

LOCATION	OBJECT CODE	LINE	SOURCE	LINE
10AE EB		4423	EX DE,HL	
10AF E1		4424	POP HL	
10B0 CBA6		4425	RES EOT,[HL]	
10B2 EB		4426	EX DE,HL	
10B3 D1		4427	POP DE	
10B4 1BA4		4428	JR TIMER1	
		4429		
10B6		4430	INIT_TIMER_EXIT:	
10B6 E1		4431	POP HL	
10B7 CBAE		4432	RES FREE,[HL]	
10B9 78		4433	LD A,B	
10BA C9		4434	RET	
		4435		
		4436		
		4437	;Procedure Test Signal	
		4438	;Acc has the Signal number to be tested	
		4439	;A value of True(1) or False(0) is returned in the Accumulator for the	
		4440	Signal given.	
		4441	COMM	
		4442	;TEST_SIG_NUM:	
		4443	DEFS 1	
		4444		
		4445	PROG	
		4446	TEST_SIG_PARAM:	
		4447	DEFM 1,1	
		4448		
		4449	TEST_SIGNALQ	
		4450	LD BC,TEST_SIG_PARAM	
		4451	LD DE,TEST_SIG_NUM	
		4452	CALL PARAM	
		4453	LD A,(TEST_SIG_NUM)	
		4454		
		4455	TEST_SIGNAL	
		4456	LD C,A	
		4457	LD HL,(TIMER_TABLE_BASE)	
		4458	LD B,A	
		4459	LD DE,3	
		4460	OR A	
		4461	JR Z,SIGNAL_MATCH	
		4462		
		4463	TEST1:	
		4464	BIT EOT,[HL]	
		4465	JR NZ,SIGNAL_FALSE	
		4466	AD0 HL,DE	
		4467	DEC C	
		4468	JR NZ,TEST1	
		4469		
		4470	SIGNAL_MATCH:	
		4471	BIT FREE,[HL]	
		4472	JR NZ,SIGNAL_FALSE	
		4473	BIT DOME,[HL]	
		4474	JR NZ,SIGNAL_TRUE	
		4475	SIGNAL_FALSE:	
		4476		
		4477	KOR A	
		4478	JR TEST_EXIT	
		4479		
10B8		00010001		
10BF		0110B8		
10C2		1173C2		
10C5		C00098		
10C8		3A73C2		
10CB				
10CC		2A73D3		
10CF		47		
10D0		110003		
10D3		B7		
10D4		2800		
10D6				
10D6 CB66				
10D8 200C				
10DA 19				
10DB 00				
10DC 20F8				
10DE CB6E				
10E0 2004				
10E2 CB7E				
10E4 2003				
10E6				
10E6 AF				
10E7 180A				

```

;Save momentarily
;Get back original timer
;Reset previous last timer
;Get back current last timer
;Restore DE register
;Go back up and initialize counter for use

```

```

;Put the offset into the Accumulator for the user of routine

```

```

;Procedure Test Signal
;Acc has the Signal number to be tested
;A value of True(1) or False(0) is returned in the Accumulator for the
Signal given.

```

```

COMM
;TEST_SIG_NUM:
DEFS 1

```

```

PROG
TEST_SIG_PARAM:
DEFM 1,1

```

```

TEST_SIGNALQ
LD BC,TEST_SIG_PARAM
LD DE,TEST_SIG_NUM
CALL PARAM
LD A,(TEST_SIG_NUM)

```

```

;Put Signal Code into C register
;Get Timer Base Address
;Save Signal
;Set up offset for next timer
;See if first timer is a match
;If so go check it

```

```

;Loop to match timer table to desired timer
;Check for end of table
;If so then return a not done
;Now index to next timer
;Decrement to the timer desired
;If not a timer desired timer then go back

```

```

;Here with a timer match

```

```

;Check for timer done
;If so then go return a True
;Here to return a false for either
;a not done or non-existent timer
;Put a false in Acc
;Go to the exit

```

LOCATION OBJECT CODE LINE SOURCE LINE

```

10E9          4480 SIGNAL_TRUE:
10EB CB76     4481          BIT REPEAT,[HL]
10EB 2002     4482          JR NZ,SIGNAL_TRUE1
10ED CBEE     4483          SET FREE,[HL]
10EF          4484 SIGNAL_TRUE1:
10EF CB8E     4485          RES DOME,[HL]
10F1 3E01     4486          LD A,1
10F3          4487          LD A,1
10F3 B7       4488          TEST_EXIT: OR A
10F4 C9       4489          RET
10F4 C9       4490          RET
10F4 C9       4491          RET
10F4 C9       4492          DATA
10F4 C9       4493          DATA
10F4 C9       4494          DATA
7303          4495 TIMER_TABLE_BASE: DEFS 2
7305          4496 NEXT_TIMER_DATA_BYTE: DEFS 2
7305          4497
7305          4498 PROG

```

```

;Here when timer is finished
;Check for repeating timer
;If so then just return True
;free current timer since not repeating
;**** Start add 4/30/82****
;Reset current timer to not done
;**** End add 4/30/82****
;Put a True in the Acc
;Return

```

LOCATION	OBJECT CODE	LINE	SOURCE	LINE
	<0000>	4500	CONTROLLER SOFTWARE	
	<0001>	4501	FIRE	0
	<0002>	4502	JOY	1
	<0003>	4503	SPIN	2
	<0004>	4504	ARM	3
	<0005>	4505	KBD	4
	<0006>	4506	PLYR_0	2
	<0007>	4507	PLYR_1	7
	<0008>	4508	SEG_0	07H
	<0009>	4509	SEG_1	18H
	<0010>	4510	FIRE_OLD	0
	<0011>	4511	FIRE_STATE	1
	<0012>	4512	JOY_OLD	2
	<0013>	4513	JOY_STATE	3
	<0014>	4514	SPIN_OLD	4
	<0015>	4515	SPIN_STATE	5
	<0016>	4516	ARM_OLD	6
	<0017>	4517	ARM_STATE	7
	<0018>	4518	KBD_OLD	8
	<0019>	4519	KBD_STATE	9
	<0020>	4520	KBD_MASK	0FH
	<0021>	4521	FIRE_MASK	40H
	<0022>	4522	ARM_MASK	40H
	<0023>	4523	JOY_MASK	0FH
	<0024>	4524	SPIN_MASK	101100000B
	<0025>	4525	MUN_DEV	5
	<0026>	4526	STACK	73FFH
	<0027>	4527	MODE_0_PORT	08EH ;D8
	<0028>	4528	MODE_1_PORT	08FH ;D9
	<0029>	4529	KBD_NULL	0FH
	<0030>	4530	CTRL_1_PORT	0FFH
	<0031>	4531	CTRL_0_PORT	0FFH
	<0032>	4532	STRB_RST_PORT	0C0H
	<0033>	4533	STRB_SET_PORT	080H
	<0034>	4534	CONTROLLER_0	0
	<0035>	4535	CONTROLLER_1	1
	<0036>	4536	STROBE_RESET	0
	<0037>	4537	STROBE_SET	1
	<0038>	4538	***** MACRO *****	
	<0039>	4539		
	<0040>	4540		
	<0041>	4541	DELAY_10	MACRO
	<0042>	4542	CALL DELAY	
	<0043>	4543	MEMO	
	<0044>	4544		
	<0045>	4545	***** DATA *****	
	<0046>	4546		
	<0047>	4547	* DECODER TABLE FOR THE KEYBOARD	
	<0048>	4548		
	<0049>	4549	DEC_KBD_TBL	
	<0050>	4550	DEFB KBD_NULL	; NULL ENTRY
	<0051>	4551	DEFB 6	; '6'
	<0052>	4552	DEFB 1	; '1'
	<0053>	4553	DEFB 3	; '3'
	<0054>	4554	DEFB 9	; '9'
	<0055>	4555	DEFB 0	; '0'
	<0056>	4556	DEFB 10	; '10'

10F5 0F
10F6 06
10F7 01
10F8 03
10F9 09
10FA 00
10FB 0A

LOCATION	OBJECT CODE LINE	SOURCE LINE
10FC 0F	4557	DEFB KBD_NULL ; NULL ENTRY
10FD 02	4558	DEFB 2 ; '2'
10FE 08	4559	DEFB 11 ; RESET
10FF 07	4560	DEFB 7 ; '7'
1100 0F	4561	DEFB KBD_NULL ; NULL ENTRY
1101 05	4562	DEFB 5 ; '5'
1102 04	4563	DEFB 4 ; '4'
1103 08	4564	DEFB 8 ; '8'
1104 0F	4565	DEFB KBD_NULL ; NULL ENTRY
	4566	*****SUBROUTINES*****
	4567	
	4568	
	4569	GLB CONTROLLER_INIT
1105 D3C0	4570	CONTROLLER_INIT ; INITIALIZE CONTROLLER TO STROBE RESET
1107 AF	4571	OUT [STRB_RST_PORT],A
1108 D02A8008	4572	XOR A
110C D023	4573	LD IX, [CONTROLLER_MAP]
110E D023	4574	INC IX
1110 D023	4575	INC IX
1110 FD217507	4576	LD IY, DBNCE_BUFF
1114 060A	4577	LD B, NUM_DEV-2
	4578	* CLEAR CONTROLLER MEMORY AND DEBOUNCE STATUS BUFFER
1116	4579	CINIT1
1116 D07700	4580	LD [IX+0], A
1119 D023	4581	INC IX
111B FD7700	4582	LD [IY+0], A
111E FD23	4583	INC IY
1120 FD7700	4584	LD [IY+0], A
1123 FD23	4585	INC IY
1125 05	4586	DEC B
1126 20EE	4587	JR NZ, CINIT1
	4588	* CLEAR REMAINING VARIABLES
1128 3273EB	4589	LD [SPIN_SMO_CT], A
112B 3273EC	4590	LD [SPIN_SW1_CT], A
112E 3273EE	4591	LD [SO_C0], A
1131 3273EF	4592	LD [SO_C1], A
1134 3273F0	4593	LD [S1_C0], A
1137 3273F1	4594	LD [S1_C1], A
113A C9	4595	RET
	4596	
	4597	
1138 00	4598	DELAY ; DELAY AFTER STROBE, BEFORE READ
113C C9	4599	NOP
	4600	RET
	4601	* CONTROLLER READ ROUTINE
	4602	INPUT:
	4603	H - CONTROLLER NUMBER
	4604	OUTPUT:
	4605	A - RAW DATA
	4606	
	4607	
	4608	
113D	4609	CONT_READ
113D 7C	4610	LD A, H
113E FE00	4611	CP CONTROLLER 0
1140 2004	4612	JR NZ, CONT_READ1
1142	4613	A, [CONT0 n PORT]
		IF CONTROLLER<>0
		THEN READ PLAYER 1
		ELSE READ PLAYER 0

LOCATION	OBJECT CODE	LINE	SOURCE	LINE
1144	1802	4614	JR	CONT_READX
1146		4615	CONT_READ1	
1146	DBFF	4616	IN	A, [CTRL_1_PORT]
1148		4617	CONT_READX	
1148	2F	4618	CPL	
1149	C9	4619	RET	
		4620		
		4621		
		4622	*	
		4623	*	CONTROLLER SCANNER ROUTINE
		4624	*	
		4625	GLB	CONT_SCAN
114A		4626	CONT_SCAN	
114A	DBFC	4627	IN	A, [CTRL_0_PORT]
114C	2F	4628	CPL	
114D	3273EE	4629	LD	[S0_C0], A
1150	DBFF	4630	IN	A, [CTRL_1_PORT]
1152	2F	4631	CPL	
1153	3273EF	4632	LD	[S0_C1], A
1156	D380	4633	OUT	[STRB_SET_PORT], A
1158		4634	DELAY	10
1158	CD1138	4635	CALL	DELAY
1158	DBFC	4635	IN	A, [CTRL_0_PORT]
1150	2F	4636	CPL	
115E	3273F0	4637	LD	[S1_C0], A
1161	DBFF	4638	IN	A, [CTRL_1_PORT]
1163	2F	4639	CPL	
1164	3273F1	4640	LD	[S1_C1], A
1167	D3C0	4641	OUT	[STRB_RST_PORT], A
1169	C9	4642	RET	
		4643		
		4644		
		4645	*	
		4646	*	
		4647	*	
		4648	*	
		4649		
		4650		
		4651		
		4652	GLB	UPDATE_SPINNER
116A		4653	UPDATE_SPINNER	
116A	DBFC	4654	IN	A, [CTRL_0_PORT]
116C	2173EB	4655	LD	HL, SPIN_SWO_CT
116F	CB67	4656	BIT	4, A
1171	2008	4657	JR	NZ, UPDATE_S1
		4658	*	CHECK DIRECTION
1173	CB6F	4659	BIT	5, A
1175	2003	4660	JR	NZ, UPDATE_R0
		4661		
1177	35	4662	DEC	[HL]
1178	1801	4663	JR	UPDATE_S1
		4664	***	RIGHT SPINNER SWITCH
117A		4665	UPDATE_R0	
117A	34	4666	INC	[HL]
		4667	*	CHECK SPINNER 1
1178	DBFF	4668	UPDATE_S1	IN A, [CTRL_1_PORT]
117D	CB67	4669	BIT	4, A

```

LOCATION OBJECT CODE LINE SOURCE LINE
117F 2009 JR NZ,UPDATE_SPINX ;THEN NOT SPINNER 1
1181 23 INC HL ;ELSE SPINNER 1, BUMP HL
1182 CB6F BIT 5,A ; IF BIT 5 IS SET
1184 2003 JR NZ,UPDATE_R1 ; THEN GOING RIGHT
1186 35 DEC [HL] ; ELSE LEFT
1187 1801 JR UPDATE_SPINX ; DECREMENT SPINNER COUNTER
1189 UPDATE_R1 *** RIGHT SPINNER SWITCH
1189 34 INC [HL] ;RIGHT, INCREMENT COUNTER
118A UPDATE_SPINX
118A C9 RET
118B
118C
118D
118E
118F
1190 0173E8 GLB DECODER
1193 7C LD BC,SPIN_SWO_CT
1194 FE00 LD A,H
1196 2801 CP CONTROLLER_0
1198 03 JR Z,DEC_PLYR
1199 0A INC BC
119A 5F LD A,[BC]
119B AF LD E,A
119C 02 XOR A
119D
119E
119F
11A0 57 CALL CONT_READ
11A1 E60F LD D,A
11A3 6F AND JOY_MASK
11A4 7A LD A,D
11A5 E640 AND FIRE_MASK
1188
1189 7D LD A,L
118C FE01 CP STROBE SET
118E 281A JR Z,DEC_SEG1
118F
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CATION	OBJECT	CODE	LINE	SOURCE	LINE
11F3	CHK_PLYR_1	POP	IX		
11F3 D0E1	LD	A, [IX+1]			
11F5 D07E01	BIT	7,A			
11F8 C87F	JR	Z,POLLER_X			
11FA 2023	JR	Z,POLLER_X			
	PLAYER 1 IS ACTIVE				
11FC 47	LD	B,A			
11FD 11000A	LD	DE, 2*MM_DEV			
1200 FD19	ADD	1Y, DE			
1202 110007	LD	DE, PLVR_1			
1205 D019	ADD	1X, DE			
1207 E607	AND	SEG_0			
1209 2009	JR	Z,CHK_SEG_11			
	SEGMENT 0 IS ACTIVE				
1208 3A73EF	LD	A, [50 C1]			
120E 2173EC	LD	HL, SPIN_SW1_CT			
1211 CD1220	CALL	DECODE_0			
1214	CHK_SEG_11				
1214 78	LD	A,B			
1215 E610	AND	SEG_1			
1217 2806	JR	Z,POLLER_X			
	SEGMENT 1 IS ACTIVE				
1219 3A73F1	LD	A, [51 C1]			
121C CD123F	CALL	DECODE_1			
121F	POLLER_X				
121F C9	RET				
4810					
4811 *	DECODE ROUTINE FOR SEGMENT 0				
4812 *					
4813 *	INPUT:				
4814 *	A - DATA				
4815 *	B - DEVICE STATUS BYTE FOR CURRENT PLAYER				
4816 *	HL - ADDRESS OF SPINNER DATA				
4817 *	IX - POINTER TO CONTROLLER MEMORY				
4818 *	IY - POINTER TO DEBOUNCE STATUS BUFFER				
4819 *					
4820	DECODE_0				
4821	LD	C,A			
4822	BIT	JOY,B			
4823	JR	Z,DEC_FIRE			
4824 *	JOYSTICK ACTIVE				
4825	CALL	JOY_DBNCE			
4826	LD	A,C			
4827	DEC_FIRE				
4828	BIT	FIRE,B			
4829	JR	Z,DEC_SPNR			
4829 *	FIRE BUTTON ACTIVE				
4830	CALL	FIRE_DBNCE			
4831	LD	A,C			
4832	DEC_SPNR				
4833	BIT	SPIN,B			
4834	JR	Z,DECODE_0X			
4835	SPINNER ACTIVE				
4836 *					
4837	LD	A, [HL]			
4838	ADD	A, [IX+SPIN]			
4839	LD	[IX+SPIN], A			
4840	XOR	A			
1220					
1220 4F	LD	C,A			
1221 C848	BIT	JOY,B			
1223 2804	JR	Z,DEC_FIRE			
1225 CD1289	CALL	JOY_DBNCE			
1228 79	LD	A,C			
1229	DEC_FIRE				
1229 C840	BIT	FIRE,B			
1228 2804	JR	Z,DEC_SPNR			
1230 CD1289	CALL	FIRE_DBNCE			
1230 79	LD	A,C			
1231	DEC_SPNR				
1231 C850	BIT	SPIN,B			
1233 2809	JR	Z,DECODE_0X			
1235 7E	LD	A, [HL]			
1236 D08602	ADD	A, [IX+SPIN]			
1239 D07702	LD	[IX+SPIN], A			
123C AF	XOR	A			

LOCATION	OBJECT CODE LINE	SOURCE LINE
1230 77	LD (HL),A	;CLEAR COUNTER
123E 123E C9	DECODE_0X RET	
4841	LD (HL),A	;CLEAR COUNTER
4842	DECODE_0X	
4843	RET	
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OBJECT	CODE LINE	SOURCE LINE
126E 2110F5	4898 * DECODE KEYBOARD DATA	
1271 1600	LD HL,DEC_KBD_TBL ;DECODE TABLE ADDRESS	
1273 19	LD D,0 ;D/E RAW DATA	
1274 7E	ADD HL,DE ;COMPUTE ADDRESS INTO TABLE	
1275 007704	LD A,[HL] ;DO TABLE LOOKUP	
1278 1808	LD [IX+KBD],A ;SAVE IN CONTROLLER MEMORY &KBD	
	JR KBD_EXIT	
127A 7B	4905 * STATE = 1	
127B 80	LD A,E ;GET CURRENT DATA	
127C 2807	CP B ;IF OLD=NEW	
127E FD7308	JR Z,KBD_EXIT ;NO CHANGE IN STATE	
1281 AF	LD [IY+KBD_OLD],E ;ELSE SAVE CURRENT DATA	
1282 FD7709	XOR A ;SET STATE=0	
1285 E1	LD [IY+KBD_STATE],A	
1286 D1	POP HL	
1287 C1	POP DE	
1288 C9	POP BC	
	RET	
	4918 * FIRE BUTTON DEBOUNCE ROUTINE *	
1289 C5	4919 * FIRE BUTTON DEBOUNCE ROUTINE *	
128A D5	4920 *	
128B E640	4921 * INPUT:	
128C 5F	A - RAW DATA	
128E FD4600	IX - CONTROLLER MEMORY POINTER	
1291 FD7E01	IY - DEBOUNCE STATE BUFFER	
1294 FE00	4922 *	
1296 2013	4923 *	
	4924 *	
	4925 *	
1298 78	4926 FIRE_DBNCE	
1299 B8	4927 PUSH BC	
129A 2805	4928 PUSH DE	
129C FD7300	AND FIRE_MASK ;MASK OUT VALID DATA	
129F 1015	LD E,A ;SAVE IT	
	LD B,[IY+FIRE_OLD] ;GET OLD DATA AND CURRENT STATE	
	LD A,[IY+FIRE_STATE] ;IF STATE <> 0	
	CP 0 ;IF STATE <> 0	
	JR NZ,FIRE_ST1 ;THEN MUST BE STATE 1	
	4935 * STATE = 0	
	LD A,E ;GET CURRENT DATA	
	CP B ;IF OLD=NEW	
	JR Z,FIRE_REG ;THEN SAVE DATA TWICE IN SEQUENCE	
	LD [IY+FIRE_OLD],E ;ELSE FIRST TIME, SAVE CURRENT DATA	
	JR FIRE_EXIT	
	4941 * SAVE DATA TWICE IN SEQUENCE	
	4942 FIRE_REG	
12A1 3E01	LD A,1 ;SET STATE=1	
12A3 FD7701	LD [IY+FIRE_STATE],A	
12A6 007300	LD [IX+FIRE],E ;SAVE IN CONTROLLER MEMORY @FIRE	
12A9 1808	JR FIRE_EXIT	
12AB 7B	4947 * STATE = 1	
12AC B8	4948 FIRE_ST1	
12AD 2807	LD A,E ;GET CURRENT DATA	
12AF FD7300	CP B ;IF OLD=NEW	
12B2 53	JR Z,FIRE_EXIT ;NO CHANGE IN STATE	
12B3 FD7701	LD [IY+FIRE_OLD],E ;ELSE SAVE CURRENT DATA	
	A 1 ST.	
	LD [IY+FIRE_STATE],A	

LOCATION	OBJECT CODE	LINE	SOURCE	LINE
12ED 5F		5012	LD E,A	;SAVE IT
12EE F04606		5013	LD B,[(Y+ARM_OLD)]	;GET OLD DATA AND CURRENT STATE
12F1 F07E07		5014	LD A,[(Y+ARM_STATE)]	
12F4 FE00		5015	CP 0	;IF STATE <> 0
12F6 2013		5016	JR NZ,ARM_ST1	;THEN MUST BE STATE 1
		5017	* STATE = 0	;ELSE
12F8 78		5018	LD A,E	;GET CURRENT DATA
12F9 80		5019	CP B	;IF OLD=NEW
12FA 2805		5020	JR Z,ARM_REG	;THEN SAVE DATA TWICE IN SEQUENCE
12FC F07306		5021	LD [(Y+ARM_OLD)],E	;ELSE FIRST TIME, SAVE CURRENT DATA
12FF 1815		5022	JR ARM_EXIT	
		5023	* SAVE DATA TWICE IN SEQUENCE	
1301		5024	ARM_REG	
1301 3E01		5025	LD A,1	;SET STATE=1
1303 F07707		5026	LD [(Y+ARM_STATE)],A	
1306 D07303		5027	LD [(X+ARM)],E	;SAVE IN CONTROLLER MEMORY @ARM
1309 1808		5028	JR ARM_EXIT	
		5029	* STATE = 1	
1308		5030	ARM_ST1	
1308 78		5031	LD A,E	;GET CURRENT DATA
130C 88		5032	CP B	;IF OLD=NEW
130D 2807		5033	JR Z,ARM_EXIT	;NO CHANGE IN STATE
130F F07306		5034	LD [(Y+ARM_OLD)],E	;ELSE SAVE CURRENT DATA
1312 AF		5035	XOR A	;SET STATE=0
1313 F07707		5036	LD [(Y+ARM_STATE)],A	
1316		5037	ARM_EXIT	
1316 D1		5038	POP DE	
1317 C1		5039	POP BC	
1318 C9		5040	RET	
		5041		
		5042		
		5043	EXT	CONTROLLER MAP
		5044	* THIS IS AN EXTERNAL POINTER (DEFINED IN THE CARTRIDGE) TO THE	
		5045	* CARTRIDGE PROGRAMMER'S CONTROLLER MAP AREA.	
		5046		
		5047	* THE CARTRIDGE PROGRAMMER IS RESPONSIBLE FOR MAINTAINING THIS AREA.	
		5048		
		5049		
7307		5050	DBNCE_BUFF	DATA
73E8		5051	SPIN_SW0_CT	DEFS
73EC		5052	SPIN_SW1_CT	DEFS
73ED		5053	STROBE_FLG	DEFS
73EE		5054	SO_C0	DEFS
73EF		5055	SO_C1	DEFS
73F0		5056	SI_C0	DEFS
73F1		5057	SI_C1	DEFS
		5058	PROG	

```

LOCATION OBJECT CODE LINE      SOURCE LINE

5060 ***** EXTERNAL SYMBOLS *****
5061
5062 * EXTERNAL ROUTINES FROM OS
5063
5064
5065 ;EXT INIT_TABLE
5066 ;EXT PUT_VRAM
5067 ;EXT GAME_NAME
5068 ;EXT WRITE_REGISTER
5069 ;EXT READ_REGISTER
5070 ;EXT WRITE_VRAM
5071 ;EXT START_GAME
5072
5073 ***** DEFINITIONS *****
5074
5075 <00BE> MODE_0_PORT EQU 0BEH
5076 <00BF> MODE_1_PORT EQU 0BFH
5077
5078 ***** EXPORTS *****
5079
5080 GLB ASCII_TBL
5081 GLB NUMBER_TBL
5082 GLB DISPLAY_LOGO
5083 GLB LOAD_ASCII
5084 GLB FILL_VRAM
5085 GLB MODE_1
5086
5087 ***** DESCRIPTION *****
5088 *
5089 * DISPLAY_LOGO
5090 *
5091 * DISPLAYS THE COLECO LOGO SCREEN WITH COLECOVISION
5092 * ON A BLACK BACKGROUND. THE GAME TITLE, MANUFACTURER,
5093 * AND COPYRIGHT YEAR ARE OBTAINED FROM THE CARTRIDGE,
5094 * AND OVERLAYED ONTO THE LOGO SCREEN. THE LOGO IS THEN
5095 * DISPLAYED FOR 10 SECONDS AFTER WHICH TIME A JUMP TO
5096 * THE GAME START ADDRESS IS EXECUTED.
5097 *
5098 * IF NO CARTRIDGE IS PRESENT A DEFAULT MESSAGE IS
5099 * DISPLAYED, INSTRUCTING THE OPERATOR TO:
5100 *
5101 * "TURN GAME OFF"
5102 * "BEFORE INSERTING CARTRIDGE"
5103 * "OR EXPANSTION MODULE."
5104 *
5105 * "[COPYRIGHT SYMBOL] 1982 COLECO"
5106 *
5107 * THIS MESSAGE IS DISPLAYED FOR 60 SECONDS, THE SCREEN
5108 * IS THEN BLANKED AND FINALLY A SOFT HALT (JP $) IS
5109 * EXECUTED LOCKING UP THE PROGRAM UNTIL THE UNIT IS
5110 * RESET.
5111 *
5112 * DISPLAY LOGO EXITS WITH THE VDP IN MODE 1, THE SCREEN
5113 * BLANKED, AND THE ASCII CHARACTER SET IN VRAM.
5114 * THE MEMORY MAP IS AS FOLLOWS:
5115 *
5116 * VDP MEMORY MAP
5117 * 3800H-3FFFH SPRITE GENERATOR TABLE
5118 * 2000H-37FFH PATTERN COLOR TABLE
5119 * 1800H-1B7FH SPRITE ATTRIBUTE TABLE
5120 * 1800H-1AFFH PATTERN NAME TABLE

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LOCATION OBJECT CODE LINE SOURCE LINE
5117 * 0000H-17FFH PATTERN GENERATOR TABLE
5118 *
5119 *****
5120 *****
5121 ***** DISPLAY LOGO *****
5122 *****
5123
5124 PROG
5125 * FILL VRAM WITH 0'S
5126 DISPLAY_LOGO LD HL,0
5127 LD DE,16384
5128 LD A,0
5129 CALL FILL_VRAM_
5130
5131 * SET UP VDP WITH MODE 1
5132 CALL MODE_1_
5133
5134 ***** WRITE OUT PATTERN GEN TABLE *****
5135
5136 * WRITE OUT ASCII GENERATOR TABLES
5137 CALL LOAD_ASCII_
5138
5139 * WRITE OUT GRAPHICS GENERATORS
5140 LD HL,OBJ_TABLE
5141 LD DE,60H
5142 WRITE_LOOP PUSH HL
5143 PUSH DE
5144 * CALCULATE GENERATOR LOCATION
5145 LD A,(HL)
5146 CP 0FFH
5147 JR Z,DONE_LOGO
5148 LD B,A
5149 INC B
5150 LD HL,LOGO_GEN
5151 LD DE,8
5152 ADDR_ADJ DJNZ ADD_0
5153
5154 * DONE ADJUSTING ROM GENERATOR ADDRESS
5155
5156 POP DE
5157 PUSH DE
5158 LD IV,1
5159 LD A,3
5160 CALL PUT_VRAM
5161 POP DE
5162 POP HL
5163 INC DE
5164 INC HL
5165 JR WRITE_LOOP
5166
5167 DONE_LOGO POP DE
5168 POP HL
5169 JR WRITE_NAMES
5170
5171 ADD_0 ADD HL,DE
5172 JR ADDR_ADJ
5173
;POINT TO TABLE OF PIN GEN NUMBERS
;ITEM LOCATION IN VRAM PATTERN GEN TABLE
;SAVE LOCATION OF CURRENT CONSTRUCTION
;SAVE VRAM ITEM #
;HAVE WE PROCESSED ALL GENERATORS?
; YES. WE'RE ALL DONE
; NO. B=NUMBER FROM OBJ_TABLES
;POINT TO ROM GENERATOR TABLE
;WE'RE GOING TO ADD 8 FOR EVERY
;GENERATOR INTO THE ROM GEN_TBL
;RESTORE ITEM # IN VRAM
;SAVE IT
;NUMBER OF GENERATORS
;PATTERN GEN TABLE CODE
;HL=ROM ADDRESS
;RESTORE ITEM # IN VRAM
;RESTORE CONSTRUCTION ADDRESS
;SET UP FOR NEXT ITEM
;KEEP GOING UNTIL DONE
;GOT TO POP FOR EVERY PUSH
;HOP AROUND ADD_0
;POINT TO NEXT GENERATOR

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LOCATION OBJECT CODE LINE SOURCE LINE
5174 ***** WRITE OUT PATTERN_NAME_TABLE *****
5175
5176 * WRITE OUT PATTERN_NAME_TABLE
5177 WRITE_NAMES LD HL, LOGO_NAMES
5178 LD DE, 133
5179 LD IX, 22
5180 LD A, 2
5181 CALL PUT_VRAM
5182
5183 LD HL, LOGO_NAMES+22
5184 LD DE, 165
5185 LD IX, 22
5186 LD A, 2
5187 CALL PUT_VRAM
5188
5189
5190 LD HL, TRADEMARK
5191 LD DE, 155
5192 LD IX, 2
5193 LD A, 2
5194 CALL PUT_VRAM
5195
5196 * SET UP DEFAULT COPYRIGHT MESSAGE
5197 LD HL, LOGO_NAMES+103
5198 LD DE, 682
5199 LD IX, 13
5200 LD A, 2
5201 CALL PUT_VRAM
5202
5203 ***** WRITE OUT COLOR_NAME_TABLE *****
5204
5205 LD HL, LOGO_COLORS
5206 LD DE, 0
5207 LD A, 4
5208 LD IX, 18
5209 CALL PUT_VRAM
5210
5211 ***** ENABLE DISPLAY *****
5212
5213 * ENABLE DISPLAY
5214 LD B, 1
5215 LD C, 11000000B
5216 CALL WRITE_REGISTER
5217
5218 * CARTRIDGE TEST
5219 LD HL, 8000H
5220 LD A, [HL]
5221 CP 0AAH
5222 JR NZ, NO_CARTRIDGE
5223 INC HL
5224 LD A, [HL]
5225 CP 55H
5226 JR NZ, NO_CARTRIDGE
5227
5228 * CARTRIDGE PRESENT
5229 * DISPLAY GAME TITLE
5230 LD HL, GAME_NAME
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LOCATION	OBJECT	CODE	LINE	SOURCE	LINE
138C	CD1946	5231	CALL PARSE		
138F	118024	5232	LD DE_GAME_NAME		;GET LENGTH OF STRING
13C2	210201	5233	LD HL,513		;STARTING LOCATION OF 1ST STRING
13C5	CD1951	5234	CALL CENTER_PRT		;LOCATION (0_767) TO START PRINTING
		5235			;PRINT IT
13C8	218024	5236	* DISPLAY COMPANY NAME		
13CB	CD1946	5237	LD HL_GAME_NAME		
		5238	CALL PARSE		;GET PAST 1ST STRING
13CE	23	5239	INC HL		
13CF	54	5240	LD D,H		;STARTING LOCATION OF 2ND STRING
13D0	50	5241	LD E,L		;SAVED IN DE
13D1	CD1946	5242	CALL PARSE		;GET LENGTH OF STRING
13D4	2101C1	5243	LD HL,449		;LOCATION (0_767) TO START PRINTING
13D7	CD1951	5244	CALL CENTER_PRT		;PRINT IT
		5245			
13DA	218024	5246	* CHANGE DATE		
13DB	CD1946	5247	LD HL_GAME_NAME		
		5248	CALL PARSE		;USE PARSE TO ADVANCE HL TO
13E0	23	5249	INC HL		;COPYRIGHT YEAR
13E1	CD1946	5250	CALL PARSE		
13E4	23	5251	INC HL		
13E5	1102AC	5252	LD DE,684		;SCREEN LOCATION
13E8	FD210004	5253	LD IY,4		;# OF DIGITS
13EC	3E02	5254	LD A,2		
13EE	CD1FBE	5255	CALL PUT_VRAM		
		5256			
13F1	CD1968	5257	* DISPLAY 10 SECONDS		
		5258	CALL DELAY_10		
		5259			
13F4	0601	5260	* TURN OFF DISPLAY		
13F6	0E00	5261	LD B,1		
13F8	CD1FD9	5262	LD C,10000000B		
		5263	CALL WRITE_REGISTER		
		5264			
13F8	2AB00A	5265	* EXIT LOGO		
13FE	E9	5266	LD HL,[START_GAME]		;A CARTRIDGE WAS PRESENT
		5267	JP [HL]		;SO JUMP TO IT
		5268			
13FF	211479	5269	* WRITE OUT PATTERN NAME TABLE		
1402	1101AA	5270	LD HL,LOGO_NAMES+44		
1405	FD210000	5271	LD DE,426		;NO CARTRIDGE PRESENT
1409	3E02	5272	LD IY,13		;DISPLAY DEFAULT
140B	CD1FBE	5273	LD A,2		;MESSAGE
		5274	CALL PUT_VRAM		
		5275			
140E	211406	5276	LD HL,LOGO_NAMES+57		
1411	1101E4	5277	LD DE,484		;TURN GAME OFF
1414	FD21001A	5278	LD IY,26		;TO INSERT CARTRIDGE
1418	3E02	5279	LD A,2		;OR EXPANSION MODULE
141A	CD1FBE	5280	CALL PUT_VRAM		
		5281			
141D	2114A0	5282	LD HL,LOGO_NAMES+83		
1420	110227	5283	LD DE,551		
1423	FD210014	5284	LD IY,20		
1427	3E02	5285	LD A,2		
1429	CD1FBE	5286	CALL PUT_VRAM		
		5287			