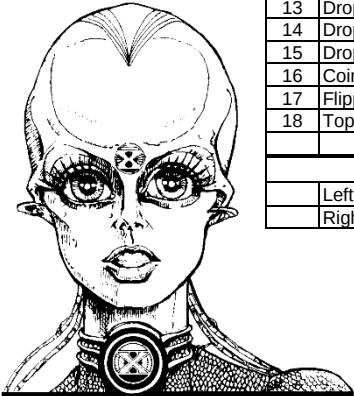
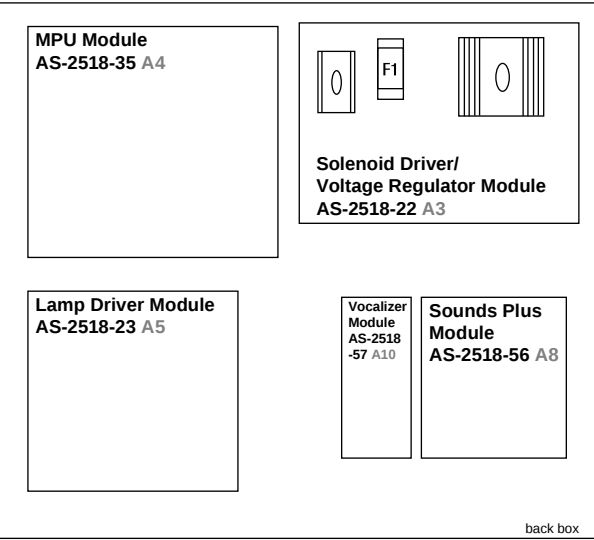
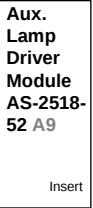
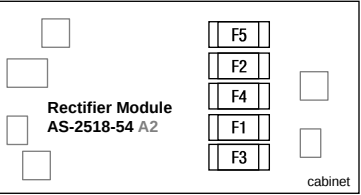




Fuse List

Rectifier Module AS-2518-54		
F1	6.5V Switched illumination	20A, 250V
F2	230V Display power input	0.75A, 250V
F3	5V Unregulated input	4A, 250V
F4	43V Solenoids (2 flippers)	5A, 250V
F5	6.5V General illumination	20A, 250V
Sol. Dr./Volt. Reg. AS-2518-22		
F1	190V Display power output	0.25A, 250V
Under the Playfield fuses		
F1	Solenoids	1A, 250V, SB
Transformer Module		
F1	Main fuse	3A, 250V, SB



Controlled Lamps Chart

SCR	connector	lamp description	code	wire color	tr type	SCR	connector	lamp description	code	wire color	tr type
Q28	A5J1-8	Amber "X"	51	Wht-Red	2N5060	Q22	A5J1-10	Flipper Feed Arrow (Left Return Lane)	23	Blu-Yel	MCR-106
Q44	A5J3-19	Amber "E"	67	Brn-Orn	2N5060	Q37	A5J3-23	Flipper Feed Arrow (Right Return Lane)	98	Gry-Blk	2N5060
Q51	A5J3-15	Amber "N" (first)	53	Wht-Yel	2N5060	Q33	A5J2-11	Game Over (Back Box)	95	Gry-Wht	MCR-106
Q08	A5J1-23	Amber "O"	12	Red-Blu	MCR-106	Q15	A5J2-23	High Score to Date (Back Box)	97	Gry-Orn	MCR-106
Q35	A5J1-3	Amber "N" (second)	45	Grn-Wht	MCR-106	Q23	A5J2-8	Match (Back Box)	70	Orn	MCR-106
Q19	A9J3-10	Ball Shooter General Illumination	25	Blu-Wht	MCR-106	Q10	A5J1-15	Outlane Arrow Left	13	Red-Yel	MCR-106
Q16	A5J2-22	Ball-in-Play (Back Box)	62	Brn-Blu	MCR-106	Q60	A5J3-3	Outlane Arrow Right	81	Blk-Red	2N5060
Q12	A5J1-19	Blue "X"	60	Brn	2N5060	Q27	A9J3-14	Ring Circle #1	83	Blk-Yel	MCR-106
Q27	A5J1-9	Blue "E"	43	Grn-Yel	2N5060	Q21	A9J3-4	Ring Circle #2	78	Orn-Blk	MCR-106
Q38	A5J3-25	Blue "N" (first)	36	Yel-Brn	2N5060	Q06	A9J2-6	Ring Circle #3	80	Blk	MCR-106
Q50	A5J3-12	Blue "O"	21	Blu-Red	2N5060	Q13	A9J2-13	Ring Circle #4	81	Blk-Red	MCR-106
Q13	A5J1-17	Blue "N" (second)	57	Wht-Orn	2N5060	Q20	A9J3-7	Ring Circle #5	82	Blk-Blu	MCR-106
Q49	A5J3-17	Bonus 20K	13	Red-Yel	MCR-106	Q28	A9J3-13	Ring Circle #6	60	Brn	MCR-106
Q54	A5J3-11	Bonus 40K & Special	20	Blu	MCR-106	Q14	A9J2-12	Ring Circle #7	85	Blk-Wht	MCR-106
Q36	A5J3-26	Bonus Multiplier 2X	43	Grn-Yel	2N5060	Q03	A5J2-21	Same Player Shoot Again (Back Box)	47	Grn-Orn	MCR-106
Q57	A5J3-1	Bonus Multiplier 4X	10	Red	2N5060	Q40	A5J3-22	Same Player Shoot Again (Playfield)	23	Blu-Yel	MCR-106
Q52	A5J3-13	Credit Indicator	35	Yel-Wht	2N5060	Q11	A5J1-16	Side Saucer 5K	90	Gry	2N5060
Q01	A9J2-7	Door Frame Bottom & Left #1	10	Red	MCR-106	Q26	A5J1-7	Side Saucer 10K	34	Yel-Grn	2N5060
Q08	A9J2-14	Door Frame Bottom & Left #2	12	Red-Blu	MCR-106	Q32	A5J3-27	Side Saucer 15K	40	Grn	2N5060
Q15	A9J3-8	Door Frame Bottom & Left #3	13	Red-Yel	MCR-106	Q59	A5J3-4	Side Saucer 20K	14	Red-Grn	2N5060
Q22	A9J3-15	Door Frame Bottom & Left #4	14	Red-Grn	MCR-106	Q04	A5J1-28	Side Saucer 25K	78	Orn-Blk	2N5060
Q04	A9J2-10	Door Frame Bottom & Right #5	56	Wht-Brn	MCR-106	Q25	A5J1-6	Side Saucer 30K	25	Blu-Wht	2N5060
Q11	A9J2-18	Door Frame Bottom & Right #6	57	Wht-Orn	MCR-106	Q20	A5J1-13	Side Saucer 35K	96	Gry-Brn	2N5060
Q18	A9J3-11	Door Frame Bottom & Right #7	58	Wht-Blk	MCR-106	Q58	A5J3-2	Side Saucer 40K	95	Gry-Wht	2N5060
Q25	A9J3-18	Door Frame Bottom & Right #8	72	Orn-Blu	MCR-106	Q01	A5J1-24	Side Saucer 50K	50	Wht	MCR-106
Q02	A9J2-4	Door Frame Top & Left #5	15	Red-Wht	MCR-106	Q05	A9J2-9	Side Saucer General Illumination	54	Wht-Grn	MCR-106
Q09	A9J2-11	Door Frame Top & Left #6	18	Red-Blk	MCR-106	Q41	A5J3-20	Side Saucer Special	64	Brn-Grn	MCR-106
Q16	A9J3-3	Door Frame Top & Left #7	20	Blu	MCR-106	Q56	A5J3-10	Side Target Arrow (lower)	91	Gry-Red	MCR-106
Q23	A9J3-12	Door Frame Top & Left #8	21	Blu-Red	MCR-106	Q24	A5J1-5	Side Target Arrow (upper)	48	Grn-Blk	MCR-106
Q03	A9J2-8	Door Frame Top & Right #1	51	Wht-Red	MCR-106	Q46	A5J3-18	Spinner	56	Wht-Brn	2N5060
Q10	A9J2-15	Door Frame Top & Right #2	52	Wht-Blu	MCR-106	Q47	A5J2-10	Tilt (Back Box)	35	Yel-Wht	MCR-106
Q17	A9J3-9	Door Frame Top & Right #3	53	Wht-Grn	MCR-106	Q07	A5J1-27	Top Saucer 1st X	53	Wht-Yel	2N5060
Q24	A9J3-16	Door Frame Top & Right #4	54	Wht-Grn	MCR-106	Q21	A5J1-12	Top Saucer 2nd X	61	Brn-Red	2N5060
Q55	A5J3-9	Drop Target #1 & Top 1	15	Red-Wht	MCR-106	Q39	A5J3-24	Top Saucer 3rd X	72	Orn-Blu	2N5060
Q48	A5J3-16	Drop Target #2 & Top 2	25	Blu-Wht	MCR-106	Q53	A5J3-14	Top Saucer Captive Ball	84	Blk-Grn	2N5060
Q34	A5J1-2	Drop Target #3 & Top 3	52	Wht-Blu	MCR-106	Q17	A5J1-11	Tube Entrance & End of Tube	65	Brn-Wht	MCR-106
Q09	A5J1-14	Drop Target #4 & Top 4	67	Brn-Orn	MCR-106	Q05	A5J2-16	Tube Lights #1	34	Yel-Grn	2N5060
Q31	A5J2-2	Drop Targets 25K	20	Blu	2N5060	Q18	A5J2-20	Tube Lights #2	98	Gry-Blk	2N5060
Q42	A5J3-21	Drop Targets Arrow	30	Yel	MCR-106	Q30	A5J2-6	Tube Lights #3	85	Blk-Wht	2N5060
Q06	A5J2-14	Drop Targets Bonus Multiplier 2X	12	Red-Blu	2N5060	Q43	A5J2-7	Tube Lights #4	91	Gry-Red	2N5060
Q19	A5J2-15	Drop Targets Bonus Multiplier 4X	23	Blu-Yel	2N5060	Q02	A5J1-25	Tube Lights #5	75	Orn-Wht	MCR-106
Q45	A5J2-1	Drop Targets Extra Ball	60	Brn	2N5060	Q14	A5J1-18		58	Wht-Blk	2N5060
Q29	A5J1-1	Drop Targets Special	41	Grn-Red	2N5060	Q07	A9J2-5		60	Brn	MCR-106
Q12	A9J2-17	End of Tube General Illumination	43	Grn-Yel	MCR-106	Q26	A9J3-17		68	Brn-Blk	MCR-106

A9 = Aux. Lamp Driver Board AS-2518-52

Coil Table

Sol. No	Solenoid description	Solenoid Type	Wire Code	Wire Color	Connector	Driver Transistor	Solenoid Coil Type
1	Outhole Kicker	Momentary	95	Gry-Wht	A3J1-5	Q4	AN-26-1200
2	Knocker	Momentary	85	Blk-Wht	A3J2-5, J3-7	Q3	AR-26-1200
3	Ball Release	Momentary	85	Blk-Wht	A3J5-10	Q8	AO-27-1300
4	Side Saucer	Momentary	80	Blk	A3J5-12	Q13	AO-27-1300
5	Left Slingshot	Momentary	83	Blk-Yel	A3J5-14	Q11	AN-26-1200
6	Right Slingshot	Momentary	18	Red-Blk	A3J5-8, J2-6, J3-7,	Q16	AN-26-1200
7	Thumper Bumper Left	Momentary	78	Orn-Blk	A3J5-11	Q14	AN-26-1200
8	Thumper Bumper Right	Momentary	71	Orn-Red	A3J5-9	Q9	AN-26-1200
9	Thumper Bumper Middle	Momentary	74	Orn-Grn	A3J5-15	Q10	AN-26-1200
10	Thumper Bumper Lower	Momentary	67	Brn-Orn	A3J5-13	Q12	AN-26-1200
11	4 Drop Target Reset	Momentary	67	Brn-Orn	A3J1-3, J2-4	Q2	NO-26-1900
12	Drop Target #1	Momentary	18	Red-Blk	A3J1-2, J2-9	Q1	CJ-31-2000
13	Drop Target #2	Momentary	81	Blk-Red	A3J2-10	Q5	CJ-31-2000
14	Drop Target #3	Momentary	80	Blk	A3J2-11	Q6	CJ-31-2000
15	Drop Target #4	Momentary	75	Orn-Wht	A3J2-12	Q7	CJ-31-2000
16	Coin Lockout	Continuous	36	Yel-Brn	A3J2-8	Q19	FO-36-7000
17	Flipper enabling relay	Continuous	--	--	--	Q15	48V Relay
18	Top Saucer	Continuous	81	Blk-Red	A3J5-7	Q17	AO-27-1300
		Continuous	80	Blk	A3J5-3, J2-15, J3-9	Q18	
Flipper Circuits		Power Wire	Flipper Coil Wire		Flipper Button Wire		Coil
Left Flipper		60 (Brn)	40 (Grn)	A3J1-8	20 (Blu)	A3J2-2	AQ-25-500/34-4500
Right Flipper		60 (Brn)	70 (Orn)	A3J1-9	10 (Red)	A3J2-1	AQ-25-500/34-4500

Switch Matrix

		strobe (ST)  return (I)				
Row	Column	STROBE 0 A4J2-1 Wht-Red (51) A4J3-2 Red-Yel (13)	STROBE 1 A4J2-2 Orn (70) A4J3-3 Red-Grn (14)	STROBE 2 A4J2-3 Gry-Yel (93)	STROBE 3 A4J2-4 Wht-Yel (53)	STROBE 4 A4J2-5 Yel-Red (31)
RETURN I 0 A4J2-8 Wht-Grn (54) A4J3-9 Red-Wht (15)		End of Tube Lane 1	Coin Chute III (Right) 9	Button #4 17	Shooter Lane 25	Side Saucer 33
RETURN I 1 A4J2-9 Brn-Yel (63) A4J3-10 Brn-Wht (65)		Ball Release #1 2	Coin Chute I (Left) 10	Button #3 18	30 Point Rebound (2) 26	Top Saucer 34
RETURN I 2 A4J2-10 Wht-Orn (57) A4J3-11 Blu (20)		Upper Side Target 3	Coin Chute II (Middle) 11	Button #2 19	Tube Entry Switch 27	Right Slingshot 35
RETURN I 3 A4J2-11 Orn-Blk (78) A4J3-12 Blu-Red (21)		Lower Side Target 4	Not Used 12	Button #1 20	Ball Release #2 28	Left Slingshot 36
RETURN I 4 A4J2-12 Brn (60) A4J3-13 Blu-Yel (23)		Spinner 5	Not Used 13	Drop Target #4 21	Left Outlane 29	Lower Thumper Bumper 37
RETURN I 5 A4J2-13 Wht-Brn (56) A4J3-14 Blu-Wht (25)		Credit Button 6	Not Used 14	Drop Target #3 22	Flipper Feed Lane (Left Return Lane) 30	Middle Thumper Bumper 38
RETURN I 6 A4J2-14 Brn-Wht (65) A4J3-15 Blu-Orn (27)		Tilt (3) 7	Not Used 15	Drop Target #2 23	Flipper Feed Lane (Right Return Lane) 31	Right Thumper Bumper 39
RETURN I 7 A4J2-15 Wht-Blu (52) A4J3-16 Yel (30)		Outhole 8	Slam (2) 16	Drop Target #1 24	Right Outlane 32	Left Thumper Bumper 40