



Fuse List

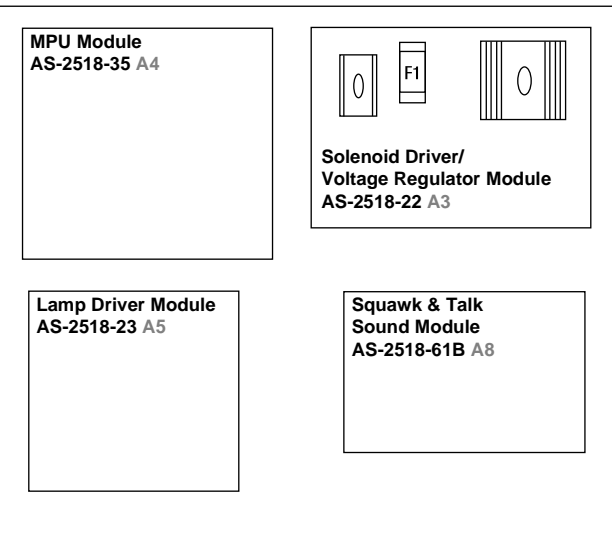
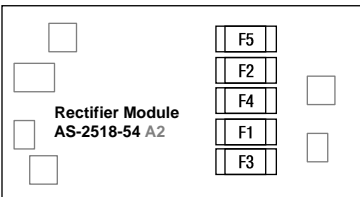
Rectifier Module AS-2518-54		
F1	6.5V Switched illumination	20A, 250V
F2	230V Display power input	0.75A, 250V
F3	5V Unregulated input	4A, 250V
F4	43V Solenoids (4 flippers)	7A, 250V
F5	6.5V General illumination	20A, 250V

Sol. Dr./Volt. Req. 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

Aux. Lamp Driver Module AS-2518-52 A9



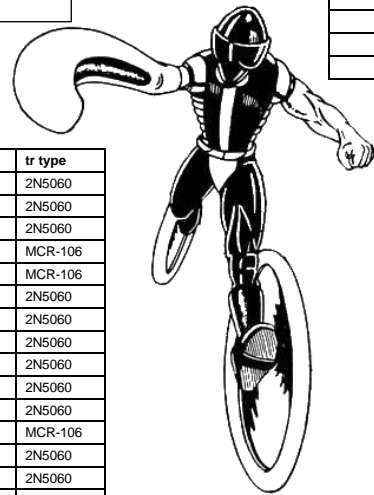
Coil Table

Sol. No	Solenoid description	Solenoid Type	Wire Code	Wire Color	Connector	Driver Transistor	Sol. Exp. Wire Color	Solenoid Coil Type
1	X-Y-Z Drop Target Reset	Momentary	74	Orn-Grn	A3J1-3, J2-4	Q2		NO-26-1900
2	Left Bottom Saucer	Momentary	71	Orn-Red	A3J2-10	Q5		AO-27-1300
3	Right Bottom Saucer	Momentary	81	Blk-Red	A3J2-12	Q7		AO-27-1300
4	Knocker	Momentary	85	Blk-Wht	A3J2-5, J3-7	Q3		AR-26-1200
5	Outhole	Momentary	95	Gry-Wht	A3J1-5	Q4	(91) Gry-Red	AT-27-1300
6	3 Top Drop Target Reset	Momentary	91	Gry-Red	A3J2-11	Q6		NO-26-1900
7	3 Lower Drop Target Reset	Momentary	78	Orn-Blk	A3J1-2, J2-9	Q1		NO-26-1900
8	Captive Ball #1 Kick Up	Momentary	80	Blk	A3J5-12	Q13	(91) Gry-Red	AT-29-2100
9	Captive Ball #1 Kick Down	Momentary	78	Orn-Blk	A3J5-11	Q14	(91) Gry-Red	AT-29-2100
10	Captive Ball #2	Momentary	71	Orn-Red	A3J5-9	Q9	(91) Gry-Red	AT-29-2100
11	Captive Ball #3	Momentary	74	Orn-Grn	A3J5-15	Q10	(91) Gry-Red	AT-29-2100
12	Thumper Bumper	Momentary	67	Brn-Orn	A3J5-13	Q12		AO-26-1200
13	Left Slingshot	Momentary	83	Blk-Yel	A3J5-14	Q11		AO-26-1200
14	Right Slingshot	Momentary	18	Red-Blk	A3J2-6, J3-7, J5-8	Q16		AO-26-1200
15	3 Top Drop Target (Left)	Momentary	95	Gry-Wht	A3J1-5	Q4	(90) Gry	CV-31-2000
16	3 Top Drop Target (Middle)	Momentary	85	Blk-Wht	A3J5-10	Q8	(90) Gry	CV-31-2000
17	3 Top Drop Target (Right)	Momentary	80	Blk	A3J5-12	Q13	(90) Gry	CV-31-2000
18	3 Lower Drop Target (Left)	Momentary	78	Orn-Blk	A3J5-11	Q14	(90) Gry	CV-31-2000
19	3 Lower Drop Target (Middle)	Momentary	71	Orn-Red	A3J5-9	Q9	(90) Gry	CV-31-2000
20	3 Lower Drop Target (Right)	Momentary	74	Orn-Grn	A3J5-15	Q10	(90) Gry	CV-31-2000
21	Coin Lockout	Continuous	36	Yel-Brn	A3J2-8	Q19		FO-36-7000
22	Flipper enabling relay	Continuous	--	--	--	Q15		48V Relay
		Continuous			A3J5-7	Q17		
		Continuous			A3J2-15, J3-9, J5-3	Q18		
Flipper Circuits		Power Wire	Flipper Coil Wire	Flipper Button Wire	Coil			
Left Flipper		Brn (60)	40 (Grn)	A3J1-8	20 (Blu)	A3J2-2		AQ-25-500/34-4500
Right Flipper		Brn (60)	70 (Orn)	A3J1-9	10 (Red)	A3J2-1		AQ-25-500/34-4500
Top Left Flipper		Brn (60)	85 (Blk-Wht)		(to lower left flipper)			AQ-25-500/34-4500
Top Right Flipper		Brn (60)	83 (Blk-Yel)		(to lower right flipper)			AQ-25-500/34-4500

Controlled Lamps Chart

SCR	connector	lamp description	code	wire color	tr type	SCR	connector	lamp description	code	wire color	tr type
Q01	A9J2-7	1st Top Lane Arrow & 2 Top Lane	10	Red	MCR-106	Q26	A5J1-7	Energy in Storage #1	34	Yel-Grn	2N5060
Q08	A9J2-14	2nd Top Lane Arrow & 3 Top Lane	12	Red-Blu	MCR-106	Q32	A5J3-27	Energy in Storage #2	40	Grn	2N5060
Q15	A9J3-8	3rd Top Lane Arrow & 4 Top Lane	13	Red-Yel	MCR-106	Q59	A5J3-4	Energy in Storage #3	14	Red-Grn	2N5060
Q22	A9J3-15	4th Top Lane Arrow & 5 Top Lane	14	Red-Grn	MCR-106	Q33	A5J2-11	Game Over (Back Box)	95	Gry-Wht	MCR-106
Q02	A9J2-4	5th Top Lane Arrow	15	Red-Wht	MCR-106	Q15	A5J2-23	High Score to Date (Back Box)	97	Gry-Orn	MCR-106
Q09	A9J2-11	6th Top Lane Arrow	18	Red-Blk	MCR-106	Q05	A5J2-16	H-Y-P-E Release 1 Ball Arrow	34	Yel-Grn	2N5060
Q16	A9J3-3	7th Top Lane Arrow & Storage Mem. Lane	20	Blu	MCR-106	Q20	A5J1-13	Left Outlane Special	30	Yel	2N5060
Q23	A9J3-12	8th Top Lane Red Arrow & Storage Mem.	21	Blu-Red	MCR-106	Q58	A5J3-2	Left Return Lane	95	Gry-Wht	2N5060
Q16	A5J2-22	Ball-in-Play (Back Box)	62	Brn-Blu	MCR-106	Q53	A5J3-14	Lower Drop Target Left Arrow	84	Blk-Grn	2N5060
Q12	A5J1-19	Bonus 1K	60	Brn	2N5060	Q39	A5J3-24	Lower Drop Target Middle Arrow	72	Orn-Blu	2N5060
Q27	A5J1-9	Bonus 2K	43	Grn-Yel	2N5060	Q21	A5J1-12	Lower Drop Target Right Arrow	61	Brn-Red	2N5060
Q38	A5J3-25	Bonus 3K	36	Yel-Brn	2N5060	Q23	A5J2-8	Match (Back Box)	82	Blk-Blu	MCR-106
Q50	A5J3-12	Bonus 4K	21	Blu-Red	2N5060	Q11	A5J1-16	Release All Balls Arrow	15	Red-Wht	2N5060
Q13	A5J1-17	Bonus 5K	57	Wht-Orn	2N5060	Q04	A5J1-28	Right Outlane Special	78	Orn-Blk	2N5060
Q28	A5J1-8	Bonus 6K	51	Wht-Red	2N5060	Q25	A5J1-6	Right Return Lane	25	Blu-Wht	2N5060
Q44	A5J3-19	Bonus 7K	67	Brn-Orn	2N5060	Q01	A5J1-24	Right Side 5K	50	Wht	MCR-106
Q51	A5J3-15	Bonus 8K	53	Wht-Yel	2N5060	Q24	A5J1-5	Right Side 10K	48	Gm-Blk	MCR-106
Q08	A5J1-23	Bonus 9K	12	Red-Blu	MCR-106	Q42	A5J3-21	Right Side 15K	64	Brn-Grn	MCR-106
Q35	A5J1-3	Bonus 10K	45	Gm-Wht	MCR-106	Q56	A5J3-10	Right Side 20K	91	Gry-Red	MCR-106
Q49	A5J3-17	Bonus 20K	13	Red-Yel	MCR-106	Q02	A5J1-25	Right Side 25K	75	Orn-Wht	MCR-106
Q18	A5J2-20	Bonus Multiplier 2X	98	Gry-Blk	2N5060	Q03	A5J2-21	Same Player Shoot Again (Back Box)	47	Gm-Orn	MCR-106
Q30	A5J2-6	Bonus Multiplier 3X	85	Blk-Wht	2N5060	Q40	A5J3-22	Same Player Shoot Again (Playfield)	23	Blu-Yel	MCR-106
Q43	A5J2-7	Bonus Multiplier 5X	91	Gry-Red	2N5060	Q10	A9J2-15	Shooter Plunger	52	Wht-Blu	MCR-106
Q54	A5J3-11	Bonus Special	20	Blu	MCR-106	Q60	A5J3-3	Target "H"	81	Blk-Red	2N5060
Q52	A5J3-13	Credit Indicator	35	Yel-Wht	2N5060	Q37	A5J3-23	Target "Y"	98	Gry-Blk	2N5060
Q06	A9J2-6	Door Frame Bottom & Left #1	45	Gm-Wht	MCR-106	Q22	A5J1-10	Target "P"	23	Blu-Yel	MCR-106
Q13	A9J2-13	Door Frame Bottom & Left #2	40	Gm	MCR-106	Q10	A5J1-15	Target "E"	13	Red-Yel	MCR-106
Q20	A9J3-7	Door Frame Bottom & Left #3	82	Blk-Blu	MCR-106	Q07	A5J1-27	Thumper Bumper	53	Wht-Yel	2N5060
Q27	A9J3-14	Door Frame Bottom & Left #4	27	Blu-Orn	MCR-106	Q47	A5J2-10	Tilt (Back Box)	35	Yel-Wht	MCR-106
Q05	A9J2-9	Door Frame Bottom & Right #5	54	Wht-Grn	MCR-106	Q14	A5J1-18	to aux. driver J1-3 (insert center ring)	58	Wht-Blk	2N5060
Q12	A9J2-17	Door Frame Bottom & Right #6	43	Gm-Yel	MCR-106	Q36	A5J3-26	to G.I. Flasher Driver (insert)	43	Gm-Yel	2N5060
Q19	A9J3-10	Door Frame Bottom & Right #7	25	Blu-Wht	MCR-106	Q57	A5J3-1	to G.I. Flasher Driver (playfield)	10	Red	2N5060
Q26	A9J3-17	Door Frame Bottom & Right #8	38	Yel-Blk	MCR-106	Q45	A5J2-1	to Solenoid Expander	60	Brn	2N5060
Q07	A9J2-5	Door Frame Top & Left #5	60	Brn	MCR-106	Q24	A9J3-16	Vectorscan 2X	56	Wht-Brn	MCR-106
Q14	A9J2-12	Door Frame Top & Left #6	62	Brn-Blu	MCR-106	Q17	A9J3-9	Vectorscan 3X	53	Wht-Grn	MCR-106
Q21	A9J3-4	Door Frame Top & Left #7	95	Gry-Wht	MCR-106	Q46	A5J3-18	Vectorscan Bonus Score, Bonus Score	56	Wht-Brn	2N5060
Q28	A9J3-13	Door Frame Top & Left #8	96	Gry-Brn	MCR-106	Q03	A9J2-8	Vectorscan Qualified Gate & 1 Top Lane	51	Wht-Red	MCR-106
Q04	A9J2-10	Door Frame Top & Right #1	80	Blk	MCR-106	Q17	A5J1-11	Vectorscan Speed Your Flip	65	Brn-Wht	MCR-106
Q11	A9J2-18	Door Frame Top & Right #2	57	Wht-Orn	MCR-106	Q41	A5J3-20	Vectorscan To Date Fastest Flip	78	Orn-Blk	MCR-106
Q18	A9J3-11	Door Frame Top & Right #3	70	Orn	MCR-106	Q06	A5J2-14	X-Y-Z Drop Targets 25K	12	Red-Blu	2N5060
Q25	A9J3-18	Door Frame Top & Right #4	72	Orn-Blu	MCR-106	Q19	A5J2-15	X-Y-Z Drop Targets Special	23	Blu-Yel	2N5060
Q55	A5J3-9	Drop Target "X" Arrow	15	Red-Wht	MCR-106	Q31	A5J2-2	X-Y-Z Drop Targets Spots Multiplier	67	Brn-Orn	2N5060
Q48	A5J3-16	Drop Target "Y" Arrow	25	Blu-Wht	MCR-106	Q29	A5J1-1		41	Gm-Red	2N5060
Q34	A5J1-2	Drop Target "Z" Arrow	52	Wht-Blu	MCR-106	Q09	A5J1-14		54	Wht-Grn	MCR-106

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



Switch Matrix

Row \ Column	strobe (ST) — return (I)					
	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)	STROBE 5 A4J4-5 Orn-Blu (72)
RETURN I 0 A4J2-8 Wht-Grn (54) A4J3-9 Red-Wht (15)	#2 Left of Outhole & #1 Right of Outhole 1	Coin Chute III (Right) 9	Captive Saucer (Bottom) 17	Not Used 25	Right Outlane 33	Not Used 41
RETURN I 1 A4J2-9 Brn-Yel (63) A4J3-10 Brn-Wht (65)	#1 Left of Outhole 2	Coin Chute I (Left) 10	Captive Saucer (Middle) 18	3 Lower Drop Target (Right) 26	Right Return Lane 34	Not Used 42
RETURN I 2 A4J2-10 Wht-Orn (57) A4J3-11 Blu (20)	Outhole 3	Coin Chute II (Middle) 11	Captive Saucer (Top) 19	3 Lower Drop Target (Middle) 27	Left Outlane 35	Not Used 43
RETURN I 3 A4J2-11 Orn-Blk (78) A4J3-12 Blu-Red (21)	Right Bottom Saucer 4	Shooter Lane 12	Not Used 20	3 Lower Drop Target (Left) 28	Left Return Lane 36	Not Used 44
RETURN I 4 A4J2-12 Brn (60) A4J3-13 Blu-Yel (23)	Left Bottom Saucer 5	Top Right Lane 13	"E" Target 21	3 Top Drop Target (Right) 29	Advance Bonus Rollover Button 37	Not Used 45
RETURN I 5 A4J2-13 Wht-Brn (56) A4J3-14 Blu-Wht (25)	Credit Button 6	Vectorscan Left Gate 14	"P" Target 22	3 Top Drop Target (Middle) 30	Right Slingshot 38	"Z" Drop Target 46
RETURN I 6 A4J2-14 Brn-Wht (65) A4J3-15 Blu-Orn (27)	Not Used 7	Tilt (3) 15	"Y" Target 23	3 Top Drop Target (Left) 31	Left Slingshot 39	"Y" Drop Target 47
RETURN I 7 A4J2-15 Wht-Blu (52) A4J3-16 Yel (30)	Push Button (under playfield, in front) 8	Slam (2) 16	"H" Target 24	Not Used 32	Thumper Button 40	"X" Drop Target 48