



FUSE LIST

Power Supply Board fuses 520-5047-03			Power Supply Board 520-5047-03 F1 F2 F4 F5 F6			CPU Board 520-5003-04		
F1	5V & 12V Logic Power Input	7A, 250V, SB						
F2	5V & 12V Logic Power Input	7A, 250V, SB						
F3	Not used							
F4	18V Controlled lamps	8A, 250V, SB						
F5	34V Solenoids	4A, 250V, SB						
F6	34V Solenoids	5A, 250V, SB						
Back Box fuses								
F1	18VDC Controlled lamps	8A, 250V, SB						
F2	34VDC Solenoids	8A, 250V, SB						
F3	18VDC Display	8A, 250V, SB						
Playfield Power Board fuses 520-5021-05			F3 F1 F2 F3 F4 F7 F6 F8 F9 Playfield Power Board 520-5021-05					
F1	General Illumination (Violet)	5A, 250V, SB						
F2	General Illumination (Green)	5A, 250V, SB						
F3	General Illumination (Yellow)	5A, 250V, SB						
F4	General Illumination (Brown)	5A, 250V, SB						
F5	Flipper Power & 50V coils	5A, 250V, SB						
F6	34V Flashers (Right)	3A, 250V, SB						
F7	34V Coils (Left)	3A, 250V, SB						
F8	50V Coils	4A, 250V, SB						
F9	50V Laser Kick	5A, 250V, SB						
Solid State Flipper Board fuses 520-5076-00								
F1	Coil A (right flipper)	3A, 250V, SB						
F2	Coil (hold power)	3A, 250V, SB						
F3	Coil B (lower left flipper)	3A, 250V, SB						
F4	Coil (hold power)	3A, 250V, SB						
F5	Coil C (upper right flipper)	3A, 250V, SB						
			Line Filter					
			Foreign		(220V)		4A, 250V, SB	
			Domestic		(110V)		8A, 250V, SB	

Switched, CPU Controlled Auxiliary & Constant Power Solenoids									
Coil No.	Coil or Flashlamp Description	Drive Transistor	CPU wire	CPU connection	PPB wire	PPB connection	Power Line	Power Description	Coil or Flash Type
1L	4-Ball Assembly Lockout	Q46	Gry-Brn	CN11-1	Vio-Brn	J2-10	Brn	34V L	25-1240
1R	4-bank 2x, left inlane 2x flashers		(to PPB)	to PPB J1-1	Blk-Brn	J9-5	Orn	34V R	#89 (4)
2L	Trough Up-Kicker	Q45	Gry-Red	CN11-3	Vio-Red	J2-9	Brn	34V L	23-800
2R	4 Left Ramp flashers		(to PPB)	to PPB J1-2	Blk-Red	J9-6	Orn	34V R	#89 (4)
3L	Ball (Auto) Launch (50V)	Q5 PPB	Gry-Orn	CN11-4	Wht-Orn/Vio-Orn	J2-8 J8-1/J8-2	Yel-Vio	50V	23-800
3R	4 Left Orbit flashers	Q44 CPU	(to PPB)	to PPB J1-3	Blk-Orn	J9-7	Orn	34V R	#89 (4)
4L	VUK (50V)	Q4 PPB	Gry-Yel	CN11-5	Wht-Yel/Vio-Yel	J2-7 J8-3/J8-4	Yel-Vio	50V	24-940
4R	1 insert, 1 back pnl, 2 top left flashers	Q43 CPU	(to PPB)	to PPB J1-4	Blk-Yel	J9-8	Orn	34V R	#906 (1) #89 (3)
5L	Top Eject	Q42	Gry-Grn	CN11-6	Vio-Grn	J2-6	Brn	34V L	24-940
5R	2 insert, 1 b pnl, 1 left ramp flashers		(to PPB)	to PPB J1-5	Blk-Grn	J9-9	Orn	34V R	#906 (1) #89 (3)
6L	Not Used	Q41	Gry-Blu	CN11-7	Vio-Blu	J2-5	Brn	34V L	-
6R	2 insert, 1 b pnl, Mini ramp flashers		(to PPB)	to PPB J1-6	Blk-Blu	J9-10	Orn	34V R	#906 (2) #89 (2)
7L	4-Bank Drop Target Reset	Q40	Gry-Vio	CN11-8	Vio-Blk	J2-3	Brn	34V L	23-700
7R	1 insert, 1 back pnl, 2 top rt flashers		(to PPB)	to PPB J1-7	Blk-Vio	J9-11	Orn	34V R	#906 (1) #89 (3)
8L	Knocker	Q39	Gry-Blk	CN11-9	Vio-Gry	J2-2	Brn	34V L	23-800
8R	1 insert, rt inlane, rt 2-bank flashers		(to PPB)	to PPB J1-8	Blk-Gry	J9-12	Orn	34V R	#906 (1) #89 (3)
9	Batcave ball lock	Q30	Brn-Blk	CN12-1			Red	34V	24-900
10	L/R Power Relay	Q29	Blk-Red	CN12-2		J6-7	Red-Wht	34V	Relay: 24VDC
11	General Illumination Relay (PSB)	Q28	Brn-Orn	CN12-4		(PSB) CN7-1	Red	34V	Relay: 24VDC
12	Batwing Ramp Diverter	Q27	Brn-Yel	CN12-5			Red	34V	27-1500
13	Not Used	Q26	Brn-Grn	CN12-6				-	-
14	Batwing Motor relay	Q25	Brn-Blu	CN12-7			Red	34V	Relay: 24VDC
15	Batwing Cannon (50V)	Q24 CPU Q3 PPB	Wht-Vio	CN12-8	Brn-Vio	J8-6/J8-7	Vio-Yel	50V	23-800
16	Batcave Kicker (50V)	Q23 CPU Q2 PPB	Wht-Gry	CN12-9	Brn-Gry	J8-9/J8-10	Vio-Yel	50V	24-940
17	Left Turbo Bumper	Q11	Blu-Brn	CN19-7			Red	34V	23-700
18	Bottom Turbo Bumper	Q9	Blu-Red	CN19-4			Red	34V	23-700
19	Right Turbo Bumper	Q8	Blu-Orn	CN19-3			Red	34V	23-700
20	Left Slingshot	Q10	Blu-Yel	CN19-6			Red	34V	23-800
21	Right Slingshot	Q12	Blu-Grn	CN19-8			Red	34V	23-800
22	Laser Kick (50V)	Q13 CPU Q1 PPB	Wht-Blk	CN19-9	Blu-Blk	J8-11/J8-12	Vio-Yel	50V	23-800
Flipper Circuits (SSFB)		SSFB Drive Transistor	SSFB to coil	SSFB Connection	SSFB to Flipperswitch	SSFB Sw. Connect	SSFB Power Wire	Power Description	Coil
SSFB	Lower Right Flipper (coil "A")	SR1, Q2-Q3	Blu-Yel	CN2-7,8	Blu-Vio	CN1-7	Blk-Wht / Blk-Wht	CN2-11, 12 50VDC	23-900 (090-5020-20)
SSFB	Lower Left Flipper (coil "B")	SR2, Q10-Q9	Gry-Yel	CN2-4,5	Blu-Gry	CN1-11	Gry / Gry Grn	CN2-9, 10 8VAC	22-1080 (090-5032-00)
SSFB	Upper Right Flipper (coil "C")	SR3, Q16-Q15	Blk-Yel	CN2-1,2	Gry-Vio	CN1-12			23-900 (090-5020-20)

LAMP MATRIX

Column (*)	Red ←								Yellow (B+) →							
	1 YEL-BRN (41) CN7-1 Q71	2 YEL-RED (42) CN7-2 Q70	3 YEL-ORN (43) CN7-3 Q69	4 YEL-BLK (40) CN7-4 Q68	5 YEL-GRN (45) CN7-6 Q67	6 YEL-BLU (46) CN7-7 Q66	7 YEL-VIO (47) CN7-8 Q65	8 YEL-GRY (48) CN7-9 Q64								
1 RED-BRN (21) CN6-1 Q72	Rooftop Chase (Grid)	Top Lane B	Riddler's Throne (Grid)	Mr. E (VUK)	Spot-Lite Middle Ramp Left	Top Good Heads	Arm Batwing	Left Turbo Bumper	1	9	17	25	33	41	49	57
2 RED-BLK (20) CN6-2 Q73	????? (Grid)	Top Lane A	4-Bank Drop C	Bat Signal (Left Orbit)	Spot-Lite Middle Ramp Right	Top Bad Heads	Jackpot (Left Ramp)	Bottom Turbo Bumper	2	10	18	26	34	42	50	58
3 RED-ORN (23) CN6-3 Q74	Face Two-Face (Grid)	Top Lane T	4-Bank Drop A	Bat Signal (Left Ramp)	Super Jackpot (U-Turn)	Right Good Heads	Double Jackpot	Right Turbo Bumper	3	11	19	27	35	43	51	59
4 RED-YEL (24) CN6-5 Q75	Crime Spree (Grid)	Left Ramp Left ?	4-Bank Drop V	Bat Signal (Mid. Ramp)	Not Used	Right Bad Heads	Crime Spree (Right Ramp)	Not Used	4	12	20	28	36	44	52	60
5 RED-GRN (25) CN6-6 Q76	Brain Drain (Grid)	Left Ramp Right ?	4-Bank Drop E	Bat Signal (U-Turn)	Not Used	Laser Kick	Jackpot (Right Ramp)	Batwing Cannon	5	13	21	29	37	45	53	61
6 RED-BLU (26) CN6-7 Q77	Safe Trap (Grid)	VUK ?	All Bat Signals...	Bat Signal (Right Ramp)	Not Used	Right Return Lane Inside	Extra Ball (U-Turn)	The Bat Lives	6	14	22	30	38	46	54	62
7 RED-VIO (27) CN6-8 Q78	Lite Extra Ball (Grid)	Right Ramp Left ?	Good Heads Matched	Bat Signal (Right Orbit)	Left Return Lane	Right Return Lane Outside	Lock Arrow (VUK)	Extra Ball Buy-In League Button	7	15	23	31	39	47	55	63
8 RED-GRY (28) CN6-9 Q79	Forever (Grid)	Right Ramp Right ?	Bad Heads Matched	Bat Signal (VUK)	Left Outlane Special	Right Outlane Special	Gotham Event	Start Button	8	16	24	32	40	48	56	64

(*) 2 digit number in parentheses indicates resistor/wire color code number displayed during diagnostics.

SWITCH MATRIX

Column (*)	White →								Green ←							
	1 GRN-BRN (51) CN8-1 Q55	2 GRN-RED (52) CN8-2 Q54	3 GRN-ORN (53) CN8-3 Q53	4 GRN-YEL (54) CN8-4 Q52	5 GRN-BLK (50) CN8-5 Q51	6 GRN-BLU (56) CN8-6 Q50	7 GRN-VIO (57) CN8-8 Q49	8 GRN-GRY (58) CN8-9 Q48								
1 WHT-BRN (91) CN10-9	Plump Bob Tilt	Not Used	Not Used	Left Ramp Left ?	Laser Kick	Top Eject	Gun Trigger	Left Turbo Bumper	1	9	17	25	33	41	49	57
2 WHT-RED (92) CN10-8	4th Coin Switch	Not Used	4-Bank Drop C	Left Ramp Right ?	Left Return Lane	Top Good Heads	Right Good Heads	Bottom Turbo Bumper	2	10	18	26	34	42	50	58
3 WHT-ORN (93) CN10-7	Start Button	Trough #1 (Left)	4-Bank Drop A	VUK ?	Left Slingshot	Top Bad Heads	Right Bad Heads	Right Turbo Bumper	3	11	19	27	35	43	51	59
4 WHT-YEL (94) CN10-6	Right Coin Switch	Trough #2	4-Bank Drop V	Right Ramp Left ?	Right Slingshot	Batwing Cannon Loaded	Left Ramp Enter	Lock #3 (Top)	4	12	20	28	36	44	52	60
5 WHT-GRN (95) CN10-5	Center Coin Switch	Trough #3	4-Bank Drop E	Right Ramp Right ?	Right Return Lane Inside	Batwing Cannon Safety	Left Ramp Exit	Lock #2 (Middle)	5	13	21	29	37	45	53	61
6 WHT-BLU (96) CN10-3	Left Coin Switch	Trough #4 (Right)	Top Lane B	Batcave Exit Kicker	Right Return Lane Outside	Batwing Cannon Home	Middle Ramp Exit	Lock #1 (Bottom)	6	14	22	30	38	46	54	62
7 WHT-VIO (97) CN10-2	Slam Tilt	4-Ball Trough VUK (Opto)	Top Lane A	Not Used	Right Outlane	Left Orbit	Right Ramp Enter	Left Flipper (via SSFB)	7	15	23	31	39	47	55	63
8 WHT-GRY (98) CN10-1	Extra Ball Buy-In League Button	Shooter Lane	Top Lane T	VUK	U-Turn Mini-Ramp	Right Orbit	Right Ramp Exit	Right Flipper (via SSFB)	8	16	24	32	40	48	56	64

(*) 2 digit number in parentheses indicates resistor/wire color code number displayed during diagnostic