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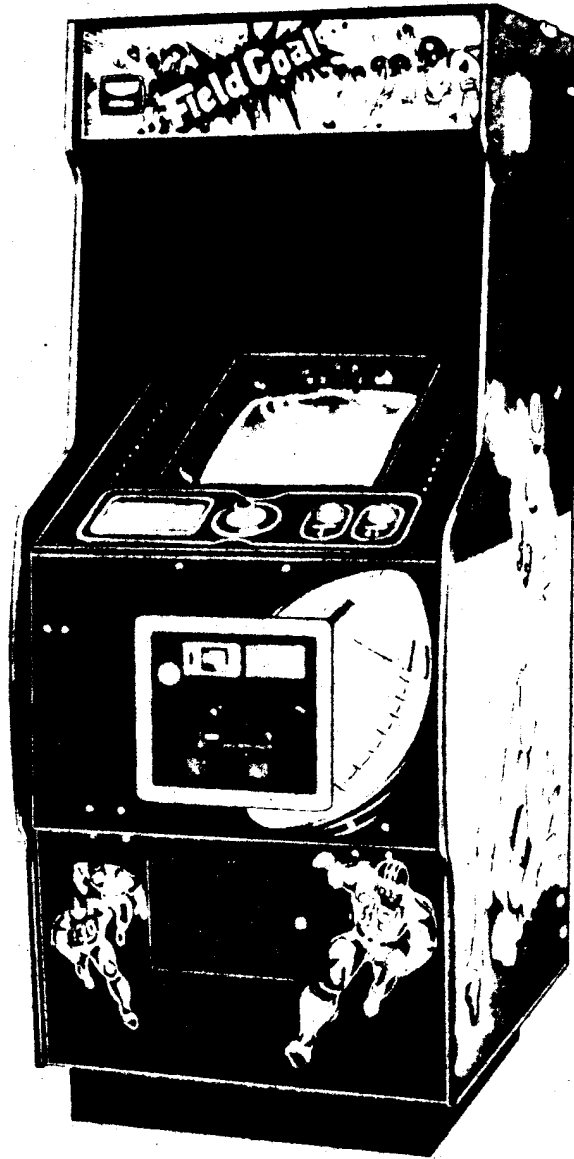


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# Field Goal



**SERVICE INSTRUCTIONS  
AND PARTS CATALOG**



**TAITO CORPORATION**

AF070009

## 5. Playing Instructions

- o 1 or 2 player game.
- o 1 coin; 1 game (1 player).. 3 balls (adjustable to 5 balls)
- o 2 coins; 2 games (1 player) or 1 game (2 players)
  
- o After inserting Coin(s), press either one two player button to start game.
  
- o After finish game-start music, helmets (blue, yellow, and red ones), the paddle and the ball will appear on the screen.
  
- o Turn the control knob to move the paddle right or left and strike the ball.
  
- o Two players alternate play.
  
- o Scoring:  
  
A goal ..... 300 pts.  
A blue helmet ..... 40 pts.  
A yellow helmet ..... 30 pts.  
A red helmet ..... 20 pts.  
  
(BONUS)  
A complete row of blue helmets ..... 1,500 pts.  
A complete row of yellow helmets ..... 1,000 pts.  
A complete row of red helmets ..... 500 pts.
  
- o One free game when the score of "TOP THIS SCORE FOR CREDIT" displayed on the screen is reached.

Functional Description of Game:

- o When the ball hits the player image running on the screen, the points (the player uniform number x100) will be added to the points displayed on the goal.
- o When the points displayed on the goal reach 1,000 or more, these points and the word "EXTRA" are displayed alternately on the screen. If the player gets a goal when the word "EXTRA" is displayed, he will be awarded one free-ball play.
- o The speed of the ball will change at random.
- o The size of the paddle becomes small if the player continues to hit helmets. If he misses a ball the size of the paddle becomes as large as before.
- o If the ball hits the head of the player's image running on the screen, he will be down and disappear.
- o In 5-ball game, the scoring for helmets changes as follows:
  - A blue helmet ..... 30 pts.
  - A yellow helmet ..... 20 pts.
  - A red helmet ..... 10 pts.
- o From the top to the 3rd HI-SCORE'S will be displayed on the screen at the time of the attract mode (game-over).

## 7. Adjustments on Game & Sound PC Board

(See Fig. 4 and Tables 1 & 2)

To decrease the sound, turn each pot counterclockwise.

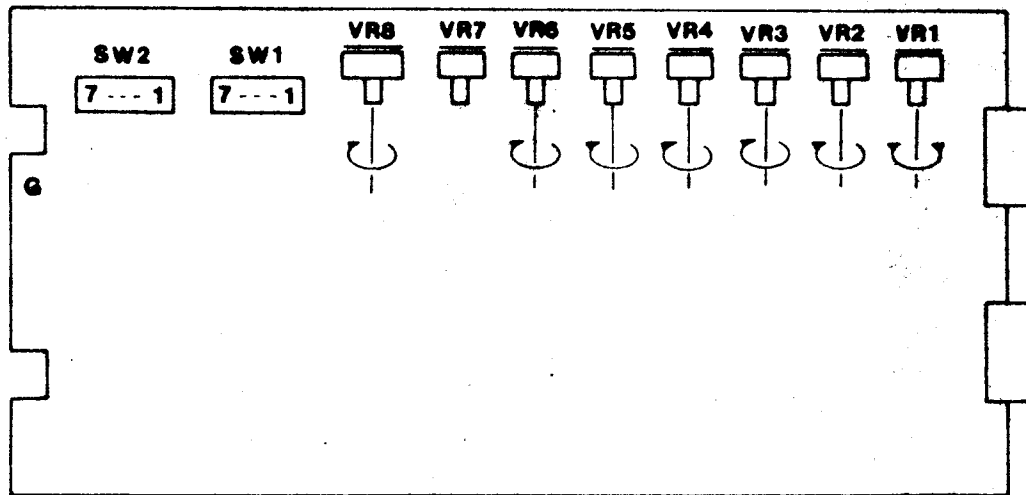


Fig. 4

- o VR1 ... Pot for adjusting the movement of the paddle.  
(If the paddle does not touch either side of the wall, adjust it by turning this pot.)
- o VR2 ... Pot for adjusting the sound volume of the ball bouncing.
- o VR3 ... Pot for adjusting the music at the game start and the game-over.
- o VR4 ... Pot for adjusting the forward-hit sound when the ball is passed to the player-image.
- o VR5 ... Pot for adjusting the sound volume of "Do·Do·Do"
- o VR6 ... Pot for adjusting the sound volume when the player-image falls down.
- o VR7 ... Pot for adjusting the tone when the player-image falls down.
- o VR8 ... Pot for adjusting total sound.

DIP Switch NO.1:

- o SW1 - SW3 ... Switches for the change-over of the replay scores (See Fig. 4 and Table 1)

The replay scores are shown at the rate of 30% and 20%, and they become higher and higher as the number of replays are increased.

SW			REPLAY SCORE			
1	2	3	30%		20%	
a	ON	ON	7,000	9,000	12,000	17,000
b	OFF		12,000	17,000	23,000	28,000
c	ON	OFF	23,000	28,000	33,000	39,000
d	OFF		33,000	39,000	45,000	50,000
e	ON	OFF	45,000	50,000	57,000	65,000
f	OFF		57,000	65,000	72,000	79,000
g	ON	OFF	72,000	79,000	86,000	93,000
h	OFF		86,000	93,000	99,000	150,000

Table 1

Note: The Replay score is preset at "f" at the factory.

- o SW4 ... Switch for the change-over of the replay  
When this switch is set at the "ON" position,  
no replay will be awarded.  
This switch is preset at the "OFF" position at  
the factory.
- o SW5 ... Switch for factory-adjusting the solid-state  
modules This switch should be always set at  
"OFF" position.
- o SW6 ... Switch for the change-over of the ball number

SW6	Number
ON	3
OFF	5

Table 2

This switch is preset at the "ON" position  
(3 balls) at the factory.

- o SW7 ... Switch for displaying "ONE PLAYER 1 COIN, TWO PLAYERS 2 COINS" on the screen  
When the switch is set at the "ON" position, these words are not displayed.  
Normally, this switch is set at the "OFF" position.

DIP Switch NO.2:

- o SW1 ... Switch for rotating the screen images  
When the switch is set at the "OFF" position the screen images will be rotated. (for Cocktail Version) In the upright version, this switch should be set at the "ON" position.
- o SW2 ... Switch for the change-over 1 COIN - 1 PLAYER or 1 COIN - 2 PLAYERS (See Fig. 4 and Table 3)

SW2	COIN	PLAYER(S)
OFF	1	1
ON	1	2

Table 3

This switch is preset at the "OFF" position at the factory.

- o SW3 ... Switch for the change-over the instruction languages (See Fig. 4 and Table 4)

SW3	LANGUAGE
OFF	ENGLISH
ON	JAPANESE

Table 4

This switch is preset at the "OFF" position (ENGLISH) at the factory.

- o SW4 - SW7 ... Switches for factory-adjusting the solid-state modules

These switches should be always set at the "OFF" positions.

9. Adjustments of Supply Voltage (See Fig. 6)

If the voltage of the power supply is low, the picture on the screen sometimes gluckers. In that case, change the connection of the power transformer terminals in the cabinet. This adjustment is obtained by using the change-over switch.

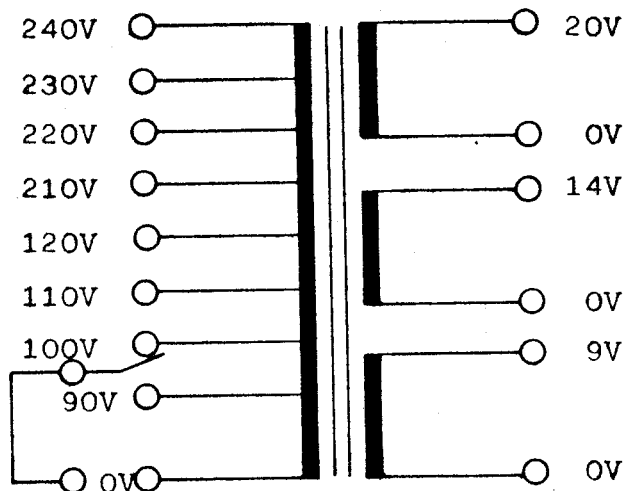


Fig. 6

10. Typical Picture During Play (See Fig. 7)

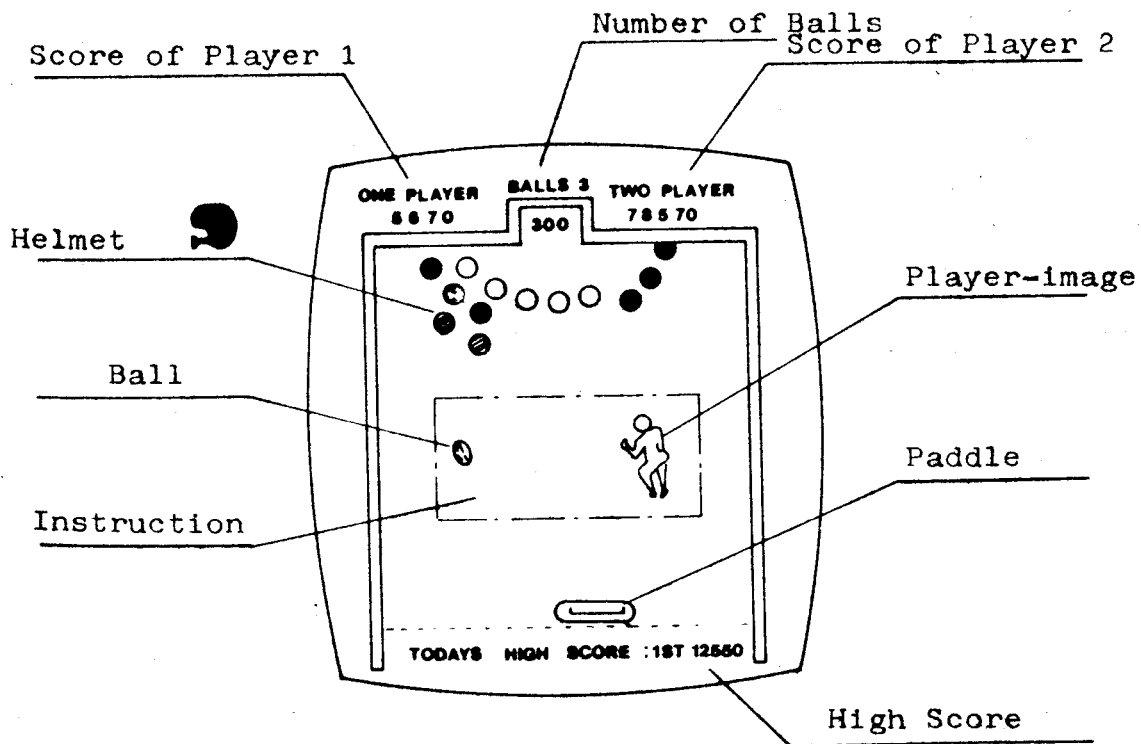
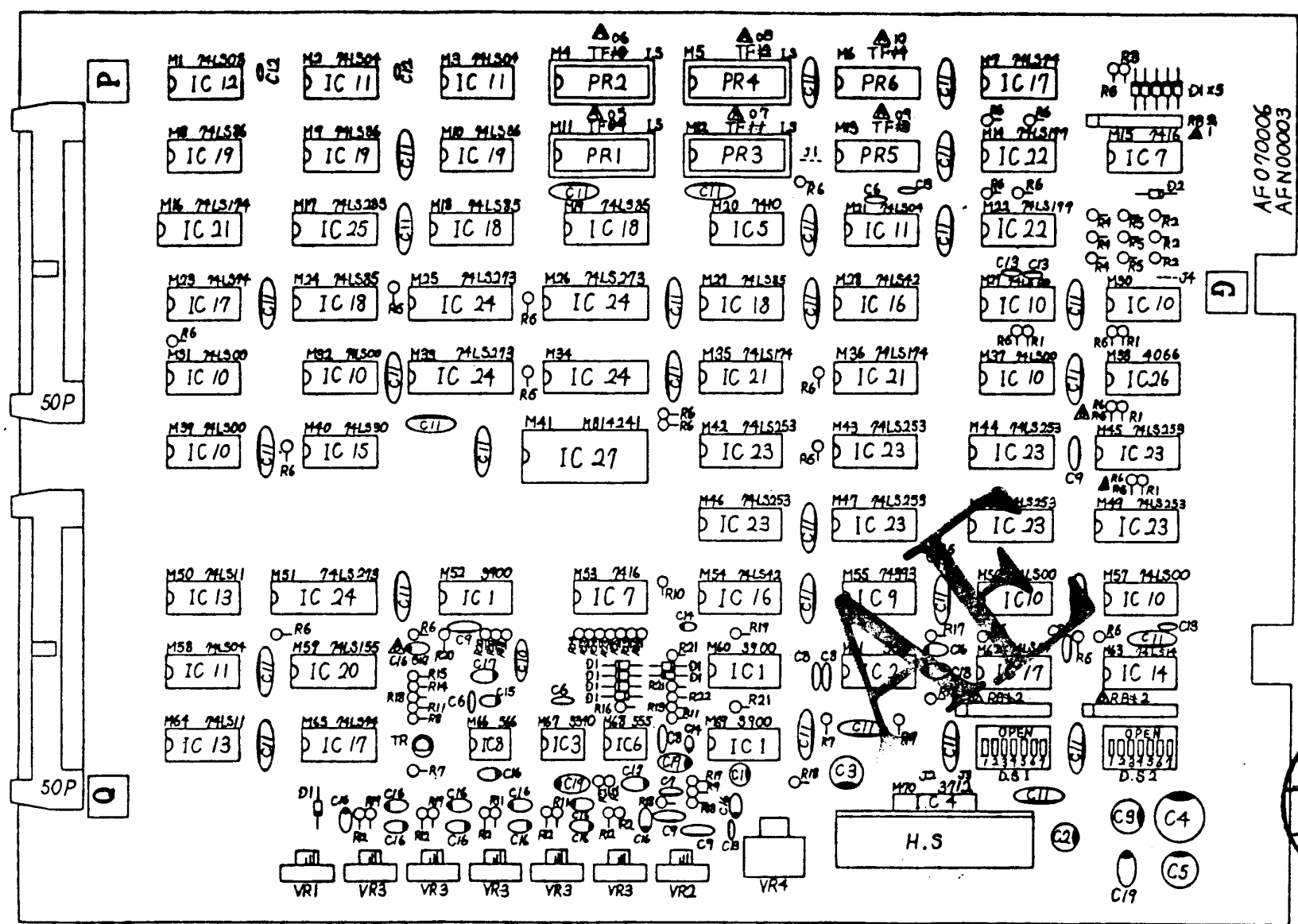
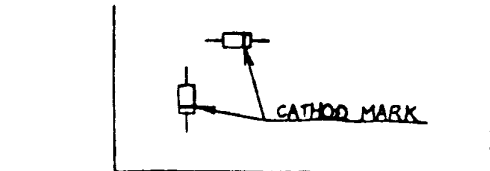
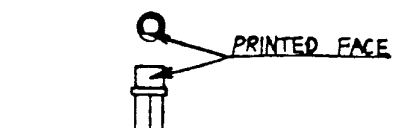
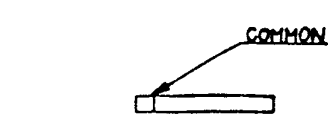
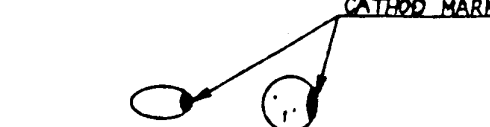
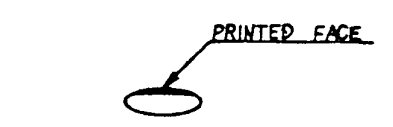
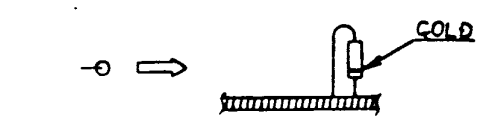


Fig. 7





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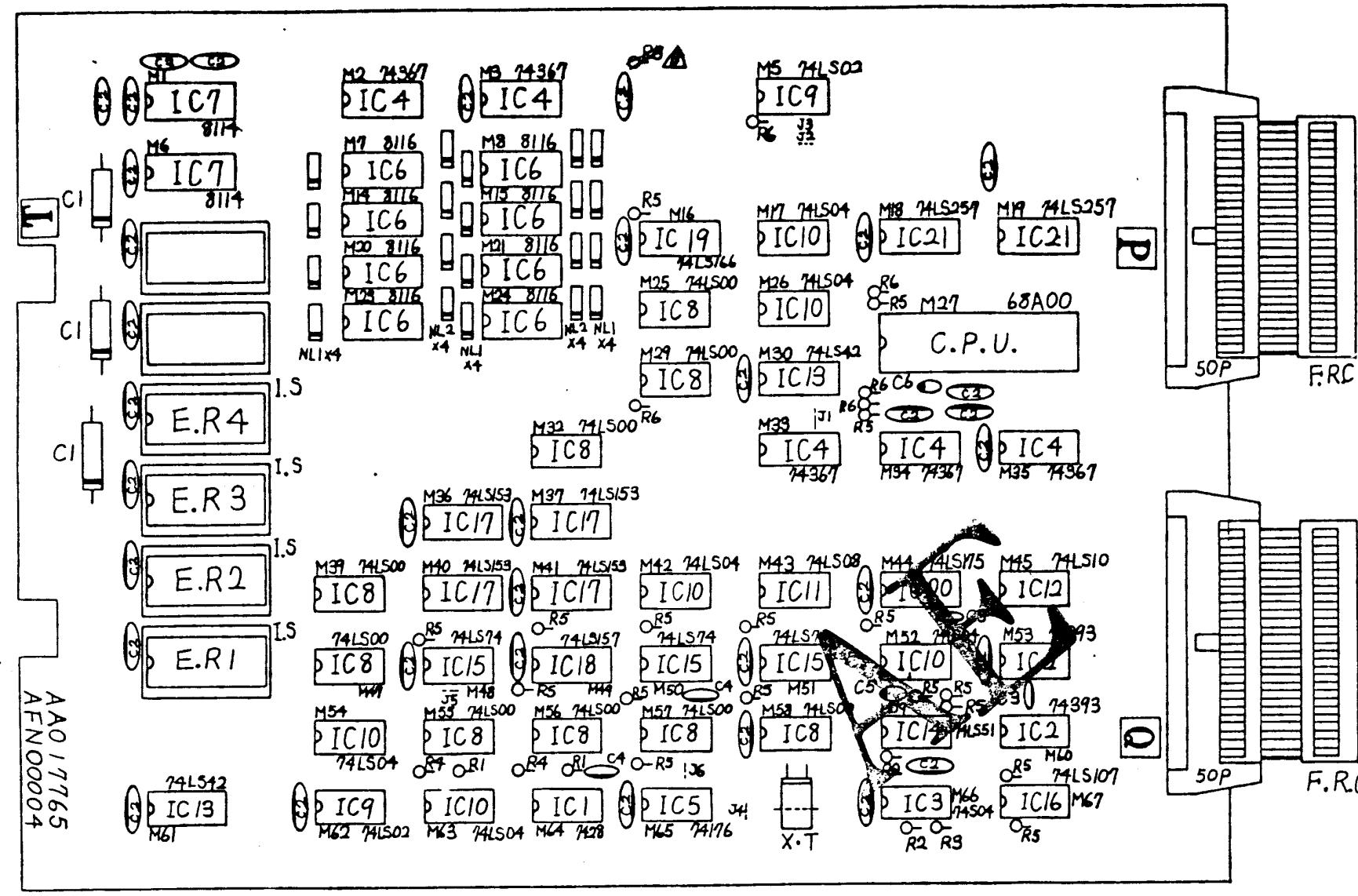


ITEM NO.	PART NO.	QUANTITY	DESCRIPTION
97	R2	1	AAT 53058 RESISTOR BLOCK 22KOHM 8-ELEMENT
98	R81	1	55039 RESISTOR BLOCK 10KOHM 8-ELEMENT
99	VR4	1	53047 VARIABLE RESISTOR, B-50K RV8YP
94	VR3	5	53041 B-50K
95	VR2	1	53038 B-5K
94	VR1	1	53037 VARIABLE RESISTOR, B-2K
93	R26	1	51967 RES., CARBON, 100KOHM 1/4W 2%
92	R25	1	51965 68K
91	R24	1	51960 20K
90	R23	3	51957 1 K OHM 1/4W 2%
89	R22	1	51847 2.7KOHM 1/4W 5%
88	R21	3	51833 680K
87	R20	3	51831 560K
86	R19	4	51831 220K
85	R18	5	51813 100K
84	R17	1	51811 82K
83	R16	1	51810 75K
82	R15	1	AAT 51809 RES., CARBON, 68K OHM 1/4W 5%
81	SYM	1	NO. 1

ITEM NO.	PART NO.	QUANTITY	DESCRIPTION
80	R14	1	51799 27K
79	R13	1	51797 22K
78	R12	1	51789 10K
77	R10	1	51781 4.7K
76	R9	1	51772 2K
75	R8	1	51771 75K
74	R7	1	51767 12K
73	R6	1	51765 1K
72	R5	1	51753 330
71	R4	1	51751 270
70	R3	1	51744 220
69	R2	1	51741 100
68	R1	1	51735 RES., CARBON, 20K OHM 1/4W 5%
67	C9	3	41606 CAP., TANTALUM, 35509-10ME
66	C8	1	41440 SSG35-488E
65	C7	1	41439 SSG35-487E
64	C6	1	41436 SSG35-1E
63	C5	1	41432 SSG35-0E2E
62	C4	1	41431 CAP., TANTALUM, 55G35-081E
61	C3	5	41334 CAP., CERAMIC, 470PF
60	C2	2	41318 CAP., CERAMIC, 100PF
59	C11	1	41244 CAP., FILM, TDY-IH-104
58	C10	1	41243 TDY-IH-473
57	C9	4	41241 TDY-IH-333
56	C8	4	41238 TDY-IH-103
55	C7	1	41234 TDY-IH-223
54	C6	3	41232 CAP., FILM, TDY-IH-102
53	C5	1	41036 CAP., ELECTROLYTIC, 25VB-100
52	C4	1	41036 16VB-100
51	C3	2	41035 16VB-100
50	C2	1	41031 16VB-100
49	C1	1	AAT 41078 CAP., ELECTROLYTIC, 16VB-100
48	PR6	1	TFO 90044 P-ROM FF=0(TF0), 4K
47	PR5	1	90043 P-ROM FF=0(TF0), 4K
46	PR4	1	90042 P-ROM FF=0(TF0), 4K
45	PR3	1	90041 P-ROM FF=0(TF0), 4K
44	PR2	1	90040 P-ROM FF=0(TF0), 4K
43	PR1	1	TFO 90045 P-ROM FF=0(TF0), 4K
42	IC7	1	AAT 37001 CUSTOM IC, MB14241
41	IC6	1	36067 C-MOS, CD4066A
40	IC5	1	33776 LS I.C., 74LS283
39	IC4	5	33770 74LS273
38	IC3	8	33763 74LS253
37	IC2	2	33747 74LS197
36	IC21	3	33737 74LS144
35	IC20	1	33710 74LS155
34	IC19	3	33062 74LS86
33	IC18	4	33061 74LS85
32	IC17	4	33051 74LS74
31	IC16	2	33032 74LS42
30	IC15	1	33026 74LS30
29	IC14	1	33015 74LS14
28	IC13	2	33012 74LS11
27	IC12	1	33009 74LS08
26	IC11	4	33005 74LS04
25	IC10	8	33001 LS I.C., 74LS00
24	IC9	1	32076 TTL I.C., 74399
23	IC8	1	32041 NE566V
22	IC7	2	32033 7476
21	IC6	1	32019 NE555V
20	IC5	1	32004 TTL I.C., 7410
19	IC4	1	31042 OP AMPLIFIER, MB3712
18	IC3	1	31031 ATTENUATOR, MC3340P
17	IC2	1	31028 TIMER I.C., NE555A
16	IC1	3	31011 OP AMPLIFIER, LM3900
15	D1	1	13028 ZENER DIODE, RD-9A-M
14	D1	12	12025 DIODE, 1S1588
13	TR	1	AAT 11020 TRANSISTOR, 2SC372-0
12	50P	2	AAD 55154 ANGLE PIN HEADER, PS-50PA
11	LS	4	55103 I.C. SOCKET, 18P
10	D.S	2	52560 DIP SWITCH, DSS-1
9	P	1	77656 CONNECTOR STICKER, P
8	G	1	77653 CONNECTOR STICKER, G
7	G	1	AAD 17632 CONNECTOR STICKER, G
6		2	NUT, M2.3
5		2	PAN HD SCREW, M2.3X8
4		1	NUT, M3
3		1	PAN HD SCREW, M3X8
2	H.S	1	AEO 40001 HEAT SINK
1		1	AFO 70006 A.F.-GAME SOUND P.C. BOARD

TAITO CORPORATION  
FIELD GOAL  
AF-GAME PC BOARD  
ASSY.  
AFN00003

LTB	DESCRIPTION	DATE	APPROVED
M-23-9	4POINTS	8.21.77	L
M-23-10	2POINTS	8.31.77	L



QTY	SYM	PART NO	NAME/DESCRIPTION	QTY
2	FRC	AA5 00215	F.R.C.-HARNESS ASSY PS-50	2
1			TINNED COPPER WIRE 0.5φ	1000
8	NL2	AAT 61020	NOISE LIMIT CS90E-IE-1R500-R58	8
12	NLF	61019	NOISE LIMIT CS90E-1A-3R300-R58	12
5	R6	51789	RES. CARBON 10K OHM 1/4W ±5%	5
18	R5	51765	RES. CARBON 1K	18
2	R4	51758	RES. CARBON 510	2
1	R3	51757	RES. CARBON 470	1
2	R2	51753	RES. CARBON 330	2
2	R1	51721	RES. CARBON 15 OHM 1/4W ±5%	2
1	C6	41436	CAP. TANTALUM SSG35-1F	1
1	C5	41429	CAP. TANTALUM SSG25-6R8F	1
2	C4	41334	CAP. CERAMIC 470PF 50V	2
2	C3	41318	CAP. CERAMIC 100PF 50V	2
30	C2	41244	CAP. FILM TDY-IH-104	30
3	C1	AAT 41094	CAP. ELECTROLYTIC 16T 47	3
1	ER4	90004	EP-ROM AF-04(TF04) 2716	1
1	ER3	90003	EP-ROM AF-03(TF03) 2716	1
1	ER2	90002	EP-ROM AF-02(TF02) 2716	1
1	ER1	90001	EP-ROM AF-01(TF01) 2716	1
1	CPU	AAT 34006	C.P.U. 68A00	1
2	IC21	33164	LS I.C. 74LS257	2
1	IC20	33128	LS I.C. 74LS175	1
1	IC19	33121	LS I.C. 74LS166	1
1	IC18	33112	LS I.C. 74LS157	1
4	IC17	33108	LS I.C. 74LS153	4
1	IC16	33076	LS I.C. 74LS107	1
3	IC15	33051	LS I.C. 74LS74	3
1	IC14	33040	LS I.C. 74LS51	1
2	IC13	33032	LS I.C. 74LS42	2
1	IC12	33011	LS I.C. 74LS10	1
1	IC11	33009	LS I.C. 74LS08	1
6	IC10	33005	LS I.C. 74LS04	6
9	IC9	33003	LS I.C. 74LS02	9
1	IC8	33001	LS I.C. 74LS00	1
2	IC7	32156	STATIC RAM MB8114NLM	2
8	IC6	32153	DYNAMIC RAM MB8116N T4116	8
1	IC5	32145	TTL I.C. 74176	1
5	IC4	32099	TTL I.C. 74367	5
1	IC3	32096	TTL I.C. 74504	1
2	IE2	32076	TTL I.C. 74393	2
1	IC1	AAT 32047	TTL I.C. 7428	1
1	X.T	AAO 69575	X-TAL 10.065MHz	1
4	I.S	55787	I.C SOCKET 24P	4
2	50P	55154	ANGLE PIN HEADER PS-50PA	2
1	T	17665	CONNECTOR STICKER T	1
1	Q	17656	CONNECTOR STICKER Q	1
1	P	AAO 17653	CONNECTOR STICKER P	1
1	B.S	AF070014	P.C BOARD STICKER	1
1		AAO 17765	C.P.U.-P.C BOARD 6800	1

- NOTE 1) CAP. FILM & CERAMIC
- NOTE 2) CAP. TANTALU
- NOTE 3) CAP. ELECTROLYTIC
- NOTE 4) NOISE LIMIT
- NOTE 5) HOW TO MOUNT RESISTOR



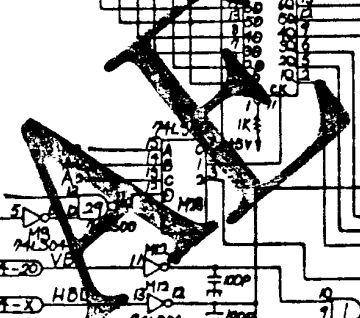
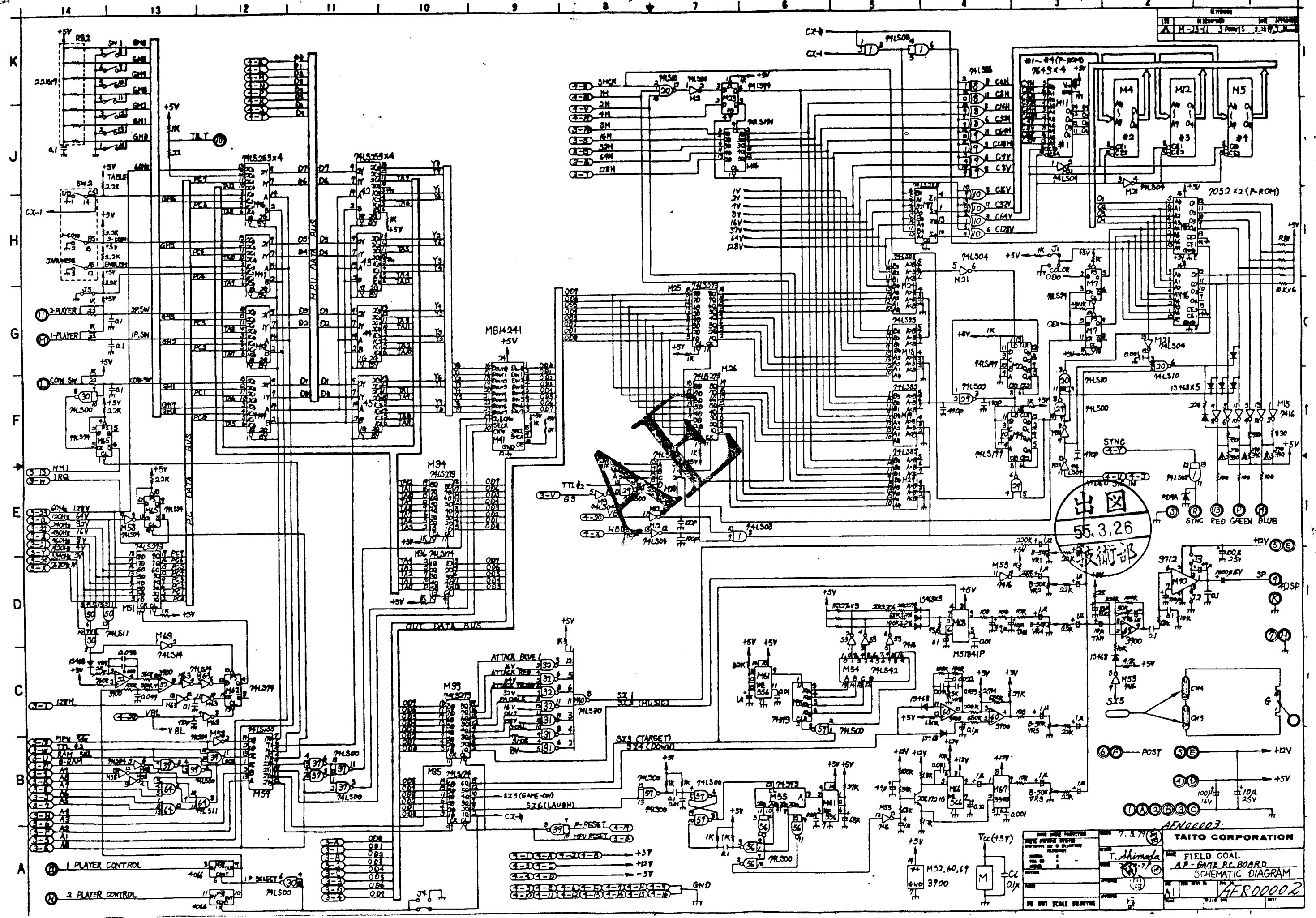
TAITO CORPORATION

NAME: FIELD COAT  
 A.F.-C.P.U PC BOARD ASSY.

DATE: 7.16.79  
 DRAWN: Y. Shinada  
 CHECKED: [Signature]

SCALE: A2  
 SHEET: AFN00004

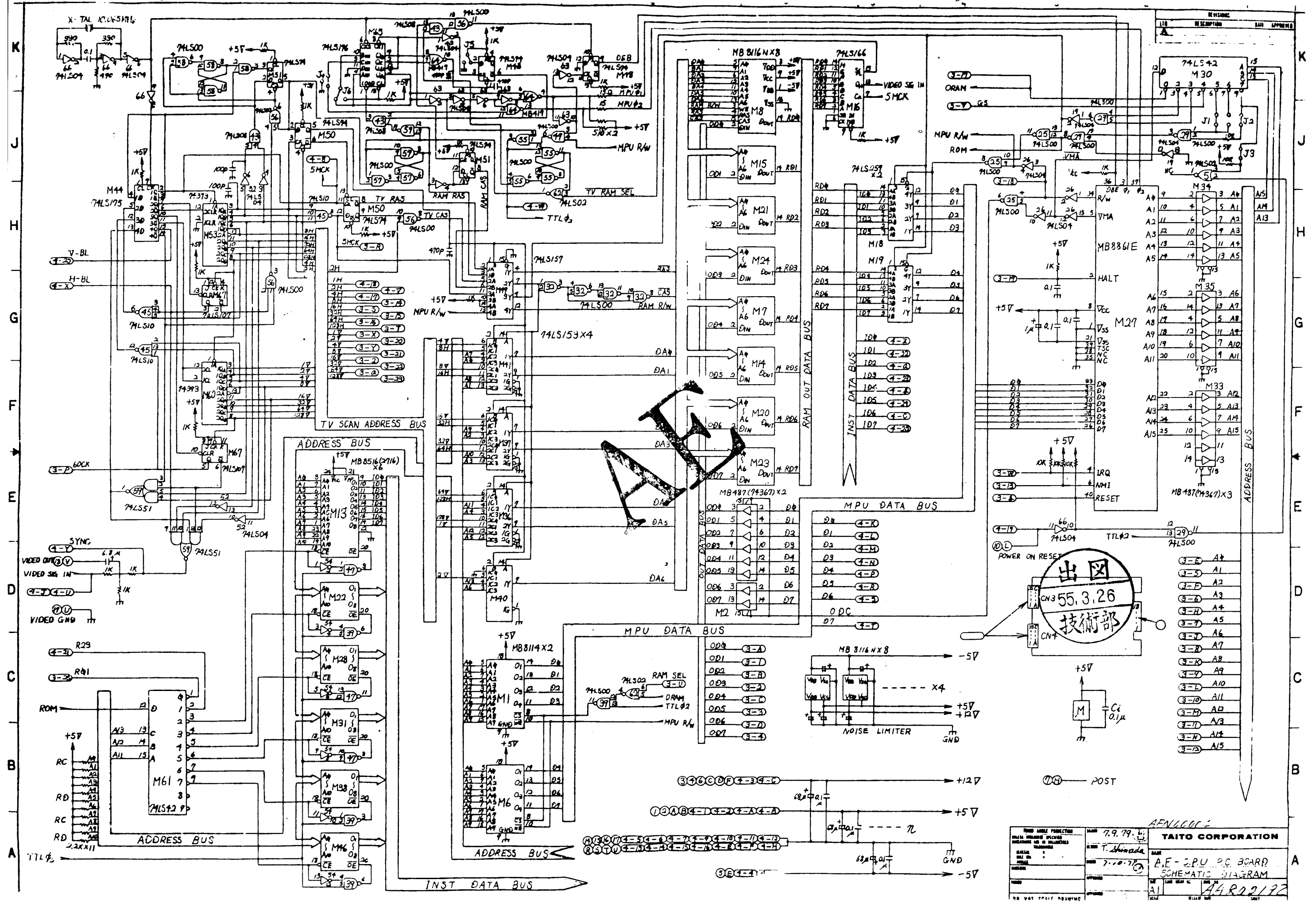
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EDGE EDGE EDGE → +12V  
EDGE EDGE EDGE → -5V  
EDGE EDGE EDGE EDGE → GND

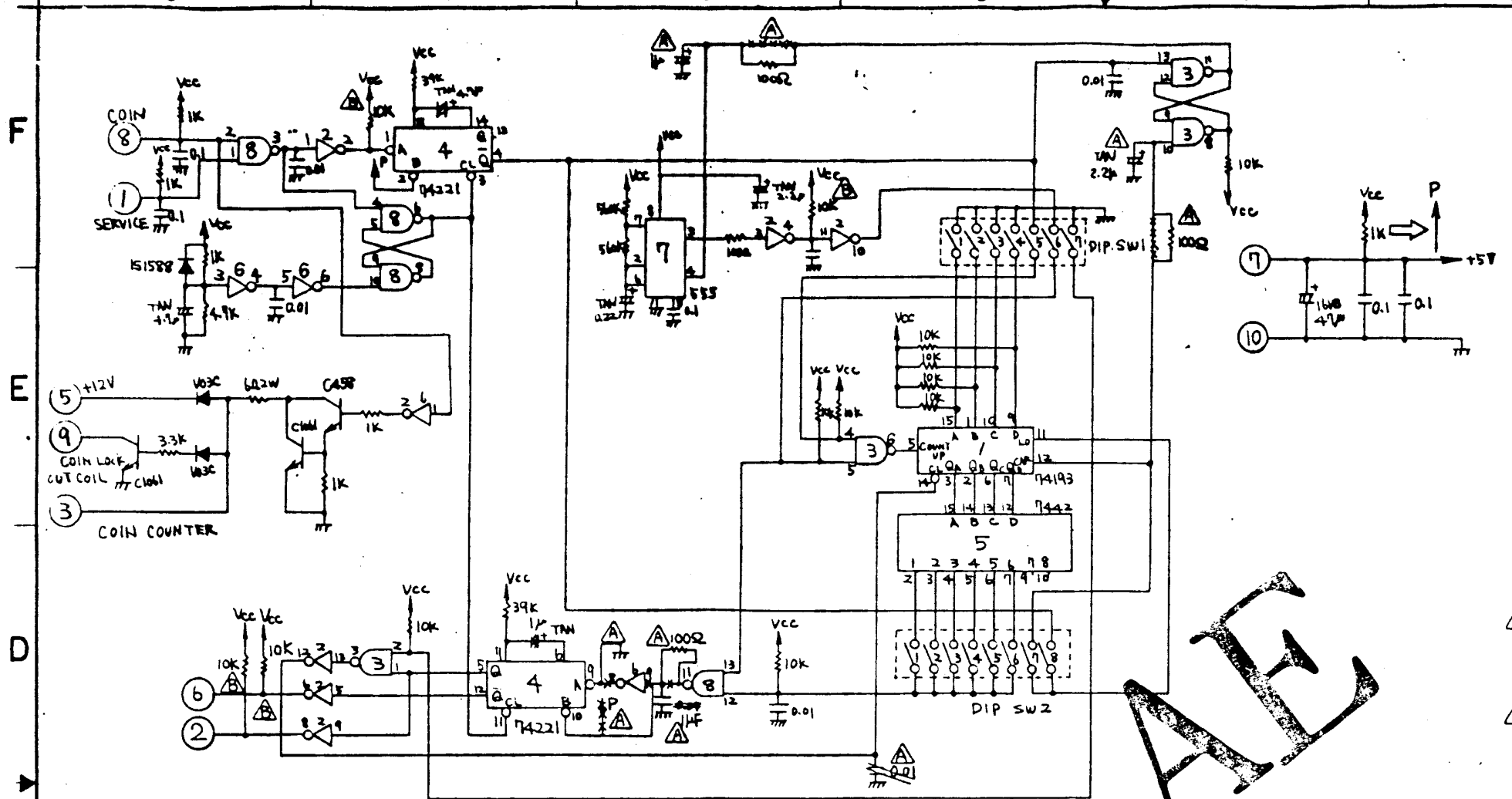
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FIELD GOAL  
AE - GAME PCB BOARD  
SCHEMATIC DIAGRAM  
AER00002  
T. Shimada  
DO NOT SCALE DRAWING



出図 55.3.26 技術部	TAITO CORPORATION A.E. Z.P.U. PC BOARD SCHEMATIC DIAGRAM A4R22172
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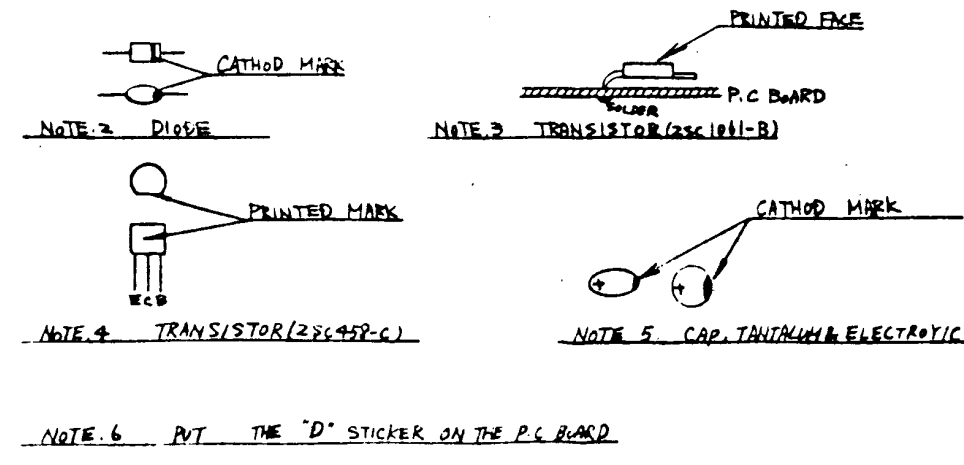
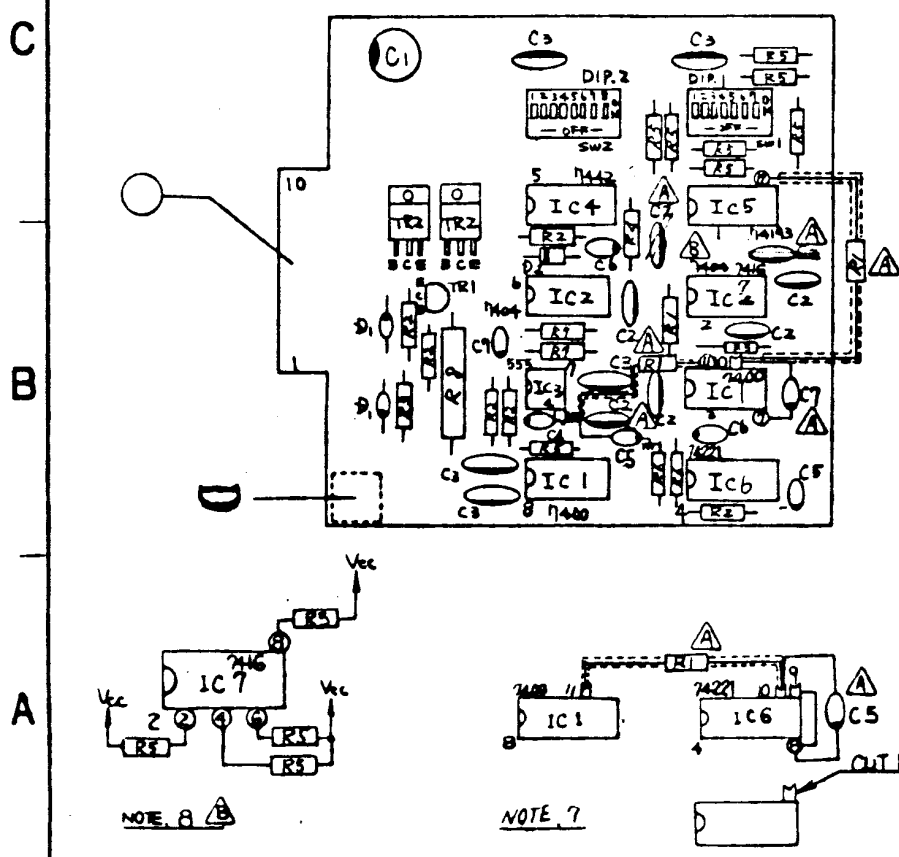
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#54	9 POINTS	80.13.10	[Signature]



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NOTE.1 THE RELATION BETWEEN COIN AND CREDIT

	SW.1							SW.2							
	1	2	3	4	5	6	7	1	2	3	4	5	6	7	8
1 COIN 1PLAY	ON	ON	ON	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF
2 COIN 1PLAY	"	"	"	"	"	"	"	OFF	ON	OFF	"	"	"	"	"
3 COIN 1PLAY	"	"	"	"	"	"	"	"	OFF	ON	"	"	"	"	"
4 COIN 1PLAY	"	"	"	"	"	"	"	"	OFF	OFF	ON	"	"	"	"
1 COIN 2PLAY	ON	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON
1 COIN 3PLAY	OFF	ON	"	"	"	"	"	"	"	"	"	"	"	"	"
1 COIN 4PLAY	ON	ON	"	"	"	"	"	"	"	"	"	"	"	"	"



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30	IC7	AAT 32033	TTL IC	7416	1
29	R8	AAT 55033	WINDING RESISTOR	1/2W 200Ω	1
28	R7	" 51831	RES. CARBON	5.1k OHM 1/4W 5%	2
27	R6	" 51803	"	30k "	2
26	R5	" 51789	"	10k "	913
25	R4	" 51781	"	4.7k "	1
24	R3	" 51777	"	33k "	1
23	R2	" 51765	"	1k "	1
22	R1	" 51741	RES. CARBON	100 OHM 1/4W 5%	14
21	C7	" 41419	CAP. TANTALUM	SS& 10μF	12
20	C6	" 41421	CAP. TANTALUM	SS& 10μF	2
19	C5	" 41418	"	SS& 16-1E	13
18	C4	" 41414	CAP. TANTALUM	SS& 16-ON 32E	1
17	C3	" 41244	CAP. FILM	TBY-1H-104	5
16	C2	" 41238	CAP. FILM	TBY-1H-103	75
15	C1	" 41021	CAP. ELECTROLY	100V 47μF	1
14	IC6	" 32077	TTL IC	74221	1
13	IC5	" 32044	"	74193	1
12	IC4	" 32039	"	7442	1
11	IC3	" 32019	"	NE555V	1
10	IC2	" 32005	"	7404	12
9	IC1	" 32001	TTL IC	7400	2
8	D2	" 12025	DIODE	1S1588	1
7	D1	" 12002	DIODE	V03C	2
6	TR2	" 11030	TRANSISTOR	2SC1611-B	2
5	TR1	AAT 11005	TRANSISTOR	2FC 458-C	1
4	DIP2	AAO 52566	DIP SWITCH	DSS-8	1
3	DIP1	" 52560	DIP SWITCH	DSS-7	1
2	D	" 17623	CONNECTOR	STICKER	1
1		AAO 17766B	CREDIT P.C BOARD		1

PARTS LIST

**TAITO CORPORATION**

NAME: CREDIT P.C BOARD

DRAWN: 12.10.77

DESIGNED: 12.11.77

CHECKED: 12.11.77

APPROVED: [Signature]

DO NOT SCALE DRAWING

SCALE: 1:1

RELEASE MAN: [Signature]



# FIELD GOAL

