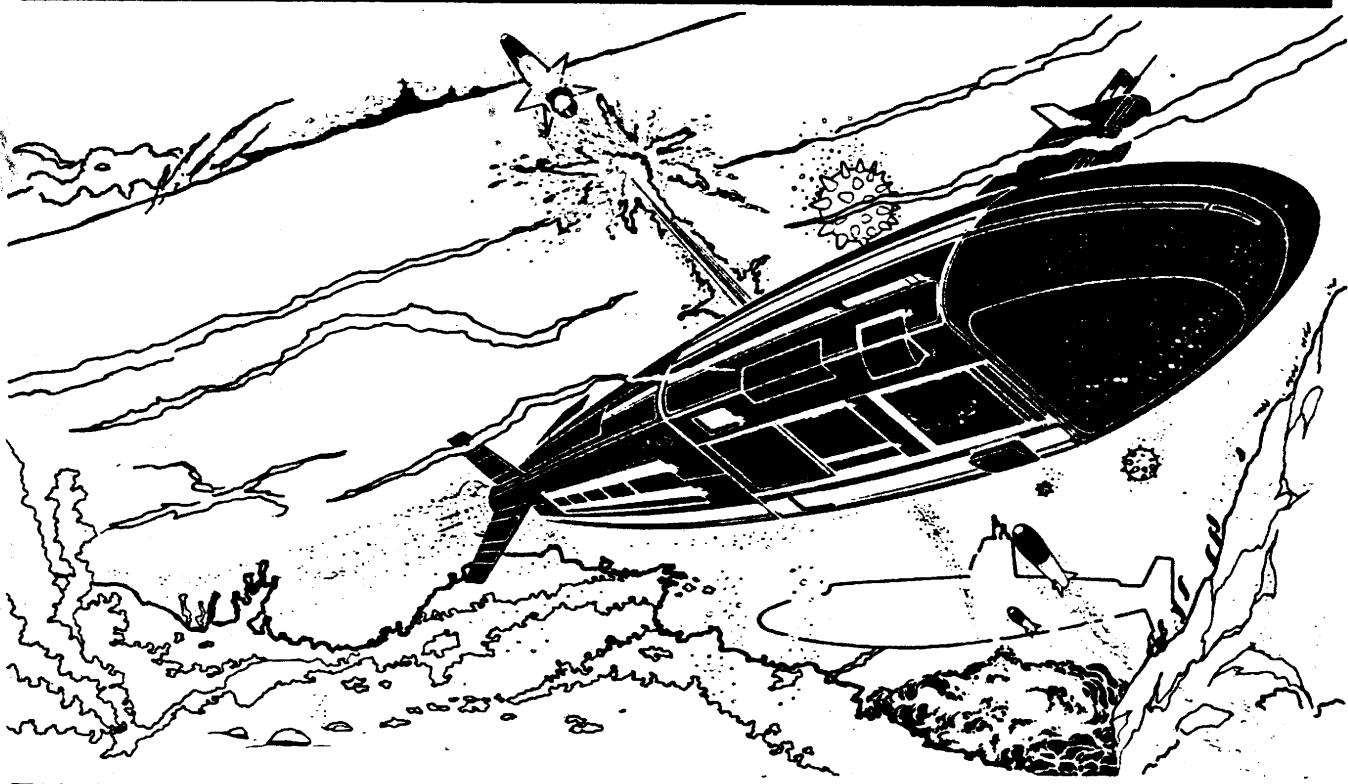


# POLARIS<sup>TM</sup>

## COLOR

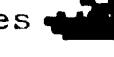


**SERVICE INSTRUCTIONS  
AND PARTS CATALOG**



**TAITO CORPORATION**

## 5. Play Instructions

- o Insert coin(s).
- o Select game 1 or 2 players.
- o Shoot jet planes  , frigates  , enemy subs  , and airplanes  for points, while avoiding enemy attack.
- o Scoring:



??? Pts.    ??? Pts.    100 Pts. 50 Pts. 30 Pts. 10 Pts.

- o In a two player game, play alternates between the two after each missing.

### Additional Information:

- o Homing missiles and mines cannot be destroyed.
- o When a anti-sub airplane is hit, some mystery points (500, 1000, 1500, or 2000 points) are scored.
- o When an enemy sub is hit, some mystery points (300, 500, 700, or 900 points) are scored.
- o When score exceeds 5,000 points, one sub is added with music.
- o As the frame progresses, the bonus points increase from 1,000 to 9,000 points.
- o Game is over when all of player8s subs have been destroyed.

## 6. Adjustments on Switcing Regulator PC Board

(See Fig. 3)

Caution: The line voltages should be set within the limit.

Failure to do so may result in destruction of the IC's.

- o To check the output voltage, measure them on the G-connector or the T-connector.

(See the cable block diagram, in this manual.)

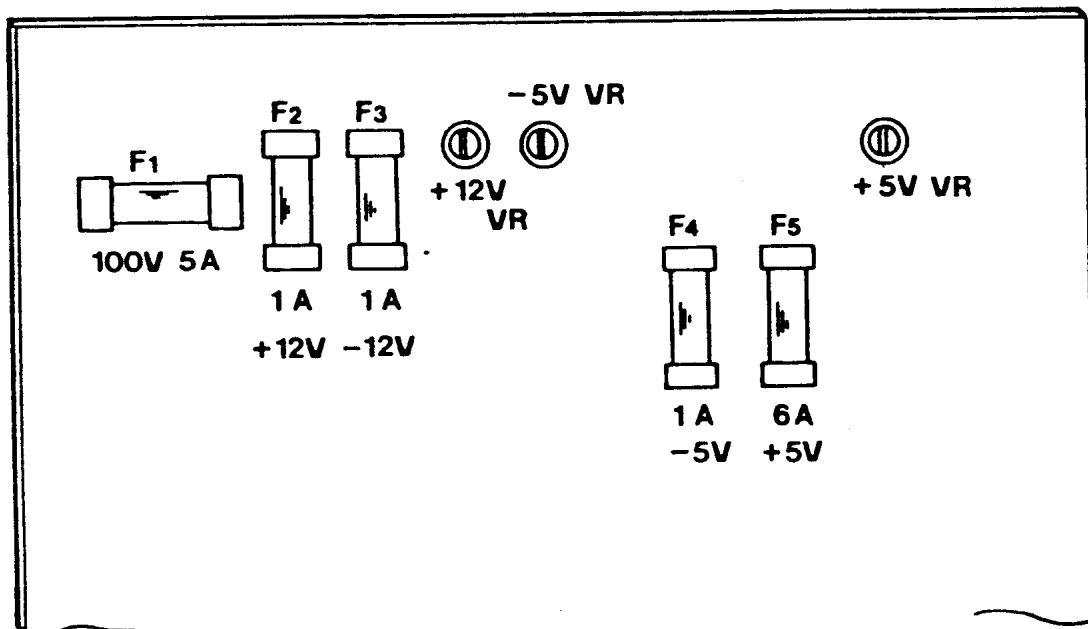


Fig. 3

- o +5V VR ... Pot for adjusting +5V DC line voltage

(Adjustable range: +4.5V to +5.5V DC)

Set approx. +5V.

- o -5V VR ... Pot for adjusting -5V DC line voltage

(Adjustable range: -5.5V to -4.5V DC.)

Set approx. -5V.

When the +5V line has no load, this -5V voltage is not present on the line.

- o +12V VR .. Pot for adjusting +12V DC line voltage

(Adjustable range: +10.8V to +13.2V DC)

Set approx. +12V.

7. Adjustments on Game PCB (See Fig. 4 and Table 1 - 3)

- o To decrease the sounds turn each pot as shown by the arrowhead.

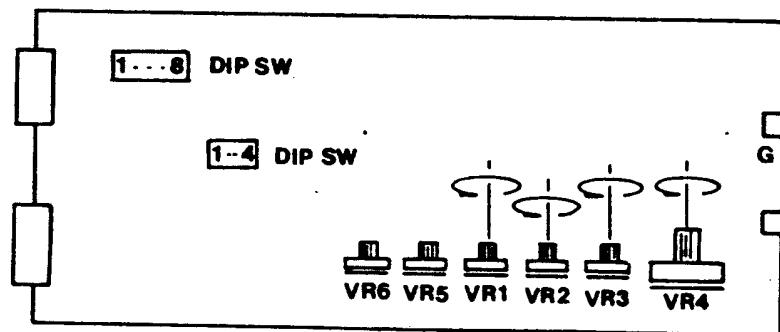


Fig. 4

- \* VR1 ... Pot for adjusting the effective sounds; firing sounds, anti-sub airplane nose diving sounds, bomb hit sounds, jet plane hit sounds, and frigate hit sounds.
- \* VR2 ... Pot for adjusting frigate appearing sounds and enemy sub hit sounds.
- \* VR3 ... Pot for adjusting the music produced when bonus points are scored or an extended play is awarded.
- \* VR4 ... Pot for adjusting the total sounds.
- \* VR5, VR6 ... These pots are for adjusting the solid-state modules, which are for factory adjustments.

Setting of DIP Switches:

DIP SW1

- \* SW1, SW2 ... Switches for changing the number of player's subs (POLARIS)

Polaris	3	4	5	6
SW 1	ON	OFF	ON	OFF
SW 2	ON	ON	OFF	OFF

Table 1

This number is preset at "3" at the factory.

- o SW3 ... Switch for Game Style

SW 3	ON	Upright Version
	OFF	T T Version

Table 2

As this game is an upright version, this switch should be set at "ON" position.

- o SW4 ... Switch for checking game features

When this switch is set at "OFF" position, no hits are made if bombs hit player's sub.

Normally, this switch should be set at "ON" position.

- o SW5 ... Switch for demonstration sounds

Effective sounds for appealing to the customers can be produced. (Polaris sounds)

SW 5	ON	No sounds are produced.
	OFF	Sounds are produced.

Table 3

- o SW6,SW7 ... These switches are not used in this game, and should be set at "OFF" positions.

- o SW8 ... Switch for Preset Mode

When this switch is set at "OFF" position, the check can be mode. When checking, each switch should be set first. Normally this switch should be set at "ON" position.

1 PLAYER START SW ... 1P's points are increased by 50 points.

2 PLAYER START SW ... 2P'S points are increased by 50 points.

1 PLAYER UP SW ..... The levele becomes high.

1 PLAYER FIRE SW .... The game starts.

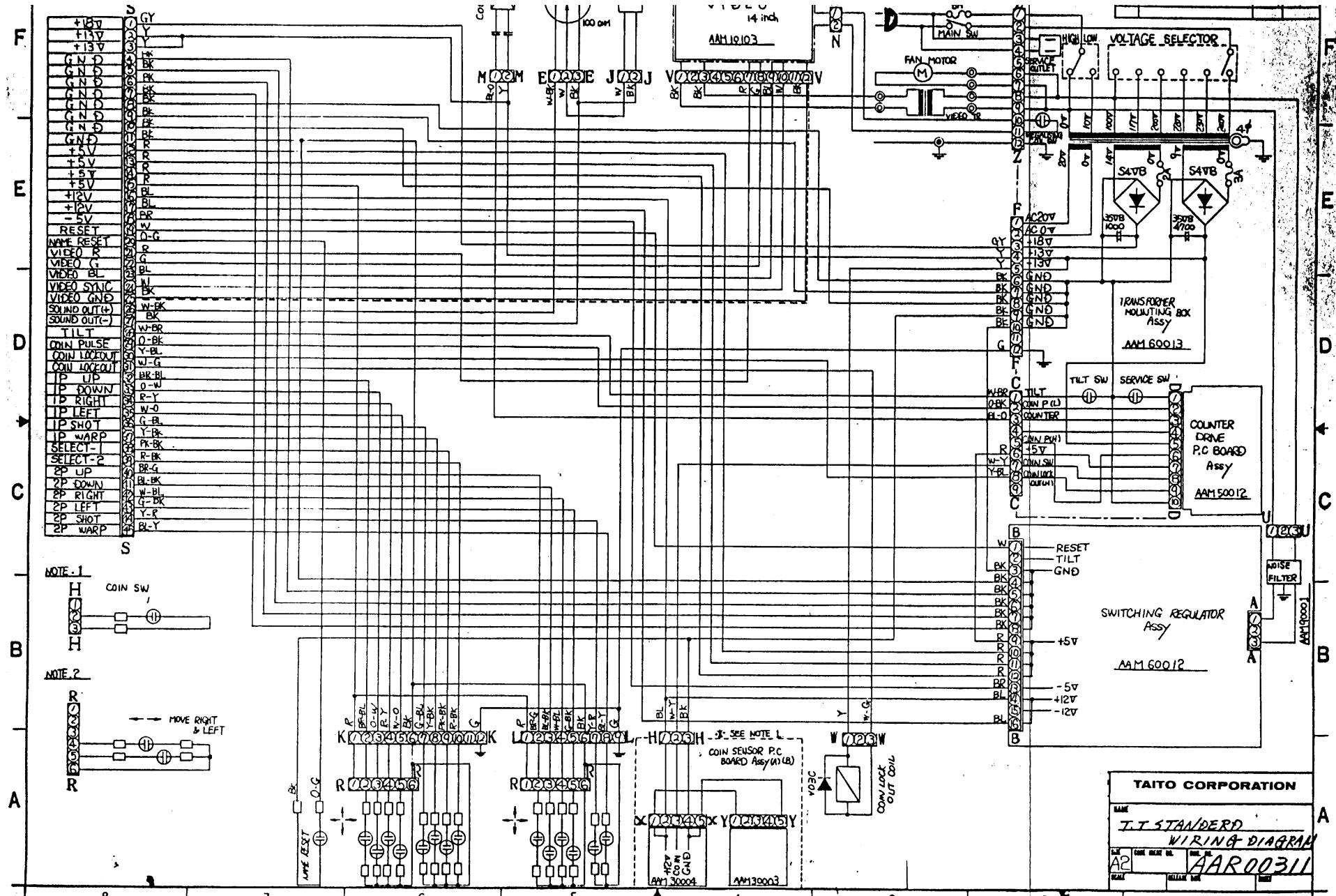
#### DIP SW2

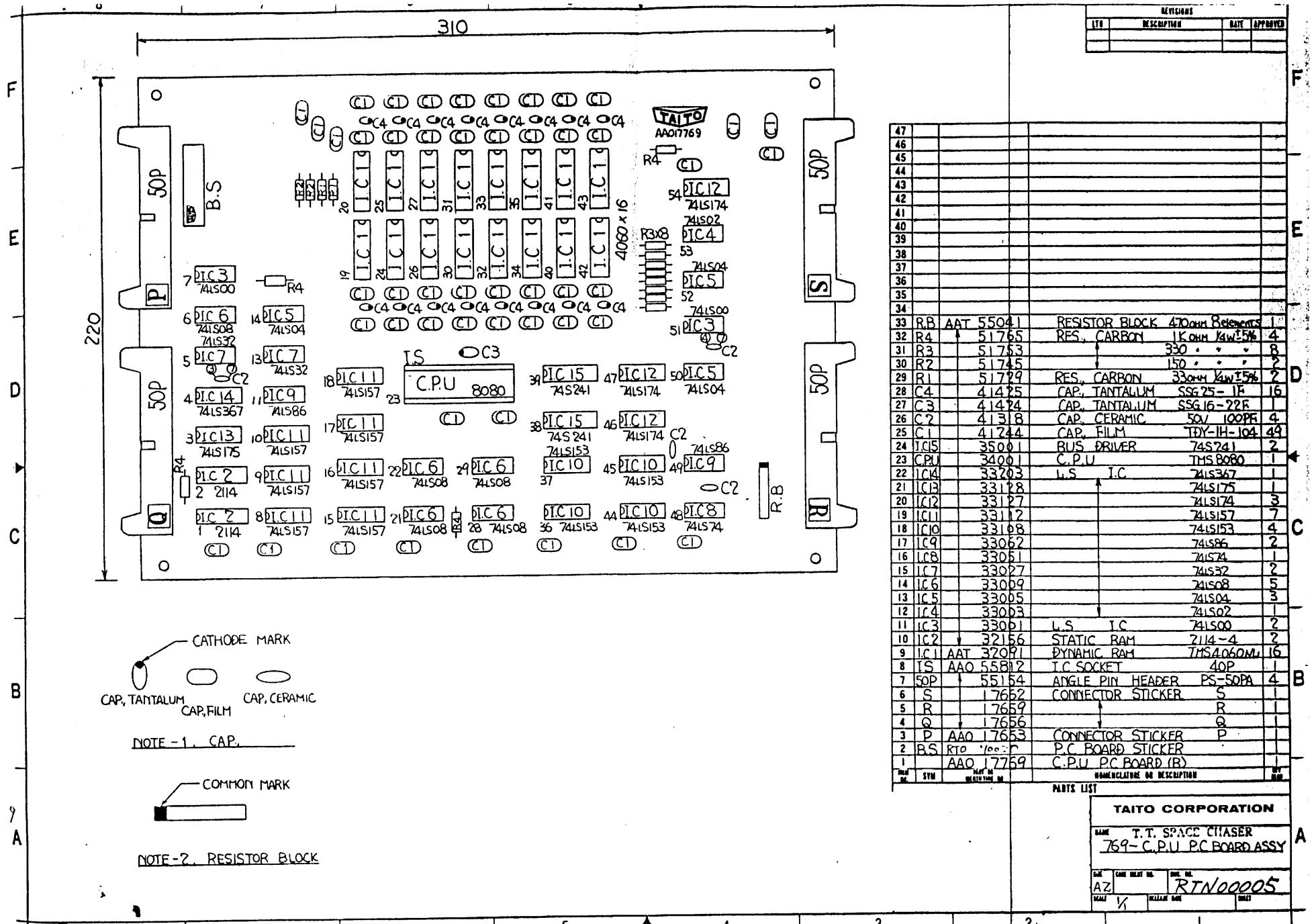
- o SW1-SW3 ... These switches are not used and ahould be set "OFF" positions.

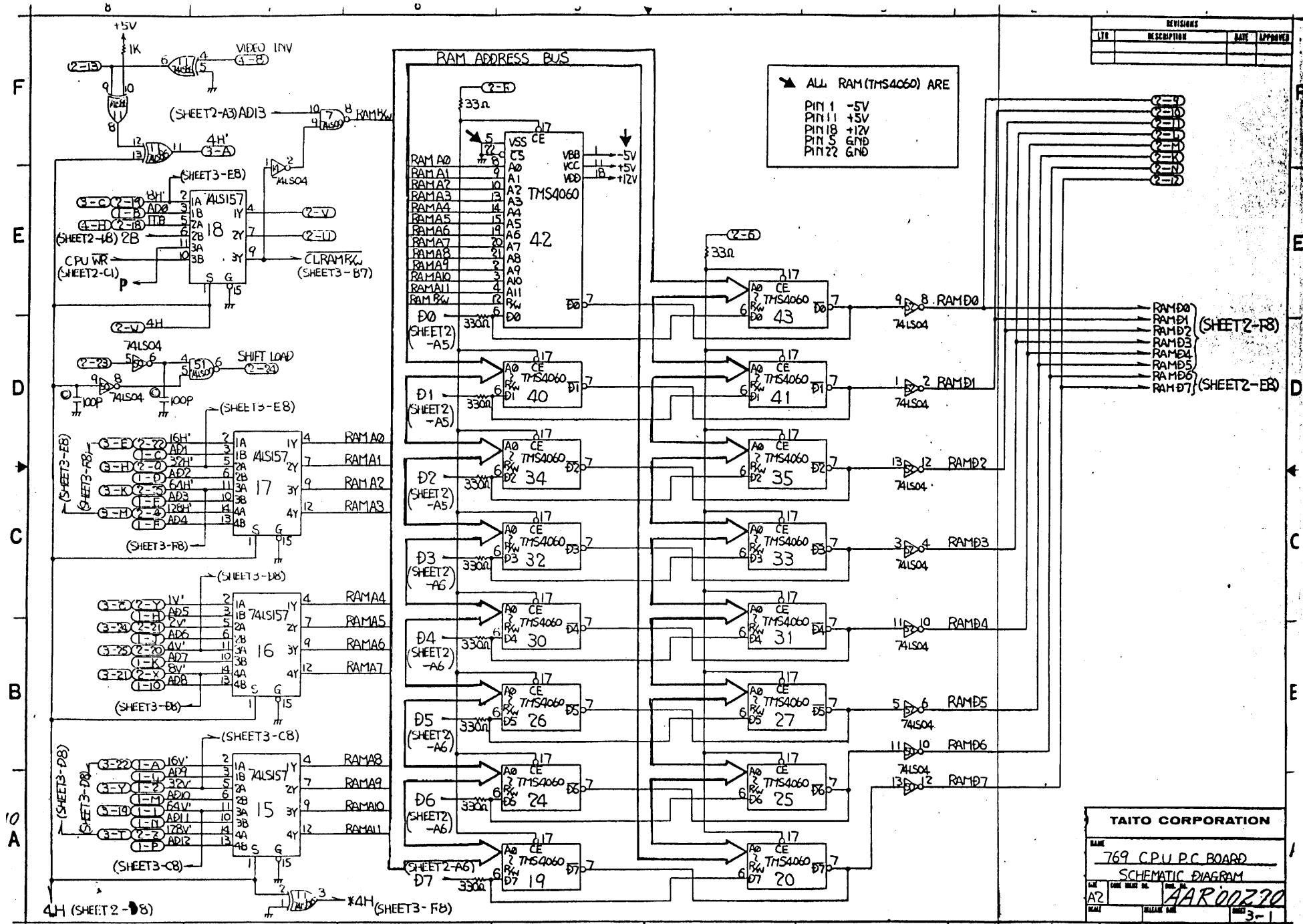
- o SW4 ... Switch for Screen Inversion

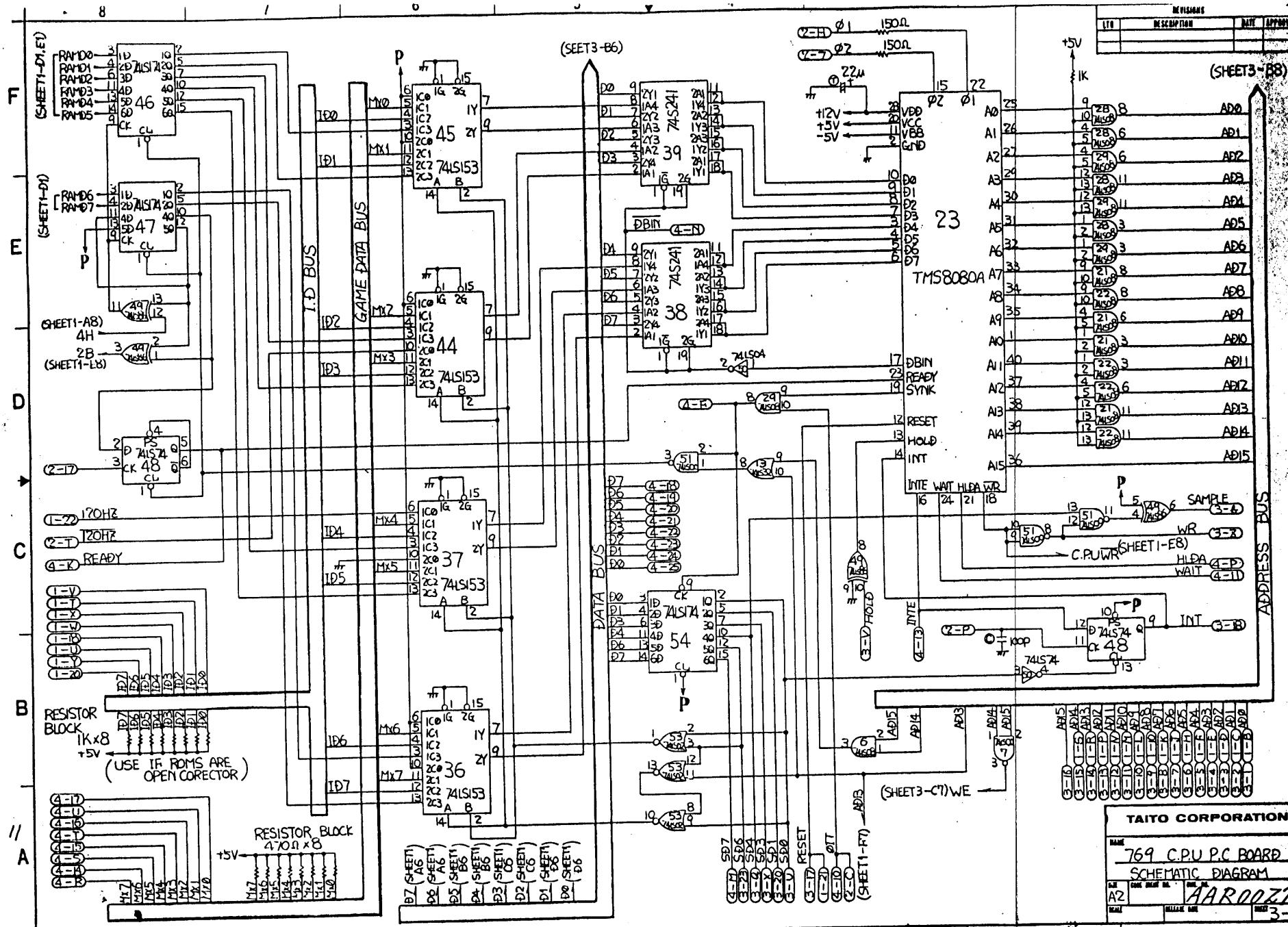
"ON" ... Inversion "OFF" ... No Inversion

Normally, this switch should be set at "OFF" position.









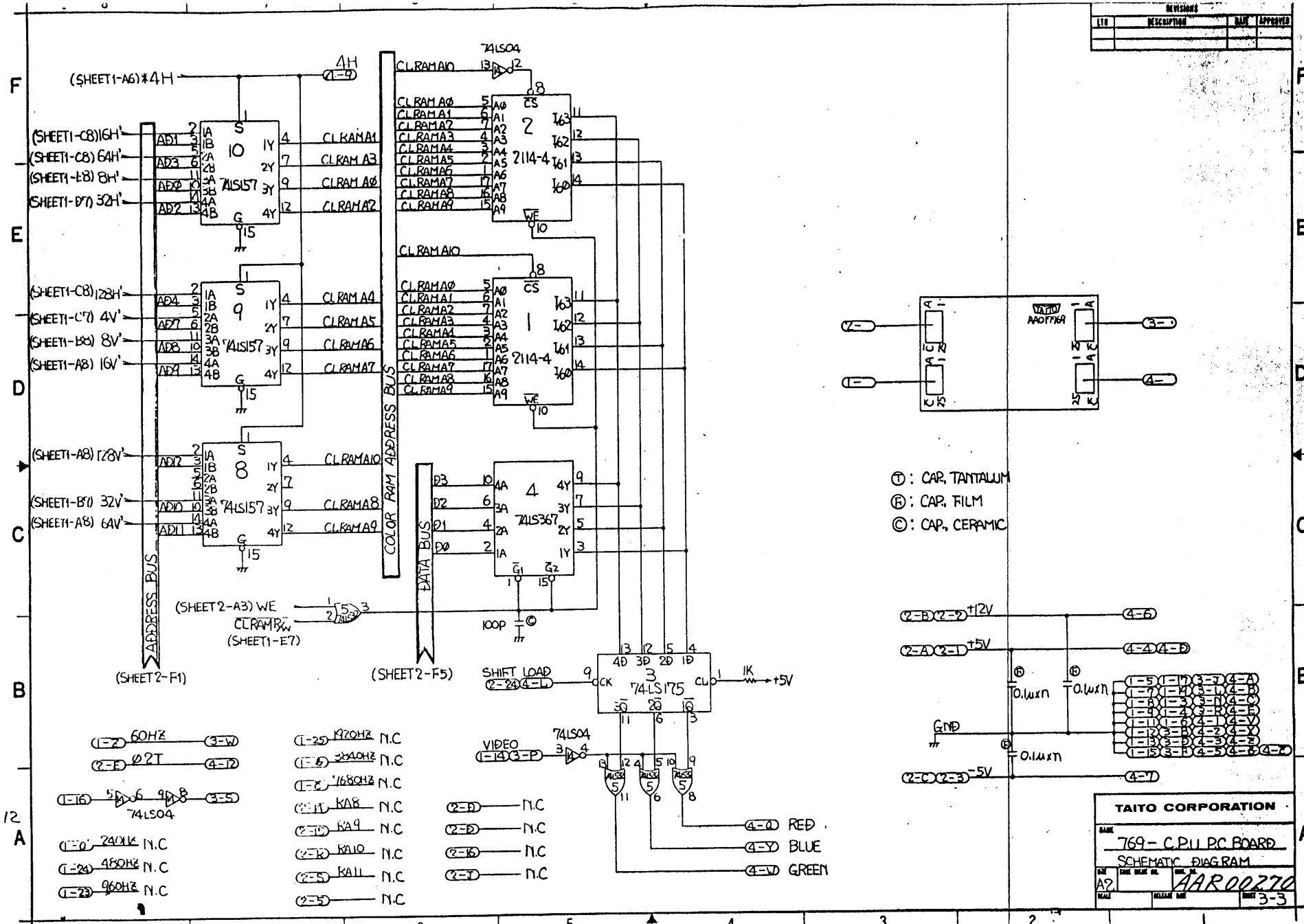
**TAITO CORPORATION**

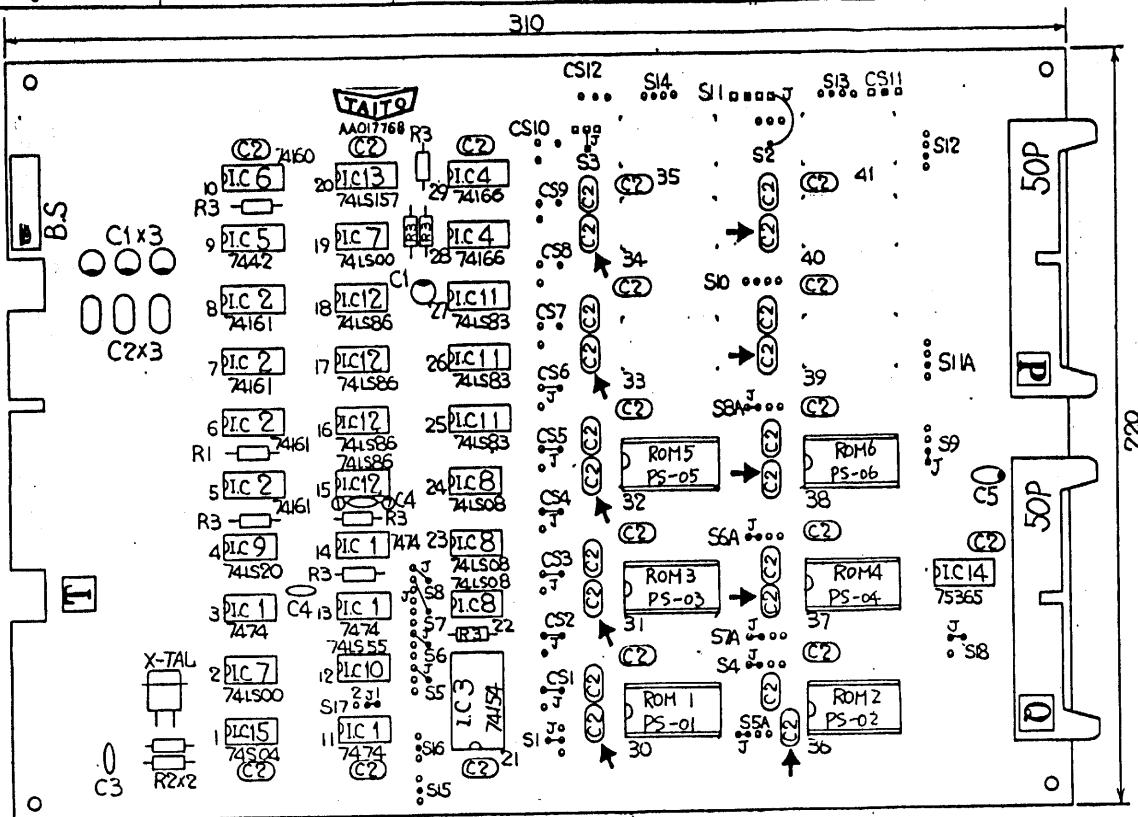
769 C.P.U P.C BOARD  
SCHEMATIC DIAGRAM

A2 **AAR00ZT**

NAME WILLIAM BROWN NUMBER 3-

—  
—



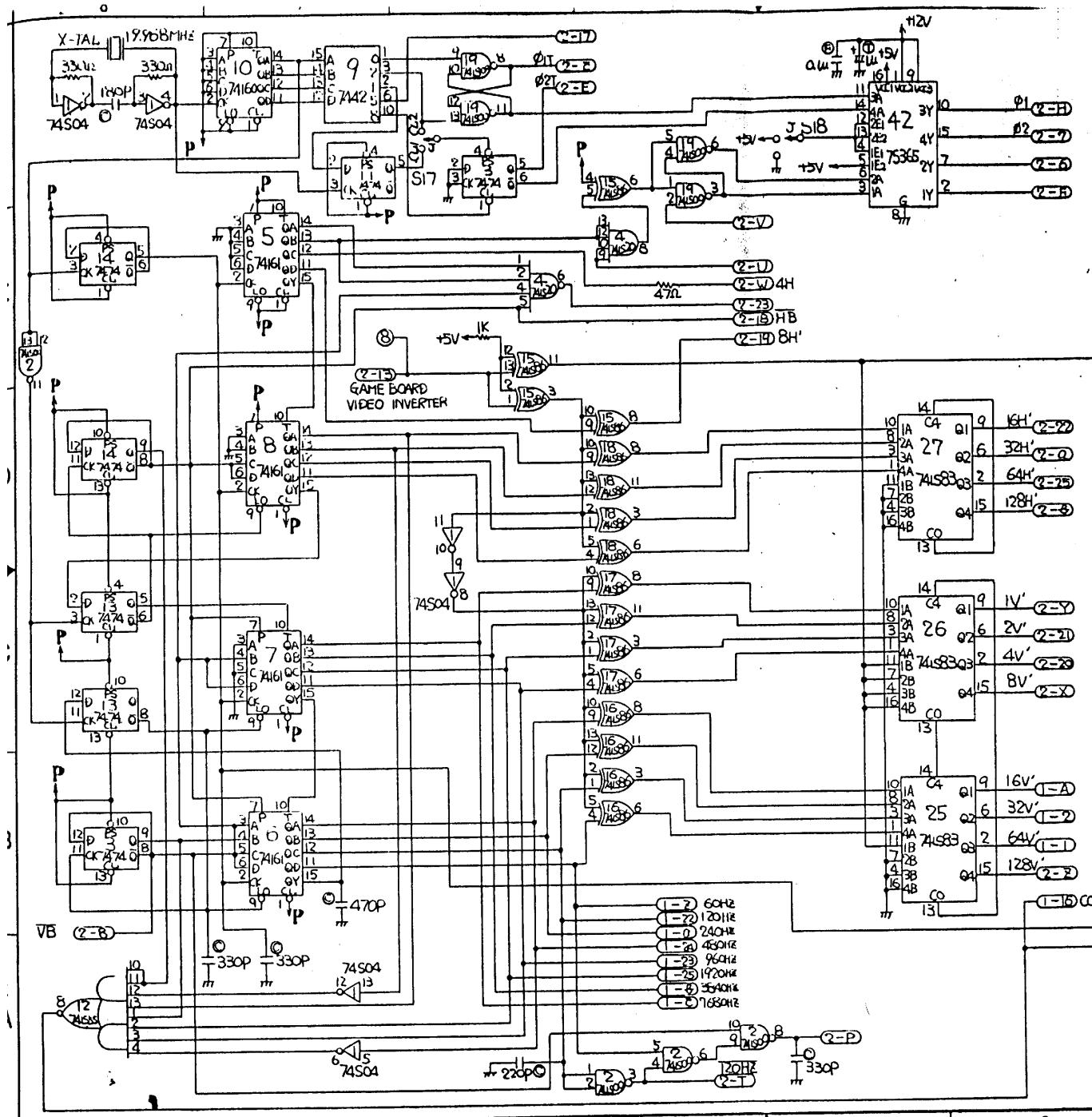


The diagram illustrates four types of capacitors:

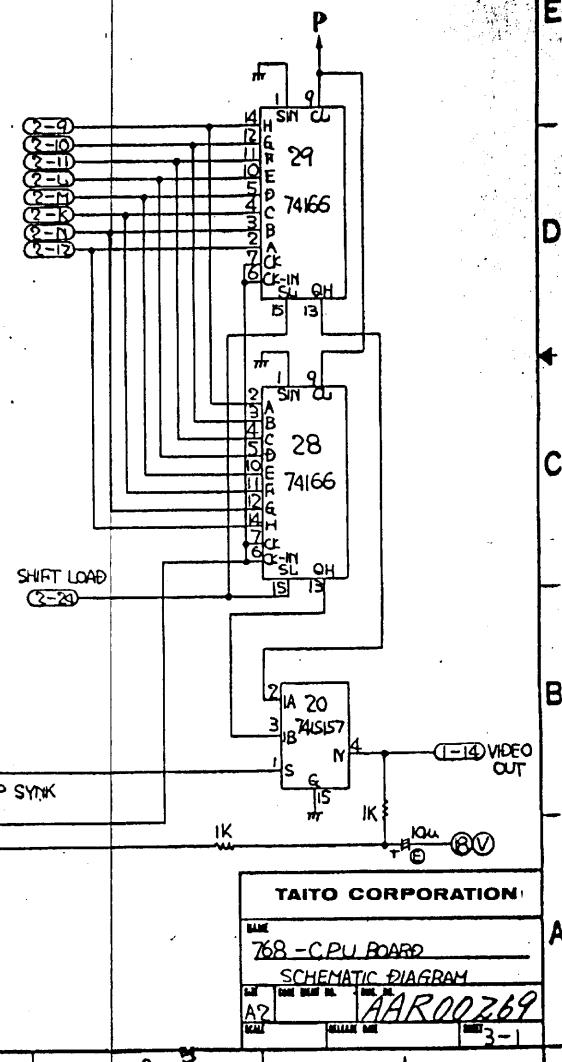
- CAP. ELECTROLYTIC**: Represented by a circle with a vertical line extending from its top.
- CAP. CERAMIC**: Represented by a horizontal oval.
- CAP. TANTALUM**: Represented by a vertical oval.
- CAP. FILM**: Represented by a horizontal oval.

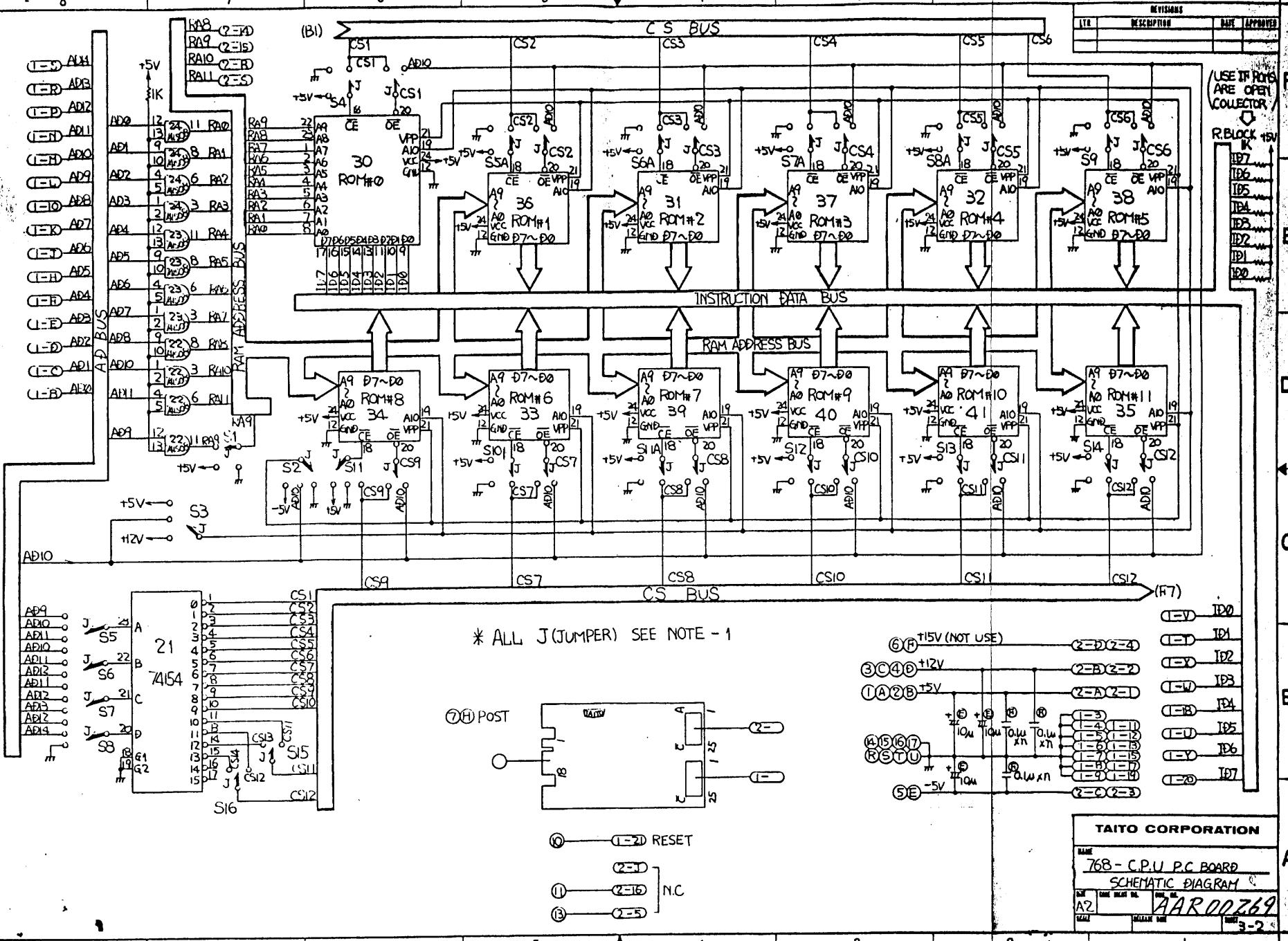
NOTE-2. NOT USE THIS MARKED (■) CAPACITOR FOR 2716 & 2316B

NOTE - I. CAP.



\* ALL J(JUMPER), SEE NOTE-1





REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

JUMPER SWICH

MACHINE NAME	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18	S5A	S7A	S8A	S1A	CS1	CS2	CS3	CS4	CS5	CS6	CS7	CS8	CS9	CS10	CS11	CS12
LUPIN the III	RPA9	+5V	AD10	CS1	AD11	AD12	AD14	GND	CS6	CS7									CL1	+5V	CS2	CS3	CS4	CS5	CS1	CS2	CS3	CS4	CS5	CS6	CS7			
ASTRO ZONE	RPA9	+5V	AD10	CS1	AD11	AD12	AD14	GND											CL1	+5V	CS2	CS3	CS4	CS5	CS1	CS2	CS3	CS4	CS5					
POLARIS	RPA9	+5V	AD10	CS1	AD11	AD12	AD14	GND	CS6										CL1	+5V	CS2	CS3	CS4	CS5	CS1	CS2	CS3	CS4	CS5	CS6				

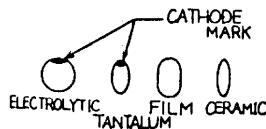
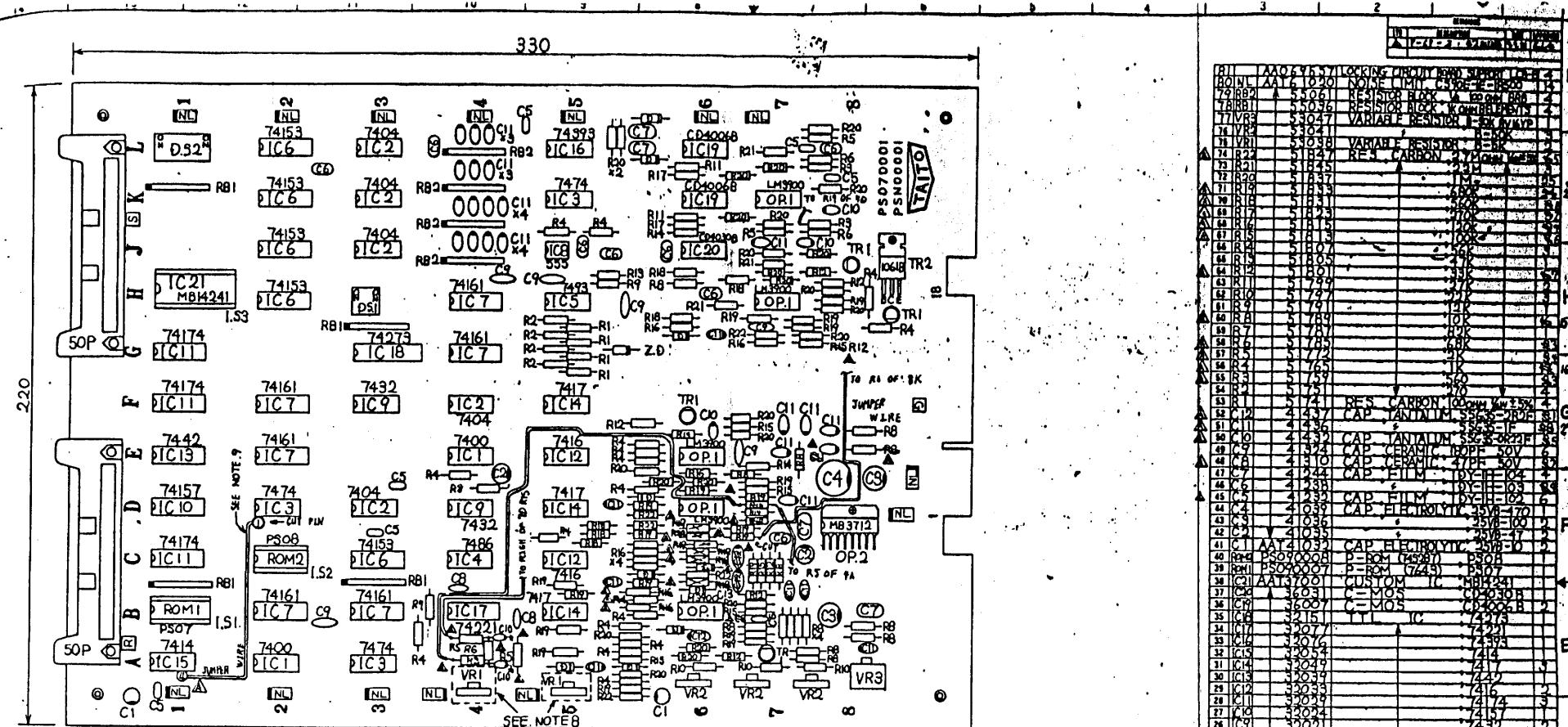
NOTE-1 JUMPER WIRING

ROM

MACHINE NAME	ROM#0	ROM#1	ROM#2	ROM#3	ROM#4	ROM#5	ROM#6	ROM#7	ROM#8	ROM#9	ROM#10	ROM#11	DESCRIPTION
LUPIN the III	LP-12	LP-13	LP-14	LP-15	LP-16	LP-17	LP18						2716
ASTRO ZONE	GE-01	GE-02	GE-03	GE-04	GE-05								2716
POLARIS	PS-01	PS-02	PS-03	PS-04	PS-05	PS-06							2716

NOTE-2 P-ROM

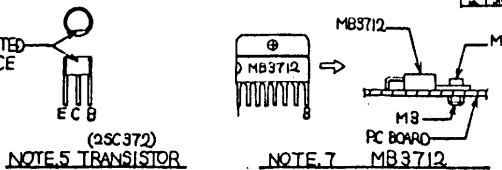
TAITO CORPORATION	
768-CPU PC BOARD	
SCHEMATIC DIAGRAM	
A2	AAR00269
5-3	



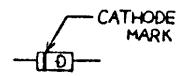
NOTE1 CAP.



### NOTE 3 NOISE LIMIT



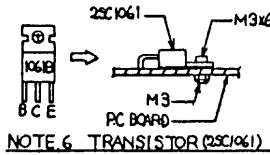
**⚠ NOTE. 9 JUMPER WIRE**



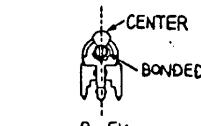
## NOTE.2 DIODE



#### **NOTE 4 RESISTOR BLOCK**



## NOTE 6 TRANSISTOR (2SC1061)



NOTE 8 VARIABLE RE3

WIRING

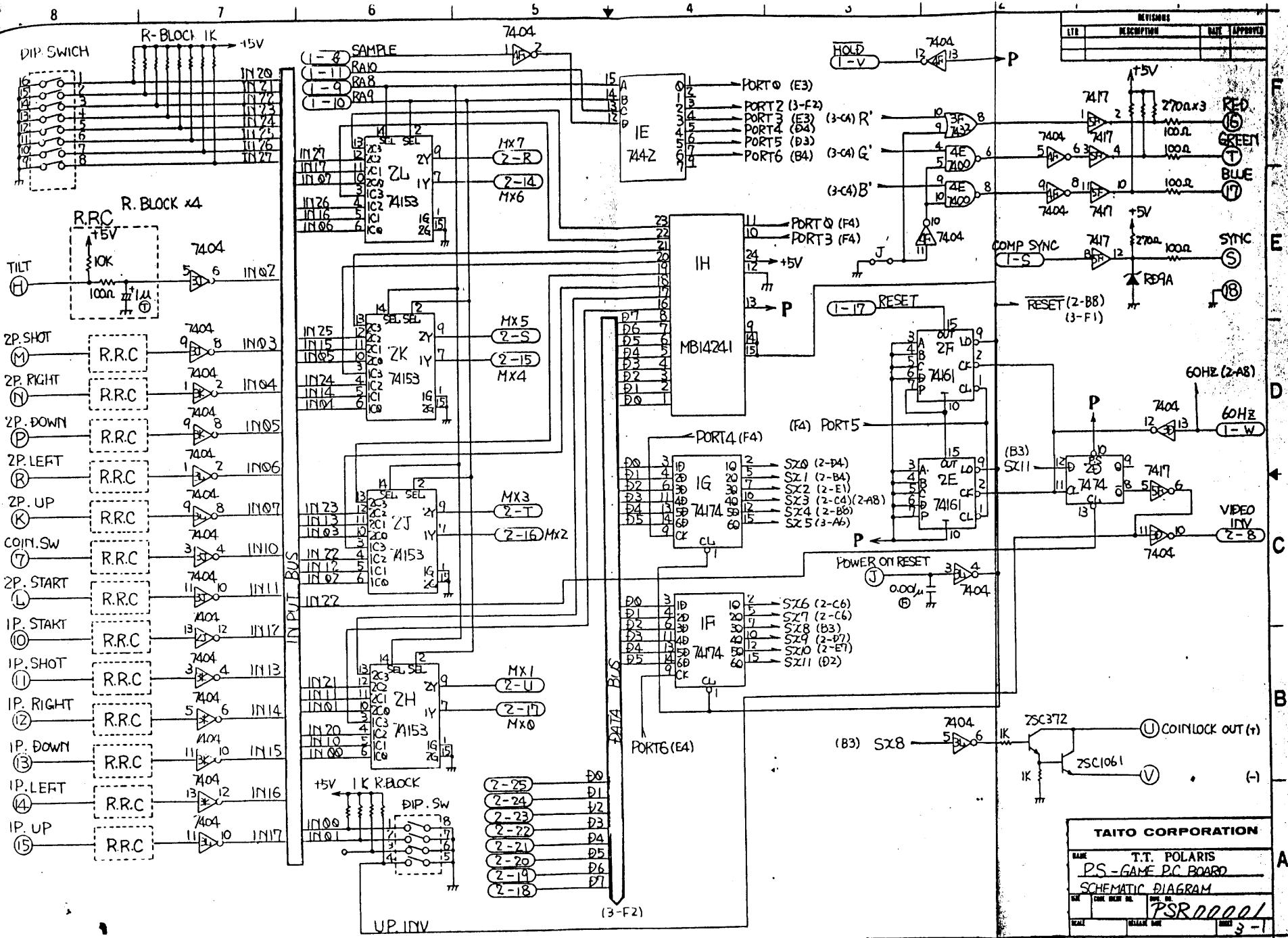
ADDRESS	ADDRESS
4A (R2)	7D (LEFT OF R1)
4A (R5)	7D (RIGHT OF R1)
8K (R3)	7D (R19)
1A (PLN)	2B (PLN)

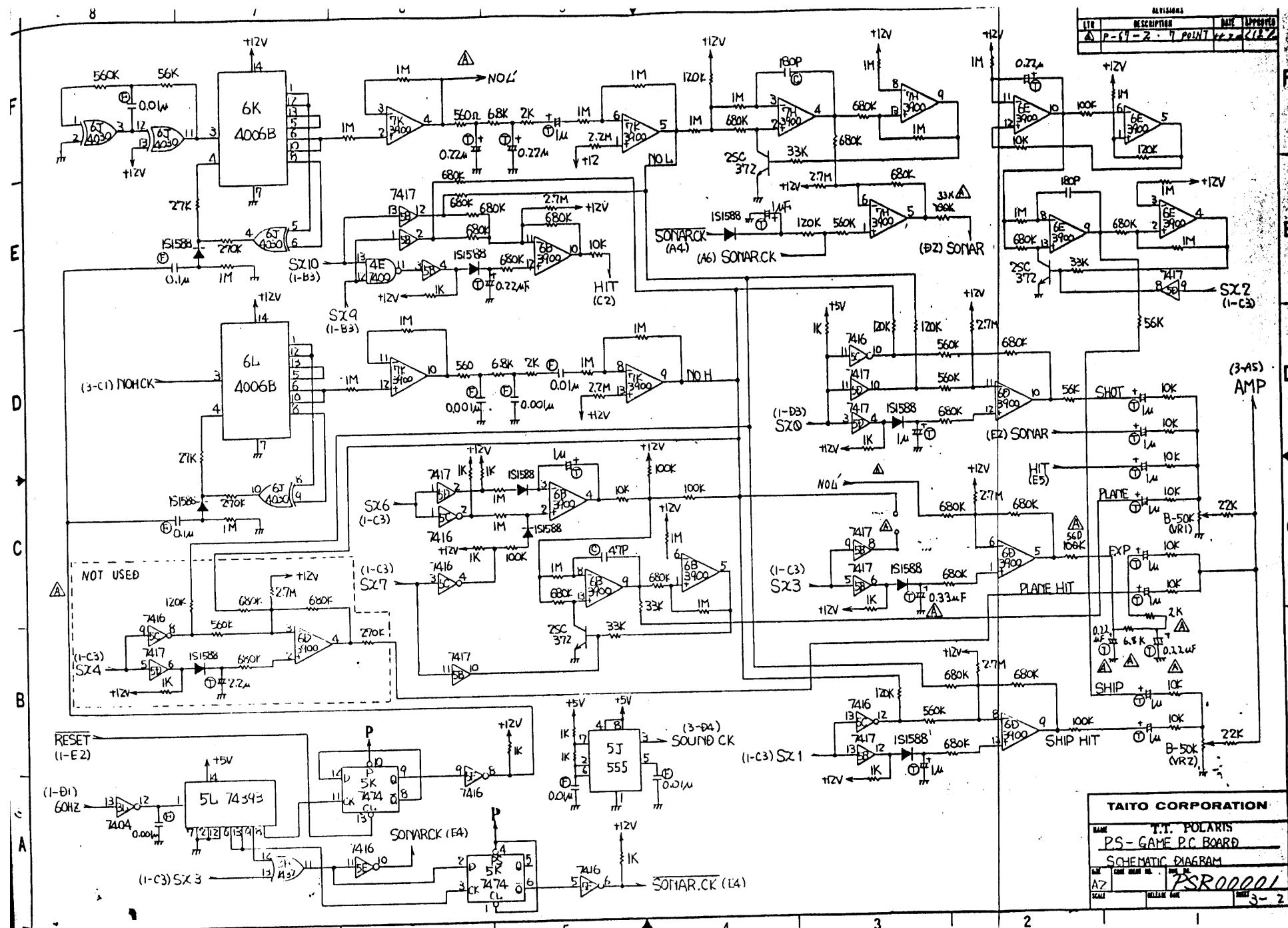
CUT THE 1st PIN OF IC

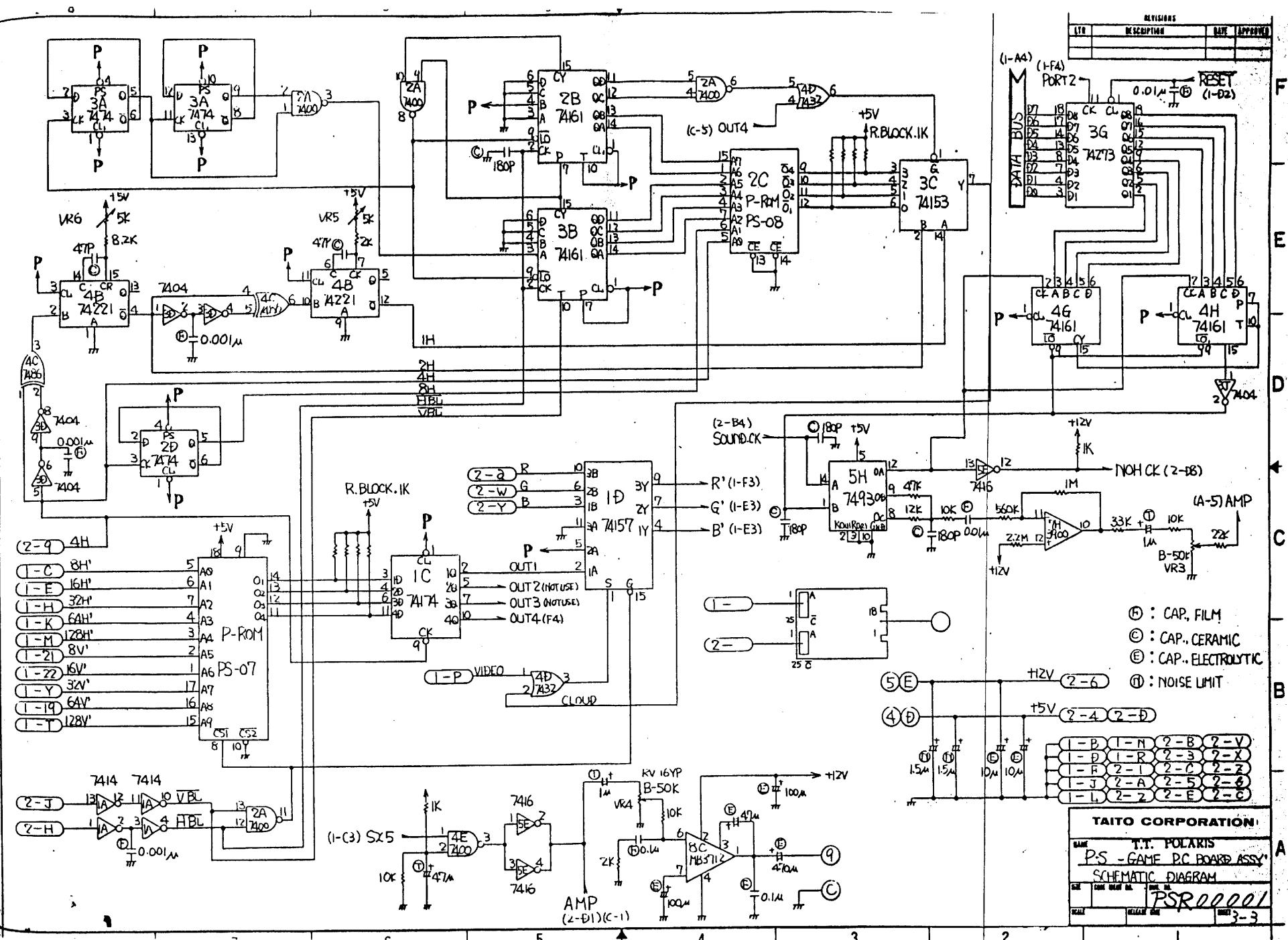
TAITO CORPORATION

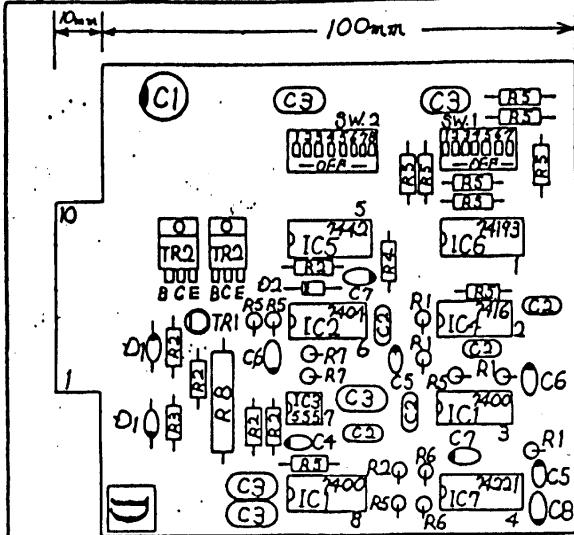
P.S-GAME PC BOARD ASSY

A1 PSN00001

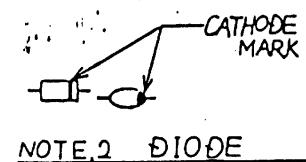




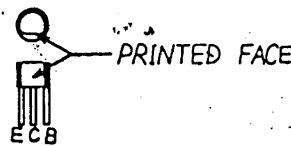




ELE. CATHODE MARK  
TAN. TANTALUM &  
NOTE.1 CAP. ELECTROLYTIC



NOTE.2 DIODE



NOTE.3 TRANSISTOR(2SC458)

NOTE.4 TRANSISTOR(2SC1061)

NOTE.5 THE RELATION BETWEEN COIN AND CREDIT

	SW1							SW2							
	1	2	3	4	5	6	7	1	2	3	4	5	6	7	8
1COIN 1PLAY	ON	ON	ON	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF	
2COIN 1PLAY	#	#	#	#	#	#	#	OFF	ON	OFF	#	#	#	#	
3COIN 1PLAY	#	#	#	#	#	#	#	OFF	ON	#	#	#	#	#	
4COIN 1PLAY	#	#	#	#	#	#	#	OFF	OFF	ON	#	#	#	#	
1COIN 2PLAY	ON	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON	
1COIN 3PLAY	OFF	ON	#	#	#	#	#	#	#	#	#	#	#	#	
1COIN 4PLAY	ON	ON	#	#	#	#	#	#	#	#	#	#	#	#	

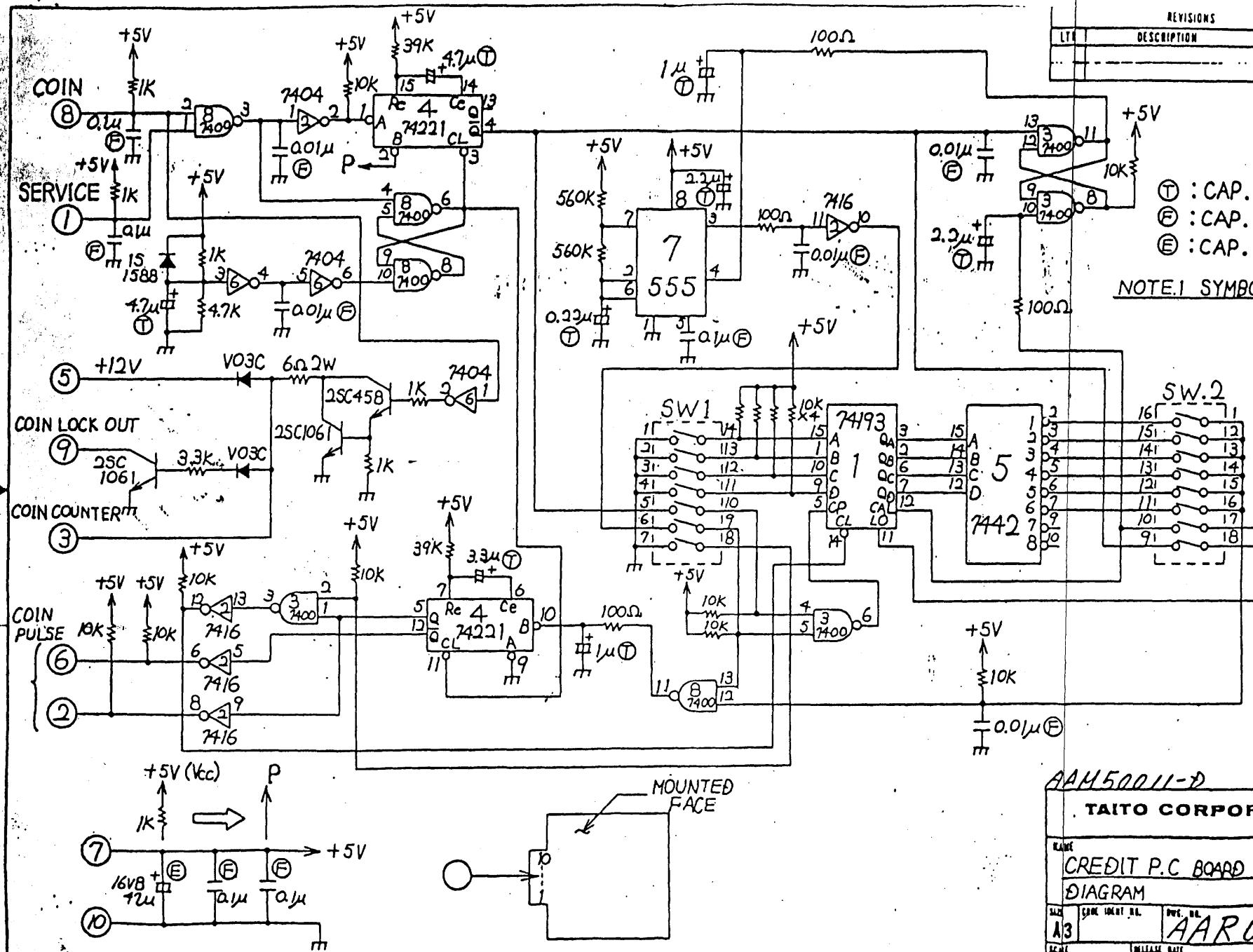
REVISIONS			
ltr	DESCRIPTION	DATE	APPROVED
31	R8 AAT55033 WINDING RESISTOR, 60OHM 2W ±10%	1	
30	R7 SW1 RES. CARBON, 560KOHM 1/4W ±5%	2	
29	R6 51803 39K	2	
28	R5 51789 10K	13	
27	R4 51781 4.7K	1	
26	R3 51777 3.3K	1	
25	R2 51765 JK	6	
24	R1 51741 RES. CARBON, 100OHM 1/4W ±5%	4	
23	C8 41438 CAP. TANTALUM, SSG35-3R3F	1	
22	C7 41421 SSG16-4R7F	2	
21	C6 41419 SSG16-2R2F	2	
20	C5 41418 SSG16-1F	2	
19	C4 41414 CAP. TANTALUM, SSG16-0R20F	1	
18	C3 41244 CAP. FILM TDY-IH-104	5	
17	C2 41238 CAP. FILM TDY-IH-103	5	
16	C1 41021 CAP. ELECTROLYTIC, 16V847μ	1	
15	IC7 32077 TTL IC 74221	1	
14	IC6 32044 74193	1	
13	IC5 32039 7442	1	
12	IC4 32033 7416	1	
11	IC3 32019 NE555V	1	
10	IC2 32003 7404	1	
9	IC1 32001 TTL IC 7400	2	
8	D2 12025 DIODE 1S1588	1	
7	D1 12002 DIODE VO3C	2	
6	TR2 V 11030 TRANSISTOR 2SC1061-B	2	
5	TR1 AAT11005 TRANSISTOR 2SC458-C	1	
4	SW2 AAO52566 DIP SWITCH DSS-8	1	
3	SW1 52560 DIP SWITCH DSS-7	1	
2	D 17623 CONNECTOR STICKER D	1	
1	AAO17766D CREDIT P.C BOARD	1	

ITEM NO.	SYM.	PLATE NO.	IDENTIFICATION NO.	REV. NO.
PARTS LIST				
TAITO CORPORATION				
NAME: CREDIT P.C BOARD ASSY.				
S/N	PLATE IDENT. NO.	REV. NO.		
A3			AAM50011-D	
SCAL	1/1	SELLER'S NAME	S/N	

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
-	-	-	-

(T) : CAP., TANTALUM  
 (F) : CAP., FILM  
 (E) : CAP., ELECTROLYTIC

### NOTE.1 SYMBOL MARK



AAM50011-D	
TAITO CORPORATION	
CREDIT P.C. BOARD SCHEMATIC	
DIAGRAM	
REV.	DATE
A3	AAR00271