

# ***SPORTSTATION™***

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## **CHAPTER SIX**

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### **WIRING**



**WARNING:** Failure to reconnect ground wires or replace metal shields and covers with mounting hardware installed and properly tightened may result in radio frequency interference.

## JAMMA Chart

Function	Wire Color	Pin	Function	Wire Color	Pin
Ground	Black	A	Ground	Black	1
Ground	Black	B	Ground	Black	2
+5VDC	Red	C	+5VDC	Red	3
+5VDC	Red	D	+5VDC	Red	4
-5VDC	Yellow	E	-5VDC	Yellow	5
+12VDC	Orange	F	+12VDC	Orange	6
Key	N/C	H	Key	N/C	7
Coin Counter 2	Brown-Red	J	Coin Counter 1	Brown	8
Not Used	N/C	K	Not Used	N/C	9
Speaker -, Left	Brown-Gray	L	Speaker +, Left	Red-Gray	10
Speaker -, Right	Brown-White	M	Speaker +, Right	Red-White	11
Video Green	Yellow-Green	N	Video Red	Yellow-Red	12
Video Sync	Yellow-White	P	Video Blue	Yellow-Blue	13
Service Credits	White-Gray	R	Video Ground	Yellow-Black	14
Slam Tilt	Black-Green	S	Test	Black-Blue	15
Coin 2	Black-Red	T	Coin 1	Black-Brown	16
2 Start	Violet-White	U	1 Start	White	17
2 Up	Violet-Black	V	1 Up	White-Black	18
2 Down	Violet-Brown	W	1 Down	White-Brown	19
2 Left	Violet-Red	X	1 Left	White-Red	20
2 Right	Violet-Orange	Y	1 Right	White-Orange	21
2 Jump	Violet-Yellow	Z	1 Jump	White-Yellow	22
2 Pass	Violet-Green	a	1 Pass	White-Green	23
2 Turbo	Violet-Blue	b	1 Turbo	White-Blue	24
Not Used	Violet	c	Not Used	White-Violet	25
Not Used	N/C	d	Not Used	N/C	26
Ground	Black	e	-5V Ground	Yellow-Brown	27
Ground	Black	f	Ground	Black	28
<b>Solder Side of Circuit Board</b>			<b>Component Side of Circuit Board</b>		

### Control Panel Wires That Aren't Part of Main JAMMA Harness

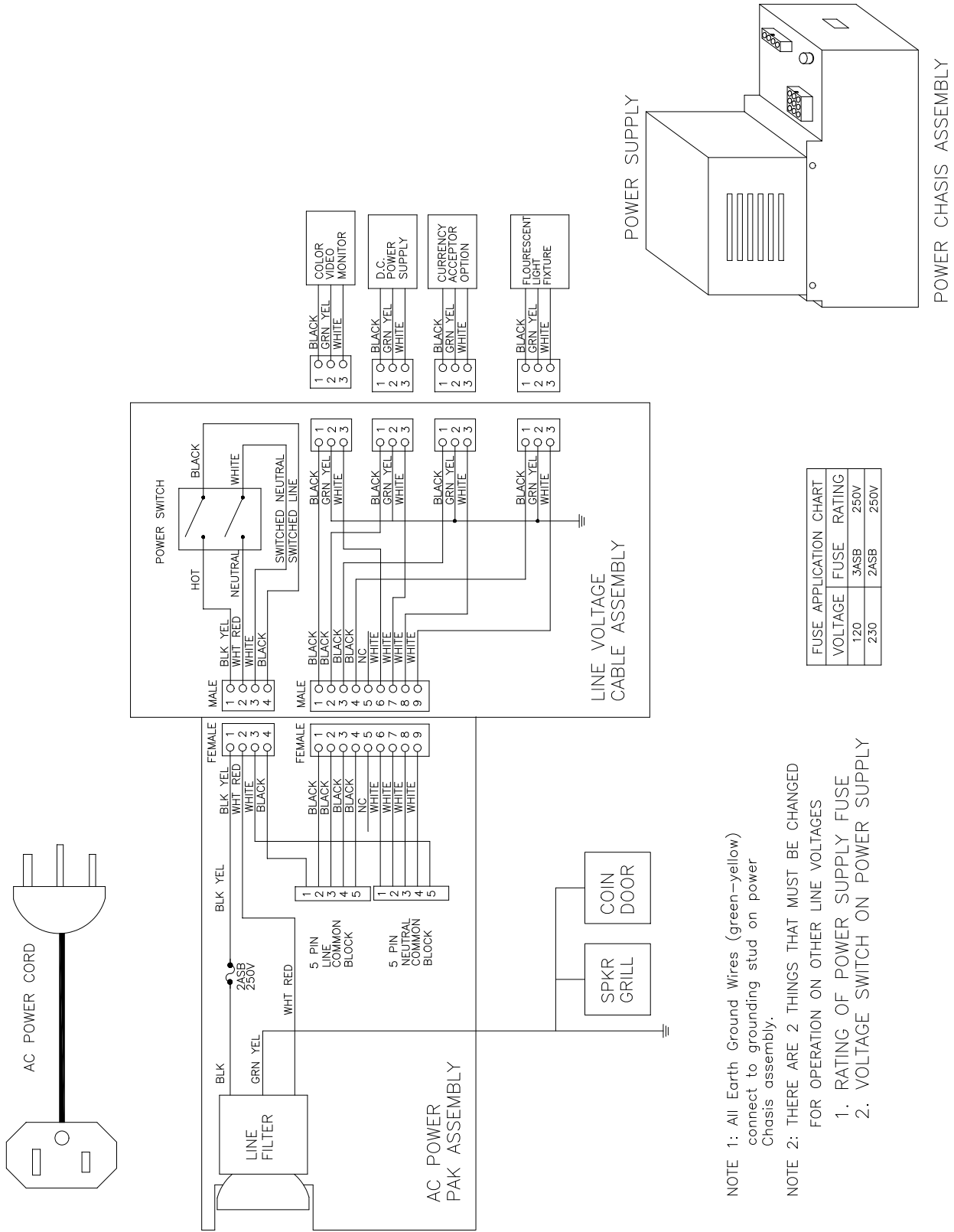
Function	Wire Color	P14-	Function	Wire Color	P7-
4 Digital Ground	Black	1	3 Digital Ground	Black	1
+5 Volts	Red	2	Unused	Not Connected	2
Unused	Not Connected	3/4/15	Unused	Not Connected	3/4/15
4 Start	Gray-White	5	3 Start	Blue-White	6
4 Stick Up, Bit 0	Gray-Black	6	3 Stick Up, Bit 0	Blue-Black	7
4 Stick Down, Bit 1	Gray-Brown	7	3 Stick Down, Bit 1	Blue-Brown	8
4 Stick Left, Bit 2	Gray-Red	8	3 Stick Left, Bit 2	Blue-Red	9
4 Stick Right, Bit 3	Gray-Orange	9	3 Stick Right, Bit 3	Blue-Orange	10
4 Button A, Jump	Gray-Yellow	10	3 Button A, Jump	Blue-Yellow	11
4 Button B, Pass	Gray-Green	11	3 Button B, Pass	Blue-Green	12
4 Button C, Turbo	Gray-Blue	12	3 Button C, Turbo	Blue	13
4 Button D (N/U)	Gray-Violet	13	3 Button D (N/U)	Blue-Violet	14

### D.C. Power Source Voltage Limits

Function	Range Limits	ID	Function	Range Limits	ID
Digital Circuits	+4.90V to +5.10V	+5V	Audio, Lights	-4.75V to -5.25V	-5V
Audio, DBV	+11.5V to +12.5V	+12V	NOTE: +5V is adjustable at the Power Supply		



# Power Wiring Chart



FUSE APPLICATION CHART	
VOLTAGE	FUSE RATING
120	3ASB
230	2ASB

NOTE 1: All Earth Ground Wires (green-yellow) connect to grounding stud on power Chassis assembly.

NOTE 2: THERE ARE 2 THINGS THAT MUST BE CHANGED FOR OPERATION ON OTHER LINE VOLTAGES

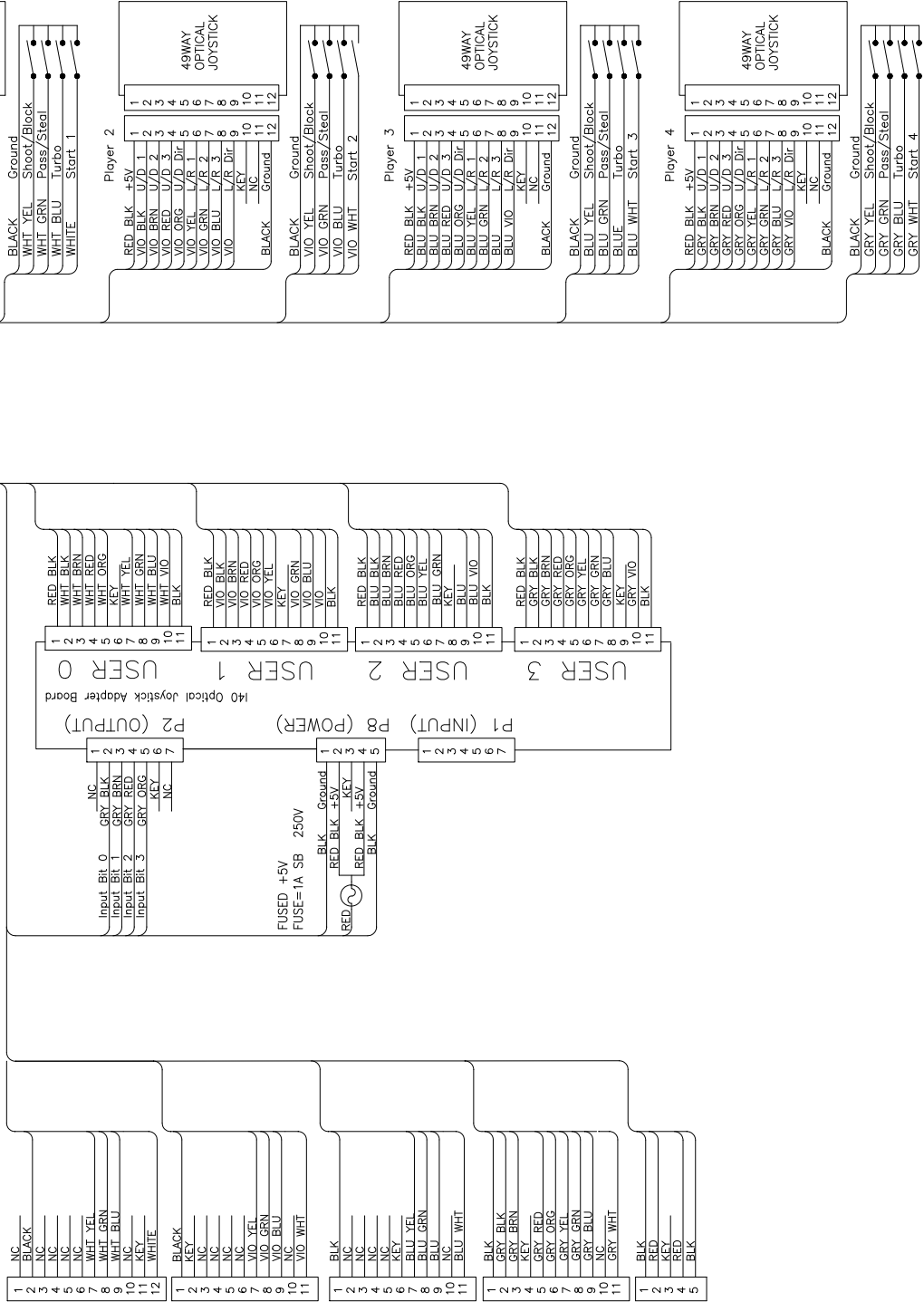
1. RATING OF POWER SUPPLY FUSE
2. VOLTAGE SWITCH ON POWER SUPPLY

## CABINET WIRING DIAGRAM

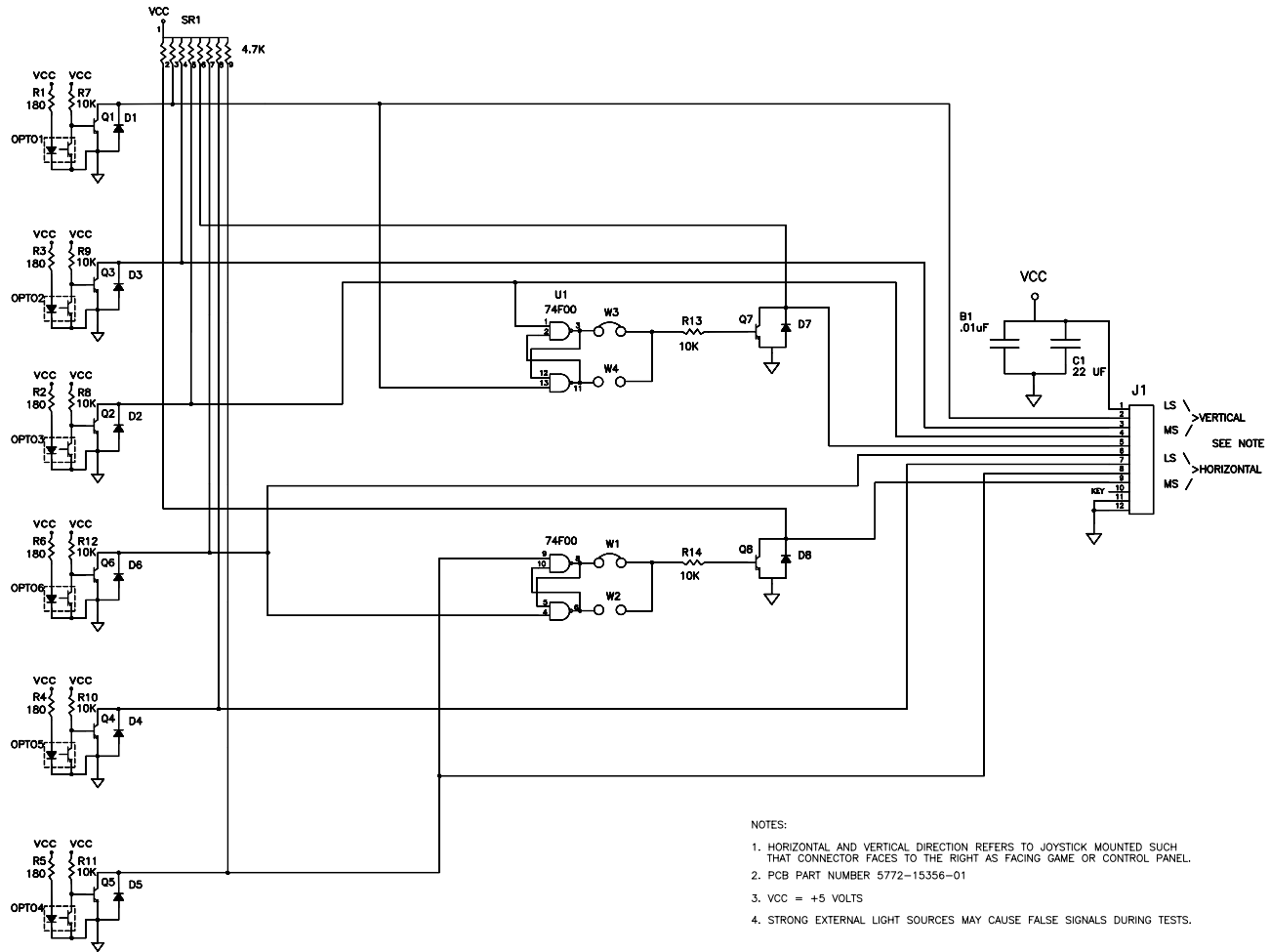
SPORTS STATION  
**WIRING DIAGRAM**  
 CONTROL PANEL

9/3/99

CONTROL PANEL CABLE  
 H-22557



## CONTROL WIRING DIAGRAM (49-WAY JOYSTICK)



## POSITION LOGIC TABLE

DIRECTION	FULLY LEFT	MODERATELY LEFT	SLIGHTLY LEFT	DEAD CENTER	SLIGHTLY RIGHT	MODERATELY RIGHT	FULLY RIGHT
FULLY UP	01110111 (00)	01110011 (01)	01110001 (02)	01110000 (03)	01111100 (04)	01111110 (05)	01111111 (06)
MODERATELY UP	00110111 (07)	00110011 (08)	00110001 (09)	00110000 (10)	00111100 (11)	00111110 (12)	00111111 (13)
SLIGHTLY UP	00010111 (14)	00010011 (15)	00010001 (24)	00010000 (24)	00011100 (24)	00011110 (19)	00011111 (20)
DEAD CENTER	00000111 (21)	00000011 (22)	00000001 (24)	00000000 (24)	00001100 (24)	00001110 (26)	00001111 (27)
SLIGHTLY DOWN	11000111 (28)	11000011 (29)	11000001 (24)	11000000 (24)	11001100 (24)	11001110 (33)	11001111 (34)
MODERATELY DOWN	11100111 (35)	11100011 (36)	11100001 (37)	11100000 (38)	11101100 (39)	11101110 (40)	11101111 (41)
FULLY DOWN	11110111 (42)	11110011 (43)	11110001 (44)	11110000 (45)	11111100 (46)	11111110 (47)	11111111 (48)

NOTE: 1. Connector pin sequence for the above data is as follows: 9 8 7 6 5 4 3 2 referred to ground at pin 12.  
 2. Numbers in parentheses are found in the Switch Test. Program does not use the "slightly" positions.

**SOUND I/O BOARD ASSEMBLY A-23431**



**SOUND I/O BOARD JUMPER POSITION TABLE \***

<b>Jumper</b>	<b>Location</b>	<b>Function</b>	<b>Meaning</b>	<b>Position</b>	<b>State</b>
J1 (Note 1)	Near U9 & Crystal Y3	I/O Connector P2	Input Mode	Pins 1 & 2	■
			Output Mode	Pins 2 & 3	
J2	Between U35 & U10	Video Sync	Positive Sync	Jumper Not Installed	■
			Negative Sync	Pins 1 & 2	
J3 (Note 2)	Near U15	I/O Connector P4	Input Mode	Pins 1 & 2	■
			Output Mode	Pins 2 & 3	
J4	None	None	Not Used	None	---
J5 (Note 2)	Between U15 & Connector P2	I/O Connector P4	Input Mode	Pins 1 & 2	■
			Output Mode	Pins 2 & 3	
J6	None	None	Not Used	None	---
J7	None	None	Not Used	None	---
J8 (Note 1)	Between U9 & Connector P4	I/O Connector P2	Input Mode	Pins 1 & 2	■
			Output Mode	Pins 2 & 3	

**Notes**

1. Configure I/O port P2 by setting both jumpers J1 and J8 to input or output mode.
2. Configure I/O port P4 by setting both jumpers J3 and J5 to input or output mode.

## SOUND I/O BOARD LED INDICATOR STATUS TABLE

LED	Location	Function	Color	State	Meaning
LED1 (Note 1)	Near U11	Not Used (Remains Off)	Green	Off	--
				On	--
				Blinking	--
LED2 (Note 2)	Near U34 & Crystal Y1	Linking Connector Status	Green	Off	Not in Use (No Game Linking)
				On	Link Continuity Good
LED3 (Note 2)	Near the JAMMA Connector	-5V Power Indicator	Red	Off*	No Power
				On*	Normal Operation
LED4 (Note 2)	Near U35 & Connector P14	+12V Power Indicator	Red	Off	No Power
				On	Normal Operation
LED5 (Note 2)	Near Connector P23	+5V Power Indicator	Red	Off	No Power
				On	Normal Operation
LED6 (Note 2)	Near U34 & Crystal Y1	CPU Linking Activity	Red	Off	Not in Use
				On	CPU Communicating with Ethernet Controller
LED7 (Note 2)	Near U34 & Crystal Y1	Linking Transmitting Data	Red	Off	Not in Use (No Game Linking)
				On	Sending Data
				Blinking	Normal Operation
LED8 (Note 1)	Near U14 & Crystal Y1	Audio Activity	Yellow	Off	No Sound Boot ROM
				On	Locked Up
				Blinking	Normal Operation
LED9 (Note 2)	Near U34 & Crystal Y1	Linking Receiving Data	Yellow	Off	Not in Use (No Game Linking)
				On	Receiving Data
LED10 (Note 1)	Near U44 & Crystal Y2	Not Used (Remains On)	Green	Off	--
				On	--
				Blinking	--
LED11 (Note 1)	Near U44 & Crystal Y2	Not Used (Remains On)	Red	Off	--
				On	--
				Blinking	--
LED12 (Note 1)	Near U44 & Crystal Y2	Not Used (Remains On)	Yellow	Off	--
				On	--
				Blinking	--
LED13 (Note 1)	Near U44 & Crystal Y2	Not Used (Remains On)	Yellow	Off	--
				On	--
				Blinking	--

### Notes

- Software controls this LED. Indications are game and revision-specific. Changing the EPROMs on this board may alter the function of this LED. Firmware damage may also cause new or different LED behavior.
- Hardware controls this LED. Indications depend on hard-wired circuitry. A change in normal LED behavior may indicate a circuit fault. Changing the EPROMs on this board shouldn't alter the function of this LED.

## CPU BOARD INDICATOR AND SWITCH LOCATIONS

### CPU BOARD SWITCH

Switch	Location	Function	Positions	State	Meaning
S1*	Edge Near U10 and U12	Resets and Restarts Game	2	Off	Normal Operation
				On	Forced Reset

**\*Notes**

This switch resets the CPU Board without shutting off power at the power supply.

## CPU BOARD JUMPER LOCATION TABLE

Jumper	J1	J2	J3	J4	J5	J6
Located Near...	U28 & Connector P5					U22 & U27

## CPU BOARD JUMPER POSITION TABLE

ROM Type	Default	Options*	J1	J2	J3	J4	J5	J6
<b>Boot (U27)</b>		27C080, 1M X 8, EPROM	1-2	2-3	1-2	1-2	--	--
	■	27C040, 512K x 8, EPROM	1-2	1-2	1-2	1-2	--	--
		27C010, 128K x 8, EPROM	1-2	1-2	1-2	2-3	--	--
		29F040, 512K x 8, Flash	2-3	1-2	2-3	1-2	--	--
		29F020, 256K x 8, Flash	1-2	1-2	2-3	1-2	--	--
		29F010, 128K x 8, Flash	1-2	1-2	2-3	1-2	--	--
<b>Expansion (U28)</b>		27C080, 1M x 8, EPROM	--	--	--	--	2-3	--
	■	27C040, 512K x 8, EPROM	--	--	--	--	1-2	--
		27C010, 128K x 8, EPROM	--	--	--	--	1-2	--
<b>External Boot</b>	■	Boot from CPU ROM	--	--	--	--	--	1-2
		Boot from SIO ROM	--	--	--	--	--	Re-moved

### \*Notes

1. -- = Not Applicable

2. Memory type numbers shown are for blank parts. Your game requires programmed parts.

## CPU BOARD LED INDICATOR STATUS TABLE

Device	Location	Function	Color	State	Meaning
LED1	Near U6, U7 & U16	3.3V CPU Power Indicator	Red	Off	Insufficient Power
				On	Power OK
				Blinking	Power Supply Fault
LED2	Near U28 & Connector P5	Hard Disk Drive Activity	Green	Off	Disk Not in Use
				On	Locked Up Disk
				Blinking	Normal Disk Activity
RP63	Near U22 & U26	Indicator	Red	Off*	See Note 3, Below.
				On*	
				Blinking* Sequentially	

### Notes

- LED1 monitors CPU power (+3.3 volts). If his LED is off or blinking, investigate processor circuits. If other LEDs are off or blinking at the same time, check +5-volt circuits or the game power supply.
- LED2 flashes when the hard disk is operating during game play. LED2 may light continuously during startup. If this LED remains lighted, the hard drive may be locked up or faulty.
- Software controls RP63. In this game, RP63 initially indicates program startup stages. This LED is a seven-segment, alphanumeric display device. Normally, RP63 displays a lowercase "b," or an "O" pattern with sequentially blinking segments. During Self-Test screens, RP63 displays a "bouncing bar" that resembles a hyphen ("-").

## VIDEO BOARD INDICATOR AND SWITCH LOCATIONS

**Note**

This video board has no jumpers or LEDs.

