

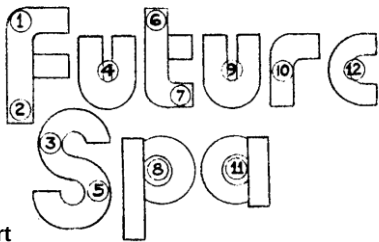
Bally

Future Spa

Fuse List

Rectifier Board AS-2518-18		
F1	6.5V Switched illumination	10A, 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
F6	Main fuse	3A, 250V, SB
Sol. Dr./Volt. Reg. AS-2518-22		
F1	190V Display power output	0.25A, 250V
Under the Playfield fuses		
F1	Solenoids	1A, 250V, SB

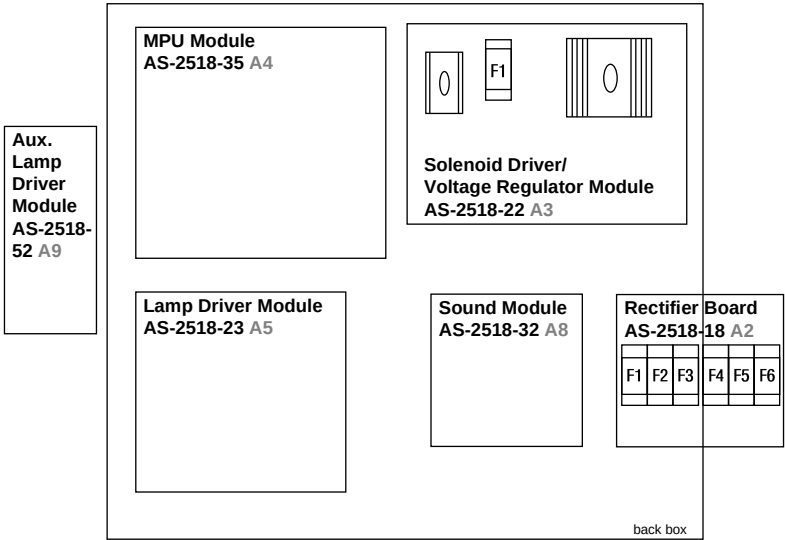
BULB CHART (INSERT)



Controlled Lamps Chart

SCR	connector	lamp description	code	wire color	tr type	SCR	connector	lamp description	code	wire color	tr type
Q06	A9J2-7	"F"-1 (Top)	34	Yel-Grn	MCR-106	Q34	A5J1-2	Lower "T"	43	Gm-Yel	MCR-106
Q01	A9J2-1	"F"-2 (Bottom)	43	Grn-Yel	MCR-106	Q48	A5J3-16	Lower "U" (2nd)	25	Blu-Wht	MCR-106
Q07	A9J2-11	"U"-4 (1st)	15	Red-Wht	MCR-106	Q55	A5J3-9	Lower "R"	15	Red-Wht	MCR-106
Q02	A9J2-2	"T"-6 (Top)	40	Gm	MCR-106	Q10	A5J1-15	Lower "E"	13	Red-Yel	MCR-106
Q11	A9J2-19	"T"-7 (Bottom)	82	Blk-Blu	MCR-106	Q08	A5J1-23	Lower "S"	56	Wht-Brn	MCR-106
Q04	A9J2-5	"U"-9 (2nd)	68	Brn-Blk	MCR-106	Q35	A5J1-3	Lower "P"	45	Gm-Wht	MCR-106
Q03	A9J2-3	"R"-10	62	Brn-Blu	MCR-106	Q49	A5J3-17	Lower "A"	27	Blu-Orn	MCR-106
Q09	A9J2-17	"E"-12	96	Gry-Brn	MCR-106	Q23	A5J2-8	Match	93	Gry-Yel	MCR-106
Q12	A9J2-18	"S"-3 (Top)	25	Blu-Wht	MCR-106	Q57	A5J3-1	Rollover "F"	10	Red	2N5060
Q05	A9J2-6	"S"-5 (Bottom)	45	Gm-Wht	MCR-106	Q12	A5J1-19	Rollover "U" (1st)	60	Brn	2N5060
Q08	A9J2-12	"P"-8	27	Blu-Orn	MCR-106	Q27	A5J1-9	Rollover "T"	52	Wht-Blu	2N5060
Q10	A9J2-20	"A"-11	95	Gry-Wht	MCR-106	Q38	A5J3-25	Rollover "U" (2nd)	36	Yel-Brn	2N5060
Q16	A5J2-22	Ball-in-Play	62	Brn-Blu	MCR-106	Q50	A5J3-12	Rollover "R"	21	Blu-Red	2N5060
Q28	A5J1-8	Bonus 18K	51	Wht-Red	2N5060	Q13	A5J1-17	Rollover "E"	57	Wht-Orn	2N5060
Q44	A5J3-19	Bonus 36K	67	Brn-Orn	2N5060	Q56	A5J3-10	Rollover Arrow "U" (1st)	91	Gry-Red	MCR-106
Q07	A5J1-27	Bonus Multiplier 2X	53	Wht-Yel	2N5060	Q42	A5J3-21	Rollover Arrow "T"	30	Yel	MCR-106
Q21	A5J1-12	Bonus Multiplier 4X	61	Brn-Red	2N5060	Q24	A5J1-5	Rollover Arrow "U" (2nd)	48	Gm-Blk	MCR-106
Q39	A5J3-24	Bonus Multiplier 6X	72	Orn-Blu	2N5060	Q01	A5J1-24	Rollover Arrow "R"	50	Wht	MCR-106
Q14	A5J1-18	Center Target "S"	58	Wht-Blk	2N5060	Q05	A5J2-16	Rollover Button 2K	34	Yel-Gm	2N5060
Q29	A5J1-1	Center Target "P"	41	Gm-Red	2N5060	Q18	A5J2-20	Rollover Button 4K	35	Yel-Wht	2N5060
Q36	A5J3-26	Center Target "A"	38	Yel-Blk	2N5060	Q30	A5J2-6	Rollover Button 6K	85	Blk-Wht	2N5060
Q52	A5J3-13	Credit Indicator	13	Red-Yel	2N5060	Q43	A5J2-7	Rollover Button 8K	91	Gry-Red	2N5060
Q02	A5J1-25	Drop Target 20K	90	Gry	MCR-106	Q06	A5J2-14	Rollover Button 10K	12	Red-Blu	2N5060
Q17	A5J1-11	Drop Target Extra Ball	65	Brn-Wht	MCR-106	Q03	A5J2-21	Same Player Shoot Again (Back Box)	47	Gm-Orn	MCR-106
Q41	A5J3-20	Drop Target Special	64	Brn-Gm	MCR-106	Q40	A5J3-22	Same Player Shoot Again (Playfield)	23	Blu-Yel	MCR-106
Q45	A5J2-1	Drop Target Spot Letter	60	Brn	2N5060	Q04	A5J1-28	Saucer 3K	78	Orn-Blk	2N5060
Q33	A5J2-11	Game Over	95	Gry-Wht	MCR-106	Q25	A5J1-6	Saucer 6K	25	Blu-Wht	2N5060
Q60	A5J3-3	Gate Open Arrow	81	Blk-Red	2N5060	Q20	A5J1-13	Saucer 9K	96	Gry-Brn	2N5060
Q15	A5J2-23	High Score to Date	97	Gry-Orn	MCR-106	Q46	A5J3-18	SPA 5K	56	Wht-Brn	2N5060
Q11	A5J1-16	Kickback 3K	12	Red-Blu	2N5060	Q51	A5J3-15	SPA Special	53	Wht-Yel	2N5060
Q26	A5J1-7	Kickback 5K	34	Yel-Gm	2N5060	Q37	A5J3-23	Spinner (Left)	98	Gry-Blk	2N5060
Q32	A5J3-27	Kickback 7K	40	Gm	2N5060	Q22	A5J1-10	Spinner (Right)	23	Blu-Yel	MCR-106
Q59	A5J3-4	Kickback 9K	14	Red-Gm	2N5060	Q58	A5J3-2	Thumper Bumper (Bottom Left)	95	Gry-Wht	2N5060
Q53	A5J3-14	Kickback Spots Letter	84	Blk-Gm	2N5060	Q47	A5J2-10	Tilt	98	Gry-Blk	MCR-106
Q54	A5J3-11	Lower "F"	20	Blu	MCR-106	Q31	A5J2-2		20	Blu	2N5060
Q09	A5J1-14	Lower "U" (1st)	54	Wht-Gm	MCR-106	Q19	A5J2-15		23	Blu-Yel	2N5060

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	Saucer	Momentary	74	Orn-Grn	A3J5-10	Q8	AO-27-1300
4	Left Kickback	Momentary	75	Orn-Wht	A3J5-12	Q13	AN-26-1200
5	Top Left Thumper Bumper	Momentary	78	Orn-Blk	A3J5-11	Q14	AN-26-1200
6	Top Right Thumper Bumper	Momentary	71	Orn-Red	A3J5-9	Q9	AN-26-1200
7	Top Center Thumper Bumper	Momentary	85	Blk-Wht	A3J5-15	Q10	AN-26-1200
8	Bottom Left Thumper Bumper	Momentary	80	Blk	A3J5-13	Q12	AN-26-1200
9	Bottom Right Thumper Bumper	Momentary	83	Blk-Yel	A3J5-14	Q11	AN-26-1200
10	Left Slingshot	Momentary	18	Red-Blk	A3J5-8, J2-6, J3-7,	Q16	AN-26-1200
11	Drop Target Reset	Momentary	81	Blk-Red	A3J1-2, J2-9	Q1	NO-26-1900
12	Coin Lockout	Continuous	36	Yel-Brn	A3J2-8	Q19	FO-36-7000
13	Flipper enabling relay	Continuous	--	--	--	Q15	48V Relay
14	Gate	Continuous	67	Brn-Orn	A3J5-7	Q17	GA-34-4000
		Momentary	81	Blk-Red	A3J1-3, J2-4	Q2	
		Momentary	67	Brn-Orn	A3J2-10	Q5	
		Momentary	74	Orn-Grn	A3J2-11	Q6	
		Momentary	81	Blk-Red	A3J2-12	Q7	
		Continuous	81	Blk-Red	A3J5-3, J2-15, J3-9	Q18	
Flipper Circuits			Power Wire	Flipper Coil Wire	Flipper Button Wire	Coil	
Left Flipper			60 (Brn)	40 (Gm)	A3J1-8	A3J2-2	AQ-25-500/34-4500
Right Flipper			60 (Brn)	70 (Orn)	A3J1-9	10 (Red)	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 Gry-Yel (93) A4J3-3 Red-Gm (14)	STROBE 2 A4J2-3 Wht-Blu (52)	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)		10 Point Right Rebound (2) 1	Coin Chute III (Right) 9	Spinner 17	Right Flipper Feed Lane 25	Not Used 33
RETURN I 1 A4J2-9 Wht-Brn (56) A4J3-10 Brn-Wht (65)		10 Point Left Rebound (2) 2	Coin Chute I (Left) 10	Not Used 18	Left Flipper Feed Lane 26	Not Used 34
RETURN I 2 A4J2-10 Wht-Orn (57) A4J3-11 Blu (20)		Right Outlane 3	Coin Chute II (Middle) 11	Not Used 19	Target "F" 27	Not Used 35
RETURN I 3 A4J2-11 Wht-Blk (58) A4J3-12 Blu-Red (21)		Left Outlane 4	Not Used 12	Not Used 20	Target "E" 28	Right Slingshot 36
RETURN I 4 A4J2-12 Brn (60) A4J3-13 Blu-Yel (23)		Top Rollover Button, Righth Top Target 5	Not Used 13	Not Used 21	Target "D" 29	Left Slingshot 37
RETURN I 5 A4J2-13 Brn-Yel (63) A4J3-14 Blu-Wht (25)		Credit Button 6	Not Used 14	Dragon's Den Target 22	Target "C" 30	Bottom Thumper Bumper 38
RETURN I 6 A4J2-14 Brn-Wht (65) A4J3-15 Blu-Orn (27)		Tilt (3) 7	Not Used 15	Left Saucer 23	Target "B" 31	Right Thumper Bumper 39
RETURN I 7 A4J2-15 Orn (70) A4J3-16 Yel (30)		Outhole 8	Slam (2) 16	Right Saucer 24	Target "A" 32	Left Thumper Bumper 40