Driver Board Assembly Drawing

(System 3-6)

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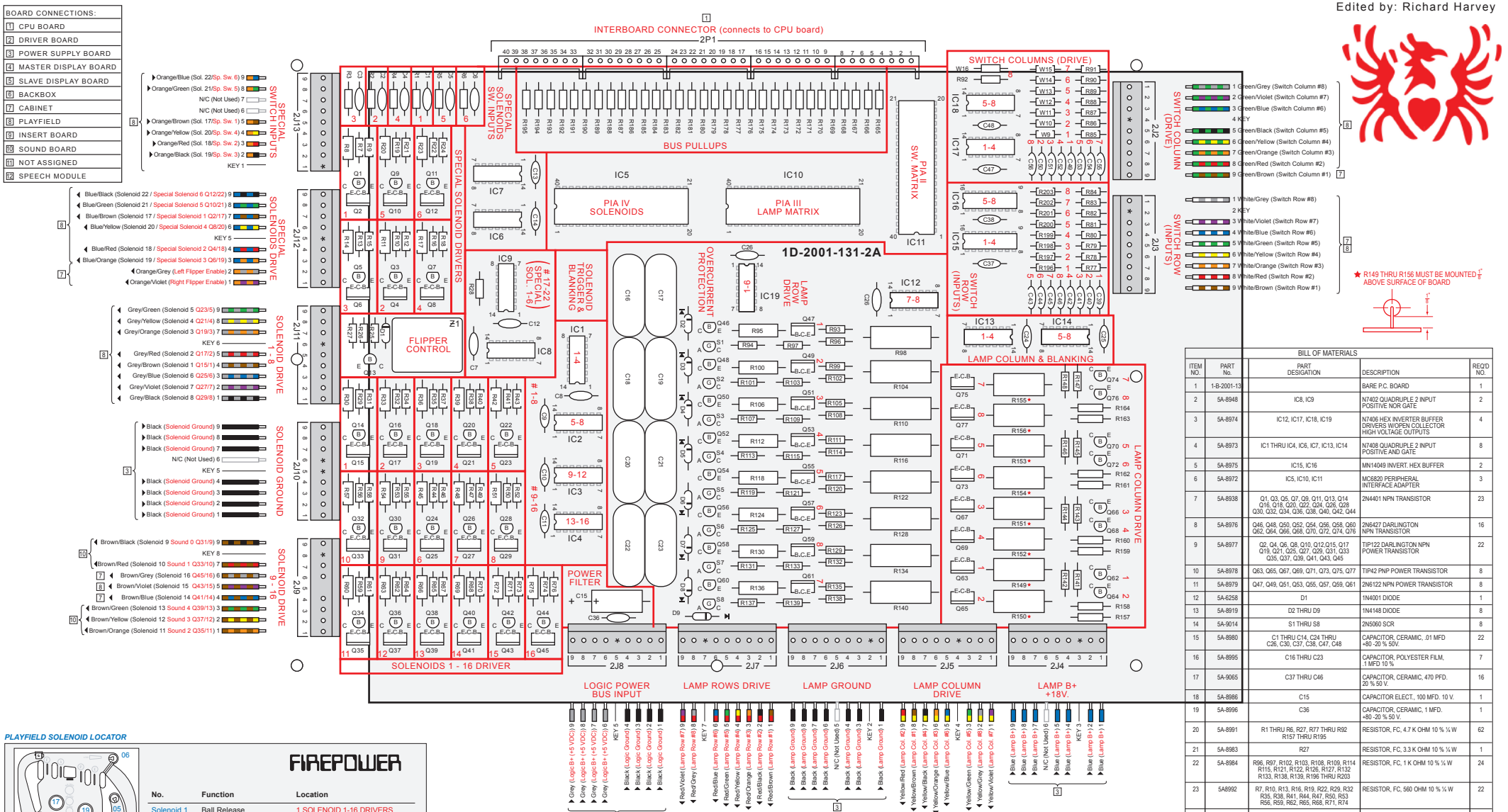
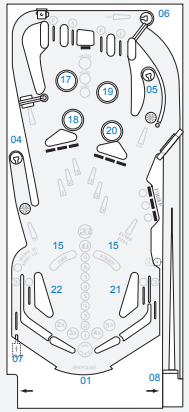
Created By: Phil Butcher
Edited by: Richard Harvey

BOARD CONNECTIONS:
1 CPU BOARD
2 DRIVER BOARD
3 POWER SUPPLY BOARD
4 MASTER DISPLAY BOARD
5 SLAVE DISPLAY BOARD
6 BACKBOX
7 CABINET
8 PLAYFIELD
9 INSERT BOARD
10 SOUND BOARD
11 NOT ASSIGNED
12 SPEECH MODULE



PLAYFIELD SOLENOID LOCATOR



FIREPOWER

No.	Function	Location
Solenoid 1	Ball Release	1 SOLENOID 1-16 DRIVERS
Solenoid 4	Left Eject Hole	4 SOLENOID 1-16 DRIVERS
Solenoid 5	Right Eject Hole	5 SOLENOID 1-16 DRIVERS
Solenoid 6	Upper Right Eject Hole	6 SOLENOID 1-16 DRIVERS
Solenoid 7	Left Ball Saver Kicker	7 SOLENOID 1-16 DRIVERS
Solenoid 8	Ball Ramp Thrower	8 SOLENOID 1-16 DRIVERS
Solenoid 15	Flash Lamps	15 SOLENOID 1-16 DRIVERS
Solenoid 17	Top Left Jet Bumper	1 SPECIAL SOLENOID DRIVERS
Solenoid 18	Bottom Left Jet Bumper	2 SPECIAL SOLENOID DRIVERS
Solenoid 19	Top Right Jet Bumper	3 SPECIAL SOLENOID DRIVERS
Solenoid 20	Bottom Right Jet Bumper	4 SPECIAL SOLENOID DRIVERS
Solenoid 21	Right Kicker	5 SPECIAL SOLENOID DRIVERS
Solenoid 22	Left Kicker	6 SPECIAL SOLENOID DRIVERS

SWITCH MATRIX

COL / ROW	1 GRN-BRN (2J2-9)	2 GRN-RED (2J2-8)	3 GRN-ORN (2J2-7)	4 GRN-YEL (2J2-6)	5 GRN-BLK (2J2-5)	6 GRN-BLU (2J2-3)	7 GRN-VIO (2J2-2)	8 GRN-GRY (2J2-1)
1 WHT-BRN (2J3-9)	PLUMB BOB TILT	OUTHOLE	"1" TARGET	BOTTOM LEFT JET BUMPER	"I" ROLLOVER	BOTTOM "POWER" TARGETS	CENTRE MIDDLE LEFT STANDUP	RIGHT BALL RAMP
2 WHT-RED (2J3-8)	BALL ROLL TILT	LEFT OUTSIDE ROLLOVER	"2" TARGET	TOP LEFT JET BUMPER	"R" ROLLOVER	RIGHT KICKER	LOWER MIDDLE LEFT STANDUP	CENTRE BALL RAMP
3 WHT-ORN (2J3-7)	CREDIT BUTTON	LEFT INSIDE ROLLOVER	"3" TARGET	TOP RIGHT JET BUMPER	"E" ROLLOVER	RIGHT INSIDE ROLLOVER	LEFT BALL RAMP	NOT USED
4 WHT-YEL (2J3-6)	RIGHT COIN SWITCH	LEFT KICKER	NOT USED	BOTTOM RIGHT JET BUMPER	UPPER RIGHT EJECT HOLE	RIGHT OUTSIDE ROLLOVER	NOT USED	NOT USED
5 WHT-GRN (2J3-5)	CENTRE COIN SWITCH	LEFT EJECT HOLE	"4" TARGET	TOP CENTRE TARGET	LOWER TOP RIGHT STANDUP	RIGHT FLIPPER LANE CHANGE SWITCH	LEFT EJECT ROLLOVER	NOT USED
6 WHT-BLU (2J3-4)	LEFT COIN SWITCH	UPPER MIDDLE LEFT STANDUP	"5" TARGET	RIGHT EJECT HOLE	MIDDLE RIGHT STANDUP	BALL SHOOTER	RIGHT EJECT ROLLOVER	NOT USED
7 WHT-VIO (2J3-3)	SLAM TILT	SPINNER	"6" TARGET	UPPER TOP RIGHT STANDUP	TOP "POWER" TARGET	PLAYFIELD TILT	NOT USED	NOT USED
8 WHT-GRY (2J3-1)	HIGH SCORE RESET	TOP LEFT STANDUP	NOT USED	"I" ROLLOVER	MIDDLE "POWER" TARGET	LOWER RIGHT STANDUP	NOT USED	NOT USED

LAMP MATRIX

COL / ROW	1 YEL-BRN (2J5-9)	2 YEL-RED (2J5-9)	3 YEL-ORN (2J5-6)	4 YEL-BLK (2J5-7)	5 YEL-GRN (2J5-3)	6 YEL-BLU (2J5-9)	7 YEL-VIO (2J5-1)	8 YEL-GRY (2J5-2)
1 RED-BRN (2J7-1)	SHOOT AGAIN (PLAYFIELD)	TOP POWER TARGET	4,000 BONUS	20,000 BONUS	LEFT EJECT HOLE ARROW	10,000 FIREPOWER BONUS	RIGHT SPECIAL	#1 PLAYER UP
2 RED-BLK (2J7-2)	BALL SAVER KICKER ON	CENTRE POWER TARGET	5,000 BONUS	"1" TARGET ARROW	RIGHT EJECT HOLE ARROW	30,000 FIREPOWER BONUS	1 CAN PLAY	#2 PLAYER UP
3 RED-ORN (2J7-3)	FIRE (x2)	BOTTOM POWER TARGETS	6,000 BONUS	"2" TARGET ARROW	UPPER RIGHT EJECT HOLE ARROW	50,000 FIREPOWER BONUS	2 CAN PLAY	#3 PLAYER UP
4 RED-YEL (2J7-4)	POWER (x2)	RIGHT INSIDE ROLLOVER	7,000 BONUS	"3" TARGET ARROW	2X	TOP LEFT JET BUMPER	3 CAN PLAY	#4 PLAYER UP
5 RED-GRN (2J7-5)	"F"	LEFT INSIDE ROLLOVER	8,000 BONUS	"4" TARGET ARROW	3X	TOP RIGHT JET BUMPER	4 CAN PLAY	TILT
6 RED-BLU (2J7-6)	"I"	1,000 BONUS	9,000 BONUS	"5" TARGET ARROW	4X	BOTTOM RIGHT JET BUMPER	MATCH	GAME OVER
7 RED-VIO (2J7-9)	"R"	2,000 BONUS	NOT USED	"6" TARGET ARROW	5X	BOTTOM LEFT JET BUMPER	BALL IN PLAY	SAME PLAYER SHOOTS AGAIN
8 RED-GRY (2J7-8)	"E"	3,000 BONUS	10,000 BONUS	SPINNER 1,000 WHEN LIT	EXTRA BALL WHEN LIT	LEFT SPECIAL	CREDITS (PLAYFIELD)	HIGH SCORE TO DATE

BILL OF MATERIALS

ITEM NO.	PART No.	PART DESIGATION	DESCRIPTION	REQ'D NO.
1	1-B-2001-13		BARE P.C. BOARD	1
2	5A-8948	IC8, IC9	N7402 QUADRUPLE 2 INPUT POSITIVE NOR GATE	2
3	5A-8974	IC12, IC17, IC18, IC19	N7406 HEX INVERTER BUFFER DRIVERS W/OPEN COLLECTOR HIGH VOLTAGE OUTPUTS	4
4	5A-8973	IC1 THRU IC4, IC6, IC7, IC13, IC14	N7408 QUADRUPLE 2 INPUT POSITIVE AND GATE	8
5	5A-8975	IC15, IC16	MN14049 INVERT. HEX BUFFER	2
6	5A-8972	IC5, IC10, IC11	MC6820 PERIPHERAL INTERFACE ADAPTER	3
7	5A-8938	Q1, Q3, Q5, Q7, Q9, Q11, Q13, Q14 Q16, Q18, Q20, Q22, Q24, Q26, Q28 Q30, Q32, Q34, Q36, Q38, Q40, Q42, Q44	2N4401 NPN TRANSISTOR	23
8	5A-8976	Q46, Q48, Q50, Q52, Q54, Q56, Q58, Q60 Q62, Q64, Q66, Q68, Q70, Q72, Q74, Q76	2N6427 DARLINGTON NPN TRANSISTOR	16
9	5A-8977	Q2, Q4, Q6, Q8, Q10, Q12,Q15, Q17 Q19, Q21, Q25, Q27, Q29, Q31, Q33 Q35, Q37, Q39, Q41, Q43, Q45	TIP122 DARLINGTON NPN POWER TRANSISTOR	22
10	5A-8978	Q63, Q65, Q67, Q69, Q71, Q73, Q75, Q77	TIP42 PNP POWER TRANSISTOR	8
11	5A-8979	Q47, Q49, Q51, Q53, Q55, Q57, Q59, Q61	2N6122 NPN POWER TRANSISTOR	8
12	5A-6258	D1	1N4001 DIODE	1
13	5A-8919	D2 THRU D9	1N4148 DIODE	8
14	5A-9014	S1 THRU S8	2N5060 SCR	8
15	5A-8980	C1 THRU C14, C24 THRU C26, C30, C37, C38, C47, C48	CAPACITOR, CERAMIC, .01 MFD +80 -20 % 50V.	22
16	5A-8995	C16 THRU C23	CAPACITOR, POLYESTER FILM, .1 MFD 10 %	7
17	5A-9065	C37 THRU C46	CAPACITOR, CERAMIC, 470 PFD. 20 % 50 V.	16
18	5A-8986	C15	CAPACITOR ELECT., 100 MFD. 10 V.	1
19	5A-8996	C36	CAPACITOR, CERAMIC, 1 MFD. +80 -20 % 50 V.	1
20	5A-8991	R1 THRU R6, R27, R77 THRU R92 R157 THRU R195	RESISTOR, FC, 4.7 K OHM 10 % ¼ W	62
21	5A-8983	R27	RESISTOR, FC, 3.3 K OHM 10 % ¼ W	1
22	5A-8984	R96, R97, R102, R103, R108, R109, R114 R115, R121, R122, R126, R127, R132 R133, R138, R139, R196 THRU R203	RESISTOR, FC, 1 K OHM 10 % ¼ W	24
23	5A8992	R7, R10, R13, R16, R19, R22, R29, R32 R35, R38, R41, R44, R47, R50, R53 R56, R59, R62, R65, R68, R71, R74	RESISTOR, FC, 560 OHM 10 % ¼ W	22
24	5A-8993	R8, R11, R14, R17, R20, R23, R30, R33, R36, R39, R42, R45, R48, R51, R54 R57, R60, R63, R66, R69, R72, R75	RESISTOR, FC, 68 OHM 10 % ¼ W	22
25	5A-8997	R9, R12, R15, R18, R21, R24, R25, R31 R34, R37, R40, R43, R46, R49, R52, R55 R58, R61, R64, R67, R70, R73, R76	RESISTOR, FC, 2.7 K OHM 10 % ¼ W	23
26	5A-8817	R26	RESISTOR, FC, 10 K OHM 10 % ¼ W	1
27	5A-8998	R141 THRU R148	RESISTOR, FC, 2.2 K OHM 10 % ¼ W	8
★ 28	5A-8999-1	R149 THRU R156	RESISTOR, FC, 27 OHM 10 % 2 W	8
29	5A-9084	R95, R100, R106, R112, R118, R124 R130, R136	RESISTOR, FC, 100 OHM 10 % 3 W	8
30	5A-9085	R93, R99, R105, R111, R117, R123 R129, R135	RESISTOR, FC, 1.5 K OHM 10 % ¼ W	8
31	5A-9086	R94, R101, R107, R113, R119, R125 R131, R137	RESISTOR, FC, 6.8 K OHM 10 % ¼ W	8
32	5A-9037	R98, R104, R110, R116, R122, R128 R134, R140	RESISTOR, WIREWOUND, .4 OHM 10 % 3 W	8
33	5A-9037	Z1	RELAY - 4 POLE - 5 AMP. CONTACTS 40 OHM COIL 6 V.D.C	1
34	5A-9066	2P1	8 PIN RECEPTACLE	6
35	5A-9027	2J2 THRU 2J13	9 PIN HEADER	12
36	5A-9534	W9 THRU W16	RESISTOR, FC, 0 OHM, ¼ W	8