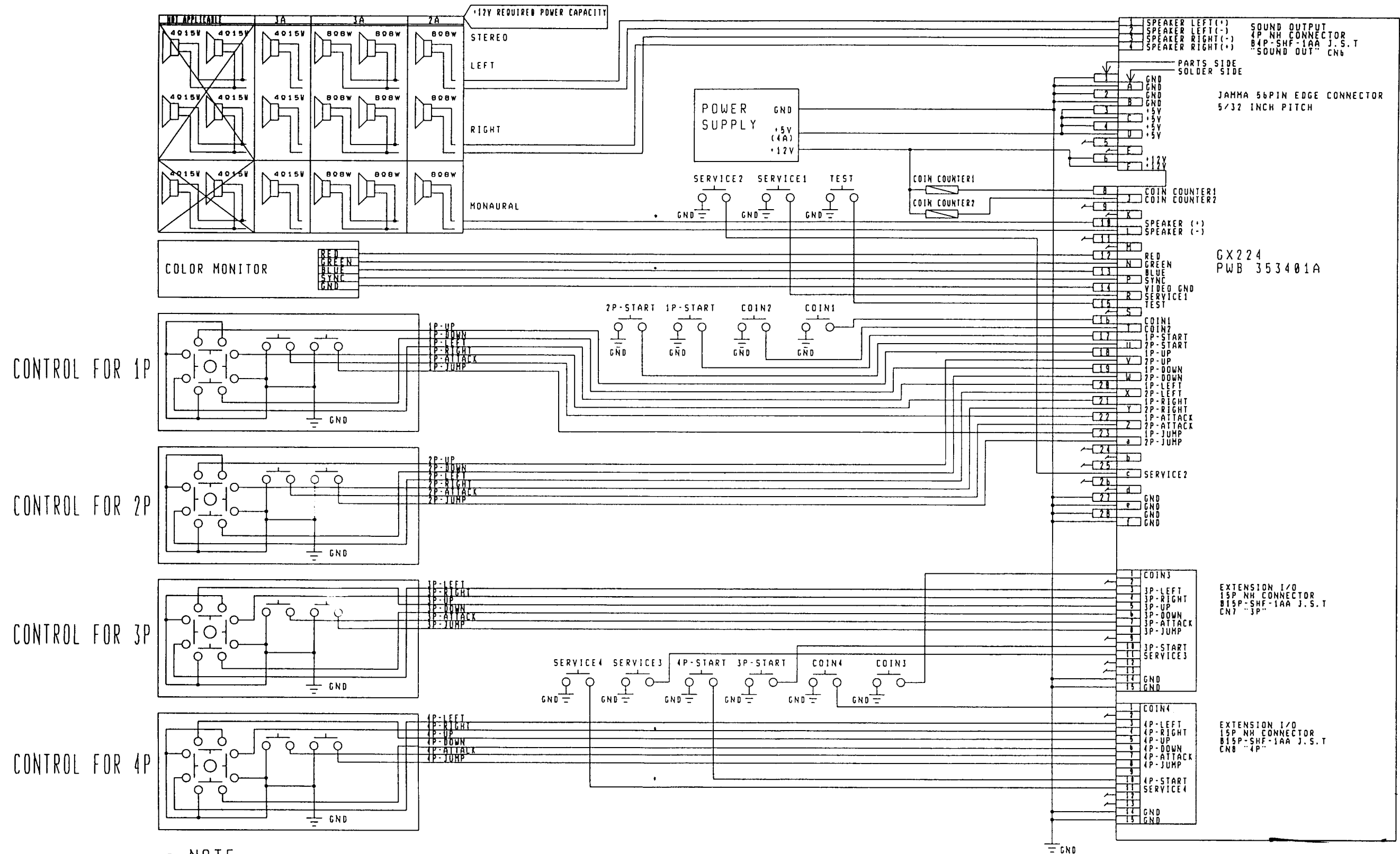(8) DIP SWITCH SETTING
You can check the settings of DIP SWITCH at this item. You can change the settings with DIP SWITCH as per the following:

DIP SWITCH	CONTENTS	DIP SW/ON	DIP SW/OFF
SW1	SOUND OUTPUT	STEREO	MONAURAL
SW2	COIN SLOT SET	INDEPENDENT	COMMON
SW3	NUMBER OF PLAYERS	4P	2P
SW4	ADD COIN(s) DURING PLAY	POSSIBLE	IMPOSSIBLE

MetamorphicForce PCB LAYOUT

224A06 224A07

224A09 224A08

注7

SOUND OUT

注2

注5

注5

注5

注2 注2

注2 注2

S 224*05

055983

注4

注4

注2

注2

注5 注5

224A04 224A03

注2

注2

S 224*02 S 224*01

注2

056001

注2

注2

注2

224A13

224A11

注2

224A12

注2
注6

JAMMA

224A14

注2

CN3

224A10

MADE IN JAPAN

PWB353481A

KONAMI

TEST SW

MetamorphicForce WIRING DIAGRAM

NOT APPLICABLE | 3A | 3A | 2A | *12V REQUIRED POWER CAPACITY

4Ω15W 4Ω15W | 4Ω15W | 8Ω8W 8Ω8W | 8Ω8W | STEREO

LEFT

4Ω15W 4Ω15W | 4Ω15W | 8Ω8W 8Ω8W | 8Ω8W | RIGHT

4Ω15W 4Ω15W | 4Ω15W | 8Ω8W 8Ω8W | 8Ω8W | MONAURAL

COLOR MONITOR
RED
GREEN
BLUE
SYNC
GND

CONTROL FOR 1P
1P-UP
1P-DOWN
1P-LEFT
1P-RIGHT
1P-ATTACK
1P-JUMP
GND

CONTROL FOR 2P
2P-UP
2P-DOWN
2P-LEFT
2P-RIGHT
2P-ATTACK
2P-JUMP
GND

CONTROL FOR 3P
3P-LEFT
3P-RIGHT
3P-UP
3P-DOWN
3P-ATTACK
3P-JUMP
GND

CONTROL FOR 4P
4P-LEFT
4P-RIGHT
4P-UP
4P-DOWN
4P-ATTACK
4P-JUMP
GND

POWER SUPPLY
GND
+5V (4A)
+12V

SERVICE2 SERVICE1 TEST
GND GND GND

COIN COUNTER1
COIN COUNTER2

2P-START 1P-START COIN2 COIN1
GND GND GND GND

SERVICE4 SERVICE3 4P-START 3P-START COIN4 COIN3
GND GND GND GND GND GND

SPEAKER LEFT(+) | SOUND OUTPUT
SPEAKER LEFT(-) | 4P NH CONNECTOR
SPEAKER RIGHT(-) | B4P-SHF-1AA J.S.T
SPEAKER RIGHT(+) | "SOUND OUT" CN6

PARTS SIDE
SOLDER SIDE

JAMMA 56PIN EDGE CONNECTOR
5/32 INCH PITCH

1 GND / A GND
2 GND / B GND
3 +5V / C +5V
4 +5V / D +5V
5 / E
6 +12V / F +12V
8 COIN COUNTER1 /
9 COIN COUNTER2
10 SPEAKER (+) / K SPEAKER (-)
12 RED / M
13 GREEN / N
14 BLUE / P SYNC
15 VIDEO GND / R SERVICE1
16 TEST / S
17 COIN1 /
18 COIN2 / U 1P-START
19 2P-START / V 1P-UP
20 2P-UP / W 1P-DOWN
21 2P-DOWN / X 1P-LEFT
22 1P-RIGHT / Y 2P-RIGHT
23 1P-ATTACK / Z 2P-ATTACK
24 1P-JUMP / 2P-JUMP
25 / b
26 / c SERVICE2
27 GND / d GND
28 GND / e GND

GX224
PWB 353401A

COIN3
1P-LEFT
3P-RIGHT
3P-UP
3P-DOWN
3P-ATTACK
3P-JUMP
1P-START
SERVICE3
GND
GND

EXTENSION I/O
15P NH CONNECTOR
B15P-SHF-1AA J.S.T
CN7 "3P"

COIN4
4P-LEFT
4P-RIGHT
4P-UP
4P-DOWN
4P-ATTACK
4P-JUMP
4P-START
SERVICE4
GND
GND

EXTENSION I/O
15P NH CONNECTOR
B15P-SHF-1AA J.S.T
CN8 "4P"
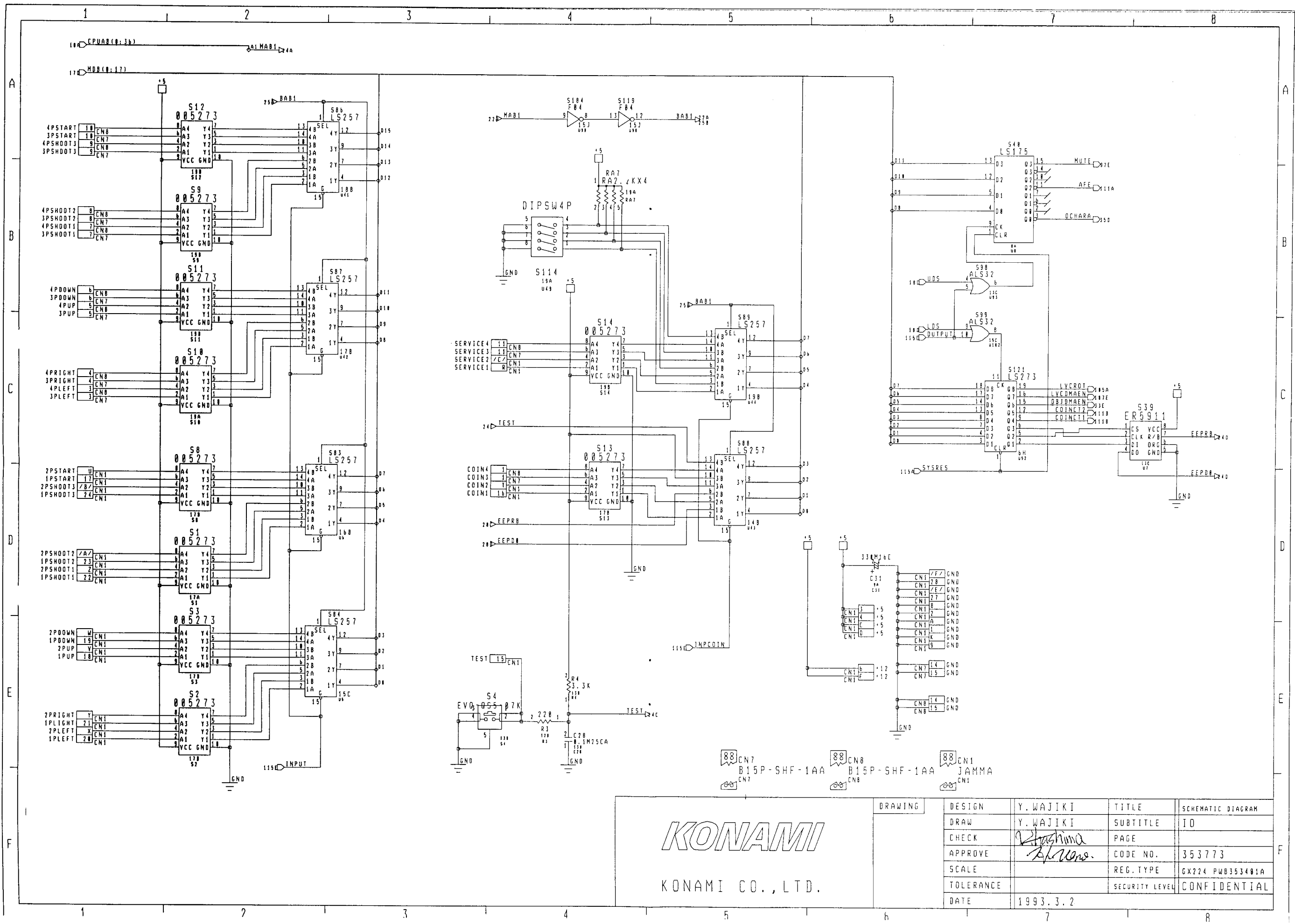
GND

- NOTE -
(1) 1P:NO.1 PLAYER 2P:NO.2 PLAYER
    3P:NO.3 PLAYER 4P:NO.4 PLAYER

(2) SURGE KILLER DIODES FOR COIN COUNTER
    INSTALLED ON THE PCB.

(3) YOU CANNOT USE BOTH STEREO AND MONAURAL
    OUTPUTS AT THE SAME TIME.

(4) DO NOT CONNECT SPEAKER(-) TO GND.
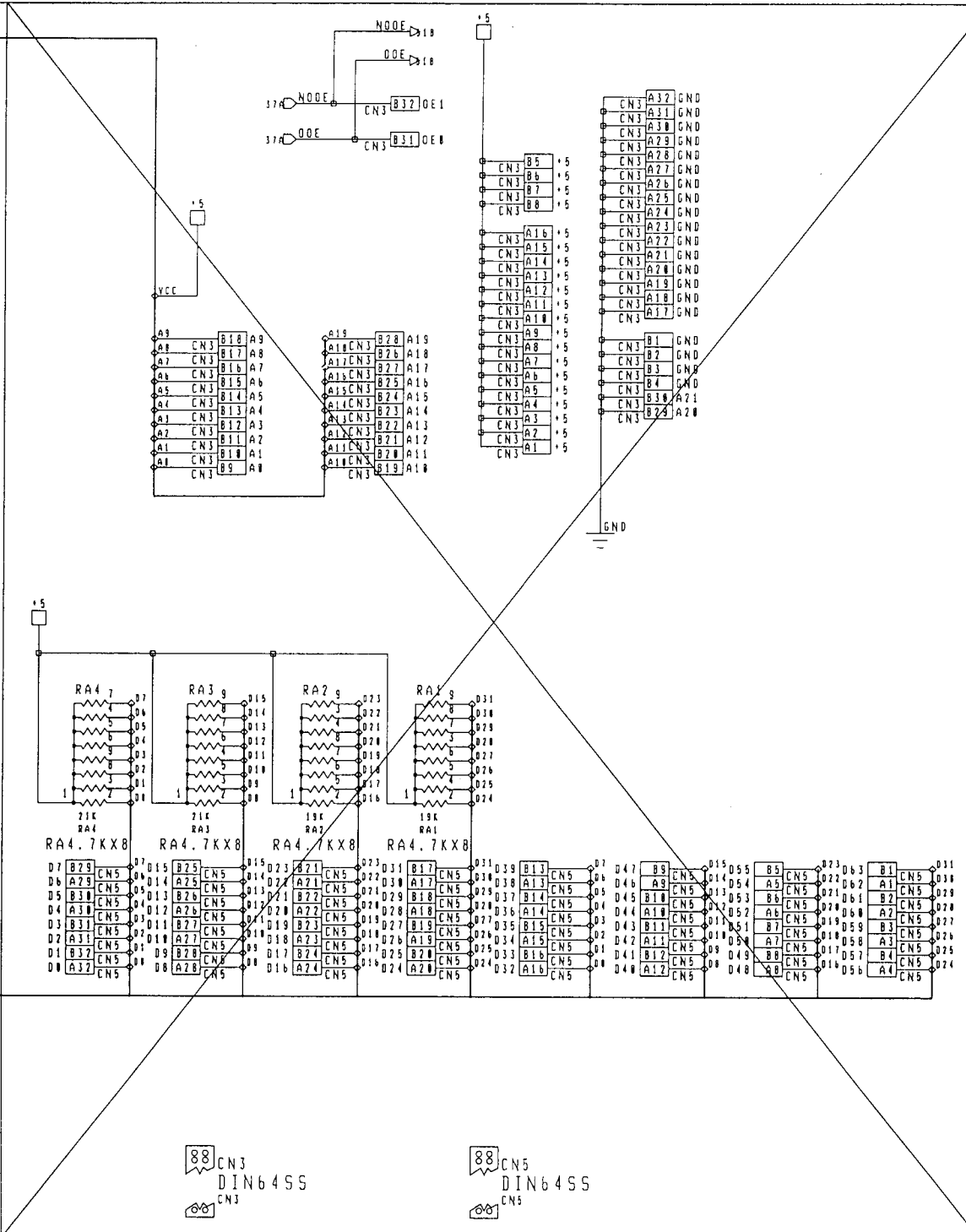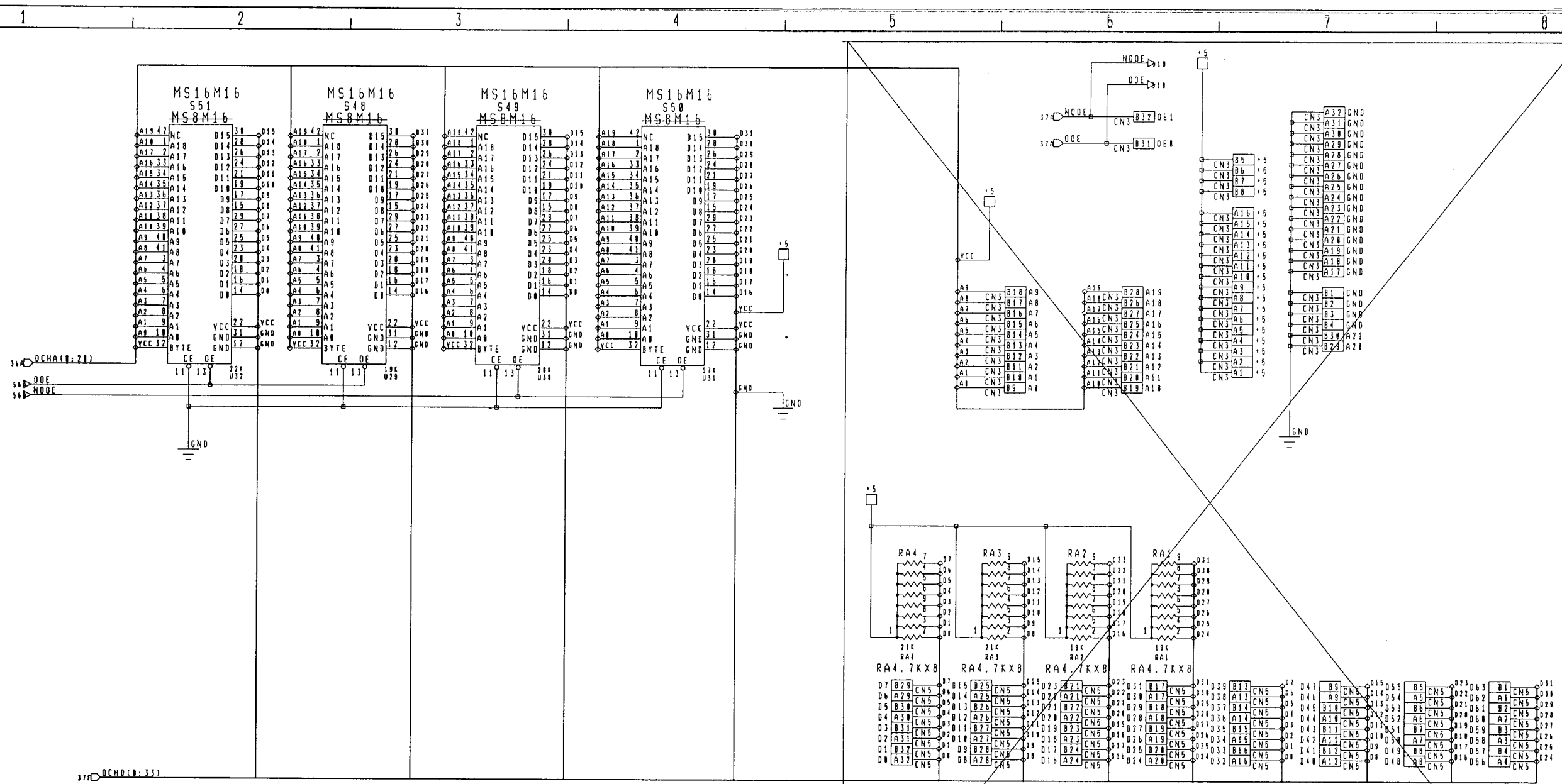   SPEAKER(-)

- NOTE -

VCC +5V

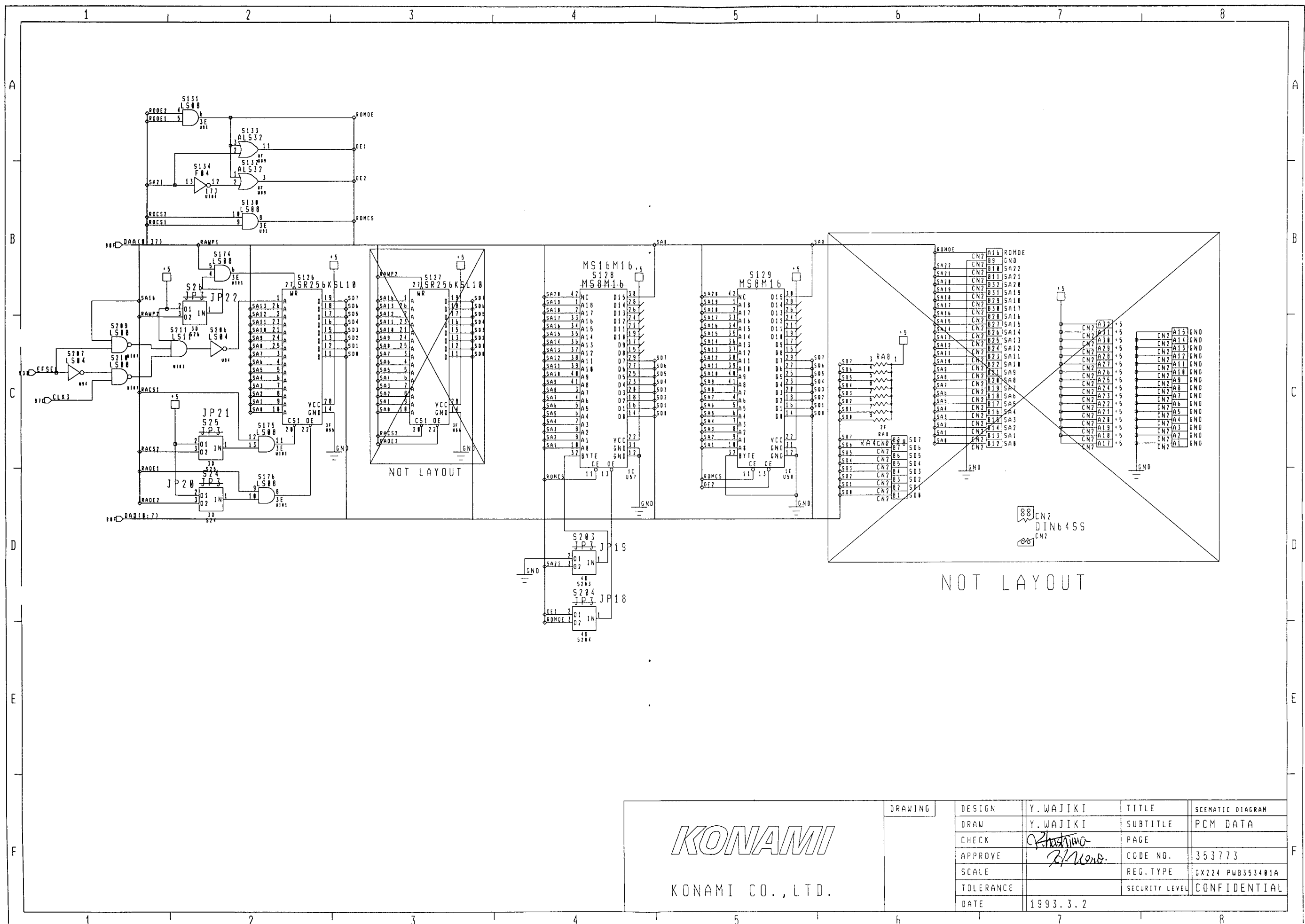VCC +12V

O1:SHORT JUMPER
O2:LONG JUMPER

KIND OF CAPACITOR

1000M16E=1000uF16V ELEC.AL
0.1M25CA=0.1uF25V CERAMIC
330M16E=330uF16V ELEC.AL

056001

DRAWING	DESIGN	Y.WAJIKI	TITLE	SCHEMATIC DIAGRAM
	DRAW	Y.WAJIKI	SUBTITLE	CPU
	CHECK		PAGE	
	APPROVE		CODE NO.	353773
	SCALE		REG.TYPE	GX224 PWB353401A
	TOLERANCE		SECURITY LEVEL	CONFIDENTIAL
	DATE	1993.3.2		

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	CHECK		PAGE	
	APPROVE		CODE NO.	353773
	SCALE		REG.TYPE	GX224 PWB353401A
	TOLERANCE		SECURITY LEVEL	CONFIDENTIAL
	DATE	1993.3.2		

MS16M16
S51
MS8M16

MS16M16
S48
MS8M16

MS16M16
S49
MS8M16

MS16M16
S50
MS8M16

RA4.7KX8

RA4.7KX8

RA4.7KX8

RA4.7KX8

NOT LAYOUT

DIN64SS
DIN64SS

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TOLERANCE		SECURITY LEVEL	CONFIDENTIAL		
DATE	1993.3.2				

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