Firmware of 7/28 bit (*1) **Video Game Microcomputer μPD777** (*2) **& μPD777C-004** (*3)

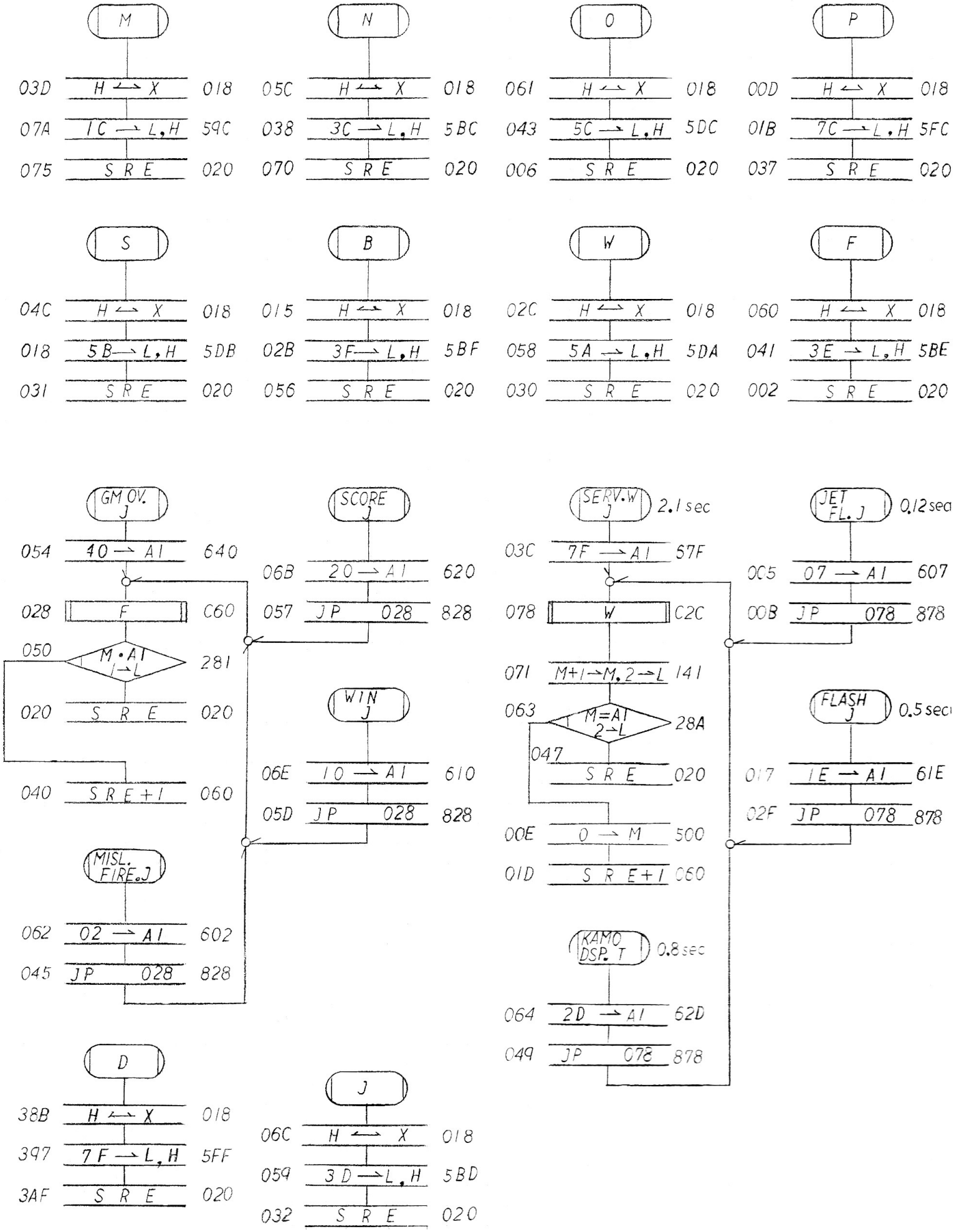
*1 : 7 bit CPU with 28 bit data transfer between 28 bit SRAM cells (MA) and 28 bit register file (A) constructed by four sets of 7 bit register (A1, A2, A3, and A4) in one instruction (A→MA, MA→A, MA↔A).

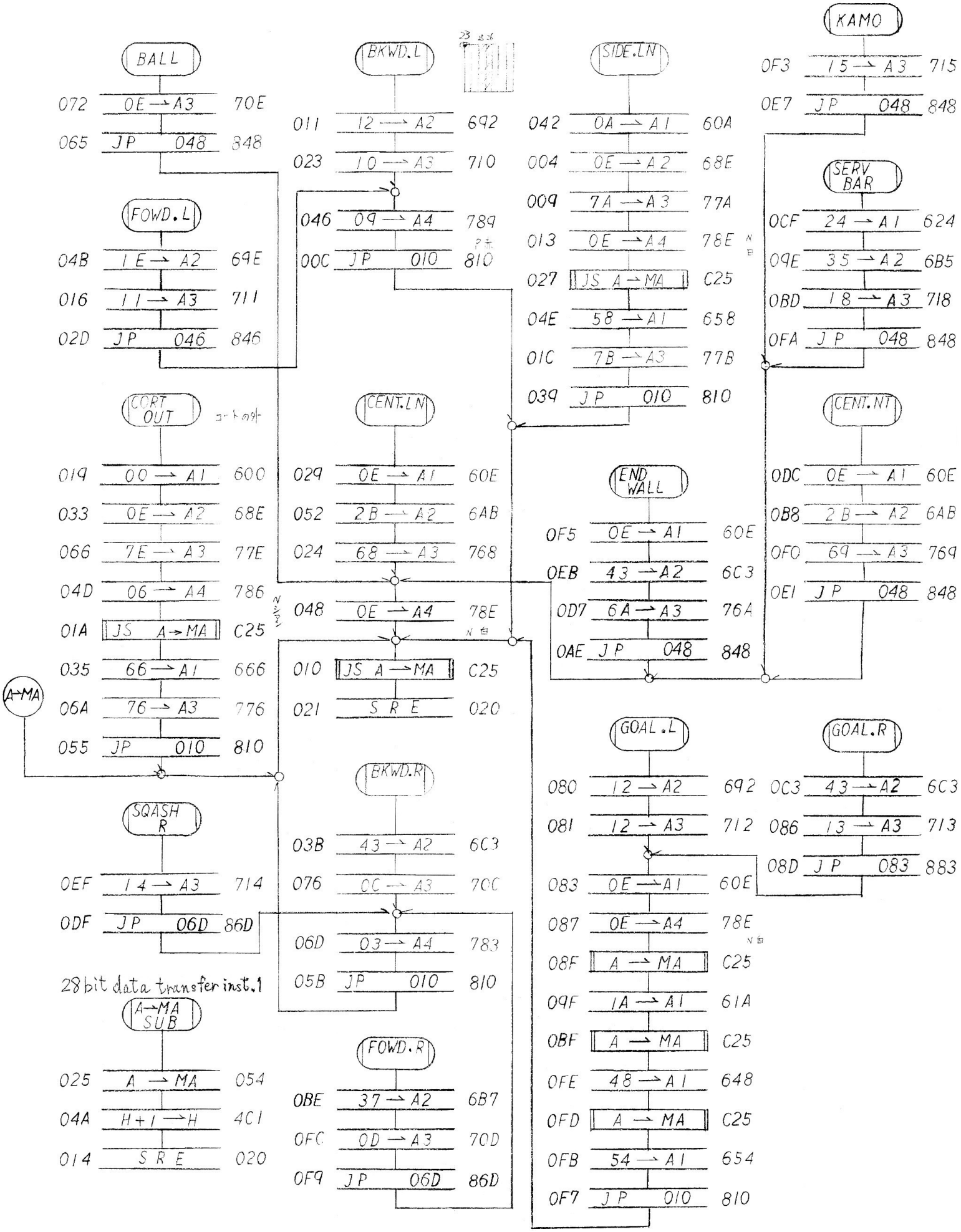
*2 : A first LSI supplied to EPOCH CO. LTD., in 3/1978 for their SUPER 10 experimentally manufactured.

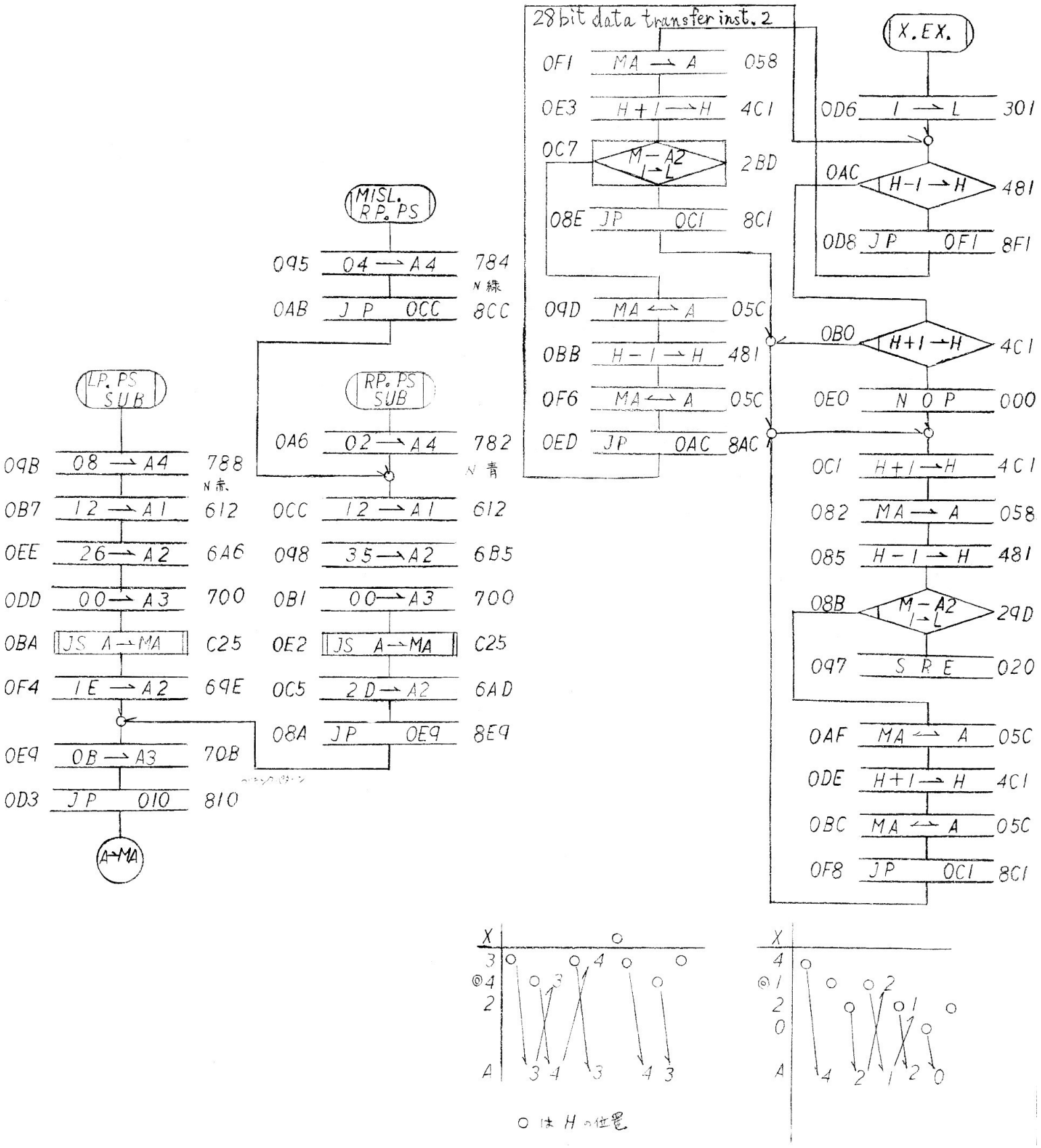
*3 : A fifth LSI implementing the same firmware for EPOCH's BIG SPORTS 12 of CASSETTE VISION, later on.

ROM Address Distribution

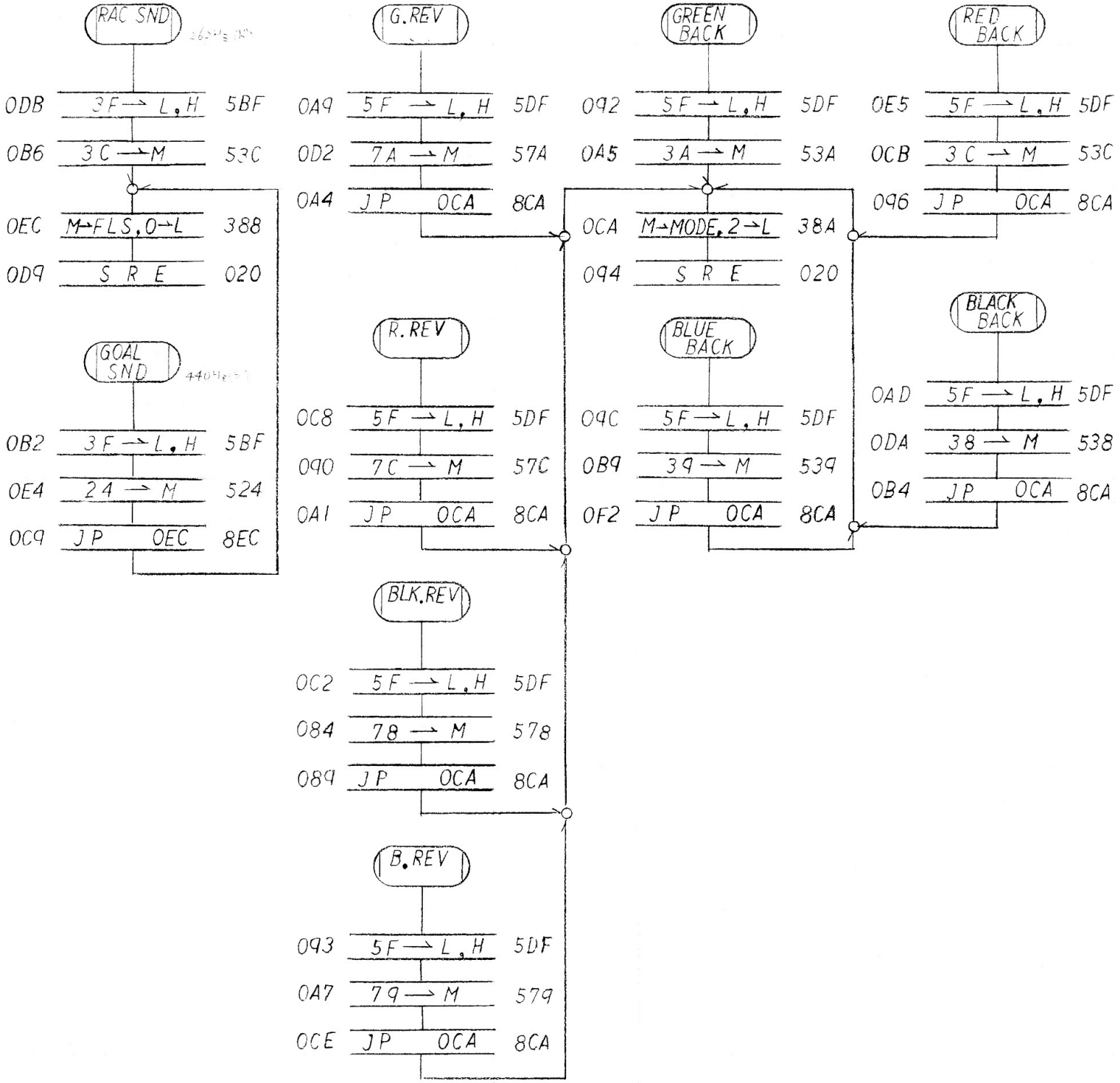
Sub Routine			Sub Routine			Sub Routine			Sub Routine			Contents
Page	Name	Words	Page	Name	Words	Page	Name	Words	Page	Name	Words	
1	B	3	4	GREEN BACK	4	9	HIT J	8	14	CT.PS.INST	0	
	D	3		BLUE BACK	3		PRACT J	8		LP.COUNT	19	
	F	3		RED BACK	3		SHOOT G.J	4		RP.COUNT	14	
	J	3		BLACK BACK	3	10	COFJ.INV	9		LP.COUNT.R	8	
	M	3	5	BL.Y±Y	7		PD.LX	7	15	SERV.BL	28	
	N	3		BL.X±X	9		PD.RX	4		SERV.KAMO	4	
	O	3		SIDE.L.COCG	14		PD Y	4		HOCK.SERV.BL	4	
	P	3		GOAL J	12		COUNT INST	10		JET.ST	0	
	S	3		L.WIN.S	0		KAMO XY.S	20		SQASH SERV.BL.	10	
	W	3		L.END X J	4		SCORE F.INV	2		SERV.X J	8	
	G M OV. J	5		R.END X J	4		WIN F.INV	3		SERV.BL.V.V.	7	
	SCORE J	2	6	BALL±Y	19	11	L.FW SRCH	2		SERV.Y J	9	
	WIN J	2		BALL±X	30		SERV.BAR.SRCH	2		PRACT.SERV.BL	3	
	MISL.FIRE.J	2		V/4=3J	2		R.FW SRCH	2	16, 17	DISPLAY	66	
	SERV.W J	7		V/4 J	7		MISSILE SRCH	2	30	CH SET	56	UFO, Jet plane, Car, Ship, Tank, Sound etc.
	JET FL.J	2	7	+Y,-YJ	5		R.BW SRCH	2	**Sub Routine Total**		935	
	FLASH J	2		+X,-XJ	2		BARIR.SRCH	2				
	KAMO DSP.T	2		HOCK.LXJ	4		BL.SRCH 2	6	**Main Routine**			**Contents**
2	BALL	2		HOCK.RXJ	2		BL.SRCH	6	16, 17	DISPLAY E	34	
	FOWD.L	3		GOAL.Y J	5		KAMO SRCH	2	18, 17	POWER ON	30	
	CORT OUT	8		LB.XJ	8		R.FW SRCH2	2	18	KEY J	51	
	SQASH R	2		RB.XJ	2		SERCH	9		RAN C	0	
	A→MA	3		LF.XJ	2		BAR1 SRCH	2	19	GM FLD	90	
	BKWD.L	4		RF.XJ	2		BAR2 SRCH	2		PD.CL	0	
	CENT.LN	6		LB.YCJ	15		PLANE1 SRCH	2	20	PD.XY	70	
	BKWD.R	4		RB.YCJ	2		PLANE2 SRCH	2		MOV.YX	6	
	FOWD.R	3		LF.YJ	2	12	VL.NET YJ	4		MOV.X	0	
	SIDE.LN	8		RF.YJ	2		SMA ENG J	18	21	GOAL J	58	
	END WALL	4	8	XF→1	5		NET YJ	8	22	GM.OV.J	71	
	GOAL.L	11		XF→0	4		W→SL.FL.R	10	23	TNS	19	
	GOAL.R	3		BL.V C	23		MS.BAR1.YJ	6		VOL	35	
	KAMO	2		PRAC V.V. RET	0	13	ERAS	12	24	HOC	25	
	SERV.BAR	4		RFYS J	3		COUNT ERAS	9		VAL.GL	27	
	CENT.NT	4		PRAC FWY J	3		BL.ERAS	9	25	SQA.	41	
3	LP.PS	8		LFYS J	3		KAMO ERAS	2	26	MISL	76	
	RP.PS	7		SQASH.RBY J	3		R.FW ERAS	2	27	MSL COL	34	
	MISL.RP.PS	2		LB.YJ	8		SERV.KAMO.V.V.	14	28	SHOOT	64	
	X.EX.	22		RB.YJ	9	14	LC.XS	11	29	PIST	9	
4	RAC SND	4	9	GM.OV.S	11		RC.XS	5		CLY GL	3	
	GOAL SND	3		Z+1→Z	3		DA→7	4		SHOOT CHECK	15	
	G.REV	3		V/4 CO.	5		10DS	4	30	CH	17	Secret code check
	R.REV	3		INSERT	4		10DJ	9	31	I	67	Color/Sound change
	BLK.REV	3		H-1→Z	11		100J	0	**Main Routine Total**		743	
	B.REV	3		Z→H	4		INST	0	**Total**		**1678**	**88.08% of 1905**


M
03D H ⇄ X 018
07A 1C → L,H 59C
075 S R E 020
N
05C H ⇄ X 018
038 3C → L,H 5BC
070 S R E 020
O
061 H ⇄ X 018
043 5C → L,H 5DC
006 S R E 020
P
00D H ⇄ X 018
01B 7C → L,H 5FC
037 S R E 020
S
04C H ⇄ X 018
018 5B → L,H 5DB
031 S R E 020
B
015 H ⇄ X 018
02B 3F → L,H 5BF
056 S R E 020
W
02C H ⇄ X 018
058 5A → L,H 5DA
030 S R E 020
F
060 H ⇄ X 018
041 3E → L,H 5BE
002 S R E 020
GM OV. J
054 40 → A1 640
028 F C60
050 M·A1 1→L 281
020 S R E 020
040 S R E+1 060
SCORE J
06B 20 → A1 620
057 JP 028 828
WIN J
06E 10 → A1 610
05D JP 028 828
MISL. FIRE. J
062 02 → A1 602
045 JP 028 828
SERV.W J 2.1 sec
03C 7F → A1 57F
078 W C2C
071 M+1→M, 2→L 141
063 M=A1 2→L 28A
047 S R E 020
00E 0 → M 500
01D S R E+1 060
JET FL. J 0.12 sec
0C5 07 → A1 607
00B JP 078 878
FLASH J 0.5 sec
017 1E → A1 61E
02F JP 078 878
KAMO DSP. T 0.8 sec
064 2D → A1 62D
049 JP 078 878
D
38B H ⇄ X 018
397 7F → L,H 5FF
3AF S R E 020
J
06C H ⇄ X 018
059 3D → L,H 5BD
032 S R E 020

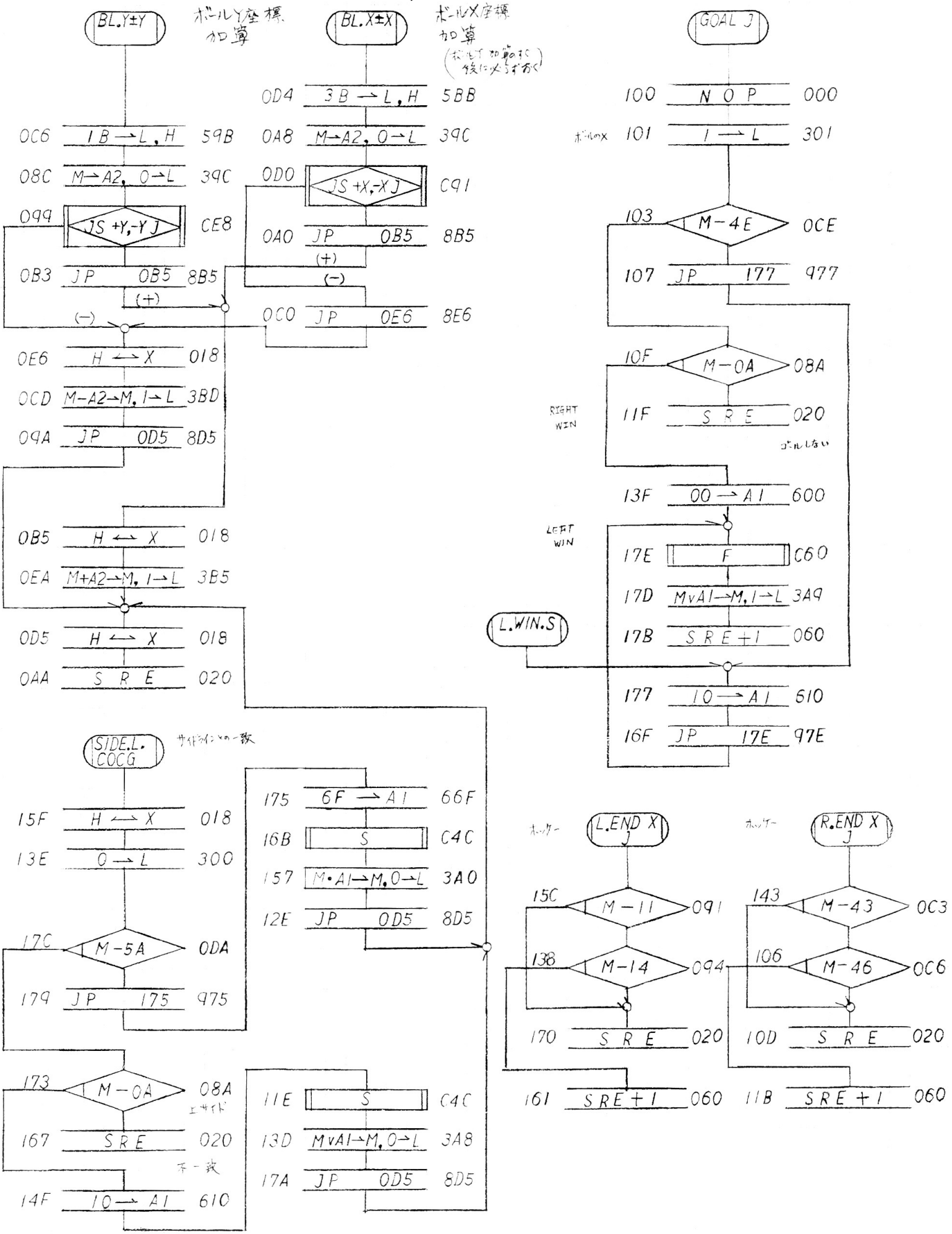

BALL
072 0E → A3 70E
065 JP 048 848
FOWD.L
04B 1E → A2 69E
016 11 → A3 711
02D JP 046 846
CORT OUT
019 00 → A1 600
033 0E → A2 68E
066 7E → A3 77E
04D 06 → A4 786
01A JS A→MA C25
035 66 → A1 666
06A 76 → A3 776
055 JP 010 810
A→MA
SQASH R
0EF 14 → A3 714
0DF JP 06D 86D
28bit data transfer inst.1
A→MA SUB
025 A → MA 054
04A H+1 → H 4C1
014 S R E 020
BKWD.L
011 12 → A2 692
023 10 → A3 710
046 09 → A4 789
00C JP 010 810
CENT.LN
029 0E → A1 60E
052 2B → A2 6AB
024 68 → A3 768
048 0E → A4 78E
010 JS A → MA C25
021 S R E 020
BKWD.R
03B 43 → A2 6C3
076 0C → A3 70C
06D 03 → A4 783
05B JP 010 810
FOWD.R
0BE 37 → A2 6B7
0FC 0D → A3 70D
0F9 JP 06D 86D
SIDE.LN
042 0A → A1 60A
004 0E → A2 68E
009 7A → A3 77A
013 0E → A4 78E
027 JS A → MA C25
04E 58 → A1 658
01C 7B → A3 77B
039 JP 010 810
END WALL
0F5 0E → A1 60E
0EB 43 → A2 6C3
0D7 6A → A3 76A
0AE JP 048 848
GOAL.L
080 12 → A2 692
081 12 → A3 712
083 0E → A1 60E
087 0E → A4 78E
08F A → MA C25
09F 1A → A1 61A
0BF A → MA C25
0FE 48 → A1 648
0FD A → MA C25
0FB 54 → A1 654
0F7 JP 010 810
KAMO
0F3 15 → A3 715
0E7 JP 048 848
SERV BAR
0CF 24 → A1 624
09E 35 → A2 6B5
0BD 18 → A3 718
0FA JP 048 848
CENT.NT
0DC 0E → A1 60E
0B8 2B → A2 6AB
0F0 69 → A3 769
0E1 JP 048 848
GOAL.R
0C3 43 → A2 6C3
086 13 → A3 713
08D JP 083 883

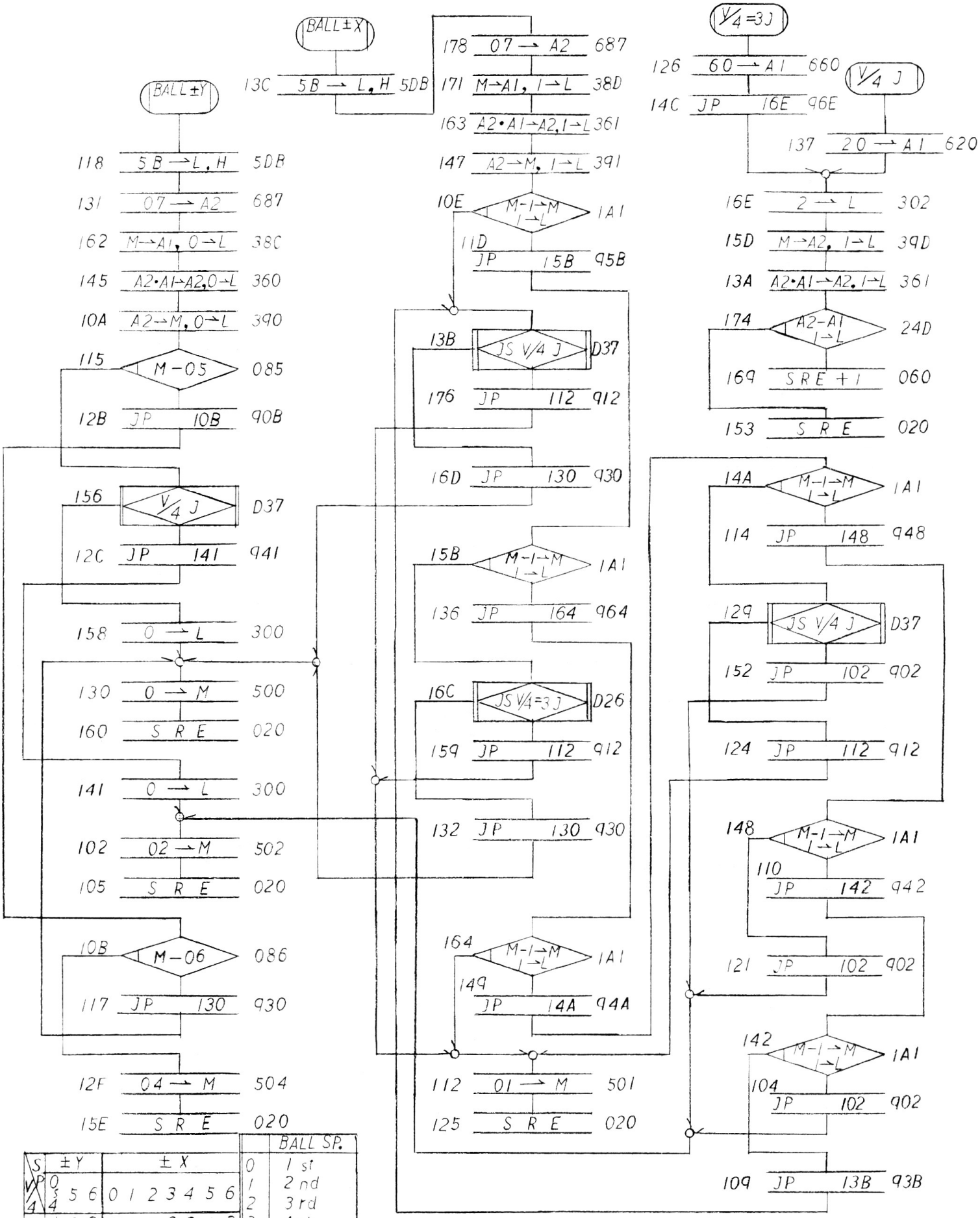

28bit data transfer inst. 2
0F1 MA → A 058
0E3 H+1 → H 4C1
0C7 M − A2 1→L 2BD
08E JP 0C1 8C1
09D MA ↔ A 05C
0BB H−1 → H 481
0F6 MA ↔ A 05C
0ED JP 0AC 8AC
X.EX.
0D6 1 → L 301
0AC H−1 → H 481
0D8 JP 0F1 8F1
0B0 H+1 → H 4C1
0E0 NOP 000
0C1 H+1 → H 4C1
082 MA → A 058
085 H−1 → H 481
08B M − A2 1→L 29D
097 SRE 020
0AF MA ↔ A 05C
0DE H+1 → H 4C1
0BC MA ↔ A 05C
0F8 JP 0C1 8C1
MISL. RP. PS
095 04 → A4 784
N 緑
0AB JP 0CC 8CC
RP. PS SUB
0A6 02 → A4 782
N 青
0CC 12 → A1 612
098 35 → A2 6B5
0B1 00 → A3 700
0E2 JS A→MA C25
0C5 2D → A2 6AD
08A JP 0E9 8E9
LP. PS SUB
09B 08 → A4 788
N 赤
0B7 12 → A1 612
0EE 26 → A2 6A6
0DD 00 → A3 700
0BA JS A→MA C25
0F4 1E → A2 69E
0E9 0B → A3 70B
0D3 JP 010 810
A→MA
X
3 ◎4 2 A
4 ◎1 2 0 A
○ は H の位置

4/31 SOUND, BACKGRD, REV SUB



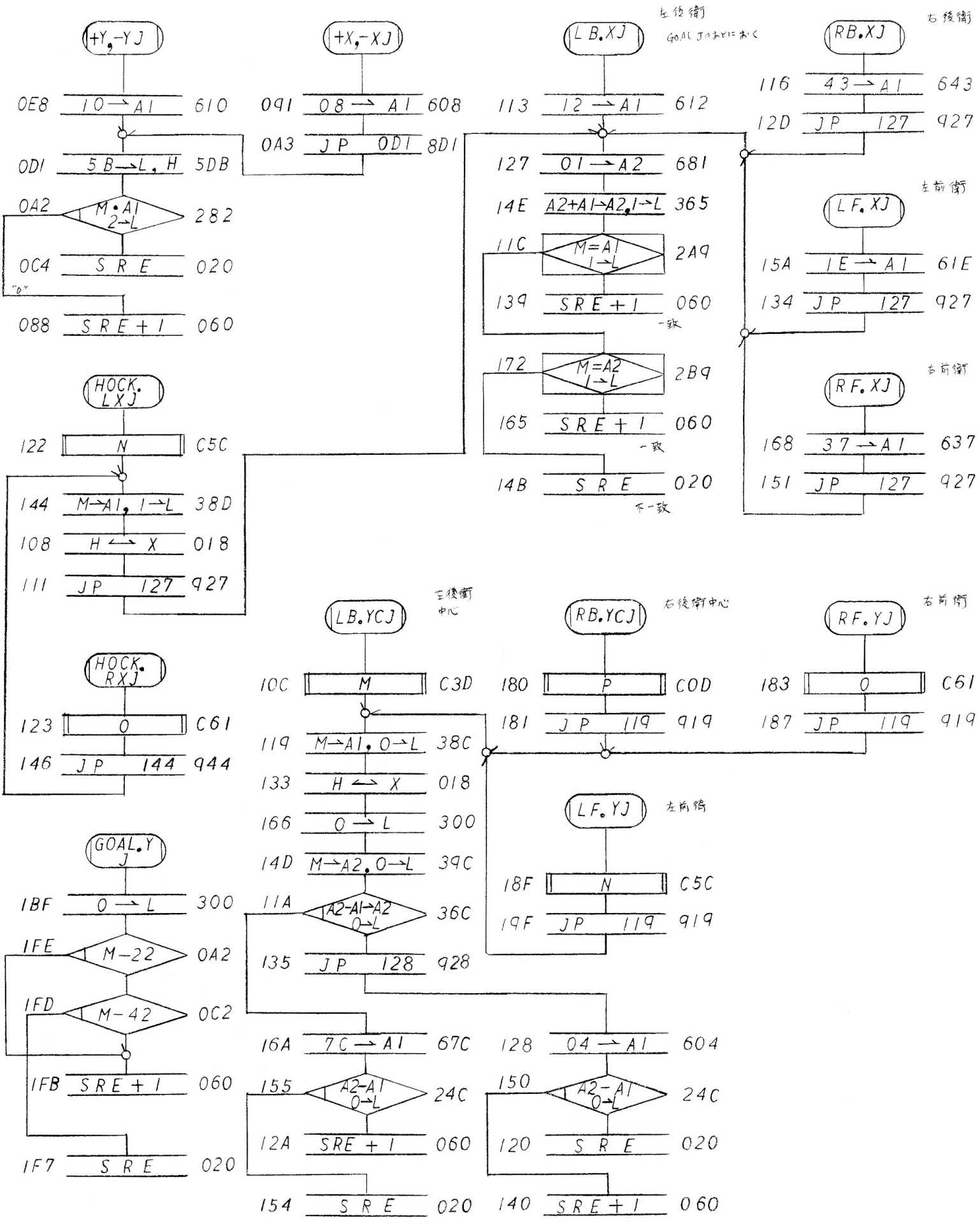
5/31 BALL MOVE

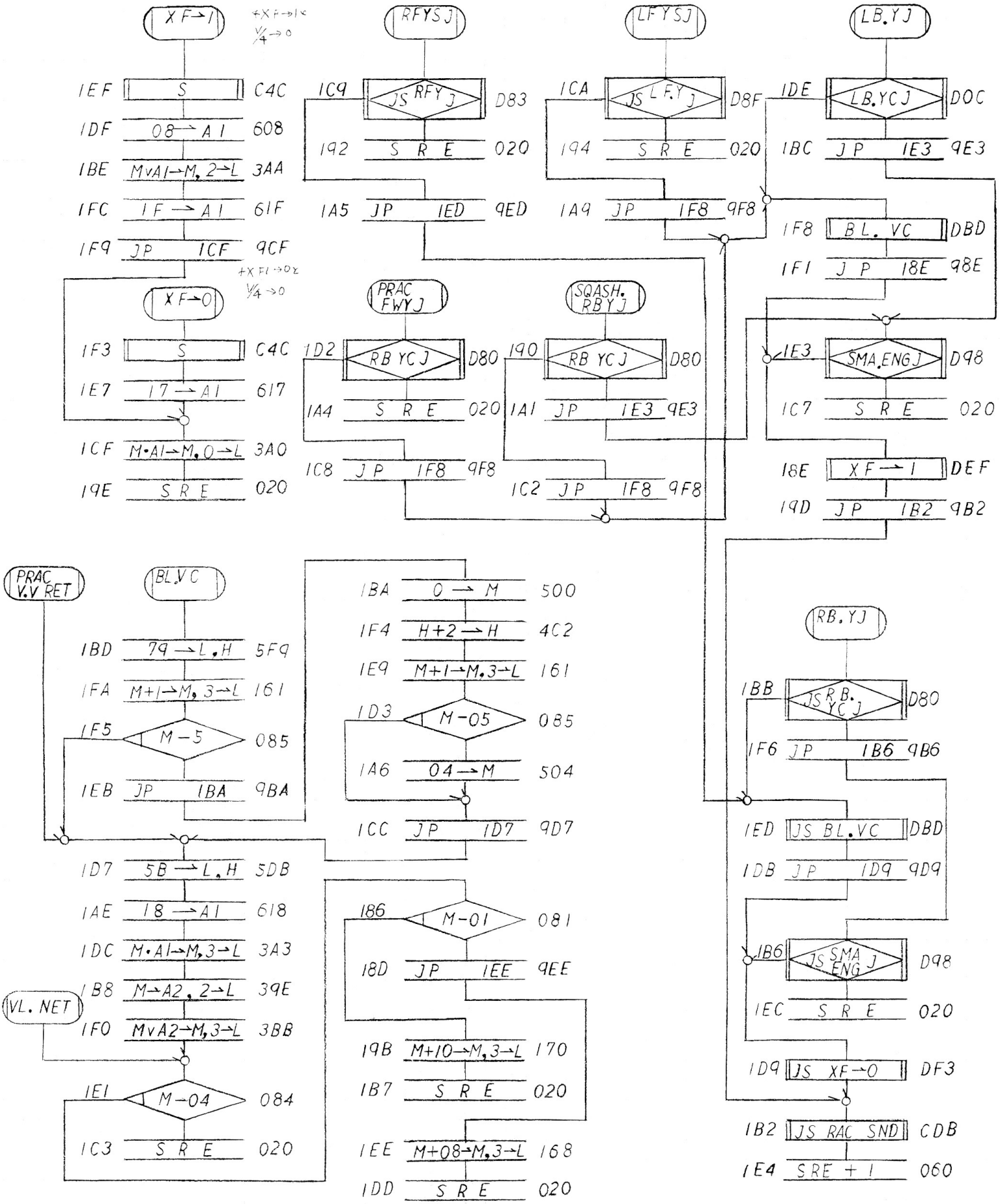


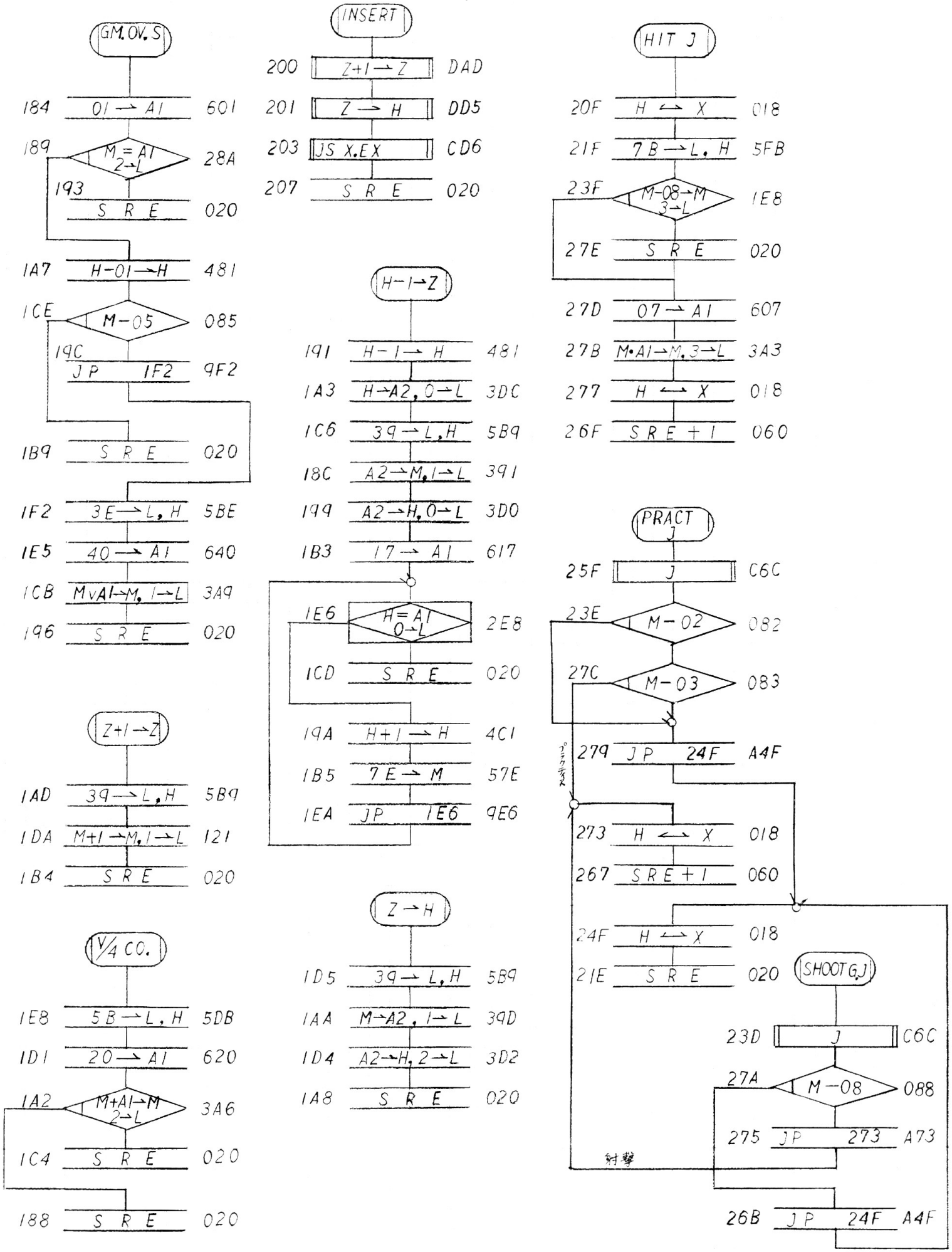


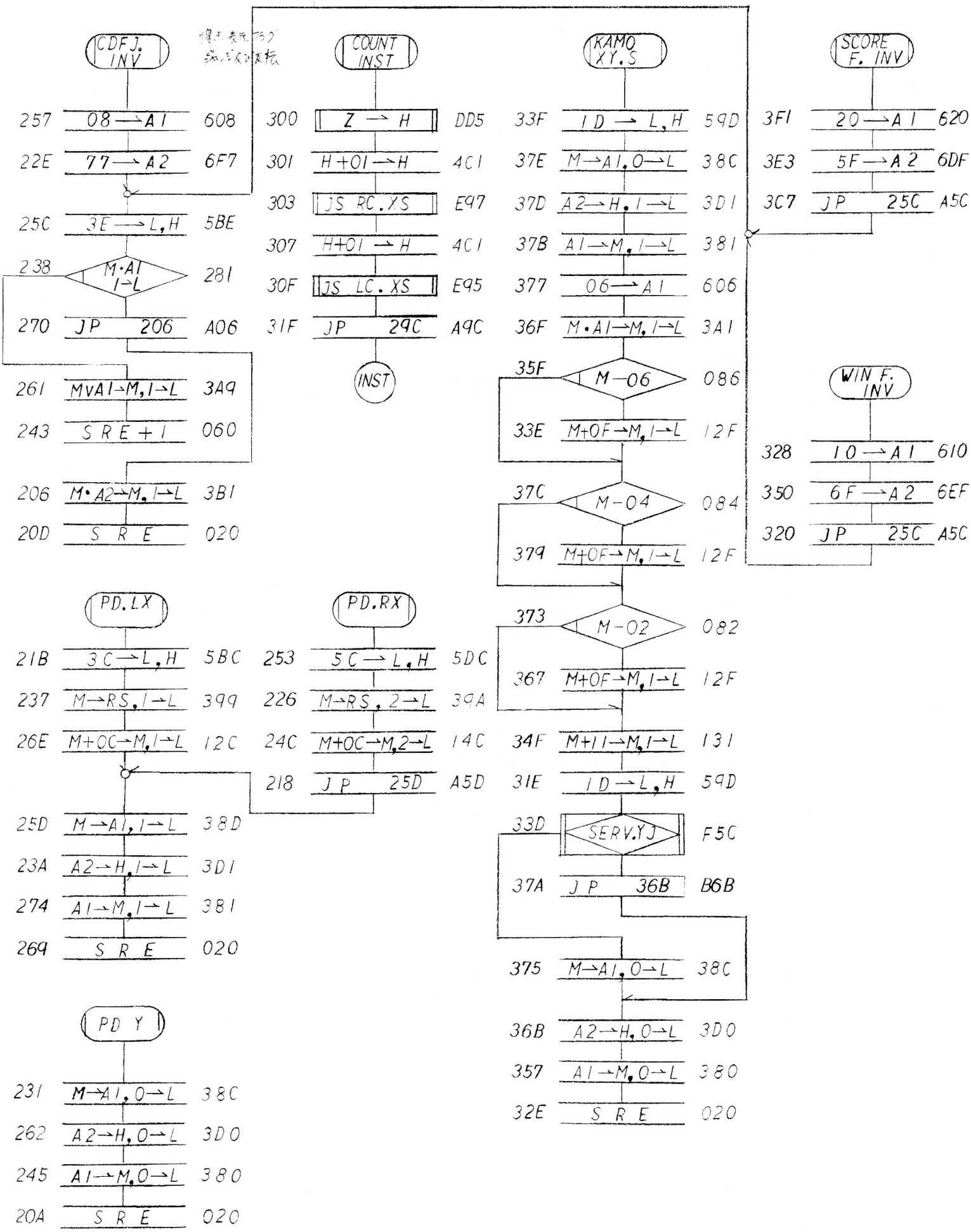
S / V/4 P	±Y 0 3 4	5	6	±X 0	1	2	3	4	5	6
0	1,	2,	0,	1	1	1	2	2	1	2
1	0	2	0	0	1	1	1	2	0	2
2	1	2	0	1	1	1	2	2	1	2
3	0	2	0	0	0	1	1	2	0	2

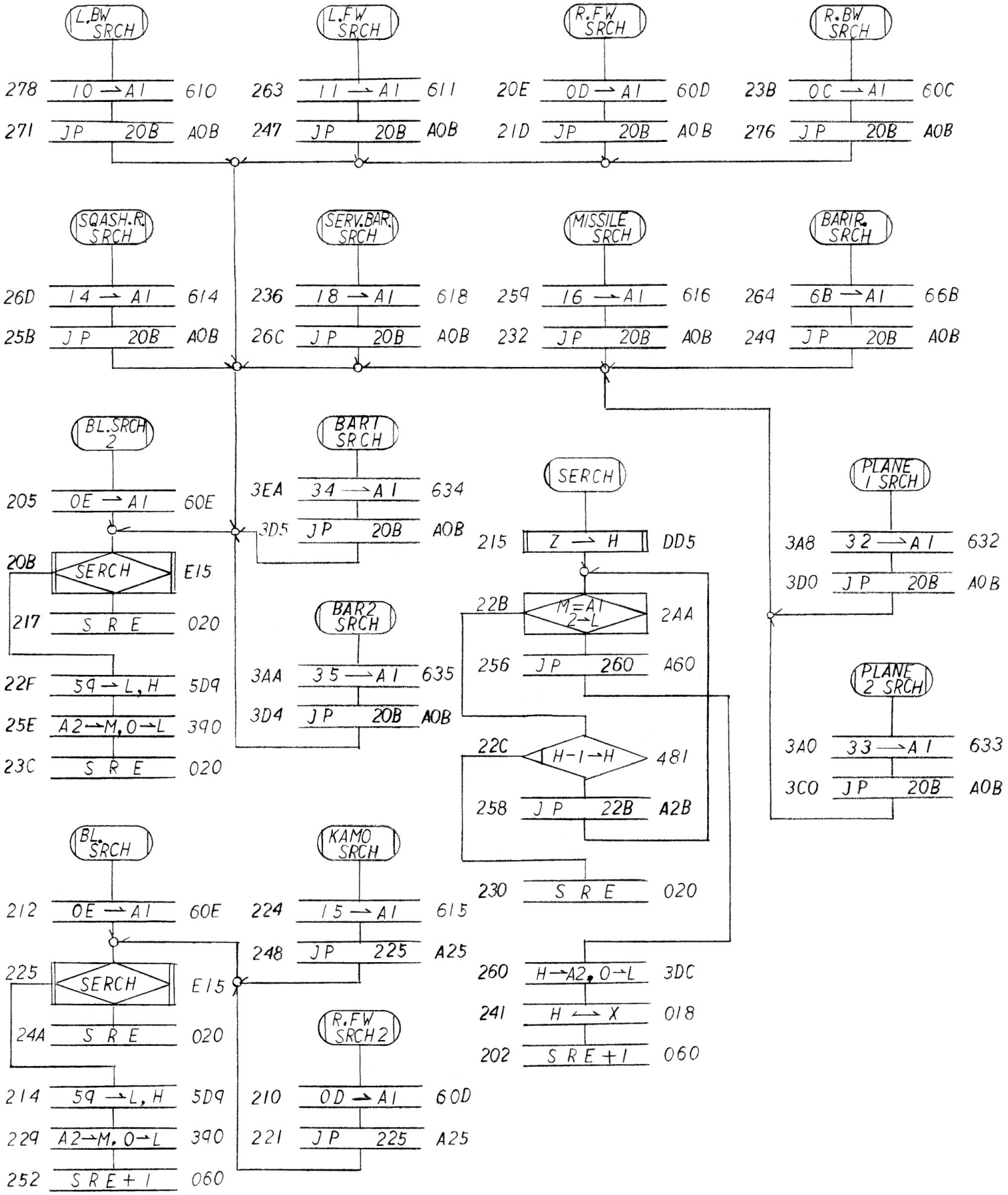
	BALL SP.
0	1 st
1	2 nd
2	3 rd
3	4 th
4	5 th
5	ENGLISH
6	SMASH

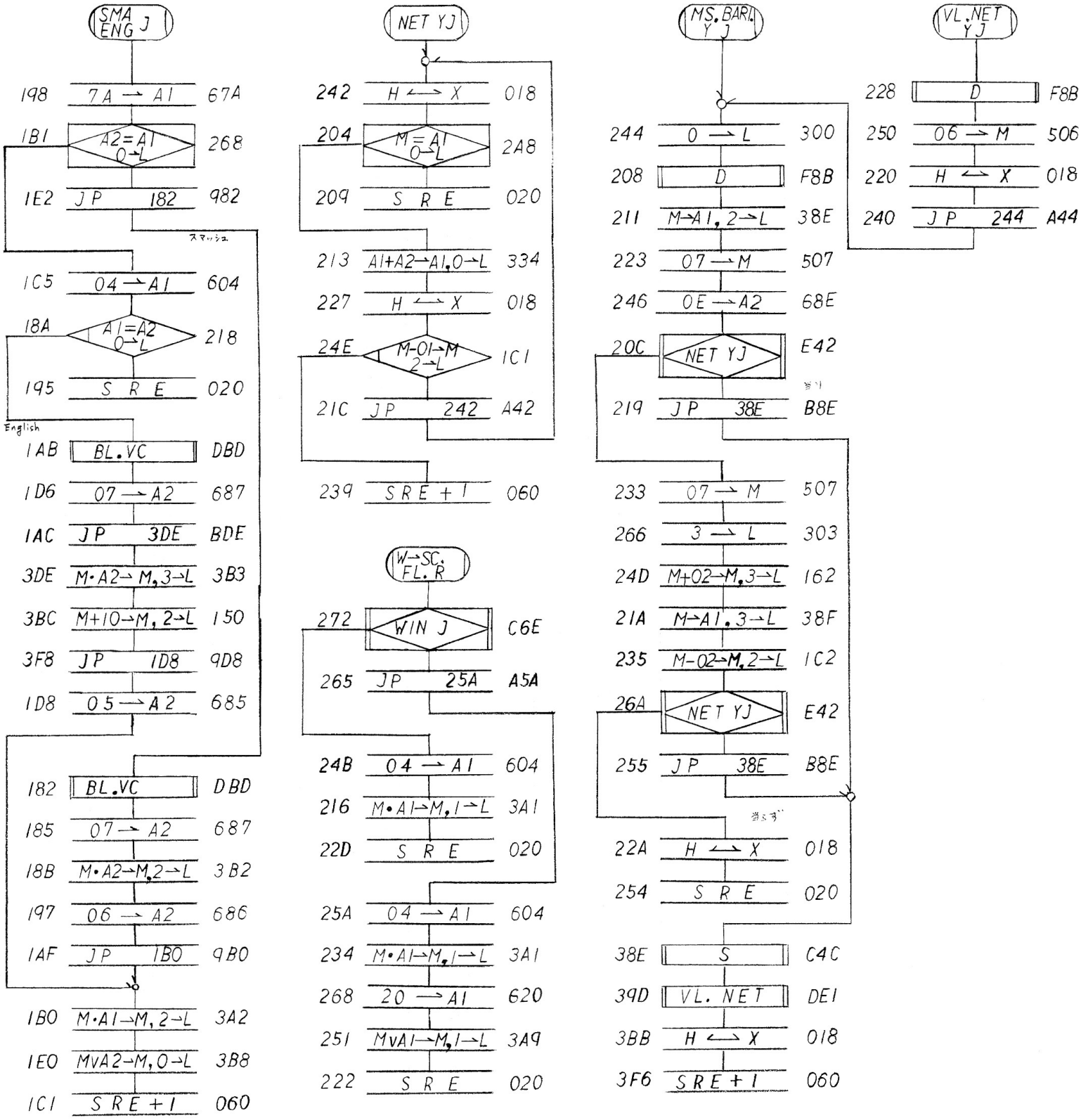

+Y,-YJ
0E8 10→A1 610
0D1 5B→L,H 5DB
0A2 M・A1 2→L 282
0C4 SRE 020
"0"
088 SRE+1 060
+X,-XJ
091 08→A1 608
0A3 JP 0D1 8D1
LB.XJ
左後衛
GOAL Jのあとにおく
113 12→A1 612
127 01→A2 681
14E A2+A1→A2,1→L 365
11C M=A1 1→L 2A9
139 SRE+1 060
一致
172 M=A2 1→L 2B9
165 SRE+1 060
一致
14B SRE 020
不一致
RB.XJ
右後衛
116 43→A1 643
12D JP 127 927
LF.XJ
左前衛
15A 1E→A1 61E
134 JP 127 927
RF.XJ
右前衛
168 37→A1 637
151 JP 127 927
HOCK.LXJ
122 N C5C
144 M→A1,1→L 38D
108 H↔X 018
111 JP 127 927
HOCK.RXJ
123 0 C61
146 JP 144 944
GOAL.YJ
1BF 0→L 300
1FE M−22 0A2
1FD M−42 0C2
1FB SRE+1 060
1F7 SRE 020
LB.YCJ
左後衛中心
10C M C3D
119 M→A1,0→L 38C
133 H↔X 018
166 0→L 300
14D M→A2,0→L 39C
11A A2-A1→A2 0→L 36C
135 JP 128 928
16A 7C→A1 67C
155 A2-A1 0→L 24C
12A SRE+1 060
154 SRE 020
RB.YCJ
右後衛中心
180 P C0D
181 JP 119 919
LF.YJ
左前衛
18F N C5C
19F JP 119 919
128 04→A1 604
150 A2-A1 0→L 24C
120 SRE 020
140 SRE+1 060
RF.YJ
右前衛
183 0 C61
187 JP 119 919

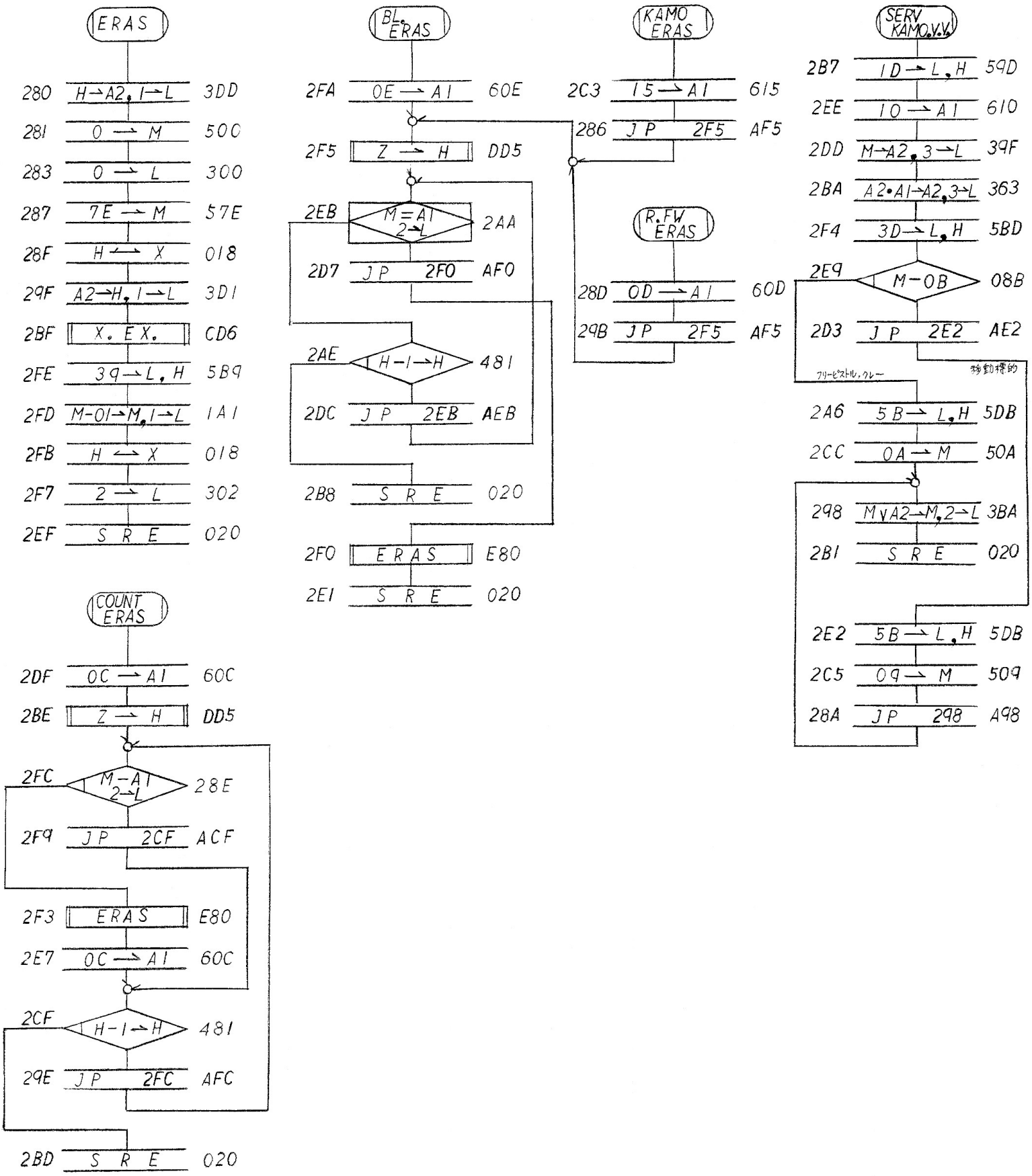

XF→1
+XF→1
V/4→0
1EF S C4C
1DF 08→A1 608
1BE MvA1→M,2→L 3AA
1FC 1F→A1 61F
1F9 JP 1CF 9CF
XF→0
+XF→0
V/4→0
1F3 S C4C
1E7 17→A1 617
1CF M·A1→M,0→L 3A0
19E S R E 020
RFYSJ
1C9 JS RFYJ D83
192 S R E 020
1A5 JP 1ED 9ED
LFYSJ
1CA JS LFYJ D8F
194 S R E 020
1A9 JP 1F8 9F8
LB.YJ
1DE LB.YCJ D0C
1BC JP 1E3 9E3
1F8 BL. VC DBD
1F1 JP 18E 98E
PRAC FWYJ
1D2 RB YCJ D80
1A4 S R E 020
1C8 JP 1F8 9F8
SQASH. RBYJ
190 RB YCJ D80
1A1 JP 1E3 9E3
1C2 JP 1F8 9F8
1E3 SMA.ENGJ D98
1C7 S R E 020
18E XF→1 DEF
19D JP 1B2 9B2
PRAC V.V RET
BL.VC
1BD 79→L.H 5F9
1FA M+1→M,3→L 161
1F5 M−5 085
1EB JP 1BA 9BA
1BA 0→M 500
1F4 H+2→H 4C2
1E9 M+1→M,3→L 161
1D3 M−05 085
1A6 04→M 504
1CC JP 1D7 9D7
1D7 5B→L.H 5DB
1AE 18→A1 618
1DC M·A1→M,3→L 3A3
1B8 M→A2,2→L 39E
VL. NET
1F0 MvA2→M,3→L 3BB
1E1 M−04 084
1C3 S R E 020
186 M−01 081
18D JP 1EE 9EE
19B M+10→M,3→L 170
1B7 S R E 020
1EE M+08→M,3→L 168
1DD S R E 020
RB.YJ
1BB JS RB.YCJ D80
1F6 JP 1B6 9B6
1ED JS BL.VC DBD
1DB JP 1D9 9D9
1B6 JS SMA ENG J D98
1EC S R E 020
1D9 JS XF→0 DF3
1B2 JS RAC SND CDB
1E4 SRE + 1 060

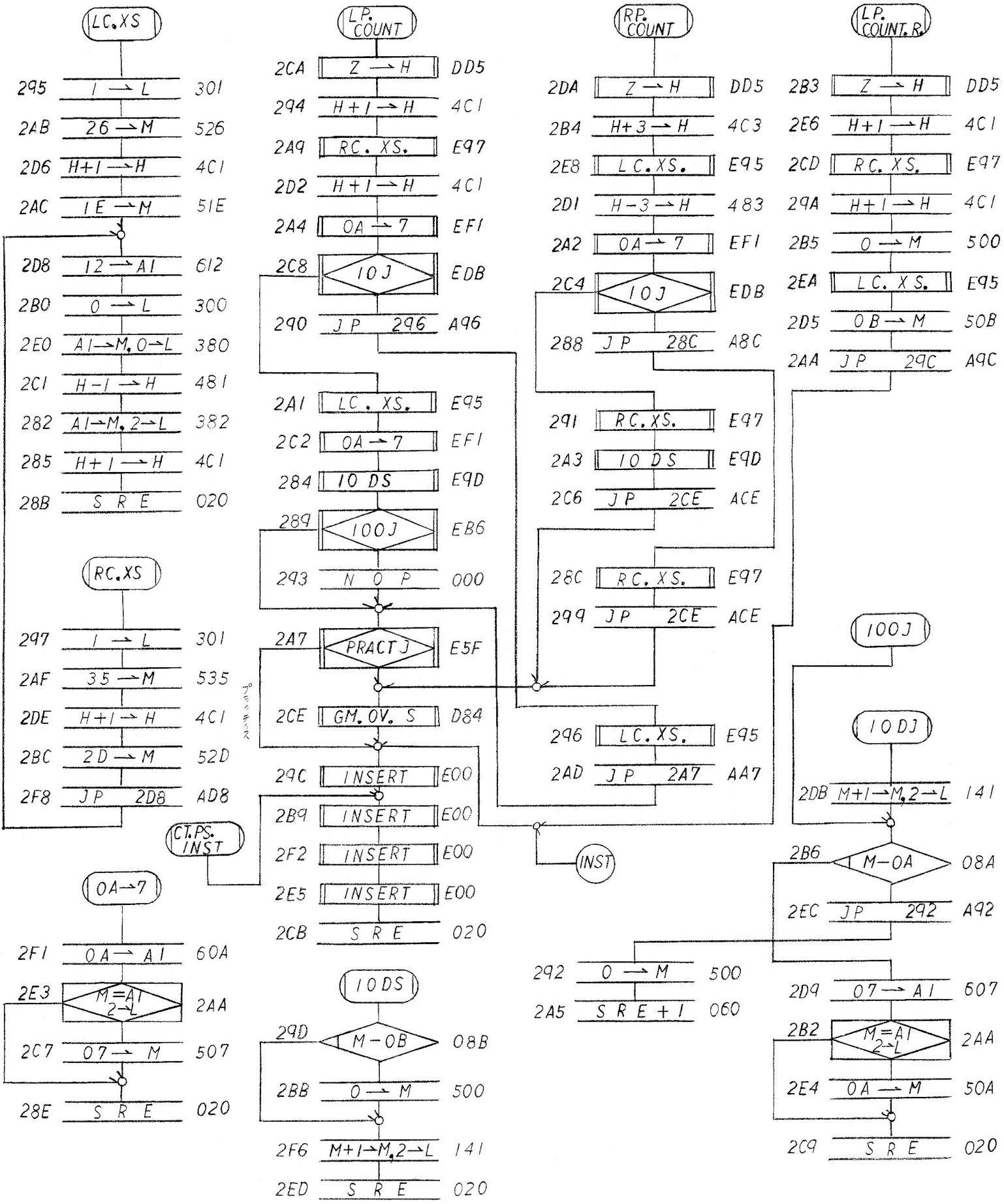

GM.OV.S
184 01 → A1 601
189 M = A1 2→L 28A
193 S R E 020
1A7 H−01→H 481
1CE M−05 085
19C JP 1F2 9F2
1B9 S R E 020
1F2 3E → L, H 5BE
1E5 40 → A1 640
1CB M∨A1→M, 1→L 3A9
196 S R E 020
Z+1→Z
1AD 39 → L, H 5B9
1DA M+1 → M, 1→L 121
1B4 S R E 020
V/4 CO.
1E8 5B → L, H 5DB
1D1 20 → A1 620
1A2 M+A1→M 2→L 3A6
1C4 S R E 020
188 S R E 020
INSERT
200 Z+1 → Z DAD
201 Z → H DD5
203 JS X.EX CD6
207 S R E 020
H−1→Z
191 H−1 → H 481
1A3 H→A2, 0→L 3DC
1C6 39 → L, H 5B9
18C A2→M, 1→L 391
199 A2→H, 0→L 3D0
1B3 17 → A1 617
1E6 H = A1 0→L 2E8
1CD S R E 020
19A H+1 → H 4C1
1B5 7E → M 57E
1EA JP 1E6 9E6
Z → H
1D5 39 → L, H 5B9
1AA M→A2, 1→L 39D
1D4 A2→H, 2→L 3D2
1A8 S R E 020
HIT J
20F H ⟷ X 018
21F 7B → L, H 5FB
23F M−08→M 3→L 1E8
27E S R E 020
27D 07 → A1 607
27B M∨A1→M, 3→L 3A3
277 H ⟷ X 018
26F S R E + 1 060
PRACT J
25F J C6C
23E M−02 082
27C M−03 083
279 JP 24F A4F
273 H ⟷ X 018
267 S R E + 1 060
24F H ⟷ X 018
21E S R E 020
SHOOT G.J
23D J C6C
27A M−08 088
275 JP 273 A73
26B JP 24F A4F

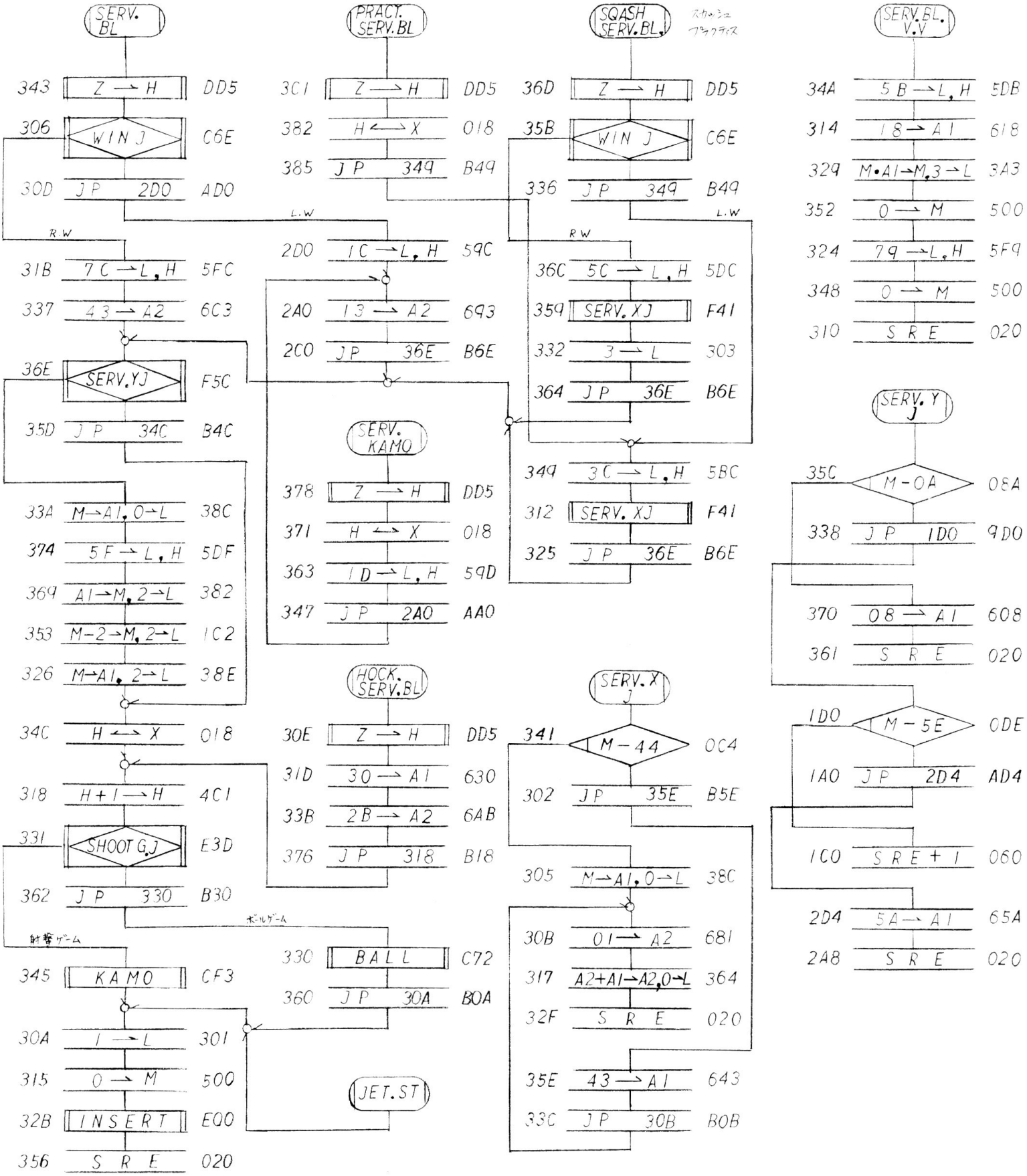

CDFJ. INV
COUNT INST
KAMO XY.S
SCORE F. INV
257 08→A1 608
22E 77→A2 6F7
25C 3E→L,H 5BE
238 M·A1 1→L 281
270 JP 206 A06
261 MVA1→M,1→L 3A9
243 SRE+1 060
206 M·A2→M,1→L 3B1
20D SRE 020
300 Z→H DD5
301 H+01→H 4C1
303 JS RC.XS E97
307 H+01→H 4C1
30F JS LC.XS E95
31F JP 29C A9C
INST
33F 1D→L,H 59D
37E M→A1,0→L 38C
37D A2→H,1→L 3D1
37B A1→M,1→L 381
377 06→A1 606
36F M·A1→M,1→L 3A1
35F M-06 086
33E M+0F→M,1→L 12F
37C M-04 084
379 M+0F→M,1→L 12F
373 M-02 082
367 M+0F→M,1→L 12F
34F M+11→M,1→L 131
31E 1D→L,H 59D
33D SERV.YJ F5C
37A JP 36B B6B
375 M→A1,0→L 38C
36B A2→H,0→L 3D0
357 A1→M,0→L 380
32E SRE 020
3F1 20→A1 620
3E3 5F→A2 6DF
3C7 JP 25C A5C
WIN F. INV
328 10→A1 610
350 6F→A2 6EF
320 JP 25C A5C
PD.LX
21B 3C→L,H 5BC
237 M→RS,1→L 399
26E M+0C→M,1→L 12C
25D M→A1,1→L 38D
23A A2→H,1→L 3D1
274 A1→M,1→L 381
269 SRE 020
PD.RX
253 5C→L,H 5DC
226 M→RS,2→L 39A
24C M+0C→M,2→L 14C
218 JP 25D A5D
PD Y
231 M→A1,0→L 38C
262 A2→H,0→L 3D0
245 A1→M,0→L 380
20A SRE 020

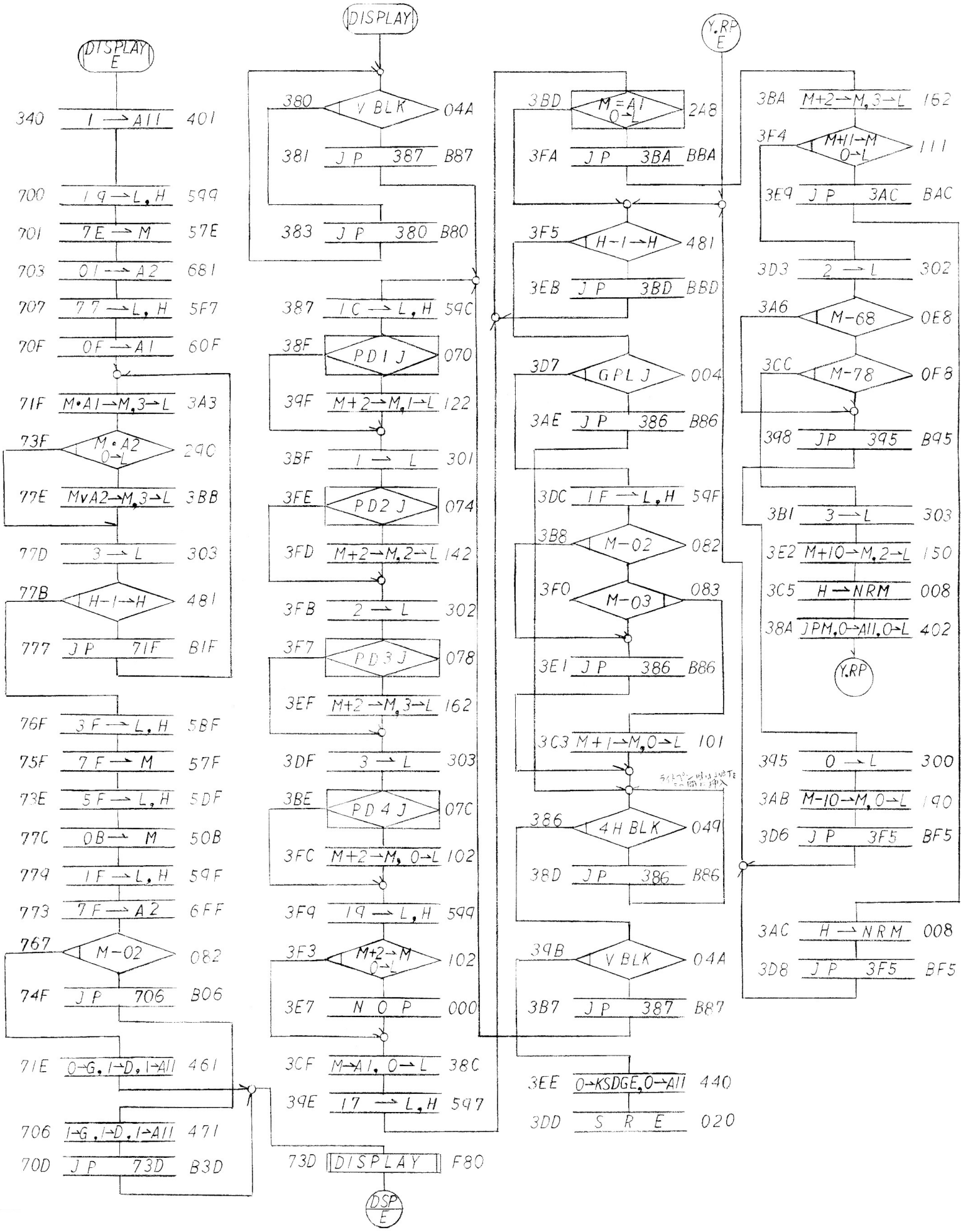

L.BW SRCH
278 10 → A1 610
271 JP 20B A0B
L.FW SRCH
263 11 → A1 611
247 JP 20B A0B
R.FW SRCH
20E 0D → A1 60D
21D JP 20B A0B
R.BW SRCH
23B 0C → A1 60C
276 JP 20B A0B
SQASH.R. SRCH
26D 14 → A1 614
25B JP 20B A0B
SERV.BAR. SRCH
236 18 → A1 618
26C JP 20B A0B
MISSILE SRCH
259 16 → A1 616
232 JP 20B A0B
BARIR. SRCH
264 6B → A1 66B
249 JP 20B A0B
BL.SRCH 2
205 0E → A1 60E
20B SERCH E15
217 S R E 020
22F 59 → L, H 5D9
25E A2 → M, 0 → L 390
23C S R E 020
BART SRCH
3EA 34 → A1 634
3D5 JP 20B A0B
BAR2 SRCH
3AA 35 → A1 635
3D4 JP 20B A0B
SERCH
215 Z → H DD5
22B M=A1 2→L 2AA
256 JP 260 A60
22C H-1→H 481
258 JP 22B A2B
230 S R E 020
260 H → A2, 0 → L 3DC
241 H ⟷ X 018
202 S R E + 1 060
PLANE 1 SRCH
3A8 32 → A1 632
3D0 JP 20B A0B
PLANE 2 SRCH
3A0 33 → A1 633
3C0 JP 20B A0B
BL. SRCH
212 0E → A1 60E
225 SERCH E15
24A S R E 020
214 59 → L, H 5D9
229 A2 → M, 0 → L 390
252 S R E + 1 060
KAMO SRCH
224 15 → A1 615
248 JP 225 A25
R.FW SRCH2
210 0D → A1 60D
221 JP 225 A25

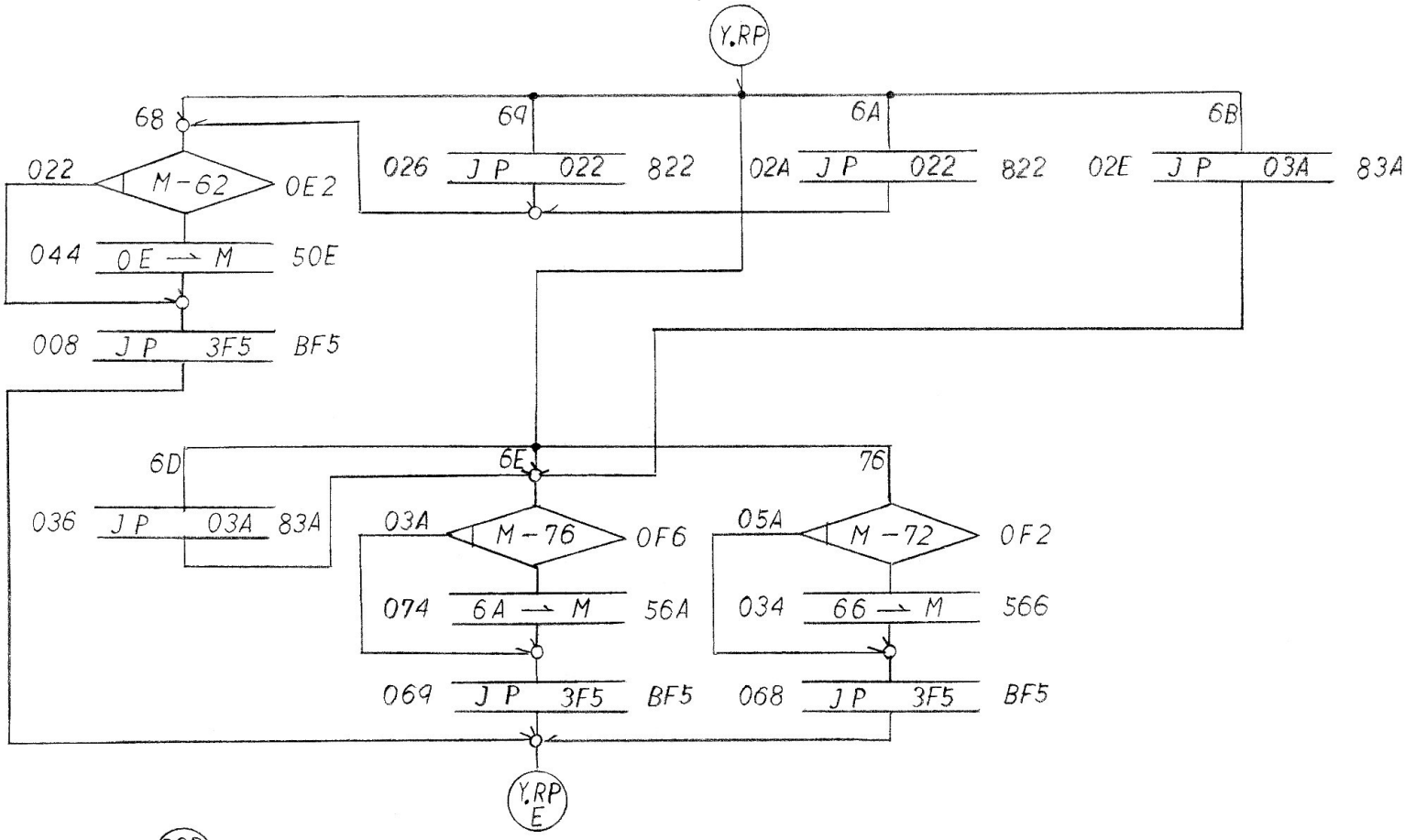

SMA ENG J
198 7A → A1 67A
1B1 A2=A1 0→L 268
1E2 JP 182 982
スマッシュ
1C5 04 → A1 604
18A A1=A2 0→L 218
195 S R E 020
English
1AB BL.VC DBD
1D6 07 → A2 687
1AC JP 3DE BDE
3DE M·A2→M,3→L 3B3
3BC M+10→M,2→L 150
3F8 JP 1D8 9D8
1D8 05 → A2 685
182 BL.VC DBD
185 07 → A2 687
18B M·A2→M,2→L 3B2
197 06 → A2 686
1AF JP 1B0 9B0
1B0 M·A1→M,2→L 3A2
1E0 MvA2→M,0→L 3B8
1C1 S R E +1 060
NET YJ
242 H ⟷ X 018
204 M=A1 0→L 2A8
209 S R E 020
213 A1+A2→A1,0→L 334
227 H ⟷ X 018
24E M-01→M 2→L 1C1
21C JP 242 A42
239 S R E +1 060
W→SC. FL.R
272 WIN J C6E
265 JP 25A A5A
24B 04 → A1 604
216 M·A1→M,1→L 3A1
22D S R E 020
25A 04 → A1 604
234 M·A1→M,1→L 3A1
268 20 → A1 620
251 MvA1→M,1→L 3A9
222 S R E 020
MS.BARL. YJ
244 0 → L 300
208 D F8B
211 M→A1,2→L 38E
223 07 → M 507
246 0E → A2 68E
20C NET YJ E42
219 JP 38E B8E
233 07 → M 507
266 3 → L 303
24D M+02→M,3→L 162
21A M→A1,3→L 38F
235 M-02→M,2→L 1C2
26A NET YJ E42
255 JP 38E B8E
22A H ⟷ X 018
254 S R E 020
38E S C4C
39D VL. NET DE1
3BB H ⟷ X 018
3F6 S R E +1 060
VL.NET YJ
228 D F8B
250 06 → M 506
220 H ⟷ X 018
240 JP 244 A44

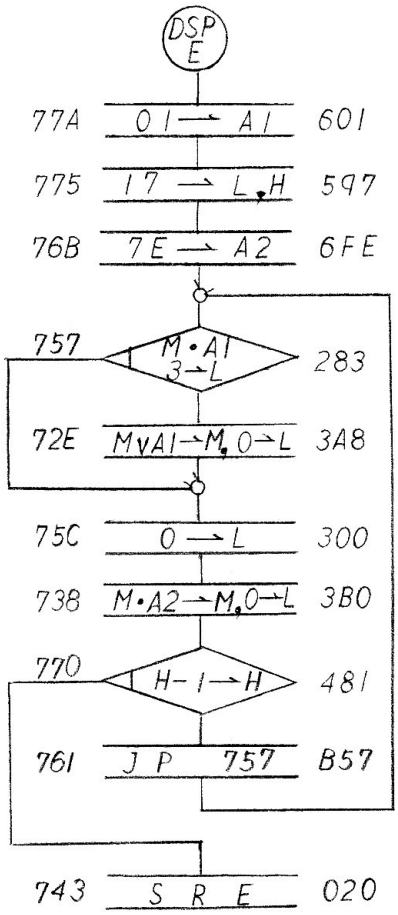

ERAS
280 H→A2, 1→L 3DD
281 0 → M 500
283 0 → L 300
287 7E → M 57E
28F H ⟷ X 018
29F A2→H, 1→L 3D1
2BF X. EX. CD6
2FE 39→L, H 5B9
2FD M-01→M, 1→L 1A1
2FB H ⟷ X 018
2F7 2 → L 302
2EF S R E 020
COUNT ERAS
2DF 0C → A1 60C
2BE Z → H DD5
2FC M-A1 2→L 28E
2F9 JP 2CF ACF
2F3 ERAS E80
2E7 0C → A1 60C
2CF H-1→H 481
29E JP 2FC AFC
2BD S R E 020
BL. ERAS
2FA 0E → A1 60E
2F5 Z → H DD5
2EB M=A1 2→L 2AA
2D7 JP 2F0 AF0
2AE H-1→H 481
2DC JP 2EB AEB
2B8 S R E 020
2F0 ERAS E80
2E1 S R E 020
KAMO ERAS
2C3 15 → A1 615
286 JP 2F5 AF5
R.FW ERAS
28D 0D → A1 60D
29B JP 2F5 AF5
SERV KAMO.V.V.
2B7 1D → L, H 59D
2EE 10 → A1 610
2DD M→A2, 3→L 39F
2BA A2•A1→A2, 3→L 363
2F4 3D → L, H 5BD
2E9 M-0B 08B
2D3 JP 2E2 AE2
フリーピストル.クレー
移動標的
2A6 5B → L, H 5DB
2CC 0A → M 50A
298 M∨A2→M, 2→L 3BA
2B1 S R E 020
2E2 5B → L, H 5DB
2C5 09 → M 509
28A JP 298 A98

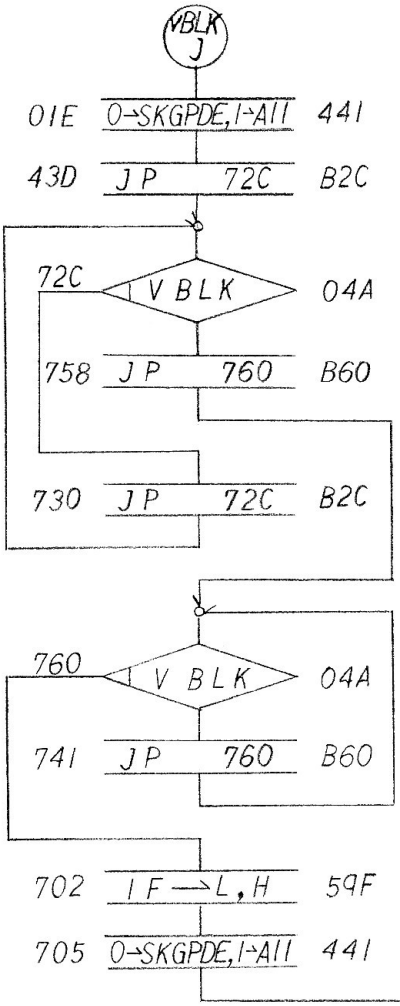

LC.XS
295 1 → L 301
2AB 26 → M 526
2D6 H+1 → H 4C1
2AC 1E → M 51E
2D8 12 → A1 612
2B0 0 → L 300
2E0 A1 → M, 0 → L 380
2C1 H−1 → H 481
282 A1 → M, 2 → L 382
285 H+1 → H 4C1
28B S R E 020
RC.XS
297 1 → L 301
2AF 35 → M 535
2DE H+1 → H 4C1
2BC 2D → M 52D
2F8 J P 2D8 AD8
CT.PS. INST
0A→7
2F1 0A → A1 60A
2E3 M=A1 2→L 2AA
2C7 07 → M 507
28E S R E 020
LP. COUNT
2CA Z → H DD5
294 H+1 → H 4C1
2A9 RC. XS. E97
2D2 H+1 → H 4C1
2A4 0A → 7 EF1
2C8 10J EDB
290 J P 296 A96
2A1 LC. XS. E95
2C2 0A → 7 EF1
284 10 DS E9D
289 100J EB6
293 N O P 000
2A7 PRACTJ E5F
2CE GM. OV. S D84
29C INSERT E00
2B9 INSERT E00
2F2 INSERT E00
2E5 INSERT E00
2CB S R E 020
10DS
29D M−0B 08B
2BB 0 → M 500
2F6 M+1 → M, 2 → L 141
2ED S R E 020
RP. COUNT
2DA Z → H DD5
2B4 H+3 → H 4C3
2E8 LC.XS. E95
2D1 H−3 → H 483
2A2 0A → 7 EF1
2C4 10J EDB
288 J P 28C A8C
291 RC.XS. E97
2A3 10 DS E9D
2C6 J P 2CE ACE
28C RC.XS. E97
299 J P 2CE ACE
296 LC.XS. E95
2AD J P 2A7 AA7
INST
LP. COUNT. R.
2B3 Z → H DD5
2E6 H+1 → H 4C1
2CD RC. XS. E97
29A H+1 → H 4C1
2B5 0 → M 500
2EA LC. XS. E95
2D5 0B → M 50B
2AA J P 29C A9C
100J
10DJ
2DB M+1 → M, 2 → L 141
2B6 M−0A 08A
2EC J P 292 A92
292 0 → M 500
2A5 S R E + 1 060
2D9 07 → A1 607
2B2 M=A1 2→L 2AA
2E4 0A → M 50A
2C9 S R E 020

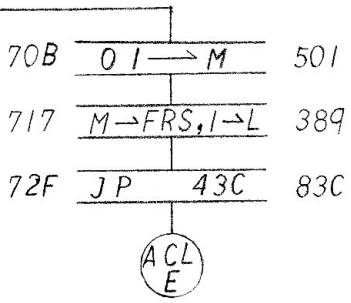

SERV. BL
343 Z → H DD5
306 WIN J C6E
30D JP 2D0 AD0
R.W
31B 7C → L, H 5FC
337 43 → A2 6C3
36E SERV. YJ F5C
35D JP 34C B4C
33A M→A1, 0→L 38C
374 5F → L, H 5DF
369 A1→M, 2→L 382
353 M−2→M, 2→L 1C2
326 M→A1, 2→L 38E
34C H ⟷ X 018
318 H+1 → H 4C1
331 SHOOT G.J E3D
362 JP 330 B30
射撃ゲーム
345 KAMO CF3
30A 1 → L 301
315 0 → M 500
32B INSERT E00
356 SRE 020
PRACT. SERV. BL
3C1 Z → H DD5
382 H ⟷ X 018
385 JP 349 B49
L.W
2D0 1C → L, H 59C
2A0 13 → A2 693
2C0 JP 36E B6E
SERV. KAMO
378 Z → H DD5
371 H ⟷ X 018
363 1D → L, H 59D
347 JP 2A0 AA0
HOCK. SERV. BL
30E Z → H DD5
31D 30 → A1 630
33B 2B → A2 6AB
376 JP 318 B18
ボールゲーム
330 BALL C72
360 JP 30A B0A
JET. ST
SQASH SERV. BL
スカッシュ プラクティス
36D Z → H DD5
35B WIN J C6E
336 JP 349 B49
L.W
R.W
36C 5C → L, H 5DC
359 SERV. XJ F41
332 3 → L 303
364 JP 36E B6E
349 3C → L, H 5BC
312 SERV. XJ F41
325 JP 36E B6E
SERV. XJ
341 M−44 0C4
302 JP 35E B5E
305 M→A1, 0→L 38C
30B 01 → A2 681
317 A2+A1→A2, 0→L 364
32F SRE 020
35E 43 → A1 643
33C JP 30B B0B
SERV. BL. V.V
34A 5B → L, H 5DB
314 18 → A1 618
329 M•A1→M, 3→L 3A3
352 0 → M 500
324 79 → L, H 5F9
348 0 → M 500
310 SRE 020
SERV. YJ
35C M−0A 08A
338 JP 1D0 9D0
370 08 → A1 608
361 SRE 020
1D0 M−5E 0DE
1A0 JP 2D4 AD4
1C0 SRE+1 060
2D4 5A → A1 65A
2A8 SRE 020

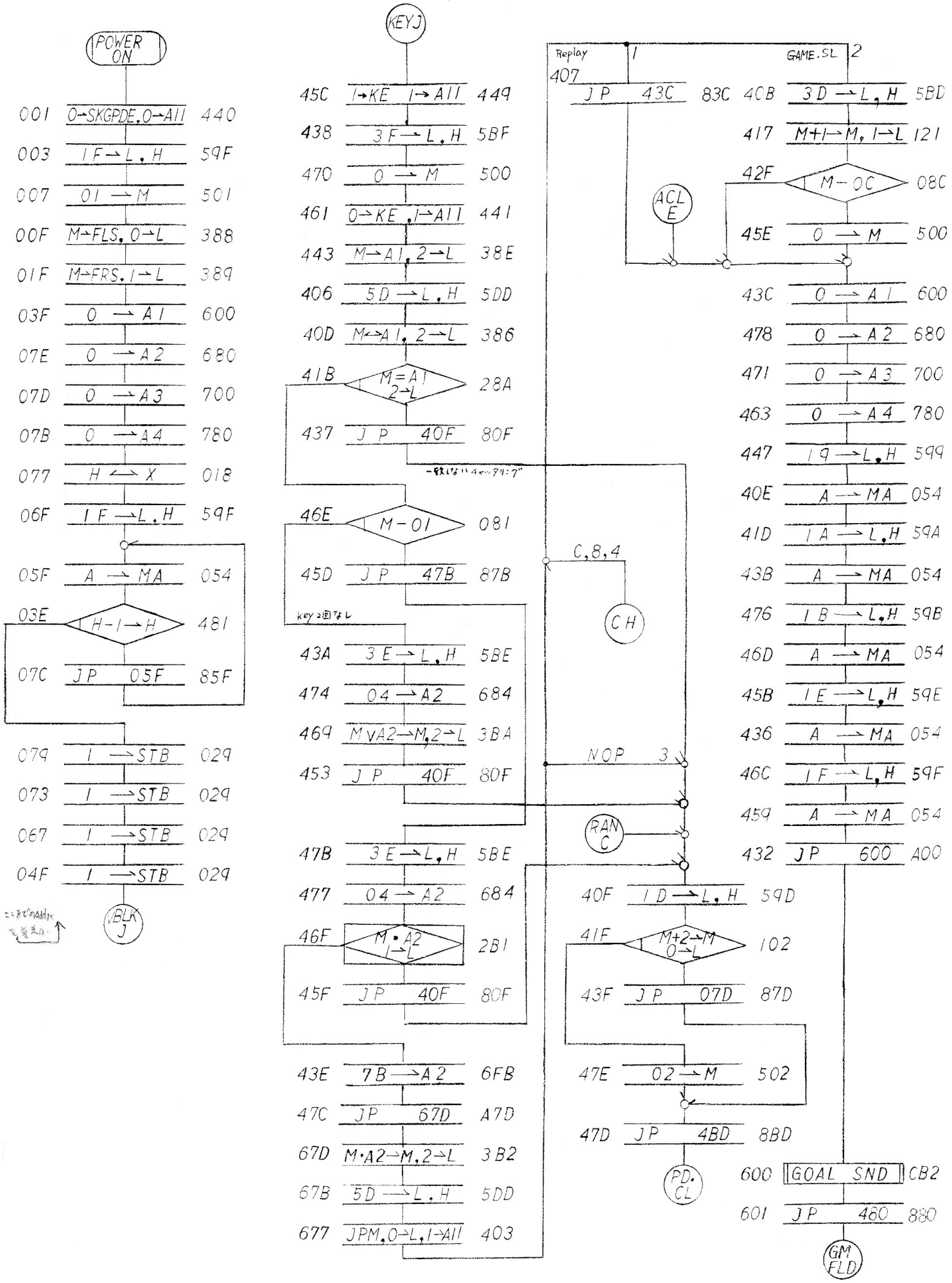

DISPLAY E
340 1 → A11 401
700 19 → L, H 599
701 7E → M 57E
703 01 → A2 681
707 77 → L, H 5F7
70F 0F → A1 60F
71F M•A1 → M, 3 → L 3A3
73F M•A2 0 → L 290
77E M∨A2 → M, 3 → L 3BB
77D 3 → L 303
77B H−1 → H 481
777 JP 71F B1F
76F 3F → L, H 5BF
75F 7F → M 57F
73E 5F → L, H 5DF
77C 0B → M 50B
779 1F → L, H 59F
773 7F → A2 6FF
767 M−02 082
74F JP 706 B06
71E 0 → G, 1 → D, 1 → A11 461
706 1 → G, 1 → D, 1 → A11 471
70D JP 73D B3D
DISPLAY
380 V BLK 04A
381 JP 387 B87
383 JP 380 B80
387 1C → L, H 59C
38F PD1J 070
39F M+2 → M, 1 → L 122
3BF 1 → L 301
3FE PD2J 074
3FD M+2 → M, 2 → L 142
3FB 2 → L 302
3F7 PD3J 078
3EF M+2 → M, 3 → L 162
3DF 3 → L 303
3BE PD4J 07C
3FC M+2 → M, 0 → L 102
3F9 19 → L, H 599
3F3 M+2 → M 0 → L 102
3E7 NOP 000
3CF M → A1, 0 → L 38C
39E 17 → L, H 597
73D DISPLAY F80
DSP E
Y.RP E
3BD M = A1 0 → L 248
3FA JP 3BA BBA
3F5 H−1 → H 481
3EB JP 3BD BBD
3D7 GPLJ 004
3AE JP 386 B86
3DC 1F → L, H 59F
3B8 M−02 082
3F0 M−03 083
3E1 JP 386 B86
3C3 M+1 → M, 0 → L 101
386 4HBLK 049
38D JP 386 B86
39B V BLK 04A
3B7 JP 387 B87
3EE 0 → KSDGE, 0 → A11 440
3DD SRE 020
3BA M+2 → M, 3 → L 162
3F4 M+11 → M 0 → L 111
3E9 JP 3AC BAC
3D3 2 → L 302
3A6 M−68 0E8
3CC M−78 0F8
398 JP 395 B95
3B1 3 → L 303
3E2 M+10 → M, 2 → L 150
3C5 H → NRM 008
38A JPM, 0 → A11, 0 → L 402
Y.RP
395 0 → L 300
3AB M−10 → M, 0 → L 190
3D6 JP 3F5 BF5
3AC H → NRM 008
3D8 JP 3F5 BF5


Y.RP
68
69
6A
6B
022
M-62
0E2
026
JP 022
822
02A
JP 022
822
02E
JP 03A
83A
044
0E → M
50E
008
JP 3F5
BF5
6D
6E
76
036
JP 03A
83A
03A
M-76
0F6
05A
M-72
0F2
074
6A → M
56A
034
66 → M
566
069
JP 3F5
BF5
068
JP 3F5
BF5
Y.RP E

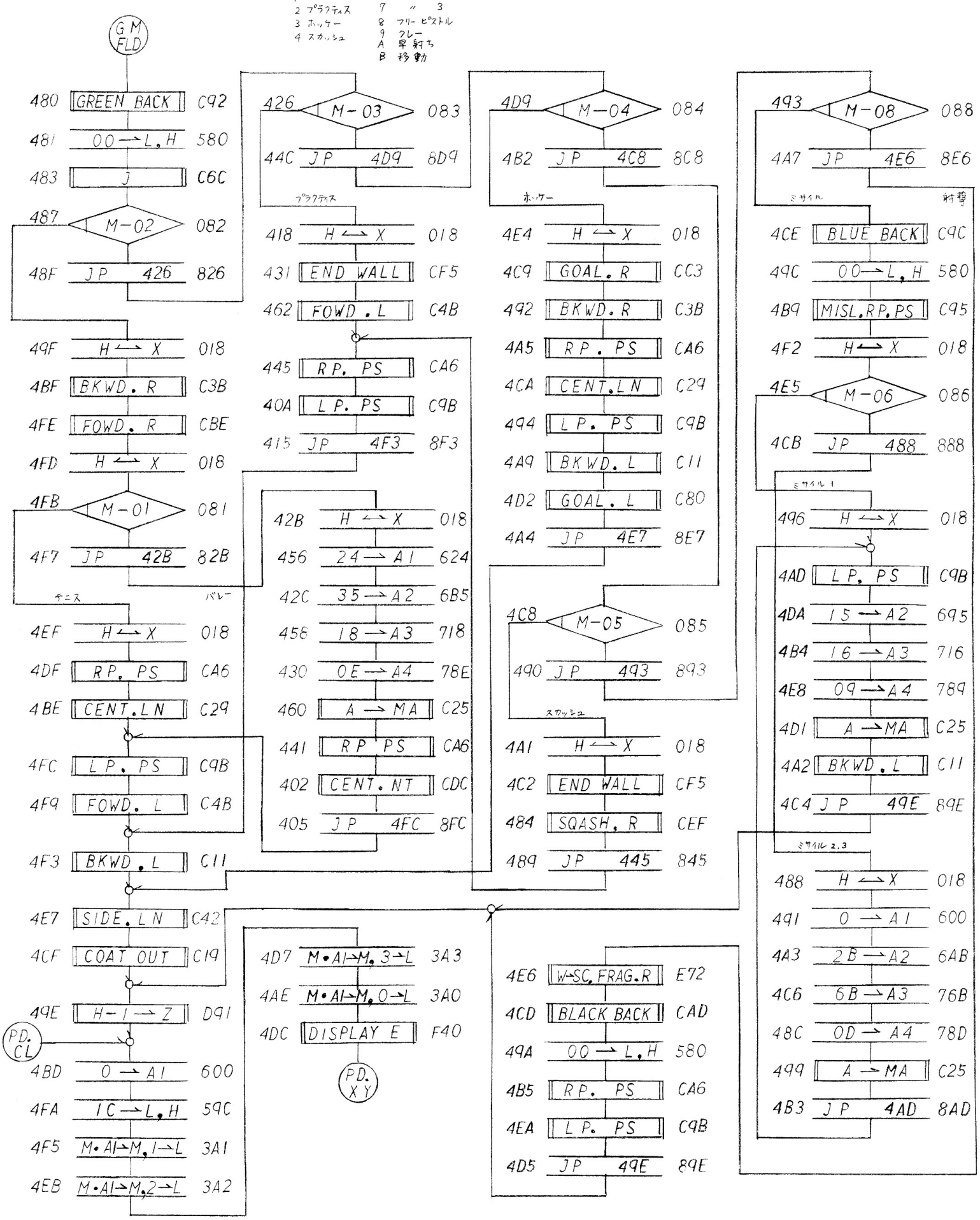

DSP E
77A
01 → A1
601
775
17 → L,H
597
76B
7E → A2
6FE
757
M·A1 3→L
283
72E
MvA1→M, 0→L
3A8
75C
0 → L
300
738
M·A2→M, 0→L
3B0
770
H-1→H
481
761
JP 757
B57
743
S R E
020

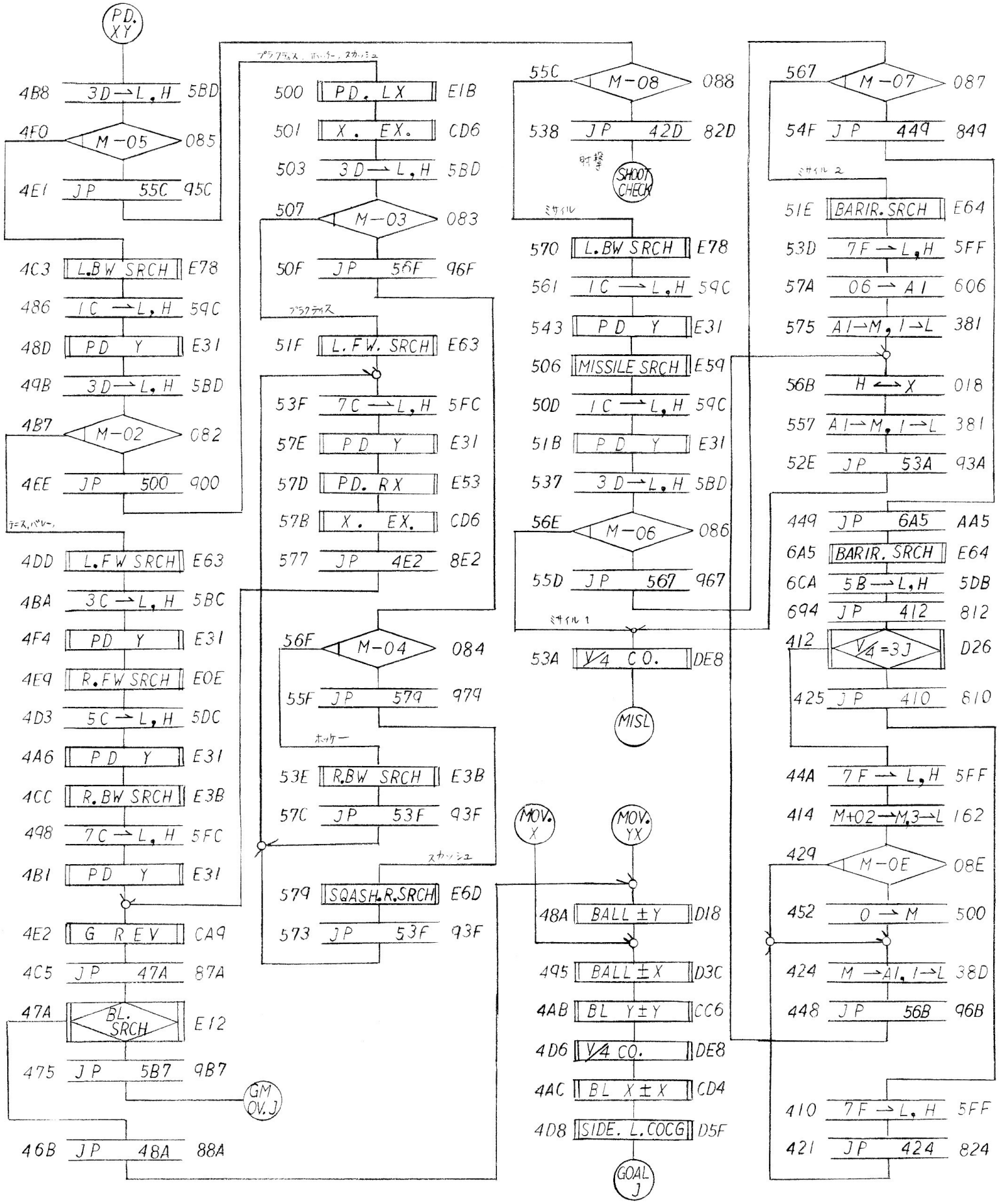

VBLK J
01E
0→SKGPDE, 1→A11
441
43D
JP 72C
B2C
72C
VBLK
04A
758
JP 760
B60
730
JP 72C
B2C
760
VBLK
04A
741
JP 760
B60
702
1F → L,H
59F
705
0→SKGPDE, 1→A11
441

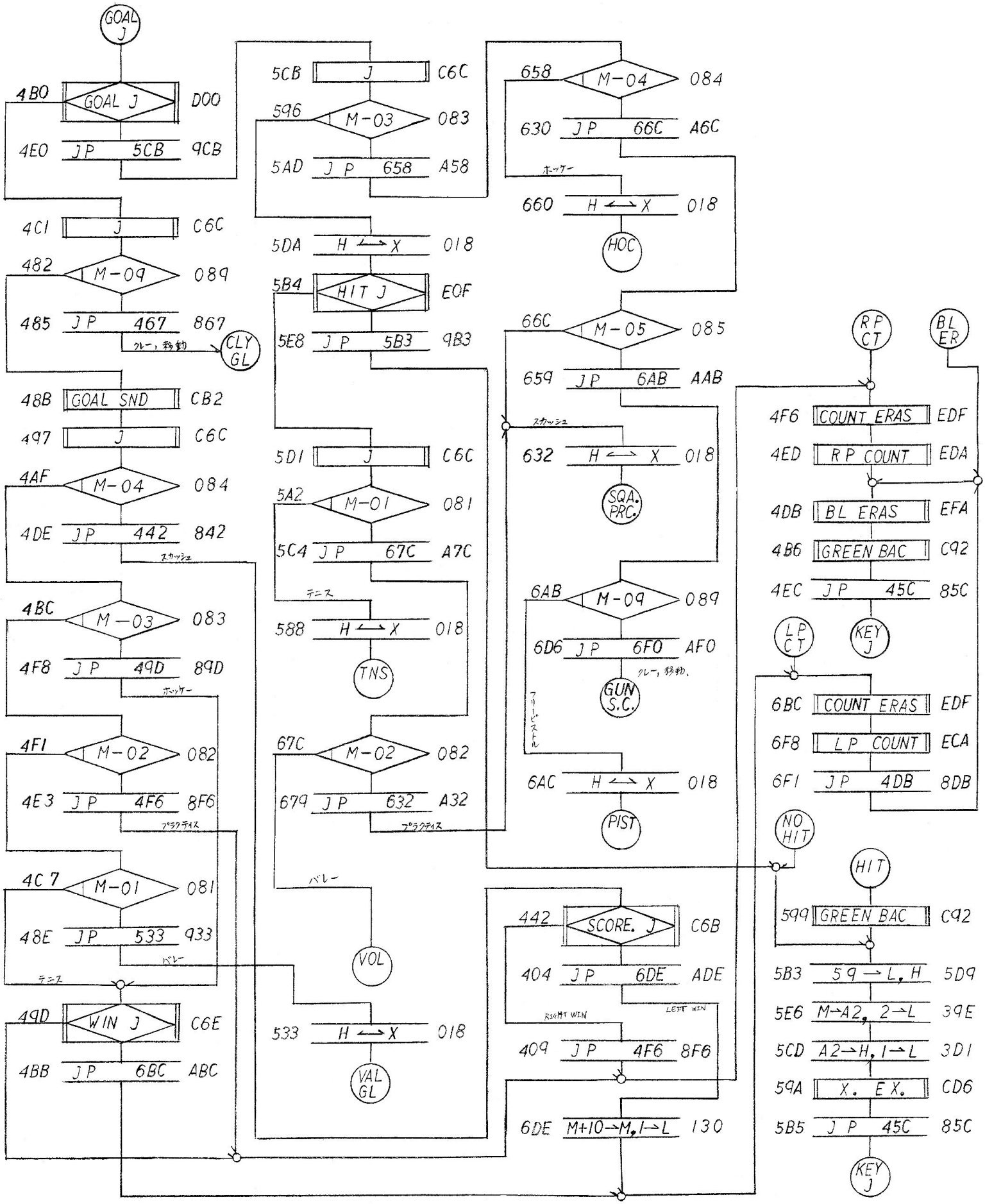

70B
01 → M
501
717
M→FRS, 1→L
389
72F
JP 43C
83C
ACL E

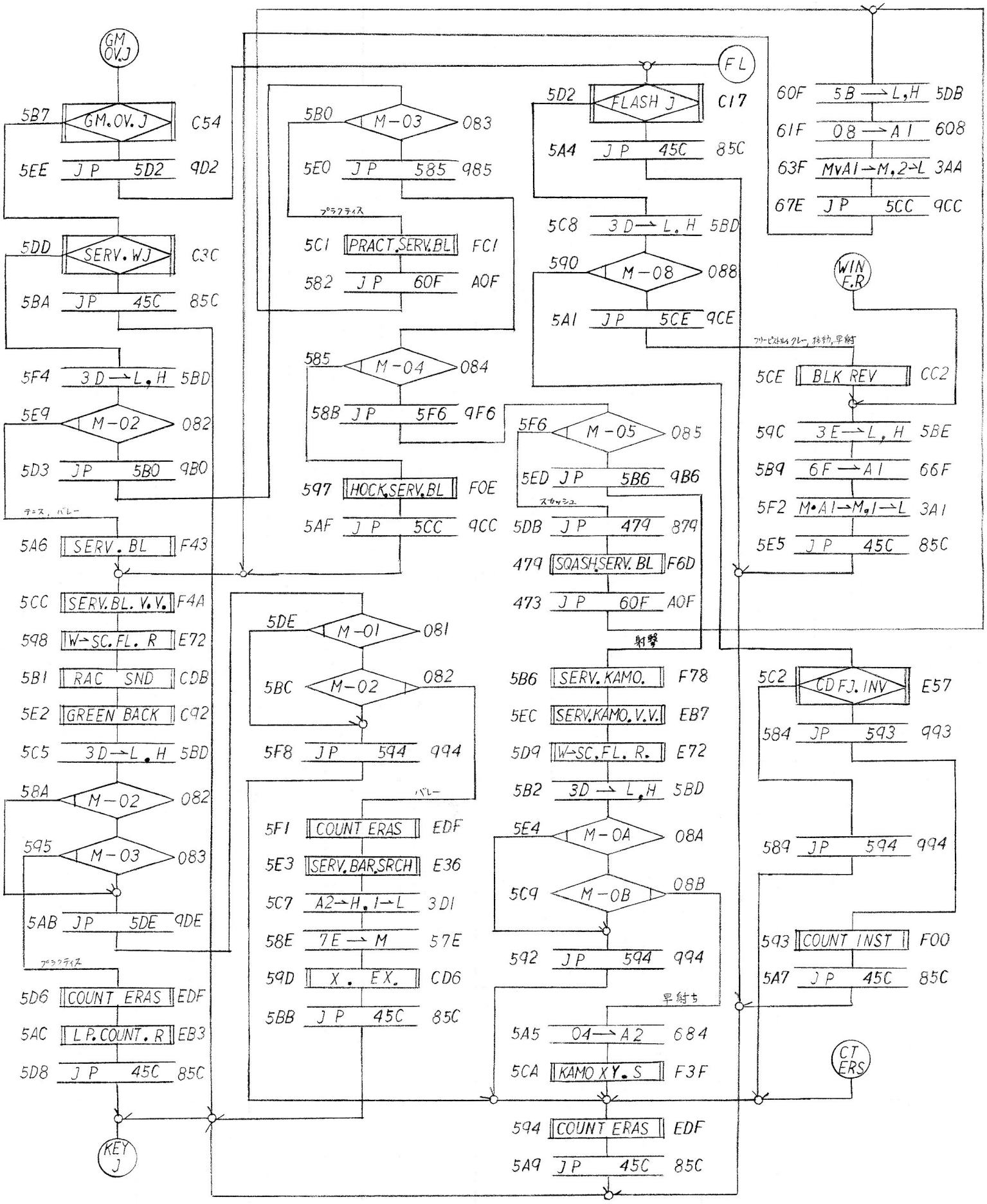

POWER ON
001 0→SKGPDE,0→A11 440
003 1F→L,H 59F
007 01→M 501
00F M→FLS,0→L 388
01F M→FRS,1→L 389
03F 0→A1 600
07E 0→A2 680
07D 0→A3 700
07B 0→A4 780
077 H↔X 018
06F 1F→L,H 59F
05F A→MA 054
03E H-1→H 481
07C JP 05F 85F
079 1→STB 029
073 1→STB 029
067 1→STB 029
04F 1→STB 029
BLK J
KEY J
45C 1→KE 1→A11 449
438 3F→L,H 5BF
470 0→M 500
461 0→KE,1→A11 441
443 M→A1,2→L 38E
406 5D→L,H 5DD
40D M↔A1,2→L 386
41B M=A1 2→L 28A
437 JP 40F 80F
46E M-01 081
45D JP 47B 87B
43A 3E→L,H 5BE
474 04→A2 684
469 M∨A2→M,2→L 3BA
453 JP 40F 80F
47B 3E→L,H 5BE
477 04→A2 684
46F M・A2 1→L 2B1
45F JP 40F 80F
43E 7B→A2 6FB
47C JP 67D A7D
67D M・A2→M,2→L 3B2
67B 5D→L,H 5DD
677 JPM,0→L,1→A11 403
Replay 1
407 JP 43C 83C
ACL E
C,8,4
CH
NOP 3
RAN C
40F 1D→L,H 59D
41F M+2→M 0→L 102
43F JP 07D 87D
47E 02→M 502
47D JP 4BD 8BD
PD. CL
GAME.SL 2
40B 3D→L,H 5BD
417 M+1→M,1→L 121
42F M-0C 08C
45E 0→M 500
43C 0→A1 600
478 0→A2 680
471 0→A3 700
463 0→A4 780
447 19→L,H 599
40E A→MA 054
41D 1A→L,H 59A
43B A→MA 054
476 1B→L,H 59B
46D A→MA 054
45B 1E→L,H 59E
436 A→MA 054
46C 1F→L,H 59F
459 A→MA 054
432 JP 600 A00
600 GOAL SND CB2
601 JP 480 880
GM FLD

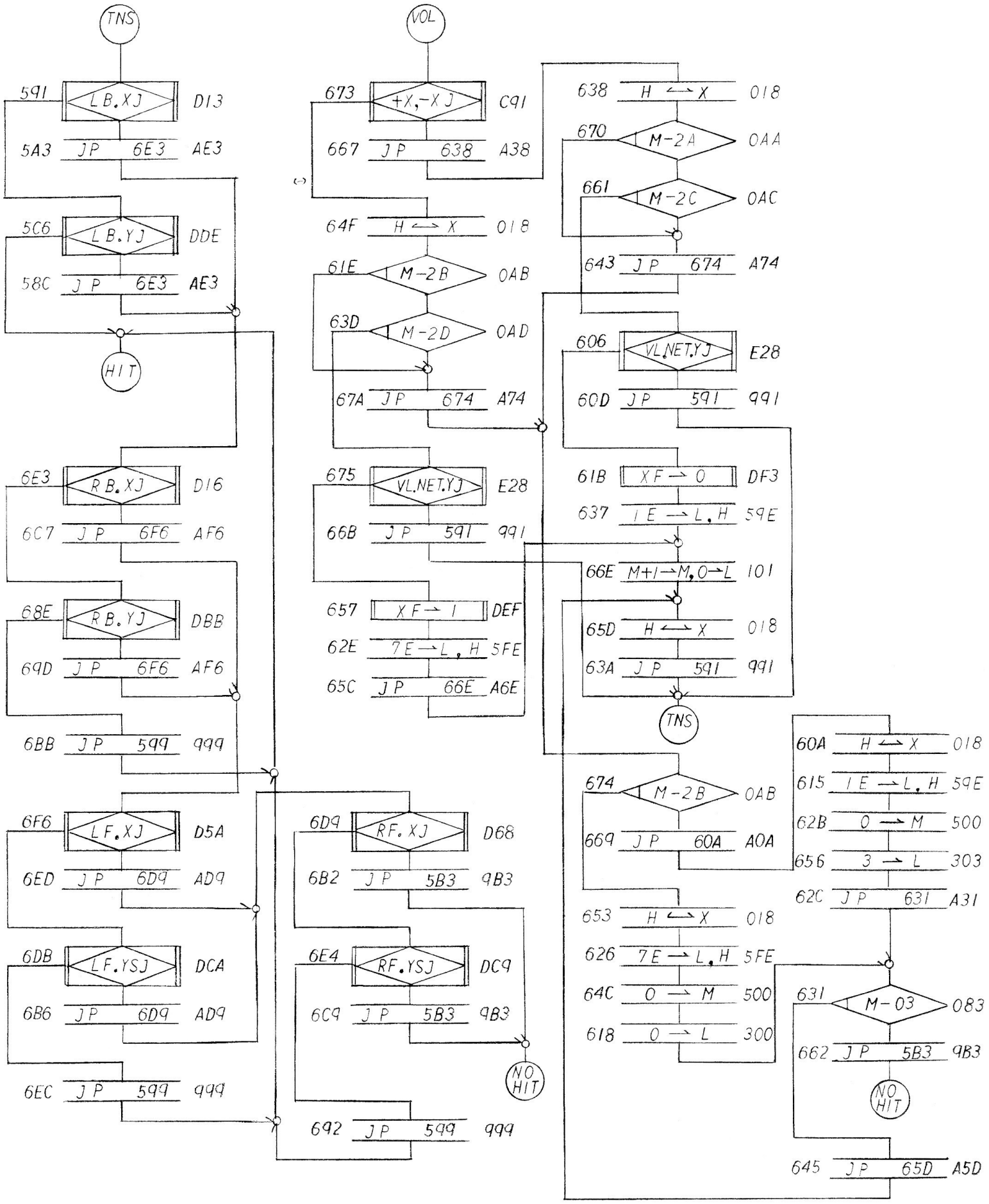
0 テニス
1 バレー
2 プラクティス
3 ホッケー
4 スカッシュ
5 MISSILE 1
6 〃 2
7 〃 3
8 フリー ピストル
9 クレー
A 早射ち
B 移動

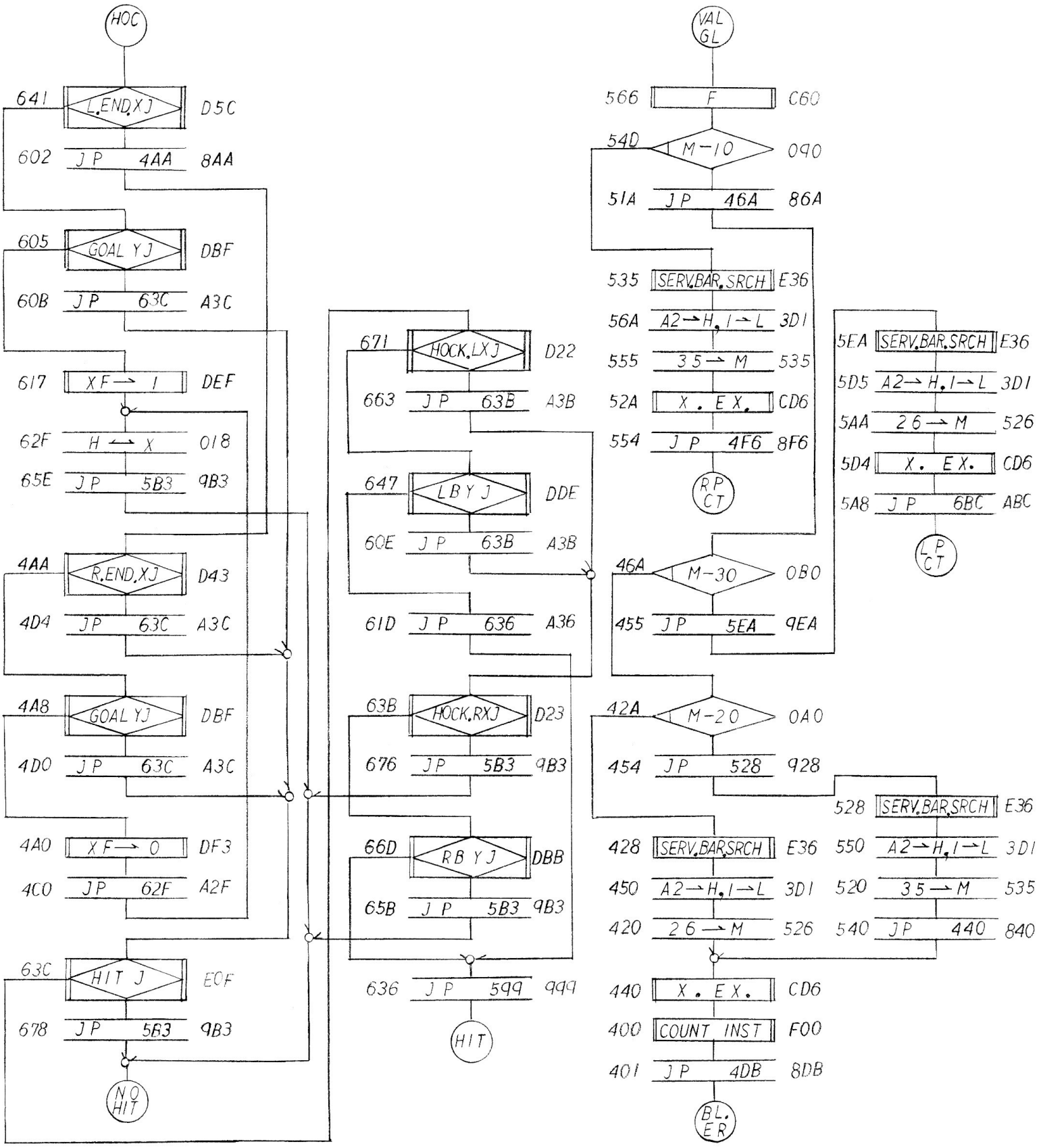


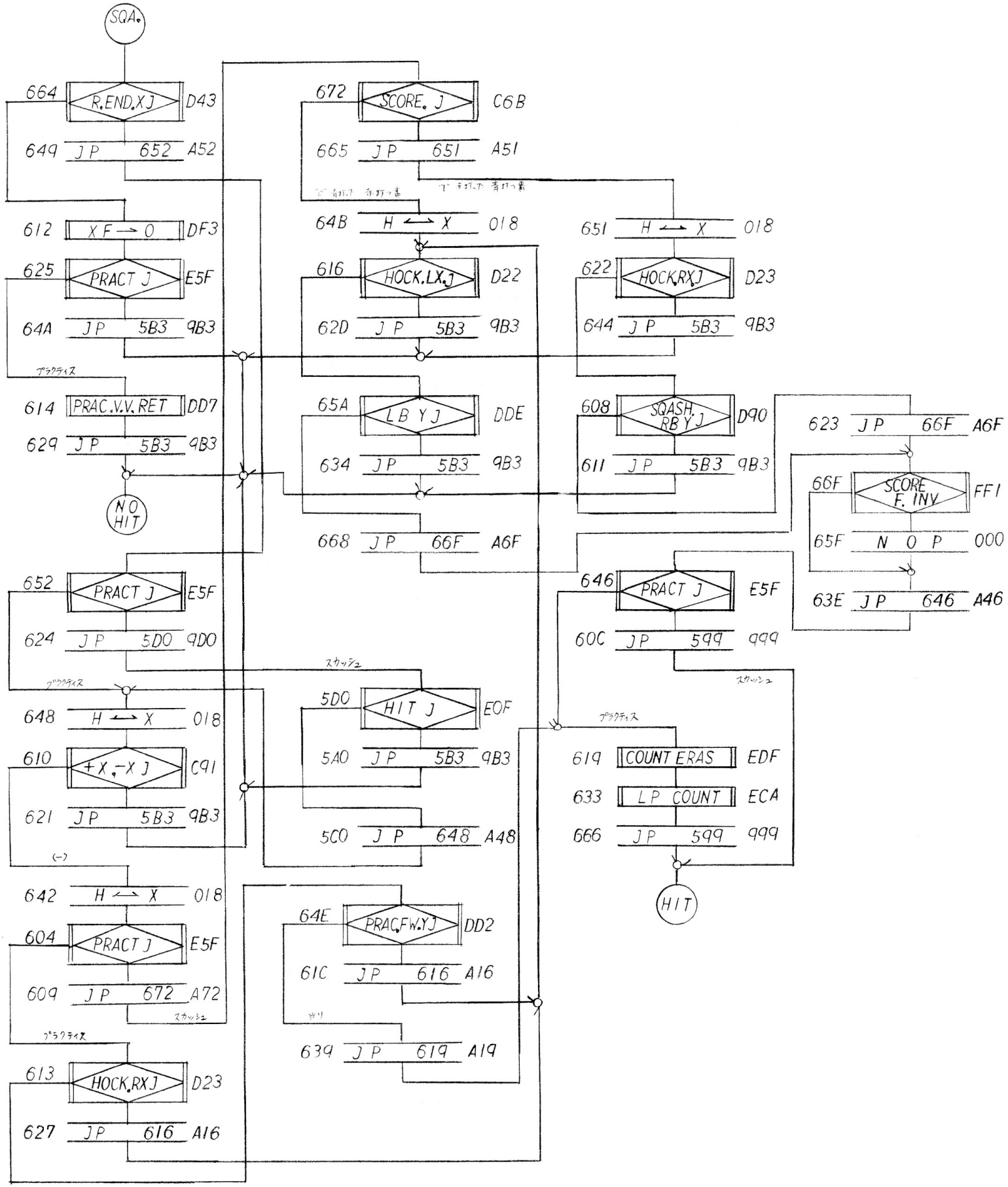

PD. XY
4B8 3D→L,H 5BD
4F0 M-05 085
4E1 JP 55C 95C
4C3 L.BW SRCH E78
486 1C→L,H 59C
48D PD Y E31
49B 3D→L,H 5BD
4B7 M-02 082
4EE JP 500 900
テニス,バレー,
4DD L.FW SRCH E63
4BA 3C→L,H 5BC
4F4 PD Y E31
4E9 R.FW SRCH E0E
4D3 5C→L,H 5DC
4A6 PD Y E31
4CC R.BW SRCH E3B
498 7C→L,H 5FC
4B1 PD Y E31
4E2 G REV CA9
4C5 JP 47A 87A
47A BL. SRCH E12
475 JP 5B7 9B7
GM OV.J
46B JP 48A 88A
プラクティス、ホッケー、スカッシュ
500 PD. LX E1B
501 X. EX. CD6
503 3D→L,H 5BD
507 M-03 083
50F JP 56F 96F
プラクティス
51F L.FW. SRCH E63
53F 7C→L,H 5FC
57E PD Y E31
57D PD. RX E53
57B X. EX. CD6
577 JP 4E2 8E2
56F M-04 084
55F JP 579 979
ホッケー
53E R.BW SRCH E3B
57C JP 53F 93F
スカッシュ
579 SQASH.R.SRCH E6D
573 JP 53F 93F
55C M-08 088
538 JP 42D 82D
射撃
SHOOT CHECK
ミサイル
570 L.BW SRCH E78
561 1C→L,H 59C
543 PD Y E31
506 MISSILE SRCH E59
50D 1C→L,H 59C
51B PD Y E31
537 3D→L,H 5BD
56E M-06 086
55D JP 567 967
ミサイル 1
53A V/4 CO. DE8
MISL
MOV. X
MOV. YX
48A BALL ±Y D18
495 BALL ±X D3C
4AB BL Y±Y CC6
4D6 V/4 CO. DE8
4AC BL X±X CD4
4D8 SIDE. L.COCG D5F
GOAL J
567 M-07 087
54F JP 449 849
ミサイル 2
51E BARIR. SRCH E64
53D 7F→L,H 5FF
57A 06→A1 606
575 A1→M,1→L 381
56B H↔X 018
557 A1→M,1→L 381
52E JP 53A 93A
449 JP 6A5 AA5
6A5 BARIR. SRCH E64
6CA 5B→L,H 5DB
694 JP 412 812
412 V/4=3J D26
425 JP 410 810
44A 7F→L,H 5FF
414 M+02→M,3→L 162
429 M-0E 08E
452 0→M 500
424 M→A1,1→L 38D
448 JP 56B 96B
410 7F→L,H 5FF
421 JP 424 824

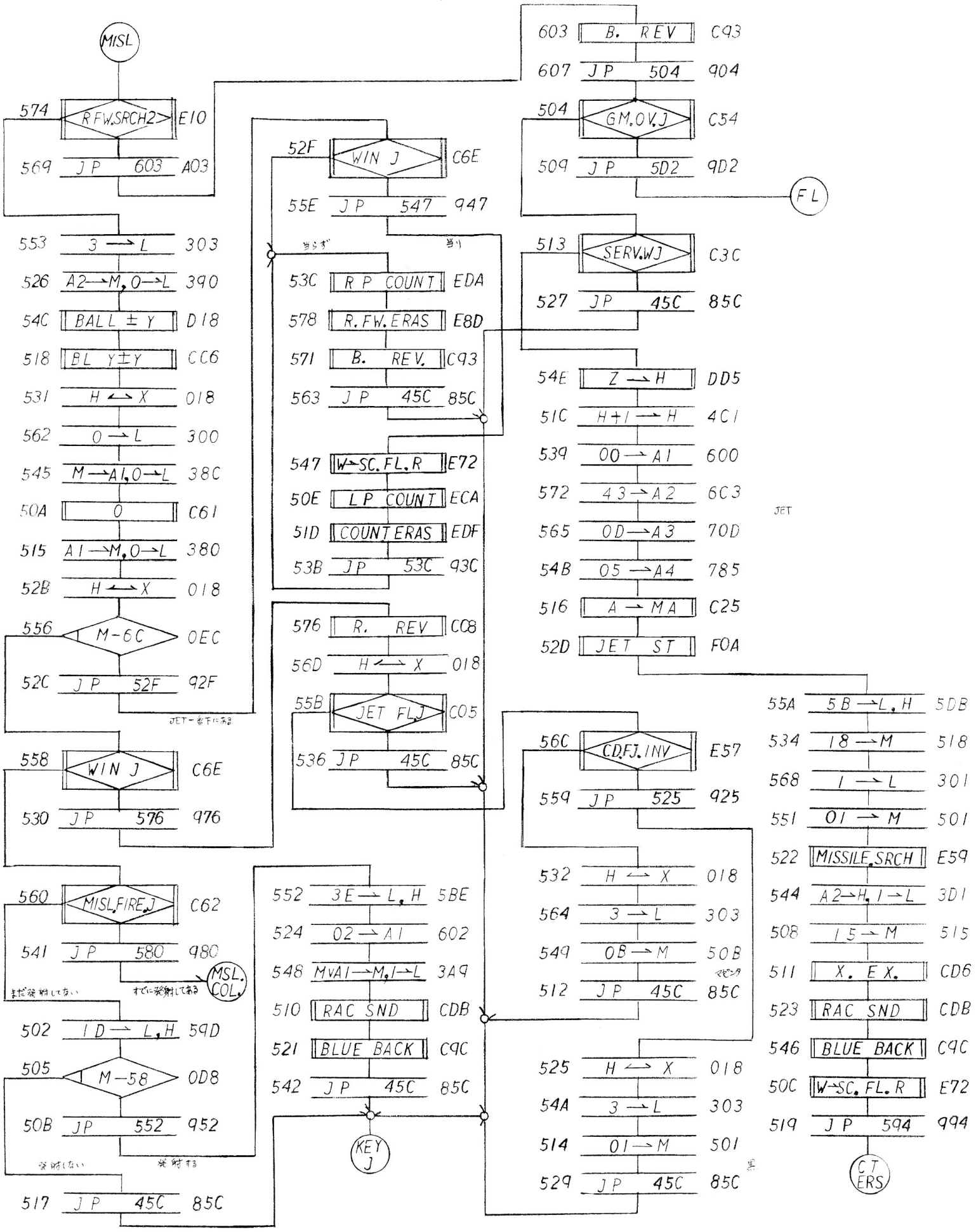

GOAL J
4B0 GOAL J D00
4E0 JP 5CB 9CB
4C1 J C6C
482 M-09 089
485 JP 467 867
クレー，移動
CLY GL
48B GOAL SND CB2
497 J C6C
4AF M-04 084
4DE JP 442 842
スカッシュ
4BC M-03 083
4F8 JP 49D 89D
ホッケー
4F1 M-02 082
4E3 JP 4F6 8F6
プラクティス
4C7 M-01 081
48E JP 533 933
バレー
テニス
49D WIN J C6E
4BB JP 6BC ABC
5CB J C6C
596 M-03 083
5AD JP 658 A58
5DA H ⟷ X 018
5B4 HIT J E0F
5E8 JP 5B3 9B3
5D1 J C6C
5A2 M-01 081
5C4 JP 67C A7C
テニス
588 H ⟷ X 018
TNS
67C M-02 082
679 JP 632 A32
プラクティス
バレー
VOL
533 H ⟷ X 018
VAL GL
658 M-04 084
630 JP 66C A6C
ホッケー
660 H ⟷ X 018
HOC
66C M-05 085
659 JP 6AB AAB
スカッシュ
632 H ⟷ X 018
SQA. PRC.
6AB M-09 089
6D6 JP 6F0 AF0
クレー，移動，
GUN S.C.
フリーピストル
6AC H ⟷ X 018
PIST
442 SCORE. J C6B
404 JP 6DE ADE
RIGHT WIN
LEFT WIN
409 JP 4F6 8F6
6DE M+10→M, 1→L 130
RP CT
BL ER
4F6 COUNT ERAS EDF
4ED RP COUNT EDA
4DB BL ERAS EFA
4B6 GREEN BAC C92
4EC JP 45C 85C
LP CT
KEY J
6BC COUNT ERAS EDF
6F8 LP COUNT ECA
6F1 JP 4DB 8DB
NO HIT
HIT
599 GREEN BAC C92
5B3 59 → L, H 5D9
5E6 M→A2, 2→L 39E
5CD A2→H, 1→L 3D1
59A X. EX. CD6
5B5 JP 45C 85C
KEY J

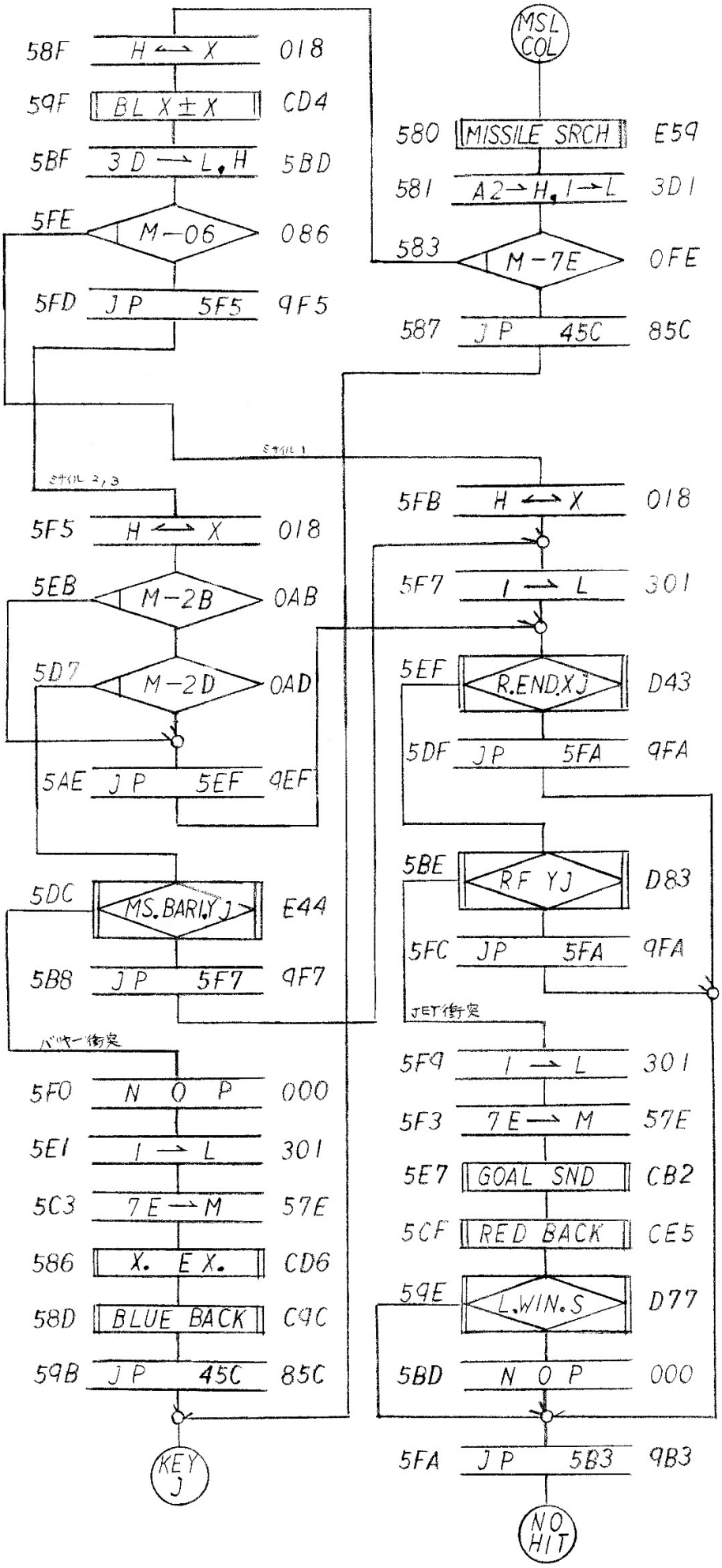

GM OV.J
5B7 GM.OV.J C54
5EE JP 5D2 9D2
5DD SERV.WJ C3C
5BA JP 45C 85C
5F4 3D→L,H 5BD
5E9 M-02 082
5D3 JP 5B0 9B0
テニス, バレー
5A6 SERV.BL F43
5CC SERV.BL.V.V. F4A
598 W→SC.FL.R E72
5B1 RAC SND CDB
5E2 GREEN BACK C92
5C5 3D→L,H 5BD
58A M-02 082
595 M-03 083
5AB JP 5DE 9DE
プラクティス
5D6 COUNT ERAS EDF
5AC LP.COUNT.R EB3
5D8 JP 45C 85C
KEY J
5B0 M-03 083
5E0 JP 585 985
プラクティス
5C1 PRACT.SERV.BL FC1
582 JP 60F A0F
585 M-04 084
58B JP 5F6 9F6
597 HOCK.SERV.BL F0E
5AF JP 5CC 9CC
5DE M-01 081
5BC M-02 082
5F8 JP 594 994
バレー
5F1 COUNT ERAS EDF
5E3 SERV.BAR.SRCH E36
5C7 A2→H,1→L 3D1
58E 7E→M 57E
59D X.EX. CD6
5BB JP 45C 85C
FL
5D2 FLASH J C17
5A4 JP 45C 85C
5C8 3D→L,H 5BD
590 M-08 088
5A1 JP 5CE 9CE
5F6 M-05 085
5ED JP 5B6 9B6
スカッシュ
5DB JP 479 879
479 SQASH.SERV.BL F6D
473 JP 60F A0F
射撃
5B6 SERV.KAMO. F78
5EC SERV.KAMO.V.V. EB7
5D9 W→SC.FL.R. E72
5B2 3D→L,H 5BD
5E4 M-0A 08A
5C9 M-0B 08B
592 JP 594 994
早射ち
5A5 04→A2 684
5CA KAMO XY.S F3F
594 COUNT ERAS EDF
5A9 JP 45C 85C
60F 5B→L,H 5DB
61F 08→A1 608
63F MvA1→M,2→L 3AA
67E JP 5CC 9CC
WIN F.R
フリーピストルクレー, 移動, 早射
5CE BLK REV CC2
59C 3E→L,H 5BE
5B9 6F→A1 66F
5F2 M•A1→M,1→L 3A1
5E5 JP 45C 85C
5C2 CD FJ.INV E57
584 JP 593 993
589 JP 594 994
593 COUNT INST F00
5A7 JP 45C 85C
CT ERS

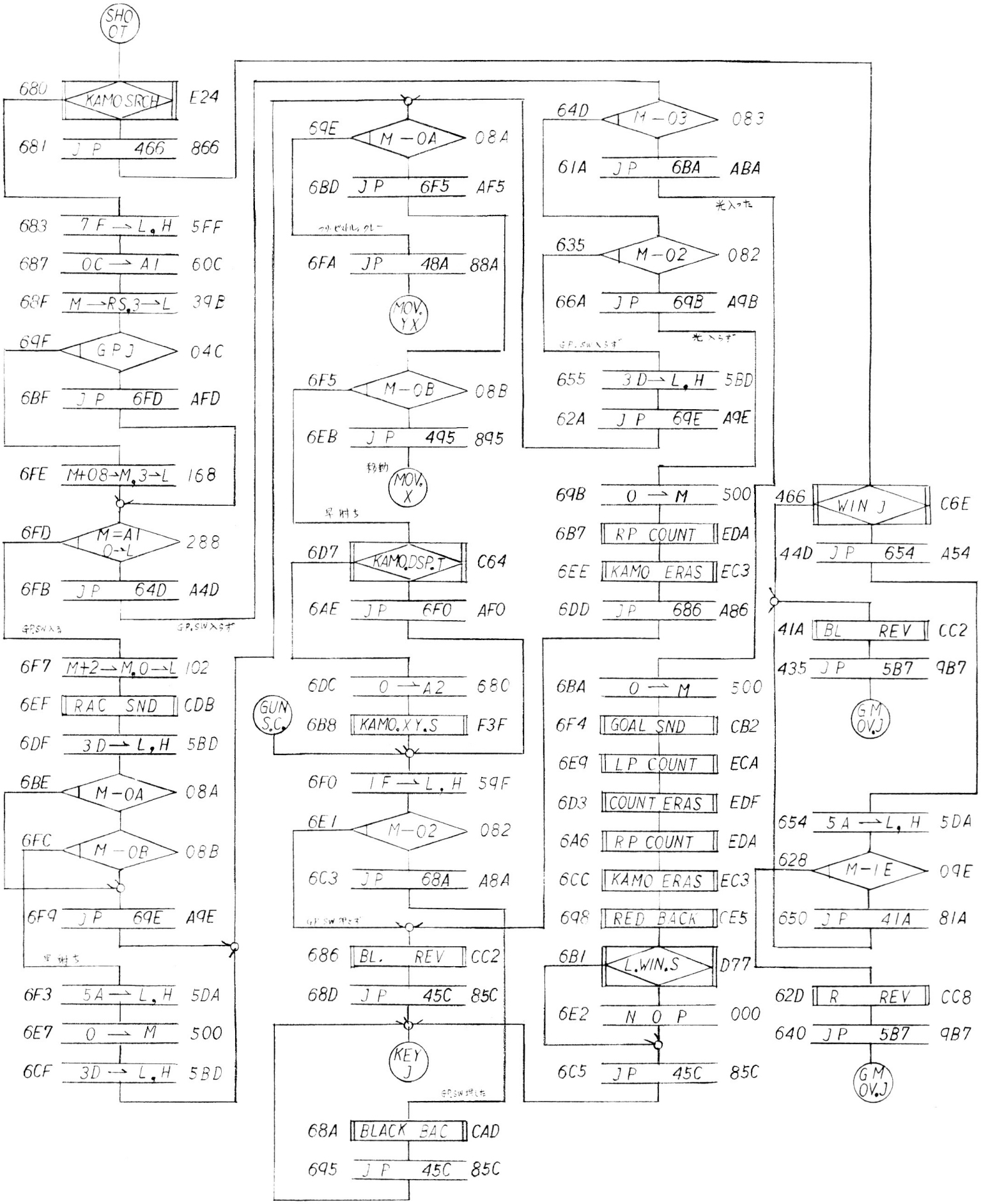

TNS
591 LB.XJ D13
5A3 JP 6E3 AE3
5C6 LB.YJ DDE
58C JP 6E3 AE3
HIT
6E3 RB.XJ D16
6C7 JP 6F6 AF6
68E RB.YJ DBB
69D JP 6F6 AF6
6BB JP 599 999
6F6 LF.XJ D5A
6ED JP 6D9 AD9
6DB LF.YSJ DCA
6B6 JP 6D9 AD9
6EC JP 599 999
VOL
673 +X,-XJ C91
667 JP 638 A38
64F H ⟷ X 018
61E M-2B 0AB
63D M-2D 0AD
67A JP 674 A74
675 VL.NET.YJ E28
66B JP 591 991
657 XF → I DEF
62E 7E → L, H 5FE
65C JP 66E A6E
6D9 RF.XJ D68
6B2 JP 5B3 9B3
6E4 RF.YSJ DC9
6C9 JP 5B3 9B3
NO HIT
692 JP 599 999
638 H ⟷ X 018
670 M-2A 0AA
661 M-2C 0AC
643 JP 674 A74
606 VL.NET.YJ E28
60D JP 591 991
61B XF → 0 DF3
637 IE → L, H 59E
66E M+1 → M, 0 → L 101
65D H ⟷ X 018
63A JP 591 991
TNS
674 M-2B 0AB
669 JP 60A A0A
653 H ⟷ X 018
626 7E → L, H 5FE
64C 0 → M 500
618 0 → L 300
60A H ⟷ X 018
615 IE → L, H 59E
62B 0 → M 500
656 3 → L 303
62C JP 631 A31
631 M-03 083
662 JP 5B3 9B3
NO HIT
645 JP 65D A5D

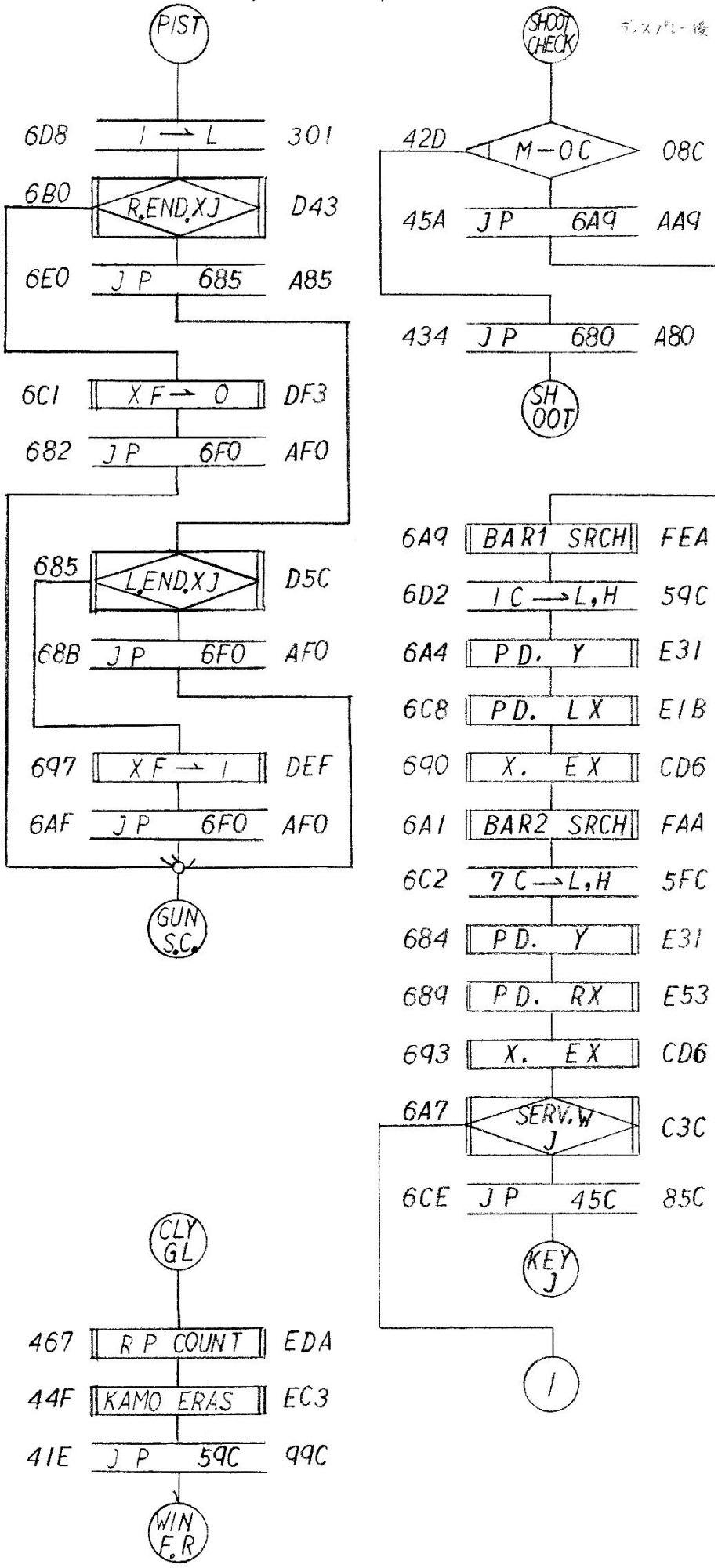

HOC
641 L.END.XJ D5C
602 JP 4AA 8AA
605 GOAL YJ DBF
60B JP 63C A3C
617 XF→1 DEF
62F H↔X 018
65E JP 5B3 9B3
4AA R.END.XJ D43
4D4 JP 63C A3C
4A8 GOAL YJ DBF
4D0 JP 63C A3C
4A0 XF→0 DF3
4C0 JP 62F A2F
63C HIT J EOF
678 JP 5B3 9B3
NO HIT
671 HOCK.LXJ D22
663 JP 63B A3B
647 LBYJ DDE
60E JP 63B A3B
61D JP 636 A36
63B HOCK.RXJ D23
676 JP 5B3 9B3
66D RBYJ DBB
65B JP 5B3 9B3
636 JP 599 999
HIT
VAL GL
566 F C60
54D M-10 090
51A JP 46A 86A
535 SERV.BAR.SRCH E36
56A A2→H,1→L 3D1
555 35→M 535
52A X.EX. CD6
554 JP 4F6 8F6
RP CT
46A M-30 0B0
455 JP 5EA 9EA
42A M-20 0A0
454 JP 528 928
428 SERV.BAR.SRCH E36
450 A2→H,1→L 3D1
420 26→M 526
440 X.EX. CD6
400 COUNT INST F00
401 JP 4DB 8DB
BL. ER
5EA SERV.BAR.SRCH E36
5D5 A2→H,1→L 3D1
5AA 26→M 526
5D4 X.EX. CD6
5A8 JP 6BC ABC
LP CT
528 SERV.BAR.SRCH E36
550 A2→H,1→L 3D1
520 35→M 535
540 JP 440 840

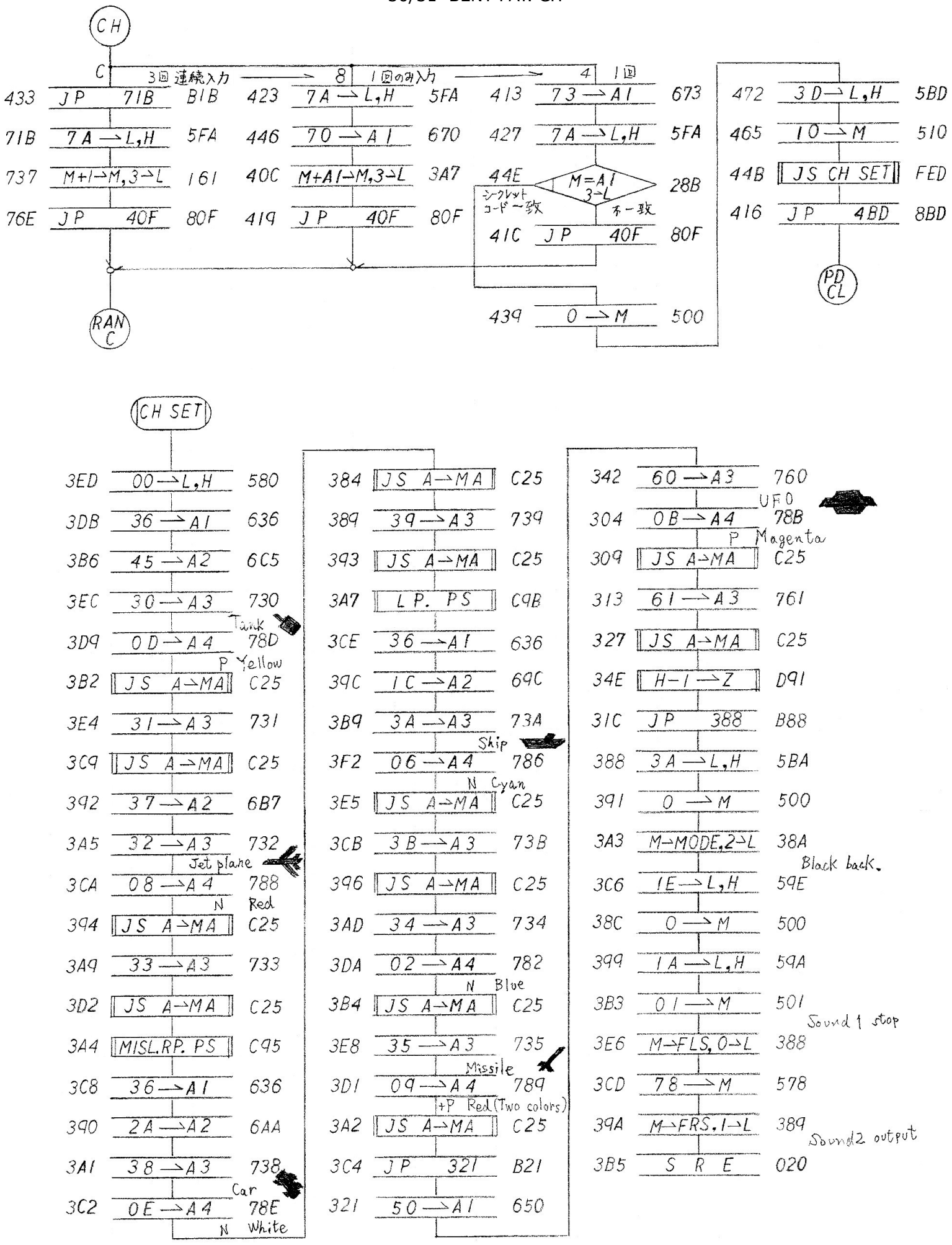

SQA.
664 R.END.XJ D43
649 JP 652 A52
612 XF → 0 DF3
625 PRACT J E5F
64A JP 5B3 9B3
プラクティス
614 PRAC.V.V.RET DD7
629 JP 5B3 9B3
NO HIT
652 PRACT J E5F
624 JP 5D0 9D0
プラクティス
648 H ⟷ X 018
610 +X,-X J C91
621 JP 5B3 9B3
(-)
642 H ⟷ X 018
604 PRACT J E5F
609 JP 672 A72
スカッシュ
プラクティス
613 HOCK.RXJ D23
627 JP 616 A16
672 SCORE. J C6B
665 JP 651 A51
64B H ⟷ X 018
616 HOCK.LX.J D22
62D JP 5B3 9B3
65A LB YJ DDE
634 JP 5B3 9B3
668 JP 66F A6F
スカッシュ
5D0 HIT J E0F
5A0 JP 5B3 9B3
5C0 JP 648 A48
64E PRAC.F W.Y J DD2
61C JP 616 A16
ザリ
639 JP 619 A19
651 H ⟷ X 018
622 HOCK.RXJ D23
644 JP 5B3 9B3
608 SQASH. RB Y J D90
611 JP 5B3 9B3
623 JP 66F A6F
66F SCORE F. INV FF1
65F NOP 000
63E JP 646 A46
646 PRACT J E5F
60C JP 599 999
スカッシュ
プラクティス
619 COUNT ERAS EDF
633 LP COUNT ECA
666 JP 599 999
HIT

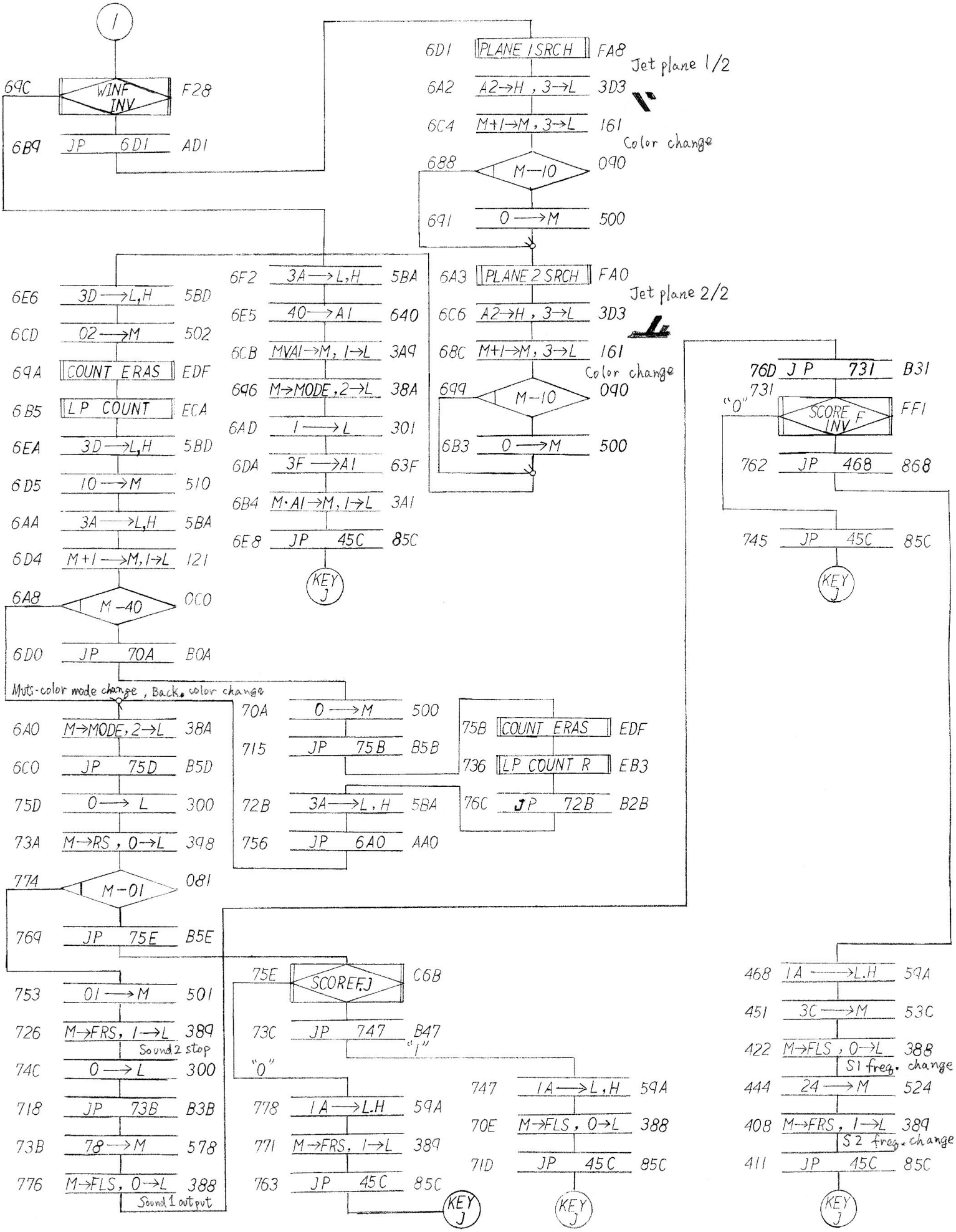

MISL
574 R FW.SRCH2 E10
569 JP 603 A03
553 3 → L 303
526 A2 → M, 0 → L 390
54C BALL ± Y D18
518 BL Y±Y CC6
531 H ↔ X 018
562 0 → L 300
545 M → A1, 0 → L 38C
50A 0 C61
515 A1 → M, 0 → L 380
52B H ↔ X 018
556 M−6C 0EC
52C JP 52F 92F
JET一番下にある
558 WIN J C6E
530 JP 576 976
560 MISL.FIRE.J C62
541 JP 580 980
MSL. COL.
まだ発射していない
すでに発射してある
502 1D → L, H 59D
505 M−58 0D8
50B JP 552 952
発射しない
発射する
517 JP 45C 85C
52F WIN J C6E
55E JP 547 947
当らず
当り
53C R P COUNT EDA
578 R.FW.ERAS E8D
571 B. REV. C93
563 JP 45C 85C
547 W→SC.FL.R E72
50E LP COUNT ECA
51D COUNT ERAS EDF
53B JP 53C 93C
576 R. REV C08
56D H ↔ X 018
55B JET FLJ C05
536 JP 45C 85C
552 3E → L, H 5BE
524 02 → A1 602
548 MVA1 → M, 1 → L 3A9
510 RAC SND CDB
521 BLUE BACK C9C
542 JP 45C 85C
KEY J
603 B. REV C93
607 JP 504 904
504 GM.OV.J C54
509 JP 5D2 9D2
FL
513 SERV.WJ C3C
527 JP 45C 85C
54E Z → H DD5
51C H+1 → H 4C1
539 00 → A1 600
572 43 → A2 6C3
565 0D → A3 70D
54B 05 → A4 785
516 A → MA C25
52D JET ST F0A
JET
56C CD.FJ.INV E57
559 JP 525 925
532 H ↔ X 018
564 3 → L 303
549 0B → M 50B
マモンタ
512 JP 45C 85C
525 H ↔ X 018
54A 3 → L 303
514 01 → M 501
529 JP 45C 85C
55A 5B → L, H 5DB
534 18 → M 518
568 1 → L 301
551 01 → M 501
522 MISSILE.SRCH E59
544 A2 → H, 1 → L 3D1
508 15 → M 515
511 X. EX. CD6
523 RAC SND CDB
546 BLUE BACK C9C
50C W→SC.FL.R E72
519 JP 594 994
CT ERS


MSL COL
580 MISSILE SRCH E59
581 A2→H, 1→L 3D1
583 M-7E 0FE
587 JP 45C 85C
58F H⟷X 018
59F BL X±X CD4
5BF 3D→L, H 5BD
5FE M-06 086
5FD JP 5F5 9F5
5F5 H⟷X 018
5EB M-2B 0AB
5D7 M-2D 0AD
5AE JP 5EF 9EF
5DC MS.BARI.YJ E44
5B8 JP 5F7 9F7
5F0 NOP 000
5E1 1→L 301
5C3 7E→M 57E
586 X. EX. CD6
58D BLUE BACK C9C
59B JP 45C 85C
KEY J
5FB H⟷X 018
5F7 1→L 301
5EF R.END.XJ D43
5DF JP 5FA 9FA
5BE RF YJ D83
5FC JP 5FA 9FA
5F9 1→L 301
5F3 7E→M 57E
5E7 GOAL SND CB2
5CF RED BACK CE5
59E L.WIN.S D77
5BD NOP 000
5FA JP 5B3 9B3
NO HIT


SHOOT
680 KAMO SRCH E24
681 JP 466 866
683 7F → L,H 5FF
687 0C → A1 60C
68F M → RS,3 → L 39B
69F GPJ 04C
6BF JP 6FD AFD
6FE M+08 → M,3 → L 168
6FD M=A1 0→L 288
6FB JP 64D A4D
GP.SW入る
GP.SW入らず
6F7 M+2 → M,0 → L 102
6EF RAC SND CDB
6DF 3D → L,H 5BD
6BE M-0A 08A
6FC M-0B 08B
6F9 JP 69E A9E
早押し
6F3 5A → L,H 5DA
6E7 0 → M 500
6CF 3D → L,H 5BD
69E M-0A 08A
6BD JP 6F5 AF5
6FA JP 48A 88A
MOV. YX
6F5 M-0B 08B
6EB JP 495 895
MOV. X
早押し
6D7 KAMO.DSP.T C64
6AE JP 6F0 AF0
6DC 0 → A2 680
GUN S.C.
6B8 KAMO.XY.S F3F
6F0 1F → L,H 59F
6E1 M-02 082
6C3 JP 68A A8A
GP.SW押さず
686 BL. REV CC2
68D JP 45C 85C
KEY J
GP.SW押した
68A BLACK BAC CAD
695 JP 45C 85C
64D M-03 083
61A JP 6BA ABA
光入った
635 M-02 082
66A JP 69B A9B
GP.SW入らず
光入らず
655 3D → L,H 5BD
62A JP 69E A9E
69B 0 → M 500
6B7 RP COUNT EDA
6EE KAMO ERAS EC3
6DD JP 686 A86
6BA 0 → M 500
6F4 GOAL SND CB2
6E9 LP COUNT ECA
6D3 COUNT ERAS EDF
6A6 RP COUNT EDA
6CC KAMO ERAS EC3
698 RED BACK CE5
6B1 L.WIN.S D77
6E2 NOP 000
6C5 JP 45C 85C
466 WIN J C6E
44D JP 654 A54
41A BL REV CC2
435 JP 5B7 9B7
GM OV.J
654 5A → L,H 5DA
628 M-1E 09E
650 JP 41A 81A
62D R REV CC8
640 JP 5B7 9B7
GM OV.J


PIST
6D8 1 → L 301
6B0 R.END.XJ D43
6E0 JP 685 A85
6C1 XF → 0 DF3
682 JP 6F0 AF0
685 L.END.XJ D5C
68B JP 6F0 AF0
697 XF → 1 DEF
6AF JP 6F0 AF0
GUN S.C.
SHOOT CHECK
ディスプレー後
42D M-0C 08C
45A JP 6A9 AA9
434 JP 680 A80
SH OOT
6A9 BAR1 SRCH FEA
6D2 1C → L,H 59C
6A4 P.D. Y E31
6C8 P.D. LX E1B
690 X. EX CD6
6A1 BAR2 SRCH FAA
6C2 7C → L,H 5FC
684 P.D. Y E31
689 P.D. RX E53
693 X. EX CD6
6A7 SERV.W J C3C
6CE JP 45C 85C
KEY J
1
CLY GL
467 RP COUNT EDA
44F KAMO ERAS EC3
41E JP 59C 99C
WIN F.R


CH
C
3回連続入力
8
1回のみ入力
4
1回
433 JP 71B B1B
71B 7A→L,H 5FA
737 M+1→M,3→L 161
76E JP 40F 80F
423 7A→L,H 5FA
446 70→A1 670
40C M+A1→M,3→L 3A7
419 JP 40F 80F
413 73→A1 673
427 7A→L,H 5FA
44E M=A1 3→L 28B
シークレットコード一致
不一致
41C JP 40F 80F
439 0→M 500
472 3D→L,H 5BD
465 10→M 510
44B JS CH SET FED
416 JP 4BD 8BD
PD CL
RAN C
CH SET
3ED 00→L,H 580
3DB 36→A1 636
3B6 45→A2 6C5
3EC 30→A3 730
Tank
3D9 0D→A4 78D
P Yellow
3B2 JS A→MA C25
3E4 31→A3 731
3C9 JS A→MA C25
392 37→A2 6B7
3A5 32→A3 732
Jet plane
3CA 08→A4 788
N Red
394 JS A→MA C25
3A9 33→A3 733
3D2 JS A→MA C25
3A4 MISL.RP. PS C95
3C8 36→A1 636
390 2A→A2 6AA
3A1 38→A3 738
Car
3C2 0E→A4 78E
N White
384 JS A→MA C25
389 39→A3 739
393 JS A→MA C25
3A7 LP. PS C9B
3CE 36→A1 636
39C 1C→A2 69C
3B9 3A→A3 73A
Ship
3F2 06→A4 786
N Cyan
3E5 JS A→MA C25
3CB 3B→A3 73B
396 JS A→MA C25
3AD 34→A3 734
3DA 02→A4 782
N Blue
3B4 JS A→MA C25
3E8 35→A3 735
Missile
3D1 09→A4 789
+P Red (Two colors)
3A2 JS A→MA C25
3C4 JP 321 B21
321 50→A1 650
342 60→A3 760
UFO
304 0B→A4 78B
P Magenta
309 JS A→MA C25
313 61→A3 761
327 JS A→MA C25
34E H-1→Z D91
31C JP 388 B88
388 3A→L,H 5BA
391 0→M 500
3A3 M→MODE,2→L 38A
Black back.
3C6 1E→L,H 59E
38C 0→M 500
399 1A→L,H 59A
3B3 01→M 501
Sound 1 stop
3E6 M→FLS,0→L 388
3CD 78→M 578
39A M→FRS.1→L 389
Sound2 output
3B5 S R E 020


1
69C WINF INV F28
6B9 JP 6D1 AD1
6D1 PLANE 1SRCH FA8
Jet plane 1/2
6A2 A2→H, 3→L 3D3
6C4 M+1→M, 3→L 161
Color change
688 M−10 090
691 0 → M 500
6A3 PLANE 2 SRCH FA0
Jet plane 2/2
6C6 A2→H, 3→L 3D3
68C M+1→M, 3→L 161
Color change
699 M−10 090
6B3 0 → M 500
6F2 3A → L,H 5BA
6E5 40 → A1 640
6CB MVA1→M, 1→L 3A9
696 M→MODE, 2→L 38A
6AD 1 → L 301
6DA 3F → A1 63F
6B4 M·A1→M, 1→L 3A1
6E8 JP 45C 85C
KEY J
6E6 3D → L,H 5BD
6CD 02 → M 502
69A COUNT ERAS EDF
6B5 LP COUNT ECA
6EA 3D → L,H 5BD
6D5 10 → M 510
6AA 3A → L,H 5BA
6D4 M+1 → M, 1→L 121
6A8 M−40 0C0
6D0 JP 70A B0A
Multi-color mode change, Back. color change
6A0 M→MODE, 2→L 38A
6C0 JP 75D B5D
75D 0 → L 300
73A M→RS, 0→L 398
774 M−01 081
769 JP 75E B5E
753 01 → M 501
726 M→FRS, 1→L 389
Sound 2 stop
74C 0 → L 300
718 JP 73B B3B
73B 78 → M 578
776 M→FLS, 0→L 388
Sound 1 output
70A 0 → M 500
715 JP 75B B5B
72B 3A → L, H 5BA
756 JP 6A0 AA0
75B COUNT ERAS EDF
736 LP COUNT R EB3
76C JP 72B B2B
75E SCOREF.J C6B
73C JP 747 B47
"0"
"1"
778 1A → L.H 59A
771 M→FRS, 1→L 389
763 JP 45C 85C
KEY J
747 1A → L, H 59A
70E M→FLS, 0→L 388
71D JP 45C 85C
KEY J
76D JP 731 B31
731
"0"
SCORE F INV FF1
762 JP 468 868
745 JP 45C 85C
KEY J
468 1A → L.H 59A
451 3C → M 53C
422 M→FLS, 0→L 388
S1 freq. change
444 24 → M 524
408 M→FRS, 1→L 389
S2 freq. change
411 JP 45C 85C
KEY J

DEC	HEX	DEC	HEX	DEC	HEX	DEC	HEX	DEC	HEX	DEC	HEX	DEC	HEX	DEC	HEX
0	00	16	10	32	20	48	30	64	40	80	50	96	60	112	70
1	01	17	11	33	21	49	31	65	41	81	51	97	61	113	71
2	02	18	12	34	22	50	32	66	42	82	52	98	62	114	72
3	03	19	13	35	23	51	33	67	43	83	53	99	63	115	73
4	04	20	14	36	24	52	34	68	44	84	54	100	64	116	74
5	05	21	15	37	25	53	35	69	45	85	55	101	65	117	75
6	06	22	16	38	26	54	36	70	46	86	56	102	66	118	76
7	07	23	17	39	27	55	37	71	47	87	57	103	67	119	77
8	08	24	18	40	28	56	38	72	48	88	58	104	68	120	78
9	09	25	19	41	29	57	39	73	49	89	59	105	69	121	79
10	0A	26	1A	42	2A	58	3A	74	4A	90	5A	106	6A	122	7A
11	0B	27	1B	43	2B	59	3B	75	4B	91	5B	107	6B	123	7B
12	0C	28	1C	44	2C	60	3C	76	4C	92	5C	108	6C	124	7C
13	0D	29	1D	45	2D	61	3D	77	4D	93	5D	109	6D	125	7D
14	0E	30	1E	46	2E	62	3E	78	4E	94	5E	110	6E	126	7E
15	0F	31	1F	47	2F	63	3F	79	4F	95	5F	111	6F	127	7F

DEC (Decimal) to HEX (Hexadecimal) Conversion Table