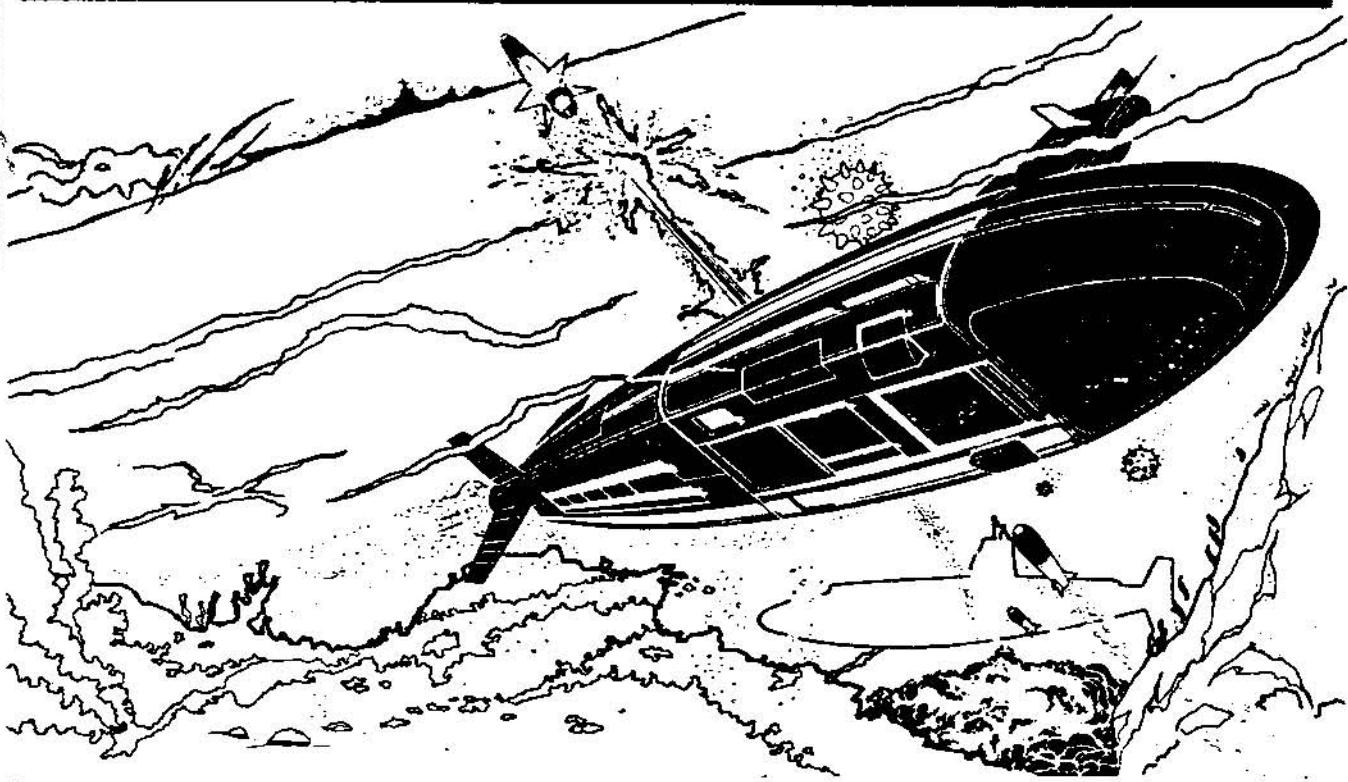


POLARIS™

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.)

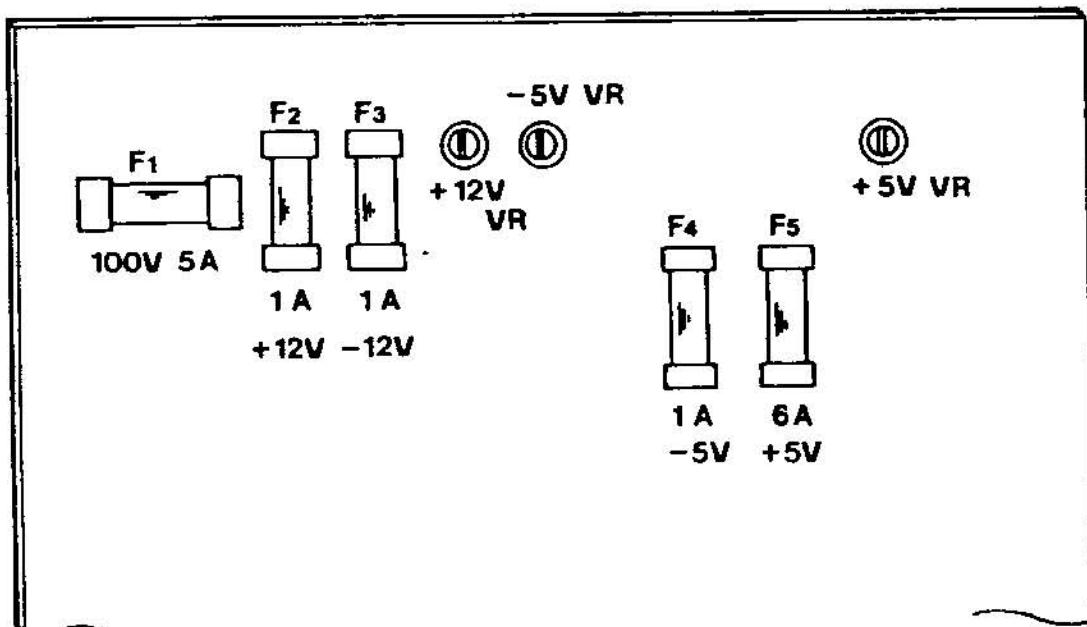


Fig. 3

- 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.

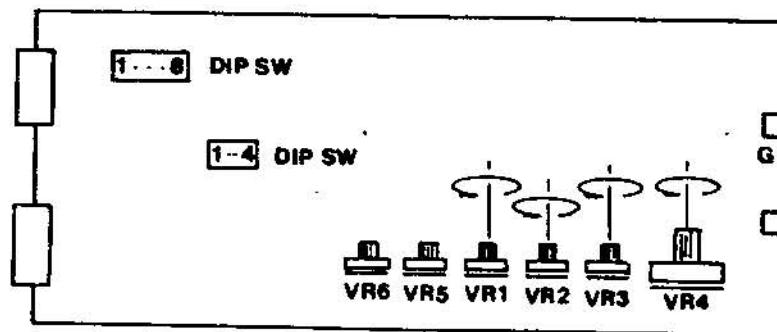


Fig. 4

- * 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 SWS ... 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.

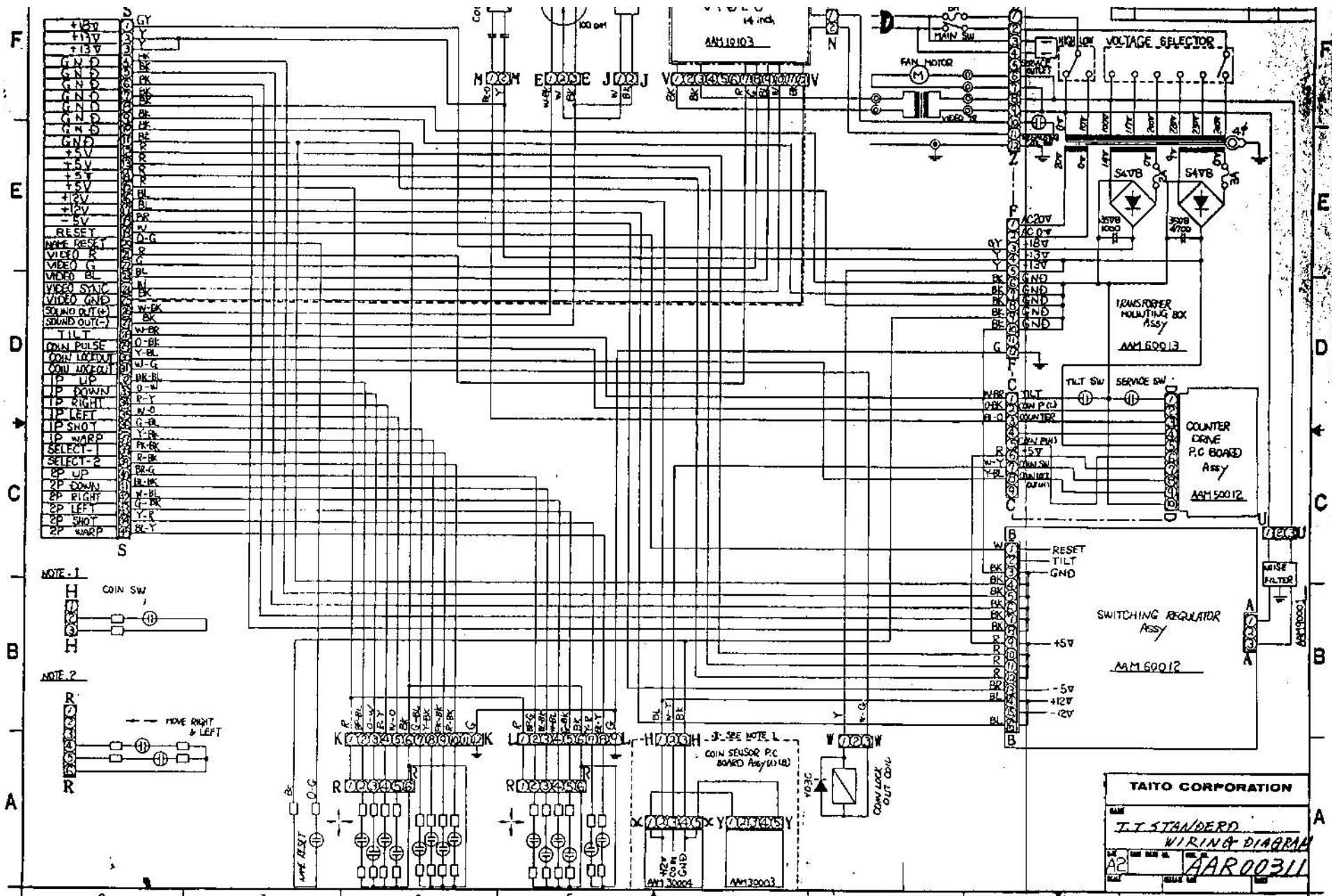
DIP SW2

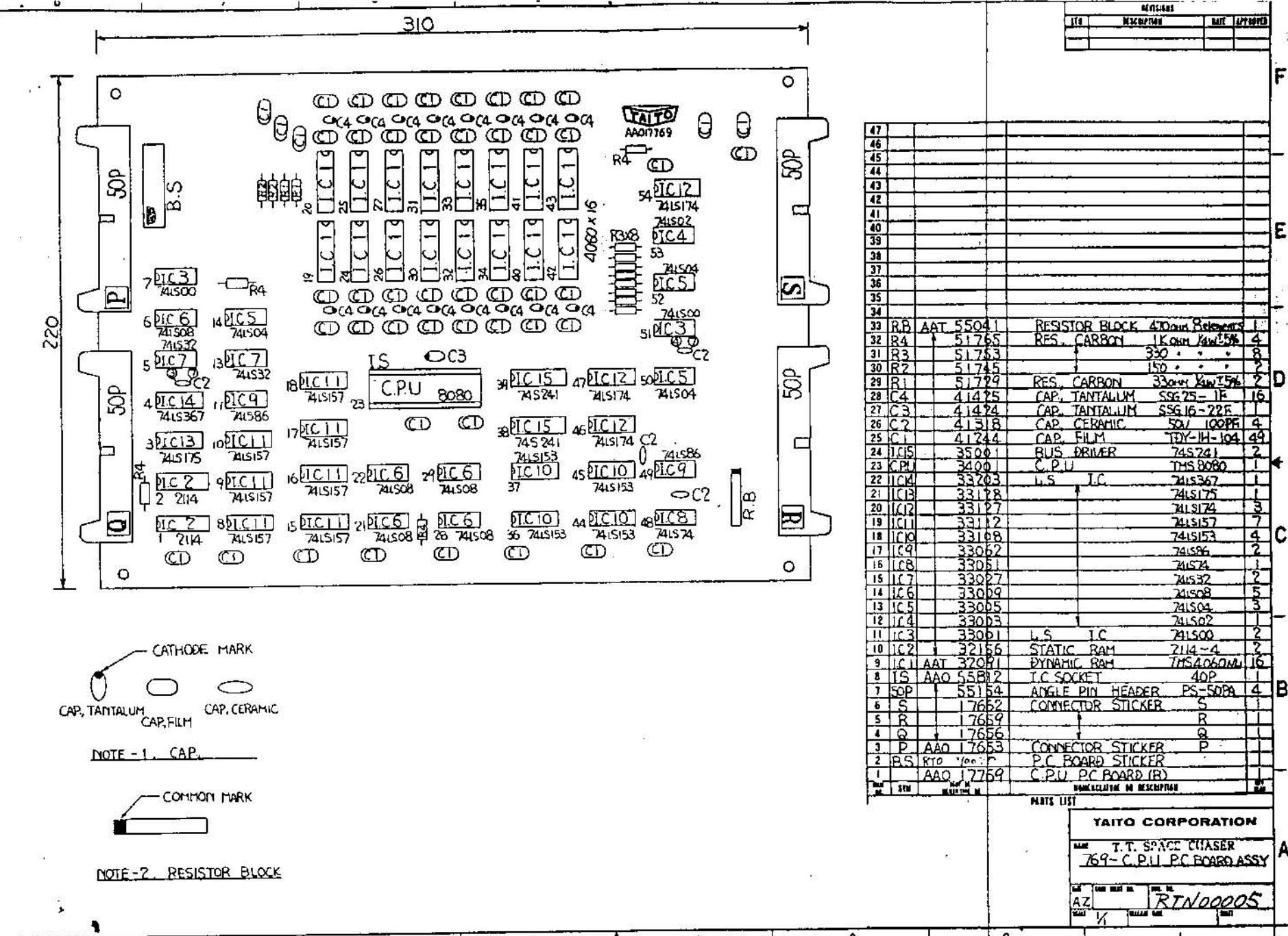
- o SW1-SW3 ... These switches are not used and ahould be set "OFF" positions.

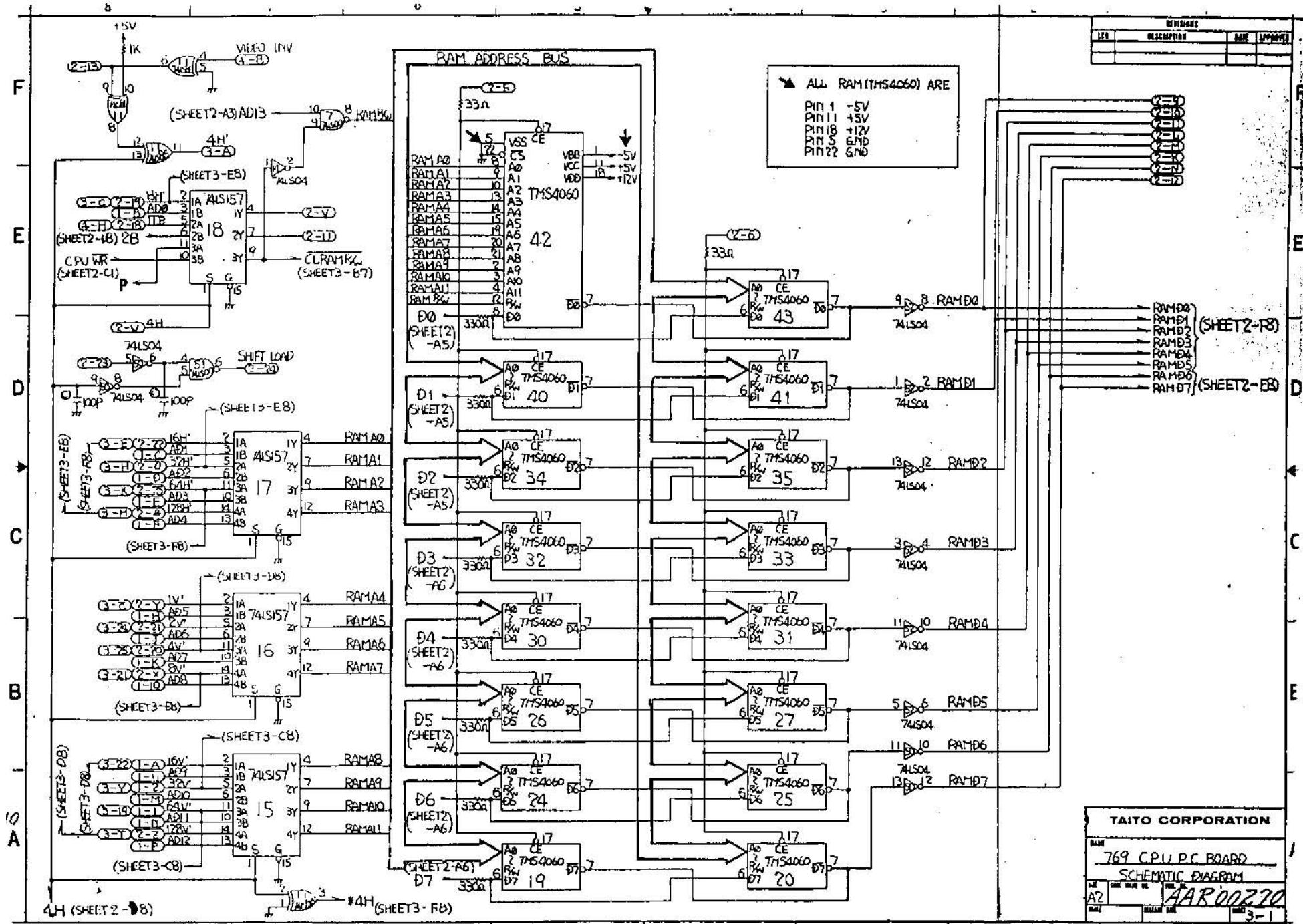
- o SW4 ... Switch for Screen Inversion

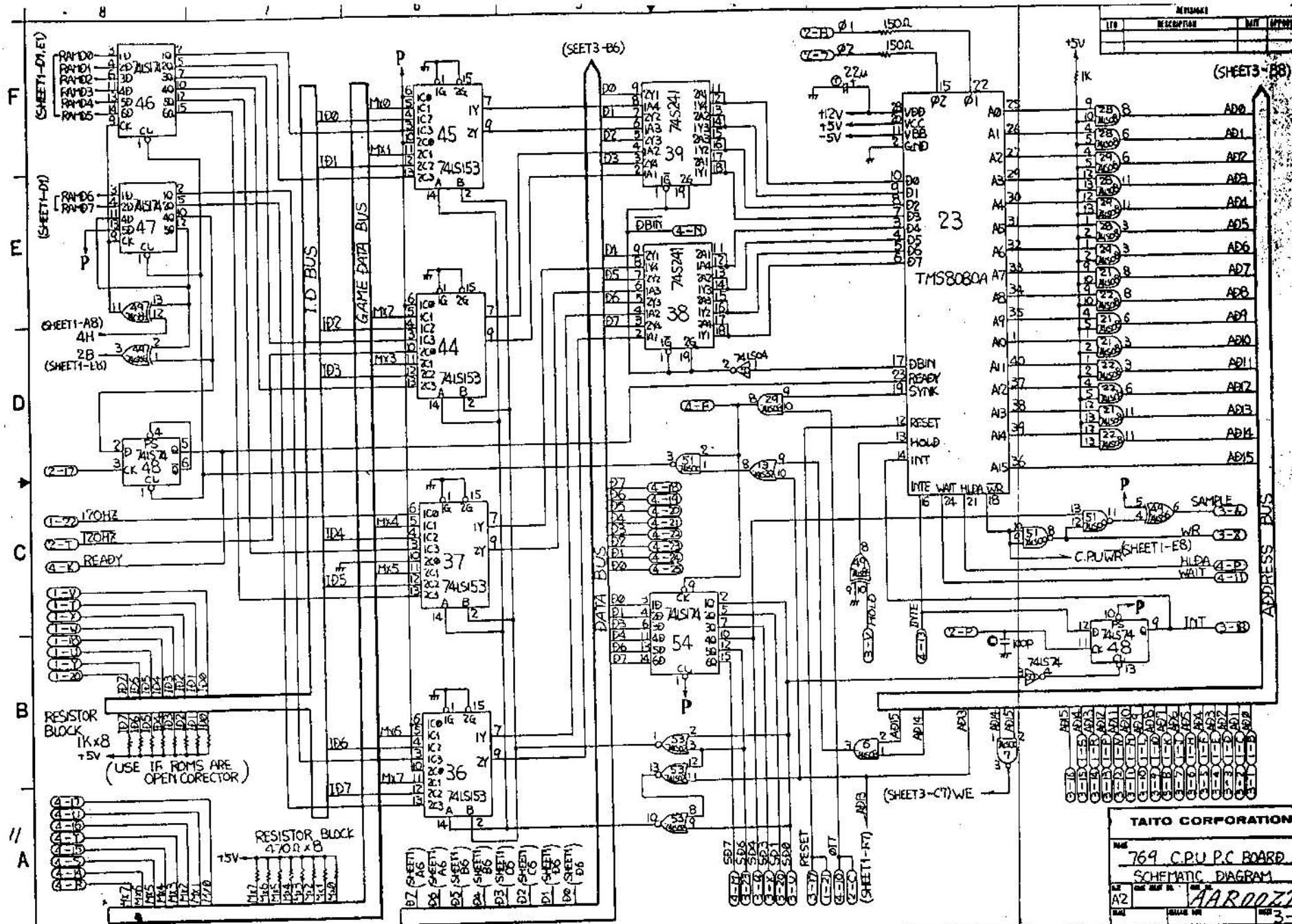
"ON" ... Inversion "OFF" ... No Inversion

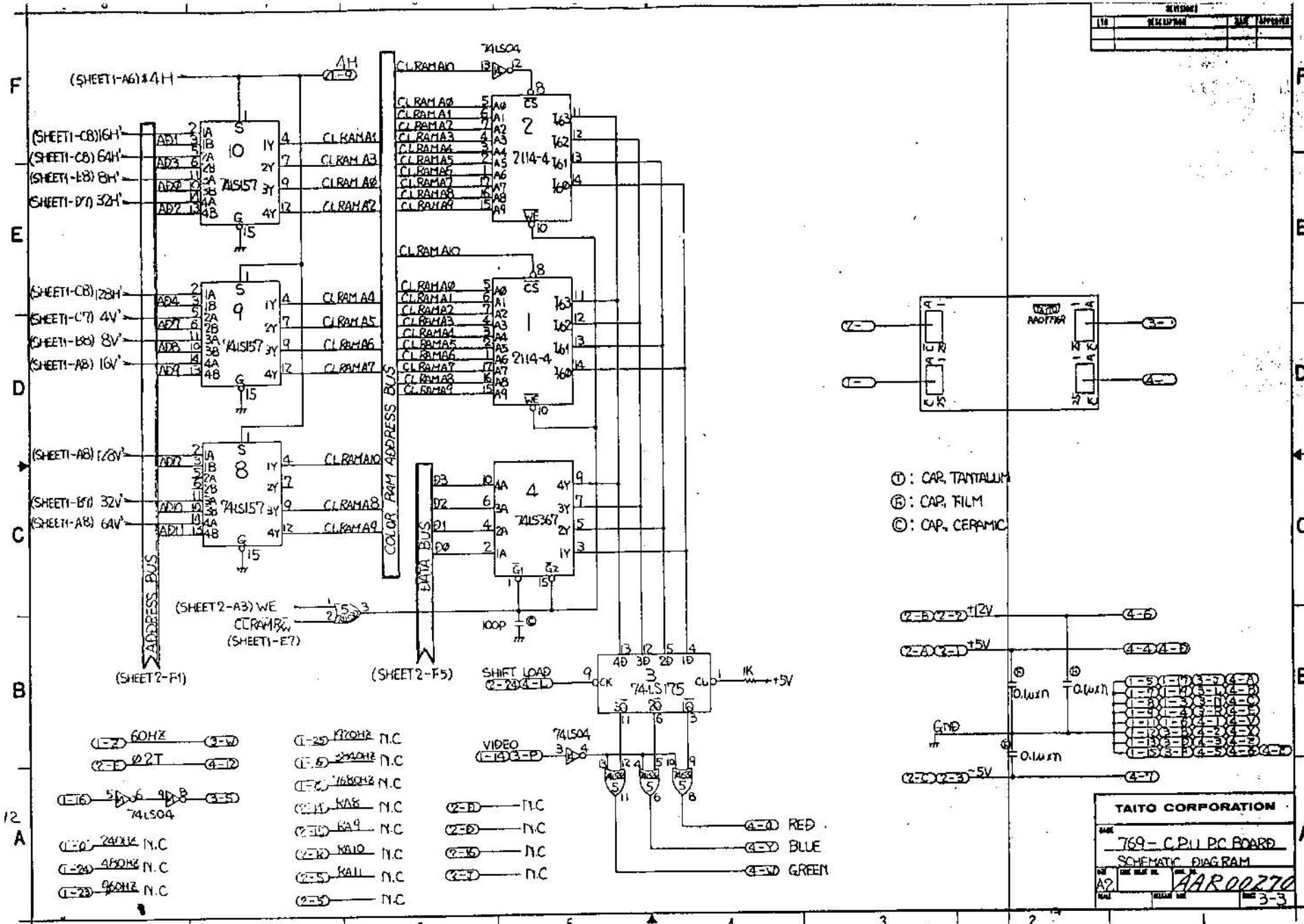
Normally, this switch should be set at "OFF" position.

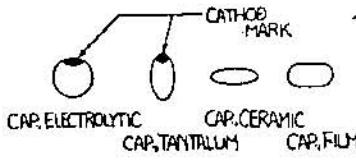
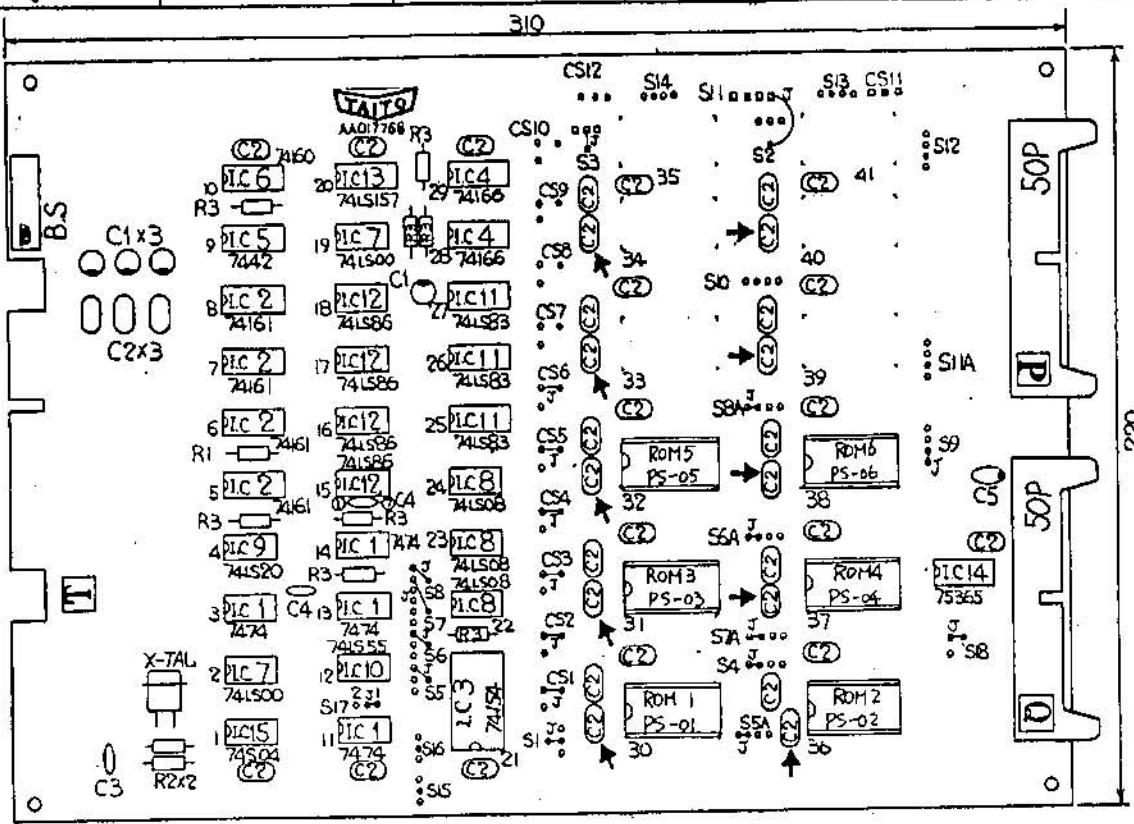












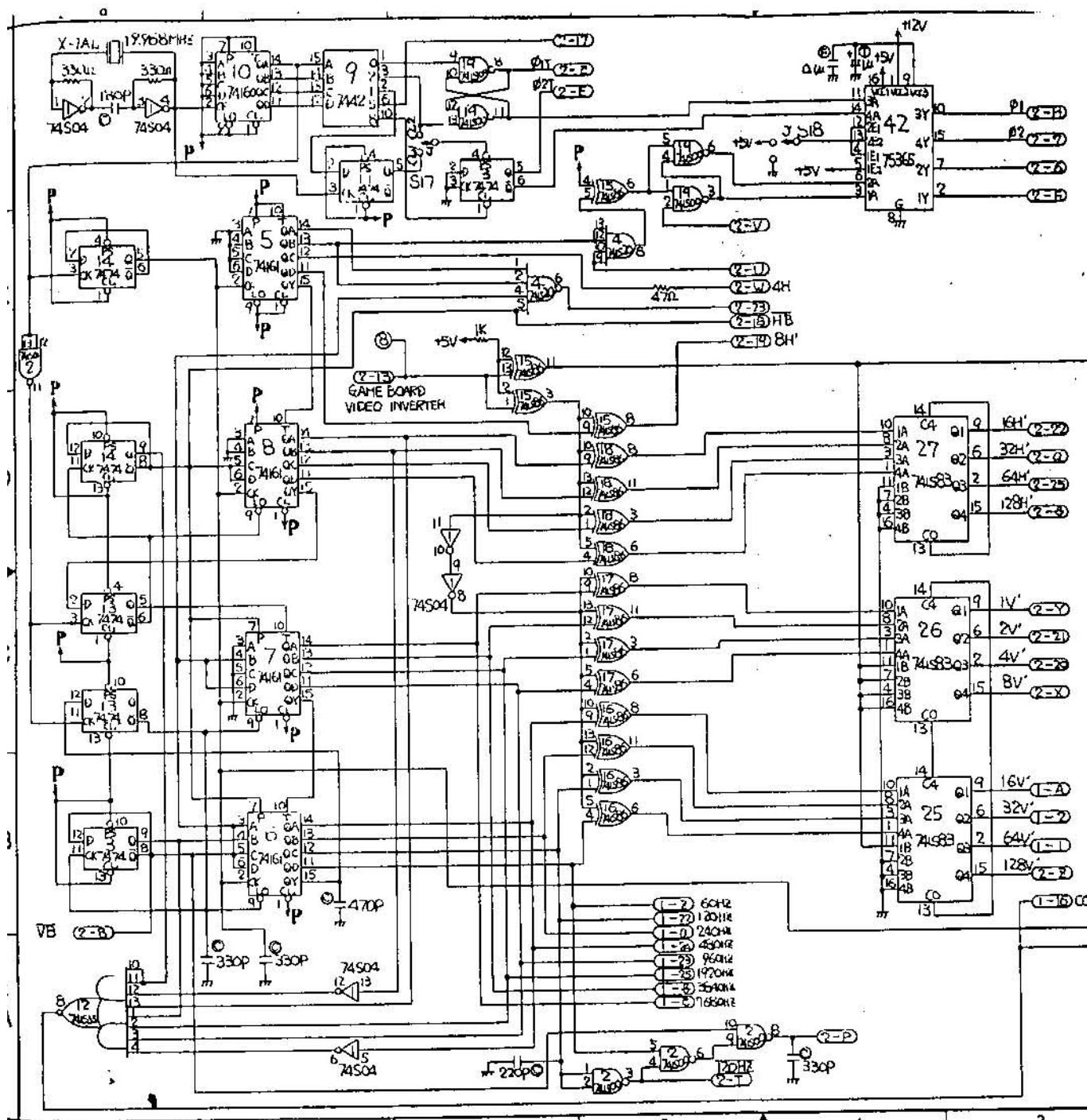
NOTE-2, NOT USE THIS MARKED (x) CAPACITOR FOR 2716 & 2316B

CAP. ELECTROLYTIC CAP. CERAMIC
CAP. TANTALUM CAP. FILM

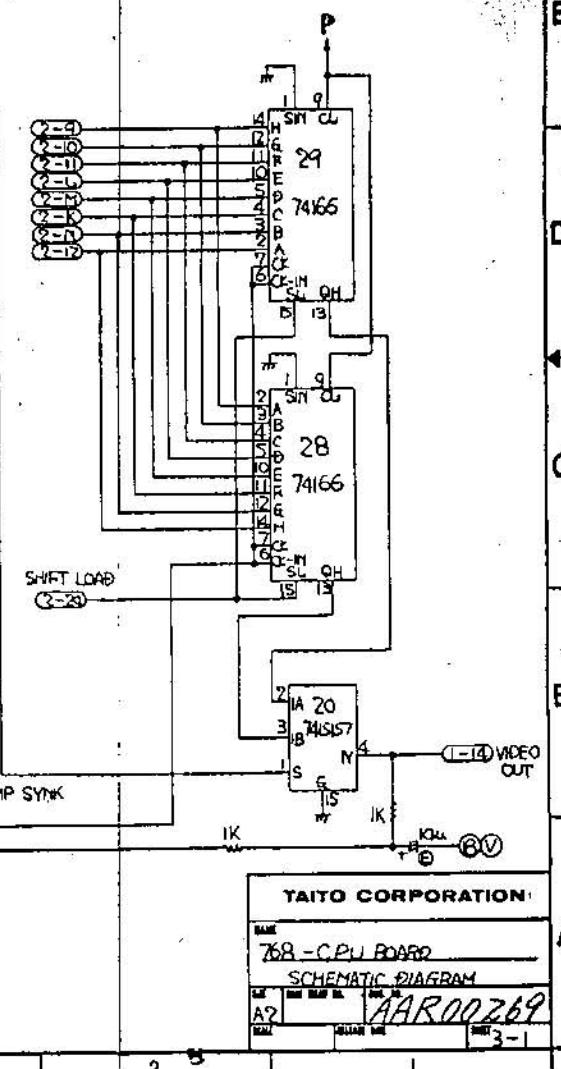
NOTE - 1. CAP.

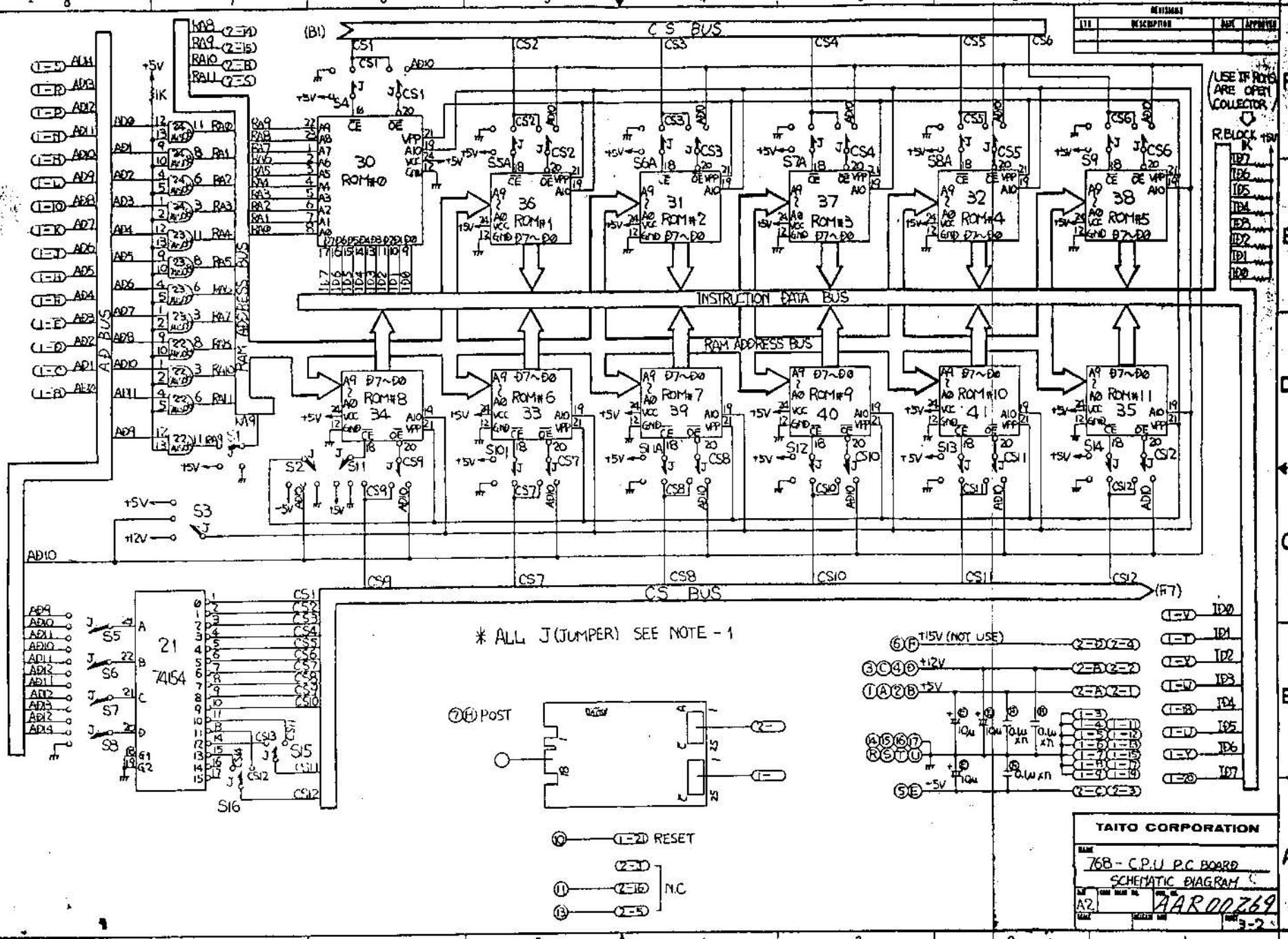
			ITEM	DESCRIPTION	DATE	AMOUNT
47						
46						
45						
44						
43						
42						
41						
40						
39						
38	R0H1	PSO	90006	P - R0H	PS-06 (2716)	1
37	R0H1		90005		PS-05	1
36	R0H1		90004		PS-04	1
35	R0H3		90003		PS-03	1
34	R0H2		90002		PS-02	1
33	R0H1	PSO	90001	P - R0H	PS-01 (2716)	1
32	R3	AAT	51765	RES. CARBON	1Kohm 1W ±5%	3
31	R2		51753		330 " "	2
30	R1		51753	RES. CARBON	470uh 1W ±5%	1
29	C5		41436	CAP. TANTALUM	SSG 35-1F	1
28	C4		41334	CAP. CERAMIC	470PF	2
27	C3		41374	CAP. CERAMIC	180PF	1
26	C2		41244	CAP. FILM	TDY-1H-104	32
25	C1		41037	CAP. ELECTROLYTIC	25Vb-10uF	4
24	IC15		38003	S I.C.	74LS04	1
23	IC14		35002	MOS DRIVER	75365	1
22	IC13		331112	L.S. I.C.	74LS157	1
21	IC12		33062		74LS86	4
20	IC11		33059		74LS83	3
19	IC10		33043		74LS55	1
18	IC9		33019		74LS20	1
17	IC8		33009		74LS08	3
16	IC7		33001	L.S. I.C.	74LS00	2
15	IC6		32086	TTL I.C.	74160	1
14	IC5		32039		7447	1
13	IC4		32028		74166	2
12	IC3		32027		74154	1
11	IC2		32016		74161	4
10	IC1	AAT	32011	TTL I.C.	7474	4
9	X-TA	AAQ	69519	X-TAL	10.468 MHZ	1
8	J		62639	TINNED COPPER WIRE	0.5#	25
7	IS1		55787	I.C. SOCKET	28P	6
6	SOP		55154	ANGLE PIN HEADER	PS-50PA	2
5	T		17665	CONNECTOR STICKER	T	1
4	Q		17656		Q	1
3	P	AAQ	17653	CONNECTOR STICKER	P	1
2	B.S.	P30	70044	P.C. BOARD STICKER		

PARTS LIST	
TAITO CORPORATION	
ITEM NO. T.T. POLARIS	
P.S. - CPU PCB BOARD ASSY	
ITEM NO.	ITEM NAME
A2	PSN00002
ITEM NO.	ITEM NAME
ITEM NO.	ITEM NAME



* ALL J(JUMPER), SEE NOTE-1





REVISED			
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	S5B	S1A	C51	C52	C53	C54	C55	C56	C57	C58	C59	C50	C51	C52	C53	C54	C55	C56	C57
LUPIN the II	RPA9	+5V	AD10	C51	AD11	AD12	AD14	GND	C54	C57											C51	C52	C53	C54	C55	C56	C57											
ASTRO ZONE	RPA9	+5V	AD10	C51	AD11	AD12	AD14	GND													C51	C52	C53	C54	C55													
POLARIS	RPA9	+5V	AD10	C51	AD11	AD12	AD14	GND	C56											C51	C52	C53	C54	C55	C56													

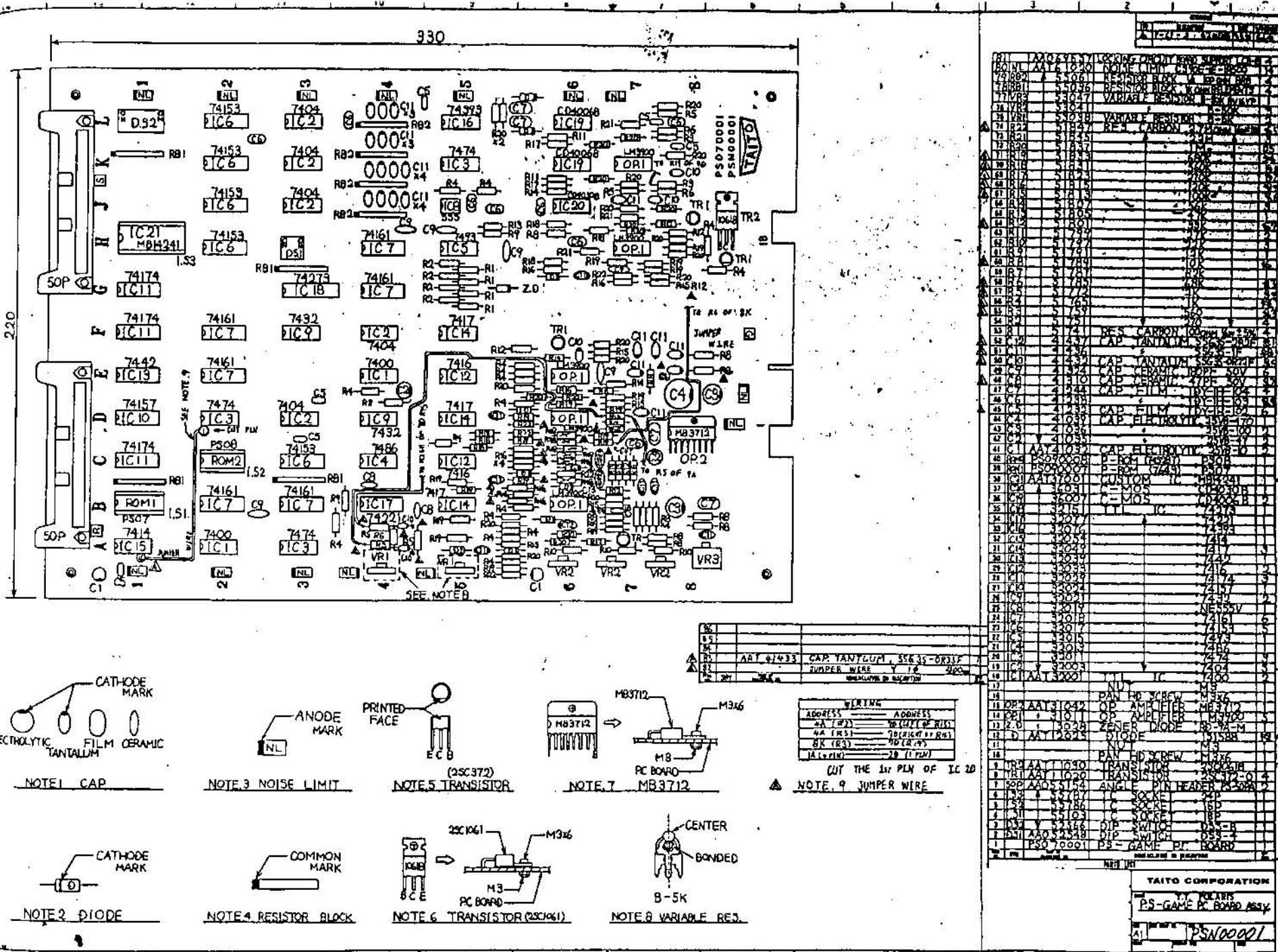
NOTE-1 JUMPER WIRING

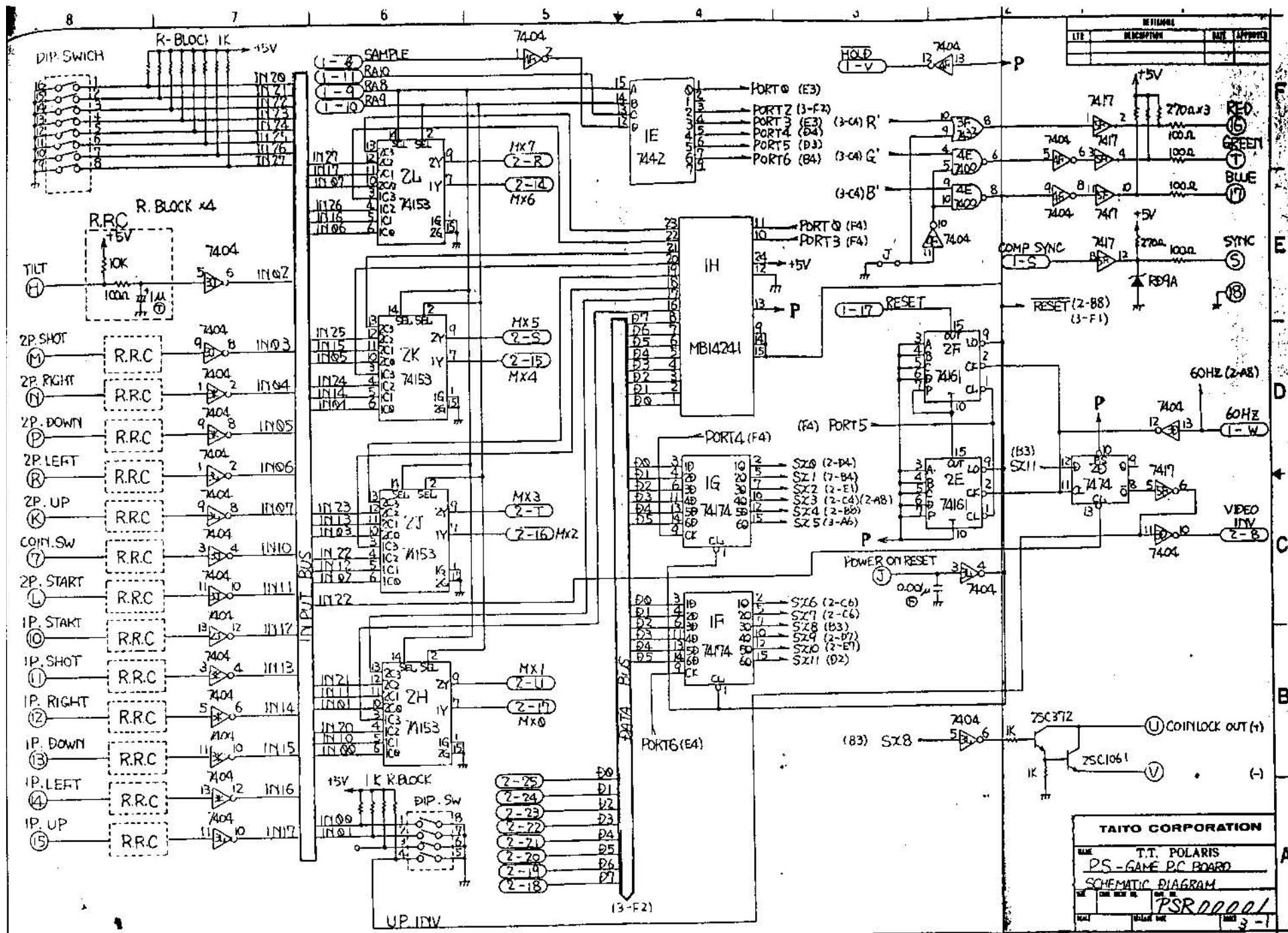
ROM

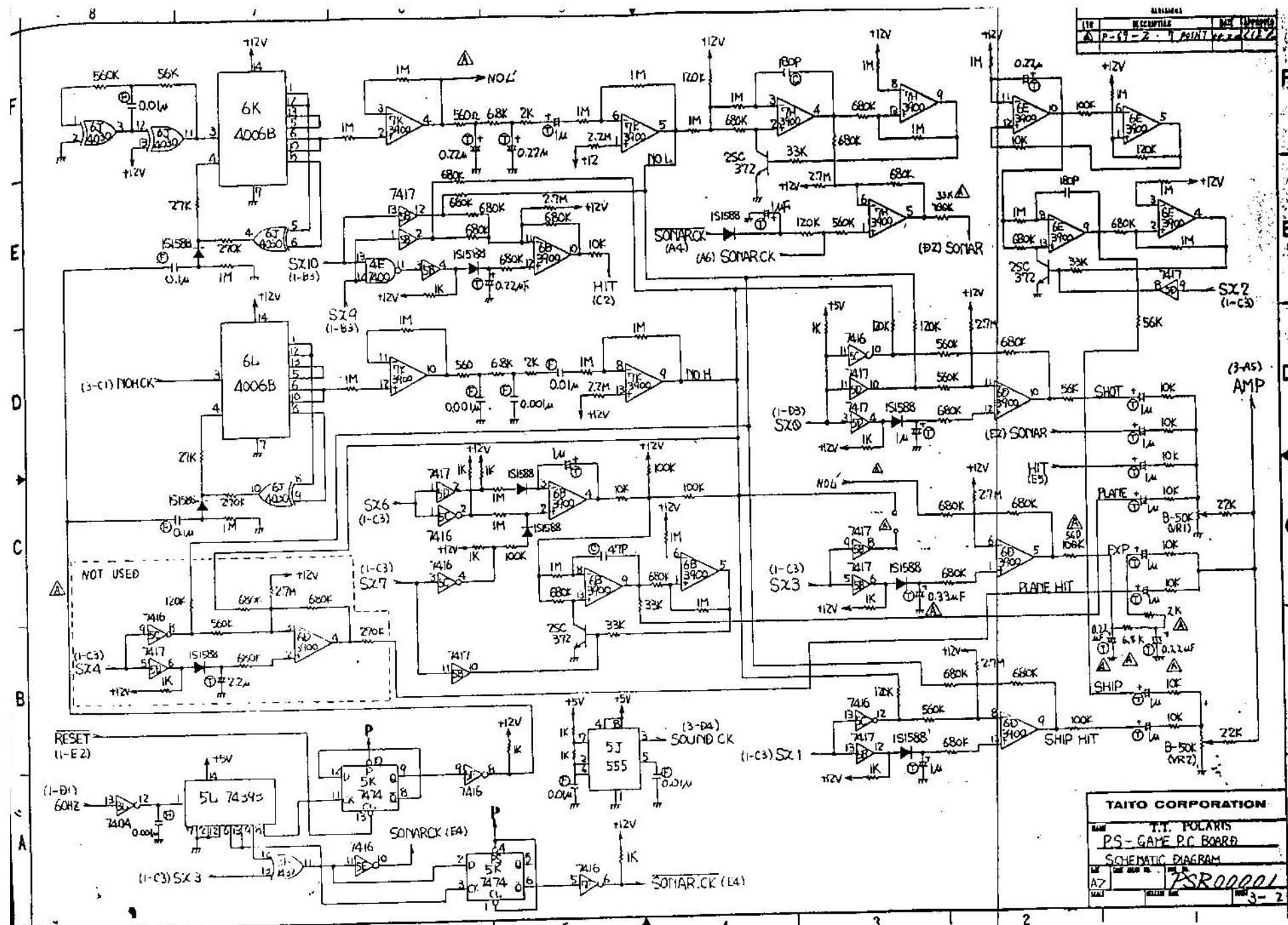
MACHINE NAME	ROM#10	ROM#11	ROM#12	ROM#13	ROM#14	ROM#15	ROM#16	ROM#17	ROM#18	ROM#19	ROM#20	ROM#21	ROM#22	DESCRIPTION
LUPIN the II	LP-12	LP-13	LP-14	LP-15	LP-16	LP-17	LP-18							2716
ASTRO ZONE	GE-01	GE-02	GE-03	GE-04	GE-05									2716
POLARIS	PS-01	PS-02	PS-03	PS-04	PS-05	PS-06								2716

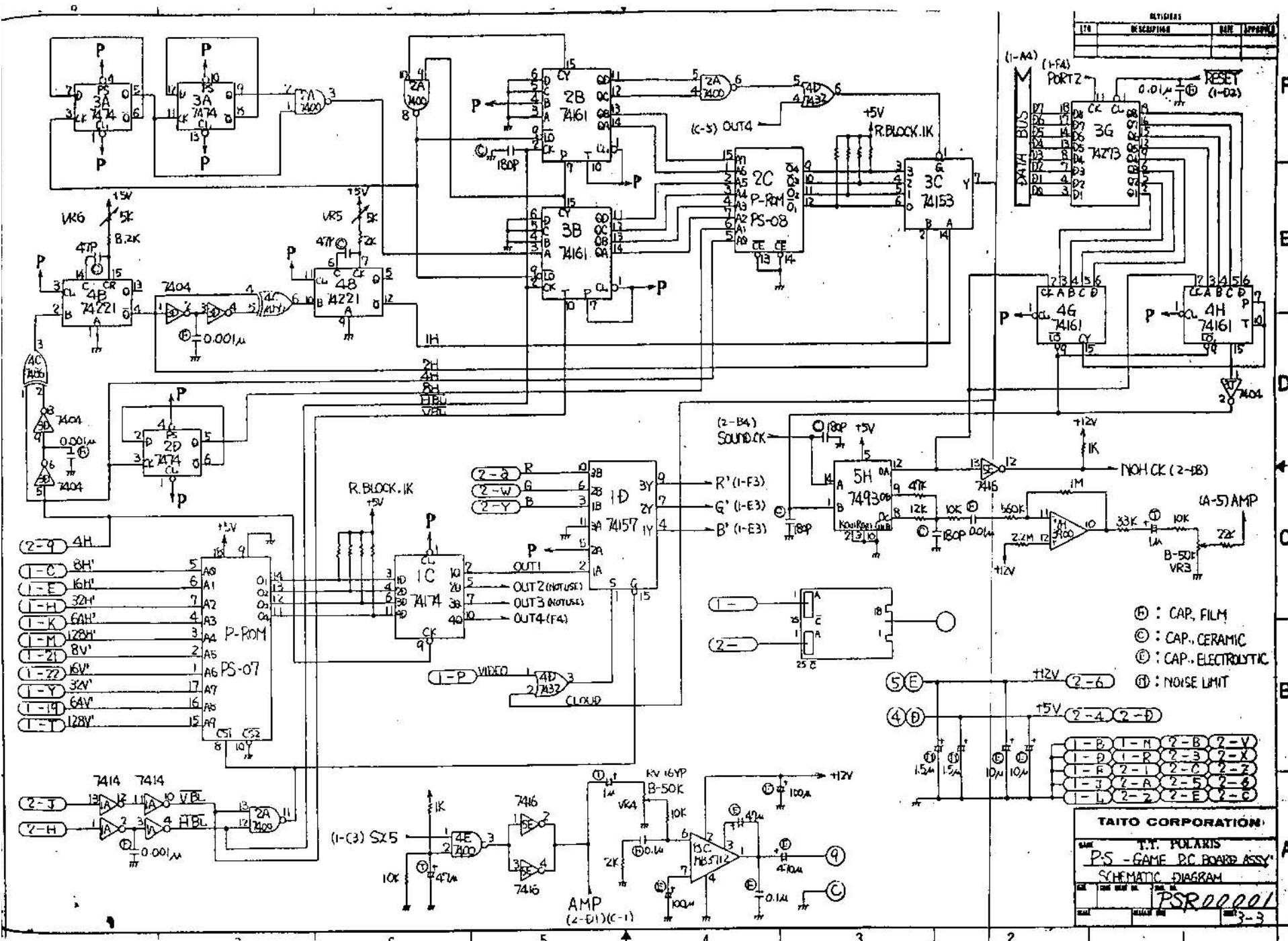
NOTE-2 P-ROM

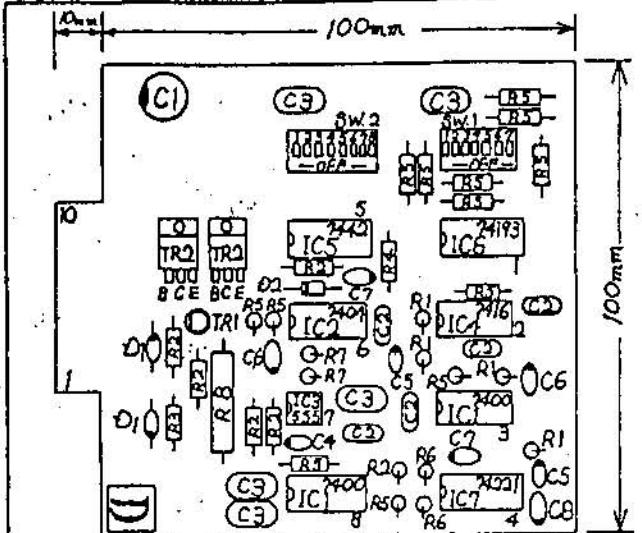
TAITO CORPORATION	
768-CPU PC BOARD	
SCHEMATIC DIAGRAM	
A2	AAR00269
REV	3-3





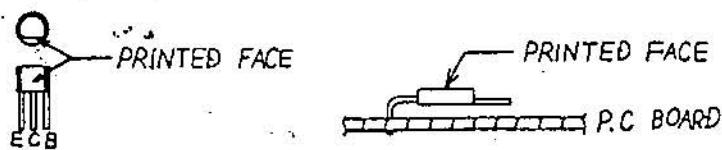






ELE. CATHODE MARK
TAN. TANTALUM &
NOTE.1 CAP. ELECTROLYTIC

CATHODE MARK
NOTE.2 DIODE



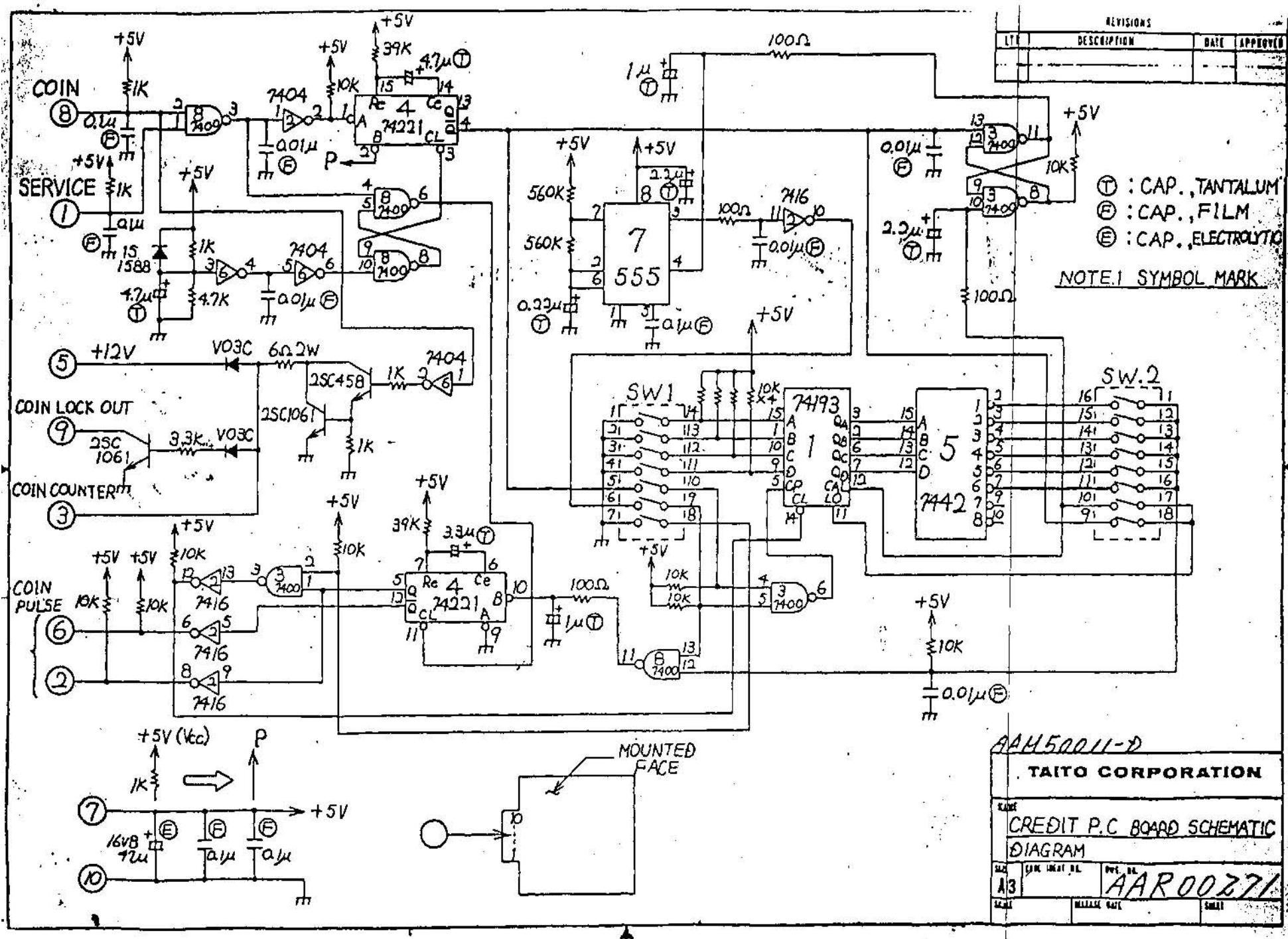
NOTE.3 TRANSISTOR(2SC458) NOTE.4 TRANSISTOR(2SC1061)

NOTE.5 THE RELATION BETWEEN COIN AND CREDIT

	SW1							SW2						
1 COIN 1 PLAY	ON	ON	ON	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF
2 COIN 1 PLAY	OFF	ON	OFF	OFF	OFF	OFF	OFF							
3 COIN 1 PLAY	OFF	ON	OFF	OFF	OFF	OFF	OFF							
4 COIN 1 PLAY	OFF	ON	OFF	OFF	OFF	OFF								
1 COIN 3 PLAY	ON	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON
2 COIN 3 PLAY	OFF	ON	OFF											
3 COIN 4 PLAY	ON	ON	OFF											

ITEM NO.	SYN.	PLAT. NO. LOCATION NO.	DESCRIPTION		REV. NO.
			NAME	REV. NO.	
31	R8	AAT 55033	WINDING RESISTOR, 60OHM 2W ±10%	1	
30	R7	51831	RES. CARBON, 560KOHM 1/4W ±5%	2	
29	R6	51803	39K	2	
28	R5	51789	10K	13	
27	R4	51781	4.7K		
26	R3	51777	3.3K		
25	R2	51765	1K	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	41298	CAP. FILM → TDY-IH-103	5	
16	C1	41021	CAP. ELECTROLYTIC, 16V847μ		
15	IC7	32077	TTL IC → 74321		
14	IC6	32044	74193		
13	IC5	32039	7442		
12	IC4	32033	7416		
11	IC3	32019	NE555V		
10	IC2	32003	7404		
9	IC1	32001	TTL IC → 7400	2	
8	D2	12025	DIODE → 151588	1	
7	D1	12002	DIODE → V03C	2	
6	TR2	11030	TRANSISTOR → 2SC1061-B	2	
5	TR1	AAT 1005	TRANSISTOR → 2SC458-C	1	
4	SW2	AAO 52566	DIP SWITCH → DSS-8		
3	SW1	52560	DIP SWITCH → DSS-7		
2	D	17623	CONNECTOR STICKER → D		
1		AAO 17766D	CREDIT P.C. BOARD		

PARTS LIST		
TAITO CORPORATION		
NAME: CREDIT P.C. BOARD ASSY.		
PLATE NO.	PLATE NO.	REV. NO.
13	AAM 50011-D	
ITEM NO.	WAVELET NO.	DATE
1/1		



AAM50011-D

TAITO CORPORATION

CREDIT P.C. BOARD SCHEMATIC
DIAGRAM

REV. A3 DATE 1987.01.01 PAGE 1/1
AAR00271