

Model # 481

FUSE LIST

Power Supply Board D-7999			Sound Board D-8066 (Type-1A)		
F1	100V Display Power Input	0.25A, 250V, SB	F1	Power Input	4A, 250V, SB
F2	Solenoids	2.5A, 250V, SB	Back Box		
F3	Controlled lamps 18V	8A, 250V	Fuse Card	General Illumination	20A, 250V
F4	Not Used		BR1	Bridge Rectifier 18V	8A, 250V, SB
F5	5V Logic Power	4A, 250V	BR2	Bridge Rectifier 34V	8A, 250V, SB
Line Filter			Under Playfield		
Foreign	(220-230V)	4A, 250V, SB	F1	Flippers	10A, 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	Left Eject	Controlled	Gry-Brn	2J11-4	8P3-1	Q15	G-25-1000-DC
2	Right Eject	Controlled	Gry-Red	2J11-5	8P3-2	Q17	G-25-1000-DC
3	Left Shooter	Controlled	Gry-Orn	2J11-7	8P3-3	Q19	G-25-1000-DC
4	Right Shooter	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	Bell Sound	Controlled	Gry-Vio	2J11-2	8P3-7	Q27	B1-26-800-DC
8	Not Used	Controlled	Gry-Blk	2J11-1	8P3-8	Q29	
9	Sound (10 Points)	Controlled	Brn-Blk	2J9-9	8P3-9	Q31	
10	Sound (100 Points)	Controlled	Brn-Red	2J9-7	8P3-10	Q33	
11	Sound (1,000 Points)	Controlled	Brn-Orn	2J9-1	3P7-1	Q35	
12	Sound (10,000 Points)	Controlled	Brn-Yel	2J9-2	8P3-12	Q37	
13	Sound (Alternator)	Controlled	Brn-Grn	2J9-3	8P3-13	Q39	
14	Credit Knocker	Controlled	Brn-Blu	2J9-4	8P3-14	Q41	A2-23-750-DC
15	Tilt Sound	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	Left 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 Jet Bumper	Special #2	Blu-Red	2J12-4	8P3-18	Q4	G-23-750-DC
		Sp. Switch #2	Orn-Red	2J13-3	8P3-25	IC6	
19	Not Used	Special #3	Blu-Orn	2J12-3	8P3-19	Q6	
		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-21-400 / 33-1300-DC
	Right Flipper switch ²	Switch	Orn-Vio	2P12-1	7P1-7		
	Left Flipper	Flipper	Blu-Gry	7J1-10	8P3-4		FL-21-400 / 33-1300-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.

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	Ball Advance 1 (x2) 1	Top S 9	Top Goal When Lit 17	2 Goals 25	Bonus 2 33	Bonus 10 41	Bonus 18 48	#1 Player Up 57
2 Red-Blk 2J7-2 Q49	Ball Advance 2 (x2) 2	Top T 10	Extra Ball When Lit 18	4 Goals 26	Bonus 3 34	Bonus 11 42	1 Can Play 50	#2 Player Up 58
3 Red-Orn 2J7-3 Q51	Ball Advance 3 (x2) 3	Top A 11	Spinner 100 19	6 Goals 27	Bonus 4 35	Bonus 12 43	2 Can Play 51	#3 Player Up 59
4 Red-Yel 2J7-4 Q53	Ball Advance 4 (x2) 4	Top R 12	Bronze Star 20	1 Goal 28	Bonus 5 36	Bonus 13 44	3 Can Play 52	#4 Player Up 60
5 Red-Grn 2J7-5 Q55	Goal When Lit 5	S 13	Silver Star 21	3 Goals 29	Bonus 6 37	Bonus 14 45	4 Can Play 53	Tilt 61
6 Red-Blu 2J7-6 Q57	Left Outlane Special 6	T 14	Gold Star 22	5 Goals 30	Bonus 7 38	Bonus 15 46	Match 54	Game Over 62
7 Red-Vio 2J7-9 Q61	Right Outlane Special 7	A 15	Gold Cup 23	7 Goals 31	Bonus 8 39	Bonus 16 47	Ball in Play 55	Shoot Again (Backbox) 63
8 Red-Gry 2J7-8 Q59	Shoot Again (Playfield) 8	R 16	Super Star 24	Bonus 1 32	Bonus 9 40	Bonus 17 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	Left Eject 9	Right 10 Points Rebounce 17	Spinner 25	Top Left 10 Points Rebounce 33	Not Used 41	Not Used 49	Not Used 57
2 Wht-Red 2J3-8 IC15	Ball Roll Tilt 2	Left 50 Points Rebounce 10	Right Outlane Special 18	Super Ball Advance 26	S Target 34	Not Used 42	Not Used 50	Not Used 58
3 Wht-Orn 2J3-7 IC15	Credit Button 3	Left Outlane Special 11	Right 50 Points Rebounce 19	R Target 27	Left Super Ball Advance 35	Not Used 43	Not Used 51	Not Used 59
4 Wht-Yel 2J3-6 IC15	Left Coin Chute 4	Left 10 Points Rebounce 12	Right Eject 20	Right Super Ball Advance 28	Left Inside Ball Advance 36	Not Used 44	Not Used 52	Not Used 60
5 Wht-Grn 2J3-5 IC16	Center Coin Chute 5	Left Kicker T 13	Ball Advance 1 21	Top Right 10 Points Rebounce 29	Left Jet Bumper 37	Not Used 45	Not Used 53	Not Used 61
6 Wht-Blu 2J3-4 IC16	Right Coin Chute 6	Outhole 14	Ball Advance 2 22	Top Right Rollover (A & R) 30	Right Jet Bumper 38	Not Used 46	Not Used 54	Not Used 62
7 Wht-Vio 2J3-3 IC16	Slam Tilt 7	Playfield Tilt 15	Ball Advance 3 23	Top Center Rollover 31	Not Used 39	Not Used 47	Not Used 55	Not Used 63
8 Wht-Gry 2J3-1 IC16	High Score Reset 8	Right Kicker T 16	Ball Advance 4 24	Top Left Rollover (S & T) 32	Not Used 40	Not Used 48	Not Used 56	Not Used 64