

Fuse List:

Wire in	Value	Wire out	description	location
Blk-Red-Red (022)	5 Amp Slo-Blo	Blk-Brn-Brn (011)	115V Primary Fuse	Bottom Board
	2½ Amp Slo-Blo		230V Primary Fuse	Bottom Board
Blk-Orn-Orn (033)	1 Amp Slo-Blo	Brn	Small transformer primary fuse	Bottom Board
Yel-Blk-Blk (400)	1 Amp Slo-Blo	Yel-Yel-Yel (444)	Sound Board Fuse	Bottom Board
Yel-Blu-Blu (466)	¼ Amp Slo-Blo	Grn-Blk-Blk (500)	Displays 69VAC	Bottom Board
Blk-Blu-Blu (066)	5 Amp Slo-Blo	Red-Slt-Slt (288)	Coils 25VAC	Bottom Board
Orn-Blk-Blk (300)	5 Amp Slo-Blo	Orn-Brn-Brn (311)	Controlled lamps 8VAC	Bottom Board
Red-Blu-Blu (266)	10 Amp	Red-Orn-Orn (233)	G.I. Playfield (via Tilt Relay) & Coin Chute 6VAC	Bottom Board
Red-Blu-Blu (266)	15 Amp	Red-Red-Red (222)	G.I. Name & Scene Lights 6VAC	Bottom Board
Red-Pur-Pur (277)	2 Amp Slo-Blo	Orn-Pur-Pur (377)	Left Drop Target Bank Reset	Playfield
			Right Drop Target Bank Reset	

Switch Matrix

	RETURN 0 A1J7-12 & A1J6-3 Blk- Blu-Blu (066)	RETURN 1 A1J7-13 Brn-Blk-Blk (100)	RETURN 2 A1J7-14 Brn-Red-Red (122)	RETURN 3 A1J7-17 Brn-Orn-Orn (133)	RETURN 4 A1J7-16 Brn-Yel-Yel (144)	RETURN 5 A1J7-15 Brn-Grn-Grn (155)	RETURN 6 A1J7-11 Brn-Blu-Blu (166)	RETURN 7 A1J7-10 Orn-Blu-Blu (366)
STROBE 0 A1J7-2 A1J6-8 Blk-Brn-Brn (011)	Test Button Brn-Blk-Blk (100) SW.00	#1 Drop Target Red-Brn-Brn (211) SW.10	#6 Drop Target Yel-Yel-Yel (444) SW.20	1X Rollover Button Grn-Pur-Pur (577) SW.30	"A" Rollover Orn-Blk-Blk (300) SW.40	"C" Rollover Grn-Blk-Blk (500) SW.50	Right Extra Ball Target Brn-Pur-Pur (177) SW.60	Left Extra Ball Target Brn-Slt-Slt (188) SW.70
STROBE 1 A1J7-3 A1J6-4 Blk-Red-Red (022)	#1 Coin Chute Brn-Red-Red (122) SW.01	#2 Drop Target Red-Red-Red (222) SW.11	#7 Drop Target Yel-Grn-Gm (455) SW.21	2X Rollover Button Grn-Slt-Slt (588) SW.31	Kickout Hole Orn-Yel-Yel (344) SW.41	Kicking Rubbers (2) Brn-Blk-Blk (100) SW.51	Right Bottom Rollover Button Orn-Pur-Pur (377) SW.61	Left Bottom Rollover Button Orn-Grn-Grn (355) SW.71
STROBE 2 A1J7-4 A1J6-5 Blk-Orn-Orn (033)	#2 Coin Chute Brn-Orn-Orn (133) SW.02	#3 Drop Target Red-Orn-Orn (233) SW.12	#8 Drop Target Yel-Blu-Blu (466) SW.22	3X Rollover Button Blu-Pur-Pur (677) SW.32	Bottom Rollovers (4) Blk-Pur-Pur (077) SW.42	10 Point Contacts (5) Brn-Brn-Brn (111) SW.52	Right Return Rollover Orn-Slt-Slt (388) SW.62	Left Return Rollover Slt-Blu-Blu (866) SW.72
STROBE 3 A1J7-7 A1J6-6 Blk-Yel-Yel (044)	Replay Button Brn-Yel-Yel (144) SW.03	#4 Drop Target Red-Yel-Yel (244) SW.13	#9 Drop Target Yel-Pur-Pur (477) SW.23	4X Rollover Button Blu-Slt-Slt (688) SW.33	"B" Rollover Orn-Brn-Brn (311) SW.43	"D" Rollover Grn-Brn-Brn (511) SW.53	Right Side Rollover Pur-Slt-Slt (788) SW.63	Left Side Rollover Slt-Pur-Pur (877) SW.73
STROBE 4 A1J7-6 Blk-Grn-Gm (055)	Tilt Blu-Blu-Blu (666) SW.04	#5 Drop Target Red-Grn-Grn (255) SW.14	#10 Drop Target Yel-Slt-Slt (488) SW.24	5X Rollover Button Pur-Blu-Blu (766) SW.34	Top Rollover Buttons (2) Red-Blu-Blu (266) SW.44	Pop Bumpers (3) Red-Blk-Blk (200) SW.54	Special Target Brn-Orn-Orn (133) SW.64	Not Used SW.74

Solenoids

	Solenoid description	Solenoid Type	Power Wire	Fuse	Transfer Wire	Coil Wire Color	Connector	Driver Transistor	Transistor Type	Coil Type
L01	Game Over Relay	Controlled	Red-Pur-Pur (277)			Yel-Blk-Blk (400)	A3J5-18	Q01	MPS-U45	A-16890
L02	Tilt Relay	Controlled	Red-Pur-Pur (277)			Yel-Brn-Brn (411)	A3J5-19	Q02	MPS-U45	A-16890
Sol. 1	Outhole	Controlled	Red-Pur-Pur (277)			Red-Blk-Blk (200)	A3J4-6	Q32	2N6043	A-16570
Sol. 2	Knocker	Controlled	Red-Pur-Pur (277)			Red-Brn-Brn (211)	A3J2-1	Q25	2N6043	A-5195
Sol. 3	10's chime	Controlled				Orn-Brn-Brn (311)	A3J2-2	Q26	2N6043	Sound Board
Sol. 4	100's chime	Controlled				Red-Yel-Yel (244)	A3J2-3	Q27	2N6043	Sound Board
Sol. 5	1000's chime	Controlled				Red-Grn-Grn (255)	A3J2-4	Q28	2N6043	Sound Board
Sol. 6	Kickout Hole	Controlled	Red-Pur-Pur (277)			Red-Blu-Blu (266)	A3J4-5	Q31	2N6043	A-16570
Sol. 7	Left Drop Target Bank Reset	Controlled	Red-Pur-Pur (277)	2 Amp Slo-Blo .	Orn-Pur-Pur (377)	Orn-Blk-Blk (300)	A3J4-4	Q30 - UPT	2N6043 - 2N5875	A-17891
Sol. 8	Right Drop Target Bank Reset	Controlled				Orn-Brn-Brn (311)	A3J4-2	Q29 - Q45	MPS-U45 - 2N3055	A-17891
	Left Pop Bumper	Directly	Orn-Red-Red (322)					Switch		A-1496
	Right Pop Bumper	Directly	Orn-Red-Red (322)					Switch		A-1496
	Center Pop Bumper	Directly	Orn-Red-Red (322)					Switch		A-1496
	Left Kicking Rubber	Directly	Orn-Red-Red (322)					Switch		A-5194
	Right Kicking Rubber	Directly	Orn-Red-Red (322)					Switch		A-5194
	Coin Lockout	Directly	Red-Pur-Pur (277)				A6J1-11	Directly wired to ground		A-16890
	Left Flippers	Directly	Orn-Yel-Yel (344)				A6J5-4	Button		A-17875 (2)
	Right Flippers	Directly	Orn-Grn-Grn (355)				A6J5-5	Button		A-17875 (2)

2N6043 can be replaced with a TIP 102

UPT = Under Playfield Transistor

D. Gottlieb & Co.



Lamps and solenoids

transistor	connector	code	description	wire code	wire color	transistor type
Q01	J5-18	L01	Game Over Relay (Q)	400	Yel-Blk-Blk	MPS-U45
Q Relay			Match / Game Over Light	366	Orn-Blu-Blu	
Q Relay			Ball in Play	255	Red-Grn-Grn	
Q02	J5-19	L02	Tilt Relay (T)	411	Yel-Brn-Brn	MPS-U45
T Relay			Tilt Light	822	Slt-Red-Red	
Q03	J5-17	L03	High Game to Date	422	Yel-Red-Red	MPS-U45
Q04	J5-15	L04	Same Player Shoot Again	433	Yel-Orn-Orn	MPS-U45
Q05	J5-13	L05	1X Bonus	455	Yel-Grn-Grn	MPS-A13
Q06	J5-14	L06	2X Bonus	466	Yel-Blu-Blu	MPS-A13
Q07	J5-12	L07	Right Extra Ball	500	Grn-Blk-Blk	MPS-A13
Q08	J5-11	L08	Left Extra Ball	511	Grn-Brn-Brn	MPS-A13
Q09	J5-9	L09	Left Drop Target	522	Grn-Red-Red	MPS-A13
Q10	J5-10	L10	Right Drop Target	533	Grn-Orn-Orn	MPS-A13
Q11	J5-8	L11	Right Side Rollover	544	Grn-Yel-Yel	MPS-A13
Q12	J5-7	L12	Left Side Rollover	566	Grn-Blu-Blu	MPS-A13
Q13	J5-5	L13	Score Bonus When Lit	600	Blu-Blk-Blk	MPS-A13
Q14	J5-6	L14	Special	611	Blu-Brn-Brn	MPS-A13
Q15	J5-4	L15	"D" Rollover	622	Blu-Red-Red	MPS-A13
Q16	J5-3	L16	"C" Rollover	633	Blu-Orn-Orn	MPS-A13
Q17	J5-1	L17	"A" Rollover	644	Blu-Yel-Yel	MPS-A13
Q18	J5-2	L18	"B" Rollover	655	Blu-Grn-Grn	MPS-A13
Q19	J3-20	L19	Right Bottom Rollover Button	700	Pur-Blk-Blk	MPS-A13
Q20	J3-18	L20	Left Bottom Rollover Button	711	Pur-Brn-Brn	MPS-A13
Q21	J3-16	L21	Left Return Rollover	722	Pur-Red-Red	MPS-A13
Q22	J3-17	L22	Right Return Rollover	733	Pur-Orn-Orn	MPS-A13
Q23	J3-15	L23	1000 Bonus	744	Pur-Yel-Yel	MPS-A13
Q24	J3-14	L24	2000 Bonus	755	Pur-Grn-Grn	MPS-A13
Q33	J3-12	L25	3000 Bonus	800	Slt-Blk-Blk	MPS-A13
Q34	J3-13	L26	4000 Bonus	811	Slt-Brn-Brn	MPS-A13
Q35	J3-11	L27	5000 Bonus	822	Slt-Red-Red	MPS-A13
Q36	J3-9	L28	6000 Bonus	833	Slt-Orn-Orn	MPS-A13
Q37	J3-7	L29	7000 Bonus	844	Slt-Yel-Yel	MPS-A13
Q38	J3-8	L30	8000 Bonus	855	Slt-Grn-Grn	MPS-A13
Q39	J3-6	L31	9000 Bonus	111	Brn-Brn-Brn	MPS-A13
Q40	J3-5	L32	10,000 Bonus	333	Orn-Orn-Orn	MPS-A13
Q41	J3-4	L33	20,000 Bonus	444	Yel-Yel-Yel	MPS-A13
Q42	J3-3	L34	5X Bonus	555	Grn-Grn-Grn	MPS-A13
Q43	J3-2	L35	4X Bonus	666	Blu-Blu-Blu	MPS-A13
Q44	J3-1	L36	3X Bonus	777	Pur-Pur-Pur	MPS-A13
Q32	J4-6	Solenoid 1	Outhole Kicker	200	Red-Blk-Blk	2N6043
Q25	J2-1	Solenoid 2	Knocker	211	Red-Brn-Brn	2N6043
Q26	J2-2	Solenoid 3	10's chime	311	Orn-Brn-Brn	2N6043
Q27	J2-3	Solenoid 4	100's chime	244	Red-Yel-Yel	2N6043
Q28	J2-4	Solenoid 5	1000's chime	255	Red-Grn-Grn	2N6043
Q31	J4-5	Solenoid 6	Kickout Hole	266	Red-Blu-Blu	2N6043 - 2N5875
Q30	J4-4	Solenoid 7	Left Drop Target Bank Reset	300	Orn-Blk-Blk	2N6043 - 2N5875
Q29 - Q45	J4-2	Solenoid 8	Right Drop Target Bank Reset	311	Orn-Brn-Brn	MPS-U45 - 2N3055