

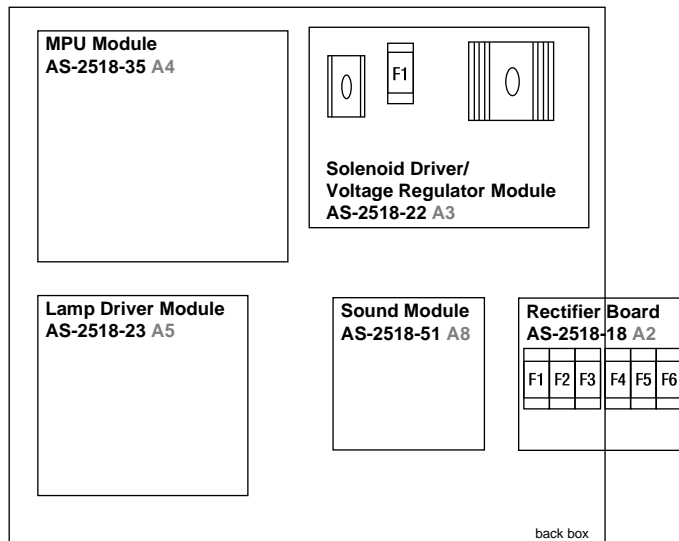
Bally

Frontier



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



Controlled Lamps Chart

SCR	connector	lamp description	code	wire color	tr type	SCR	connector	lamp description	code	wire color	tr type
Q57	A5J3-1	A-B-C Extra Ball	10	Red	2N5060	Q12	A5J1-19	Left Hawk	60	Brn	2N5060
Q50	A5J3-12	A-B-C Special	21	Blu-Red	2N5060	Q13	A5J1-17	Left Lion	57	Wht-Orn	2N5060
Q16	A5J2-22	Ball-in-Play (Back Box)	62	Brn-Blu	MCR-106	Q14	A5J1-18	Left Snake	58	Wht-Blk	2N5060
Q34	A5J1-2	Center Bear	52	Wht-Blu	MCR-106	Q08	A5J1-23	Left Wolf	12	Red-Blu	MCR-106
Q27	A5J1-9	Center Hawk	43	Gm-Yel	2N5060	Q23	A5J2-8	Match (Back Box)	70	Orn	MCR-106
Q28	A5J1-8	Center Lion	51	Wht-Red	2N5060	Q53	A5J3-14	Outlane Special Left	84	Blk-Gm	2N5060
Q29	A5J1-1	Center Snake	41	Gm-Red	2N5060	Q39	A5J3-24	Outlane Special Right	72	Orn-Blu	2N5060
Q35	A5J1-3	Center Wolf	45	Gm-Wht	MCR-106	Q19	A5J2-15	Predators 2X	23	Blu-Yel	2N5060
Q52	A5J3-13	Credit Indicator	35	Yel-Wht	2N5060	Q31	A5J2-2	Predators 3X	20	Blu	2N5060
Q05	A5J2-16	Drop Target 2X	34	Yel-Gm	2N5060	Q45	A5J2-1	Predators 4X	60	Brn	2N5060
Q18	A5J2-20	Drop Target 3X	98	Gry-Blk	2N5060	Q51	A5J3-15	Predators 45K	53	Wht-Yel	2N5060
Q30	A5J2-6	Drop Target 4X	85	Blk-Wht	2N5060	Q55	A5J3-9	Predators Special	15	Red-Wht	MCR-106
Q43	A5J2-7	Drop Target Special	91	Gry-Red	2N5060	Q48	A5J3-16	Right Bear	25	Blu-Wht	MCR-106
Q21	A5J1-12	Flipper Feed Lane Left	61	Brn-Red	2N5060	Q38	A5J3-25	Right Hawk	36	Yel-Brn	2N5060
Q07	A5J1-27	Flipper Feed Lane Right	53	Wht-Yel	2N5060	Q44	A5J3-19	Right Lion	67	Brn-Orn	2N5060
Q11	A5J1-16	Frontier 10K	90	Gry	2N5060	Q36	A5J3-26	Right Snake	43	Gm-Yel	2N5060
Q26	A5J1-7	Frontier 20K	34	Yel-Gm	2N5060	Q49	A5J3-17	Right Wolf	13	Red-Yel	MCR-106
Q32	A5J3-27	Frontier 30K	40	Gm	2N5060	Q10	A5J1-15	Rollover Lane "A"	13	Red-Yel	MCR-106
Q59	A5J3-4	Frontier 40K	14	Red-Gm	2N5060	Q22	A5J1-10	Rollover Lane "B"	23	Blu-Yel	MCR-106
Q04	A5J1-28	Frontier 50K	78	Orn-Blk	2N5060	Q37	A5J3-23	Rollover Lane "C"	98	Gry-Blk	2N5060
Q25	A5J1-6	Frontier 60K	25	Blu-Wht	2N5060	Q03	A5J2-21	Same Player Shoot Again (Back Box)	47	Gm-Orn	MCR-106
Q56	A5J3-10	Frontier Multiplier 2X	91	Gry-Red	MCR-106	Q40	A5J3-22	Same Player Shoot Again (Playfield)	23	Blu-Yel	MCR-106
Q46	A5J3-18	Frontier Multiplier 3X	56	Wht-Brn	2N5060	Q20	A5J1-13	Spinner 1000	96	Gry-Brn	2N5060
Q54	A5J3-11	Frontier Multiplier 4X	20	Blu	MCR-106	Q24	A5J1-5	Target Arrow Center	48	Gm-Blk	MCR-106
Q33	A5J2-11	Game Over (Back Box)	95	Gry-Wht	MCR-106	Q01	A5J1-24	Target Arrow Left	50	Wht	MCR-106
Q06	A5J2-14	Gate Arrow	12	Red-Blu	2N5060	Q42	A5J3-21	Target Arrow Right	30	Yel	MCR-106
Q58	A5J3-2	Grizzly Target 30K	95	Gry-Wht	2N5060	Q17	A5J1-11	Thumper Bumper Bottom	65	Brn-Wht	MCR-106
Q60	A5J3-3	Grizzly Target 4X	81	Blk-Red	2N5060	Q02	A5J1-25	Thumper Bumper Left	75	Orn-Wht	MCR-106
Q15	A5J2-23	High Score to Date (Back Box)	97	Gry-Orn	MCR-106	Q41	A5J3-20	Thumper Bumper Right	64	Brn-Gm	MCR-106
Q09	A5J1-14	Left Bear	54	Wht-Gm	MCR-106	Q47	A5J2-10	Tilt (Back Box)	35	Yel-Wht	MCR-106

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	3 Drop Target Reset	Momentary	80	Blk	A3J5-12	Q13	NO-26-1900
4	Saucer	Momentary	78	Orn-Blk	A3J5-11	Q14	AO-27-1300
5	Inline Drop Target Reset	Momentary	85	Blk-Wht	A3J5-10	Q8	NO-26-1900
6	Thumper Bumper Left	Momentary	71	Orn-Red	A3J5-9	Q9	AN-26-1200
7	Thumper Bumper Right	Momentary	74	Orn-Gm	A3J5-15	Q10	AN-26-1200
8	Thumper Bumper Bottom	Momentary	67	Brn-Orn	A3J5-13	Q12	AN-26-1200
9	Left Slingshot	Momentary	83	Blk-Yel	A3J5-14	Q11	AO-26-1200
10	Right Slingshot	Momentary	18	Red-Blk	A3J5-8, J2-6, J3-7,	Q16	AO-26-1200
11	Gate	Continuous	81	Blk-Red	A3J5-7	Q17	GO-36-6900
12	Coin Lockout	Continuous	36	Yel-Brn	A3J2-8	Q19	FO-36-7000
13	Flipper enabling relay	Continuous	--	--	--	Q15	48V Relay
		Momentary	18	Red-Blk	A3J1-2, J2-9	Q1	
		Momentary	67	Brn-Orn	A3J1-3, J2-4	Q2	
		Momentary	81	Blk-Red	A3J2-10	Q5	
		Momentary	80	Blk	A3J2-11	Q6	
		Momentary	75	Orn-Wht	A3J2-12	Q7	
		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 (Gm)	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)				
Column	Row	STROBE 0 A4J2-1 Wht-Red (51) A4J3-2 Red-Yel (13)	STROBE 1 A4J2-2 Orn (70) A4J3-3 Red-Gm (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-Gm (54) A4J3-9 Red-Wht (15)	30 Points Rebound (4)	Coin Chute III (Right)	Not Used	Saucer Rollover Button	Bottom Side Drop Target
RETURN I 1	A4J2-9 Brn-Yel (63) A4J3-10 Brn-Wht (65)	Right Outlane	Coin Chute I (Left)	Not Used	Not Used	Middle Side Drop Target
RETURN I 2	A4J2-10 Wht-Orn (57) A4J3-11 Blu (20)	Flipper Feed Lane (Right Return Lane)	Coin Chute II (Middle)	Not Used	Spinner	Top Side Drop Target
RETURN I 3	A4J2-11 Orn-Blk (78) A4J3-12 Blu-Red (21)	Flipper Feed Lane (Left Return Lane)	Saucer	Not Used	Not Used	Right Slingshot
RETURN I 4	A4J2-12 Brn (60) A4J3-13 Blu-Yel (23)	Left Outlane	Rollover Lane "A"	3rd Inline Drop Target	Left Target	Left Slingshot
RETURN I 5	A4J2-13 Wht-Brn (56) A4J3-14 Blu-Wht (25)	Credit Button	Rollover Lane "B"	2nd Inline Drop Target	Center Target	Bottom Thumper Bumper
RETURN I 6	A4J2-14 Brn-Wht (65) A4J3-15 Blu-Orn (27)	Tilt (3)	Rollover Lane "C"	1st Inline Drop Target	Right Target	Right Thumper Bumper
RETURN I 7	A4J2-15 Wht-Blu (52) A4J3-16 Yel (30)	Outhole	Slam (2)	Grizzly Target	Not Used	Left Thumper Bumper