CPU – Switch Connections

1J8-1	GRN-BRN	Switch Col 1 (Q45)
1J8-2	GRN-RED	Switch Col 2 (Q49)
1J8-3	GRN-ORG	Switch Col 3 (Q44)
1J8-4	GRN-YEL	Switch Col 4 (Q48)
1J8-5	GRN-BLK	Switch Col 5 (Q43)
1J8-6	Key Pin	No Connection
1J8-7	GRN-BLU	Switch Col 6 (Q47)
1J8-8	GRN-VIO	Switch Col 7 (Q42)
1J8-9	GRN-GRY	Switch Col 8 (Q46)

1J10-1	WHT/GRY	Switch Row 8
1J10-2	WHT/VIO	Switch Row 7
1J10-3	WHT/BLU	Switch Row 6
1J10-4	Key Pin	No Connection
1J10-5	WHT/GRN	Switch Row 5
1J10-6	WHT/YEL	Switch Row 4
1J10-7	WHT/ORG	Switch Row 3
1J10-8	WHT/RED	Switch Row 2
1J10-9	WHT/BRN	Switch Row 1

Interconnect Board

2J18-1	GRN/BRN	Switch Col 1 (Q45)
2J18-2	---	No Connection
2J18-3	---	No Connection
2J18-4	Key Pin	No Connection
2J18-5	WHT/GRY	Switch Row 8
2J18-6	WHT/VIO	Switch Row 7
2J18-7	WHT/BLU	Switch Row 6
2J18-8	WHT/GRN	Switch Row 5
2J18-9	WHT/YEL	Switch Row 4
2J18-10	WHT/ORG	Switch Row 3
2J18-11	---	No Connection
2J18-12	WHT/BRN	Switch Row 1
2J20	Not Applicable	

2J19-1	GRN/RED	Switch Col 2 (Q49)
2J19-2	GRN/ORG	Switch Col 3 (Q44)
2J19-3	GRN/YEL	Switch Col 4 (Q48)
2J19-4	GRN/BLK	Switch Col 5 (Q43)
2J19-5	GRN/BLU	Switch Col 6 (Q47)
2J19-6	GRN/VIO	Switch Col 7 (Q42)
2J19-7	GRN/GRY	Switch Col 8 (Q46)
2J19-8	Key Pin	No Connection
2J19-9	WHT/GRY	Switch Row 8
2J19-10	WHT/VIO	Switch Row 7
2J19-11	WHT/BLU	Switch Row 6
2J19-12	WHT/GRN	Switch Row 5
2J19-13	WHT/YEL	Switch Row 4
2J19-14	WHT/ORG	Switch Row 3
2J19-15	WHT/RED	Switch Row 2
2J19-16	WHT/BRN	Switch Row 1

SYSTEM-11B MEMORY CHIP TEST.

A new feature is now included in the Memory Chip Test for System 11B. During power-up, the CPU performs a self-testing routine. When all tests are satisfactory, the game proceeds to the Attract Mode, allowing players to use the game. Whenever a portion of the testing does not produce satisfactory results, the game displays a message, before proceeding to the next portion of the testing. ONLY after all tests are satisfactory does the game allow play to begin.

In addition to the displayed message, when a test fails, LED2 ('DIAGNOSTIC') mounted on the CPU Board can be observed to determine the probable cause of the problem. This LED blinks, or flashes, a certain number of times to identify the probable cause, as described in the **CPU LED Indicator Codes Table**. The operator can also start the self-testing routine by pressing the CPU Diagnostic Switch (SW 2) on the edge of the CPU Board.

EARTHSHAKER Switch-Matrix Table

COLUMN / ROW	1 Q45 GRN-BRN 1J8-1	2 Q49 GRN-RED 1J8-2	3 Q44 GRN-ORN 1J8-3	4 Q48 GRN-YEL 1J8-4	5 Q43 GRN-BLK 1J8-5	6 Q47 GRN-BLU 1J8-7	7 Q42 GRN-VIO 1J8-8	8 Q46 GRN-GRY 1J8-9
1 WHT-BRN 1J10-9	Plumb Bob Tilt 1	Playfield Tilt 9	Left Outlane 17	25	On Ramp 50K 33	Spinner 41	49	Flipper Right 57
2 WHT-RED 1J10-8	C Side Power A/C Relay 2	Outhole 10	Left Return Lane (8) 18	26	On Ramp 25K 34	Fault Open 42	Ball Shooter 50	Flipper Left 58
3 WHT-ORN 1J10-7	Credit Button 3	Ball Trough #1 (R) 11	Left Standup (1) 19	3-Bank DT (left) 27	On Ramp 100K 35	Right Ramp Entry 43	51	59
4 WHT-YEL 1J10-6	Left Coin Chute 4	Ball Trough #2 (Mid) 12	Eject Hole (5) 20	3-Bank DT (mid) 28	On Ramp Bypass 36	Center Ramp Entry 44	Left Jet Bumper 52	60
5 WHT-GRN 1J10-5	Center Coin Chute 5	Ball Trough #3 (L) 13	Right Standup (high) (2) 21	3-Bank DT (right) 29	Ball Popper (top) 37	Center Ramp Middle 45	Right Jet Bumper 53	61
6 WHT-BLU 1J10-3	Right Coin Chute 6	Right Inside Return Lane (7) 14	Right Standup (low) (3) 22	Center Standup (4) 30	Under Playfield Drop Hole 1 38	Center Ramp End 46	Top Jet Bumper 54	62
7 WHT-VIO 1J10-2	Slam Tilt 7	Right Outside Return Lane 15	Captive Ball (9) 23	Right Loop (6) 31	Under Playfield Drop Hole 2 39	47	BL Kicker ("sling") 55	63
8 WHT-GRY 1J10-1	High Score Reset 8	Right Outlane 16	Right Standup (50K) 24	Left Loop (6) 32	Ball Popper (bottom) 40	48	BR Kicker ("sling") 56	64

TL = Top Left TR = Top Right BL = Bottom Left BR = Bottom Right (7) = "Zone"

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CPU LED Indicator Codes Table

Diagnostic LED		
Blinks/ Flashes	**Display Message**	**Explanation**
1	U25 RAM FAILURE	U25 RAM could not be used properly (NO other tests are performed; the game is locked here, until the game is turned off).
2	MEM. PROT. FAILURE	This message means that (A) the Coin Door may be shut; (B) the Memory Protect Switch may be stuck in the ON position; (C) the memory protect logic is protecting the memory; or (D) a U25 RAM failure is occurring. (See Note 1)
3	U51 PIA FAILURE	U51 has a malfunction. (See Note 2)
4	U38 PIA FAILURE	U38 has a malfunction. (See Note 2)
5	U41 PIA FAILURE	U41 has a malfunction. (See Note 2)
6	U42 PIA FAILURE	U42 has a malfunction. (See Note 2)
7	U54 PIA FAILURE	U54 has a malfunction. (See Note 2)
8	U10 PIA FAILURE	U10 has a malfunction. (See Note 2)
9	IRQ FAILURE	IRQ has a malfunction. It may be missing or too fast or too slow.
10	U27 ROM FAILURE	U27's internal checksums do not match. It may be a ROM failure, or its associated connections and connectingdevices are causing it to appear to have a problem. (The following U26 test is skipped.)
11	U26 ROM FAILURE	U26's internal checksums do not match.

Notes: 1. This test assumes that the Coin Door is OPEN; it is initiated ONLY by pressing the CPU Diagnostic Switch (SW2).

2. Alternatively, its associated connections or connecting devices are causing the IC to appear to have problems.