

Model # 477

FUSE LIST

Power Supply Board D-7999			Back Box		
F1	100V Display Power Input	0.25A, 250V, SB	BR1	Bridge Rectifier 18V	8A, 250V, SB
F2	Solenoids	2.5A, 250V, SB	BR2	Bridge Rectifier 34V	8A, 250V, SB
F3	Controlled lamps 18V	8A, 250V	Under Playfield		
F4	General Illumination	20A, 250V	F1	Flippers	10A, 250V, SB
F5	5V Logic Power	4A, 250V			
Line Filter					
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	Top Eject	Controlled	Gry-Brn	2J11-4	8P3-1	Q15	G-25-1000-DC
2	"TIP" Drop Target Reset	Controlled	Gry-Red	2J11-5	8P3-2	Q17	G-24-875-DC
3	"HOT" Drop Target Reset	Controlled	Gry-Orn	2J11-7	8P3-3	Q19	G-24-875-DC
4	Left Eject	Controlled	Gry-Yel	2J11-8	8P3-4	Q21	G-25-1000-DC
5	Outhole	Controlled	Gry-Grn	2J11-9	8P3-5	Q23	A-23-800-DC
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	10 Points Chime	Controlled	Brn-Blk	2J9-9	8P3-9	Q31	B-29-1600-DC
10	100 Points Chime	Controlled	Brn-Red	2J9-7	8P3-10	Q33	B-29-1600-DC
11	1,000 Points Chime	Controlled	Brn-Orn	2J9-1	3P7-1	Q35	B-29-1600-DC
12	10,000 Points Chime	Controlled	Brn-Yel	2J9-2	8P3-12	Q37	B-29-1600-DC
13	Noice Drum	Controlled	Brn-Grn	2J9-3	8P3-13	Q39	B1-26-800-DC
14	Credit Knocker	Controlled	Brn-Blu	2J9-4	8P3-14	Q41	A2-23-750-DC
15	Buzzer	Controlled	Brn-Vio	2J9-5	7P1-17	Q43	
16	Coin Lockout Coil	Controlled	Brn-Gry	2J9-6	7P1-18, 7P2-4	Q45	M-35-4000-DC
17	Jet Bumper	Special #1	Blu-Brn	2J12-7	8P3-17	Q2	G-23-750-DC
		Sp. Switch #1	Orn-Brn	2J13-5	8P3-24	IC6	
18	Right Slingshot	Special #2	Blu-Red	2J12-4	8P3-18	Q4	G-23-750-DC
		Sp. Switch #2	Orn-Red	2J13-3	8P3-25	IC6	
19	Left Slingshot	Special #3	Blu-Orn	2J12-3	8P3-19	Q6	G-23-750-DC
		Sp. Switch #3	Orn-Blk	2J13-2	8P3-26	IC6	
20	Not Used	Special #4	Blu-Yel	2J12-6	8P3-20	Q8	
		Sp. Switch #4	Orn-Yel	2J13-4	8P3-27	IC6	
21	Not Used	Special #5	Blu-Grn	2J12-8	8P3-21	Q10	
		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	8P3-3		FL-20-300 / 33-1500-DC
	Right Flipper switch ²	Switch	Orn-Vio	2P12-1	7P1-7		
	Left Flipper	Flipper	Blu-Gry	7J1-10	8P3-4		FL-20-300 / 33-1500-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.

Williams
HOT TIP



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	Not Used 1	Not Used 9	Shoot Again (Playfield) 17	Eject 1000 (Right) 25	Spinner 33	2.000 Bonus 41	Not Used 48	#1 Player Up 57
2 Red-Blk 2J7-2 Q49	Not Used 2	Not Used 10	Left Outlane Special 18	Eject Lites Captive Ball 26	Right Drop Target 34	3.000 Bonus 42	1 Can Play 50	#2 Player Up 58
3 Red-Orn 2J7-3 Q51	Not Used 3	Double Bonus 11	Extra Ball 19	Eject 500 (Center) 27	Left Drop Target 35	4.000 Bonus 43	2 Can Play 51	#3 Player Up 59
4 Red-Yel 2J7-4 Q53	Not Used 4	#1 Horseshoe 12	Spinner 100 20	Eject Double Bonus 28	Double Bonus 36	5.000 Bonus 44	3 Can Play 52	#4 Player Up 60
5 Red-Grn 2J7-5 Q55	Not Used 5	#2 Horseshoe 13	"HOT" 1.000 21	Eject 500 (Left) 29	Shoot Again (Playfield) 37	6.000 Bonus 45	4 Can Play 53	Tilt 61
6 Red-Blu 2J7-6 Q57	Not Used 6	#3 Horseshoe 14	"HOT" 100 22	Not Used 30	Not Used 38	7.000 Bonus 46	Match 54	Game Over 62
7 Red-Vio 2J7-9 Q61	Not Used 7	Captive Ball 3,000 15	"TIP" 1.000 23	Not Used 31	10.000 Bonus 39	8.000 Bonus 47	Ball in Play 55	Shoot Again (Backbox) 63
8 Red-Gry 2J7-8 Q59	Not Used 8	Right Outlane Special 16	"TIP" 100 24	Not Used 32	1.000 Bonus 40	9.000 Bonus 48	Credits (Playfield) 56	High Score 64

SWITCH MATRIX

Column Row	White → Green							
	1 Grn-Brn 2J2-9 IC17	2 Grn-Red 2J2-8 IC17	3 Grn-Orn 2J2-7 IC17	4 Grn-Yel 2J2-6 IC17	5 Grn-Blk 2J2-5 IC18	6 Grn-Blu 2J2-3 IC18	7 Grn-Vio 2J2-2 IC18	8 Grn-Gry 2J2-1 IC18
1 Wht-Brn 2J3-9 IC15	Plumb Bob Tilt 1	Outhole 9	Right "TIP" Drop Target 17	Right "HOT" Drop Target 25	Left Outlane 33	Not Used 41	Not Used 49	Not Used 57
2 Wht-Red 2J3-8 IC15	Ball Roll Tilt 2	Playfield Tilt 10	Center "TIP" Drop Target 18	Center "HOT" Drop Target 26	Left Flipper Return Lane 34	Not Used 42	Not Used 50	Not Used 58
3 Wht-Orn 2J3-7 IC15	Credit Button 3	Right Outlane 11	Left "TIP" Drop Target 19	Left "HOT" Drop Target 27	Left Slingshot 35	Not Used 43	Not Used 51	Not Used 59
4 Wht-Yel 2J3-6 IC15	Left Coin Chute 4	Right Flipper Return Lane 12	Top Advance Bonus Target 20	Top Left 10 Points Rebounce 28	Not Used 36	Not Used 44	Not Used 52	Not Used 60
5 Wht-Grn 2J3-5 IC16	Center Coin Chute 5	Right Slingshot 13	Top Right 10 Points Rebounce 21	Left Eject 29	"HOT-TIP" Drop Targets Series 37	Not Used 45	Not Used 53	Not Used 61
6 Wht-Blu 2J3-4 IC16	Right Coin Chute 6	Right 500 Points Rebounce 14	Top Eject 22	Spinner 30	Not Used 38	Not Used 46	Not Used 54	Not Used 62
7 Wht-Vio 2J3-3 IC16	Slam Tilt 7	Captive Ball Rollover 15	Top Left 10 Points Rebounce 23	Jet Bumper 31	Not Used 39	Not Used 47	Not Used 55	Not Used 63
8 Wht-Gry 2J3-1 IC16	High Score Reset 8	Captive Ball Target 16	Top Left Rollover 24	Left 500 Points Rebounce 32	Not Used 40	Not Used 48	Not Used 56	Not Used 64