

Model # 515
FUSE LIST

Power Supply Board D-8345			Sound Board D-8223 (Type-2)		
F1	100V Display Power Input	0.25A, 250V, SB	F1	Power Input	4A, 250V, SB
F2	Solenoids	2.5A, 250V, SB	F2	Power Input	4A, 250V, SB
F3	Controlled lamps 18V	8A, 250V, SB	Back Box		
F4	Flippers	10A, 250V SB	BR1	Bridge Rectifier 18V	8A, 250V, SB
F5	5V & 12V Logic Power Input	7A, 250V, SB	BR2	Bridge Rectifier 34V	8A, 250V, SB
F6	5V & 12V Logic Power Input	7A, 250V, SB	Line Filter		
F7	General Illumination	20A, 250V	Foreign	(220-230V)	4A, 250V, SB
			Domestic	(110-120V)	8A, 250V, SB



SOLENOID/FLASHER TABLE

Sol. No.	Function	Solenoid Type	Wire Color ¹	Connections		Driver Transistor	Solenoid Part Number
				Driver Board	Playfield / Cabinet		
1	Outhole	Controlled	Gry-Brn	2J11-4	8P3-1	Q15	SA3-23-850-DC
2	Not Used	Controlled	Gry-Red	2J11-5	8P3-2	Q17	
3	Not Used	Controlled	Gry-Orn	2J11-7	8P3-3	Q19	
4	Not Used	Controlled	Gry-Yel	2J11-8	8P3-4	Q21	
5	Not Used	Controlled	Gry-Grn	2J11-9	8P3-5	Q23	
6	Not Used	Controlled	Gry-Blu	2J11-3	8P3-6	Q25	
7	Not Used	Controlled	Gry-Vio	2J11-2	8P3-7	Q27	
8	Not Used	Controlled	Gry-Blk	2J11-1	8P3-8	Q29	
9	Not Used	Controlled	Brn-Blk	2J9-9	8P3-9	Q31	
10	Not Used	Controlled	Brn-Red	2J9-7	8P3-10	Q33	
11	General Illumination Relay	Controlled	Brn-Orn	2J9-1	3P7-1	Q35	5580-09555-00 ³
12	Not Used	Controlled	Brn-Yel	2J9-2	8P3-12	Q37	
13	Not Used	Controlled	Brn-Grn	2J9-3	8P3-13	Q39	
14	Not Used	Controlled	Brn-Blu	2J9-4	8P3-14	Q41	
15	Bell	Controlled	Brn-Vio	2J9-5	7P1-17	Q43	SM-29-1000-DC
16	Coin Lockout Coil	Controlled	Brn-Gry	2J9-6	7P1-18, 7P2-4	Q45	904218-696
17	Top Left Jet Bumper	Special #1	Blu-Brn	2J12-7	8P3-17	Q2	SG-23-850-DC
		Sp. Switch #1	Orn-Brn	2J13-5	8P3-24	IC6	
18	Right Jet Bumper	Special #2	Blu-Red	2J12-4	8P3-18	Q4	SG-23-850-DC
		Sp. Switch #2	Orn-Red	2J13-3	8P3-25	IC6	
19	Left Slingshot	Special #3	Blu-Orn	2J12-3	8P3-19	Q6	SG-23-850-DC
		Sp. Switch #3	Orn-Blk	2J13-2	8P3-26	IC6	
20	Right Slingshot	Special #4	Blu-Yel	2J12-6	8P3-20	Q8	SG1-23-850-DC
		Sp. Switch #4	Orn-Yel	2J13-4	8P3-27	IC6	
21	Bottom Jet Bumper	Special #5	Blu-Grn	2J12-8	8P3-21	Q10	SG1-23-850-DC
		Sp. Switch #5	Orn-Grn	2J13-8	8P3-28	IC7	
22	Not Used	Special #6	Blu-Blk	2J12-9	8P3-22	Q12	
		Sp. Switch #6	Orn-Blu	2J13-5	8P3-29	IC7	
Flipper Circuits							
	Right Flipper	Flipper	Blu-Vio	7P1-8	8P3-34		SFL19-400 / 30-750-DC
	Right Flipper switch ²	Switch	Orn-Vio	2P12-1	7P1-7		
	Left Flipper	Flipper	Blu-Gry	7J1-10	8P3-32		SFL19-400 / 30-750-DC
	Left Flipper switch ²	Switch	Orn-Gry	2P12-2	7P1-9		
Notes:							
1. Wire colors, except flipper Orn-Vio and Orn-Gry, are ground connections (to coil terminal with unbanded end of diode). Flipper Orn-Vio and Orn-Gry wires connect from CPU Board to flipper button switch on cabinet.							
2. Flipper connections are from flipper button switch to flipper coil.							
3. Relay is mounted on Power Supply Board D-8345 in the backbox.							

LAMP MATRIX

Column Row	Red ← Yellow (B+) →							
	1 Yel-Brn 2J5-8 Q63	2 Yel-Red 2J5-9 Q65	3 Yel-Orn 2J5-6 Q67	4 Yel-Blk 2J5-7 Q69	5 Yel-Grn 2J5-3 Q71	6 Yel-Blu 2J5-5 Q73	7 Yel-Vio 2J5-1 Q75	8 Yel-Gry 2J5-2 Q77
1 Red-Brn 2J7-1 Q47	Keep Shooting (Backbox) 1	F 9	Turn Around Right 17	Lane 4 25	Time 4X 33	M 41	1 Bonus 49	9 Bonus 57
2 Red-Blk 2J7-2 Q49	Ball in Play 2	A 10	Left Outlane 18	Lane 5 26	Time 5X 34	E 42	2 Bonus 50	10 Bonus 58
3 Red-Orn 2J7-3 Q51	Tilt 3	N 11	Right Outlane 19	Lane 30,000 27	Ramp T 35	10,000 Turn Around 43	3 Bonus 51	20 Bonus 59
4 Red-Yel 2J7-4 Q53	Game Over 4	T 12	Left Flipper Return Lane 20	Lane 60,000 28	Ramp I 36	20,000 Turn Around 44	4 Bonus 52	2X Bonus Multiplier 60
5 Red-Grn 2J7-5 Q55	Match 5	A 13	Right Flipper Return Lane 21	Lane 90,000 29	Ramp M 37	30,000 Turn Around 45	5 Bonus 53	3X Bonus Multiplier 61
6 Red-Blu 2J7-6 Q57	High Score 6	S 14	Lane 1 22	All Score Multi-Arrow 30	Ramp E 38	40,000 Turn Around 46	6 Bonus 54	5X Bonus Multiplier 62
7 Red-Vio 2J7-9 Q61	50,000 When Lit 7	Y 15	Lane 2 23	Time 2X 31	T 39	50,000 Turn Around 47	7 Bonus 55	10X Bonus Multiplier 63
8 Red-Gry 2J7-8 Q59	Keep Shooting (Playfield) 8	Turn Around Left 16	Lane 3 24	Time 3X 32	I 40	100,000 Turn Around 48	8 Bonus 56	Not Used 64

SWITCH MATRIX

Column Row	White → Green ←							
	1 Gm-Brn 2J2-9 IC17	2 Gm-Red 2J2-8 IC17	3 Gm-Orn 2J2-7 IC17	4 Gm-Yel 2J2-6 IC17	5 Gm-Blk 2J2-5 IC18	6 Gm-Blu 2J2-3 IC18	7 Gm-Vio 2J2-2 IC18	8 Gm-Gry 2J2-1 IC18
1 Wht-Brn 2J3-9 IC15	Plumb Bob Tilt 1	F 9	Right Turn Around 17	Lane 4 25	Top Left Jet Bumper 33	Playfield Tilt 41	Not Used 49	Not Used 57
2 Wht-Red 2J3-8 IC15	Ball Roll Tilt 2	A 10	Left Outlane 18	Lane 5 26	Right Jet Bumper 34	Left Side Lane 42	Not Used 50	Not Used 58
3 Wht-Orn 2J3-7 IC15	Credit Button 3	N 11	Right Outlane 19	Lower Left Rebounce 27	Bottom Left Jet Bumper 35	Not Used 43	Not Used 51	Not Used 59
4 Wht-Yel 2J3-6 IC15	Right Coin Chute 4	T 12	Left Flipper Return Lane 20	Upper Left Rebounce 28	Ramp Target Timetube 36	Not Used 44	Not Used 52	Not Used 60
5 Wht-Grn 2J3-5 IC16	Center Coin Chute 5	A 13	Right Flipper Return Lane 21	Upper Top Rebounce 29	Left Slingshot 37	Not Used 45	Not Used 53	Not Used 61
6 Wht-Blu 2J3-4 IC16	Left Coin Chute 6	S 14	Lane 1 22	Upper Center Rebounce 30	Right Slingshot 38	Not Used 46	Not Used 54	Not Used 62
7 Wht-Vio 2J3-3 IC16	Slam Tilt 7	Y 15	Lane 2 23	Upper Bottom Rebounce 31	Outhole 39	Not Used 47	Not Used 55	Not Used 63
8 Wht-Gry 2J3-1 IC16	High Score Reset 8	Left Turn Around 16	Lane 3 24	Lower Right Rebounce 32	Flipper Lane 40	Not Used 48	Not Used 56	Not Used 64