

FIVE STAR REDEMPTION

BASEBALL OPERATION MANUAL



FEATURES

- Bright Attention Grabbing Graphics & Cabinet
- Hot looking Lighting
- Exciting Super Fast Skill Stop
- Oversized Highly Reliability Button
- Operator Programmable

SPECIFICATIONS

Parameter	Value	Units
Voltage	115	VAC
Frequency	60	HZ
Weight	200	Pounds

Overview

Baseball consists of a lighted clock face with a motorized spinner, a player console with a large button, a numeric display for game play, a speaker for sound effects, two coin acceptors, and a ticket dispenser. The objective is to skillfully stop the spinner to a desirable position to maximize the number of points won.

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Game Play

Baseball offers very fast and interesting play with many different strategies for maximizing points won.

- Insert coins(s) to ready the game for play.
- Push the *Start* button to begin the *Bat* spinning.
- There are several seconds in which to influence where the *Bat* will stop by skillfully pushing the *Start/Stop* Button.
- Points are awarded when you land on the different bases.
- Points are awarded and displayed in addition to any accumulated points already won.
- Tickets may be dispensed at the end of the game.

CREDITS	SPINS (AT BATS)
1	4
4	20

Game Programming

Baseball is controlled by a CPU board having several operator controllable options that are programmed by entering data through a four-button keypad and by setting DIP switches. Both the four-button keypad and the DIP switches are located on the CPU board.

Keypad Programming

Press the *Mode* button on the CPU board to begin keypad programming. The numeric display on the player console will show the mode number on the left with its value on the right. To change the mode's value, press the *Up* or *Dn* buttons on the CPU board to cycle through each of the allowable values. When the desired value is displayed, the *Mode* button may be pressed repeatedly to select other modes to modify. When all of the modes have their values set as desired, press the *Reset* button on the CPU board. The reset button must remain held down for a minimum of ten seconds or until the game begins running.

Game Play Programming Table

PROG	DESCRIPTION	Units	Factory Defaults
1	Total Coins In		0
2	Game Time	Seconds	30
3	Attract On	Seconds	180
4	Attract Off	Seconds	1
5	Coin per game	coin	1
6	Motor RAMP-UP speed limit	RPM	150
7	Motor RAMP-DN speed limit	RPM	40
8	Consolation points		0
9	Bonus points	Point Value	250
10	Points/Ticket	Point	1
11	Ticket Dispenser Pulse	x20msec	25
12	Not Used		0
13	Spins/Game Max	Max # of Spins per Game.	25
14	Spins Before Tickets Dispensed	# Spins Before Tickets Dispensed	3
15	Motor Speed Control	Pulse Off Duration	1
16	Not Used		0
17	Bases Advanced 1	Points	0
18	Bases Advanced 2	Points	1
19	Bases Advanced 3	Points	2
20	Bases Advanced 4	Points	3

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Game Play Programming Table Continued

21	Bases Advanced 5	Points	5 (1 Run)
22	Bases Advanced 6	Points	5
23	Bases Advanced 7	Points	5
24	Bases Advanced 8	Points	5
25	Bases Advanced 9	Points	10 (2 Runs)
26	Bases Advanced 10	Points	10
27	Bases Advanced 11	Points	10
28	Bases Advanced 12	Points	10
29	Bases Advanced 13	Points	20 (3 Runs)
30	Bases Advanced 14	Points	20
31	Bases Advanced 15	Points	20
32	Bases Advanced 16	Points	20
33	Bases Advanced 17	Points	100 (4 Runs)
34	Not Used		0
35	Not Used		0

DIP Switch Programming

Eight DIP switches numbered 1 through 8 are located on the CPU board. These switches control various aspects of game play and configurations. *The CPU board must be turned off and back on again for new DIP Switch settings to take effect.*

Dip Switch Setting

DIP SWITCH NUMBER	Description of DIP Switch Function	Factory Default Setting
1	ATTRACT MODE DISABLE ON = Disable Attraction Audio OFF = Enable Attraction Audio	OFF
2	AUTO TICKET DISPENSE ON = Enable Dispense As Points Won.. OFF = Disable Dispense At End of Game	ON

3	MULTI COIN GAME PLAY ON = Enable Multi-Coin Game Play OFF = Disable Multi-Coin Play	OFF
4	GAME SPINNER AUTO START/RESTART ON = Start/Restart Spinner After Timeout OFF = Don't Auto Restart Spinner (Play Audio, "Press Start Button.")	ON
5	FREE SPIN ON HOMERUN ON = Enable Free Spin OFF =Disable Free Spin (Bases Only)	ON
6	TICKET DISPENSER TICKET SENSE BYPASS ON = Bypass Ticket Dispenser. OFF = Check for Tickets Before Starting New Game	ON
7	ENABLE DUAL STOP BUTTON FUNCTION Not Used	OFF
8	MULTI RUNNER BASE PATH TRACKING ON = Enable Multiple Runners OFF = Accumulate Total Hits Using A Single Runner Only	ON

Input/Output Signals

CPU Inputs/Outputs

Target Inputs	Wire #	Signal Source	CPU Board Location	
SENSOR BOARD F	1	J1F	Group 1-1	
SENSOR BOARD E	2	J1E	Group 1-2	
SENSOR BOARD D	3	J1D	Group 1-3	
SENSOR BOARD C	4	J1C	Group 1-4	
SENSOR BOARD B	5	J1B	Group 1-5	
SENSOR BOARD A	6	J1A	Group 1-6	
Not Used	7			
Not Used	8			
COIN1	9	Coin Acceptor	Group 1 –9	
COIN2	10	Coin Acceptor	Group 1-10	
START/BRAKE_BUTTON	11	Player Console	Group 1-11	
Not Used	12			
Not Used	13			
Not Used	14			
Not Used	15			
Not Used	16			
CPU Vend Outputs	Wire #	Signal Source	**Signal Destination	Wheel Location
BATTER UP	1	Vend 1	Wheel Lights	L10
BASE1	2	Vend 2	Wheel Lights	L14
BASE2	3	Vend 3	Wheel Lights	L13
BASE3	4	Vend 4	Wheel Lights	L12
RUN1	5	Vend 5	Wheel Lights	L4
RUN2	6	Vend 6	Wheel Lights	L3
RUN3	7	Vend 7	Wheel Lights	L2
RUN4	8	Vend 8	Wheel Lights	L15
HITLFT1	9	Vend 9	Wheel Lights	L6
HITLFT2	10	Vend 10	Wheel Lights	L7
HITLFT3	11	Vend 11	Wheel Lights	L8
HITLFT4	12	Vend 12	Wheel Lights	L9

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Input / Output Signals Continued

CPU GAME BALL OUTPUTS

Signal Source P3	Pin	Signal Destination To Relay	Signal Destination
Start	1	K3	Control Panel
Not Used	3		
Grand Slam	5	K5	**Target Wheel Face - L15, L16 (Blue)
Game Over	7	K4	**Target Wheel Face - L5, L11 (Red)
Not Used	9		
Not Used	11		
Brake	13	K1	Brake
Spinner	15	K2	Motor

Appendix A Encoding Wheel Details

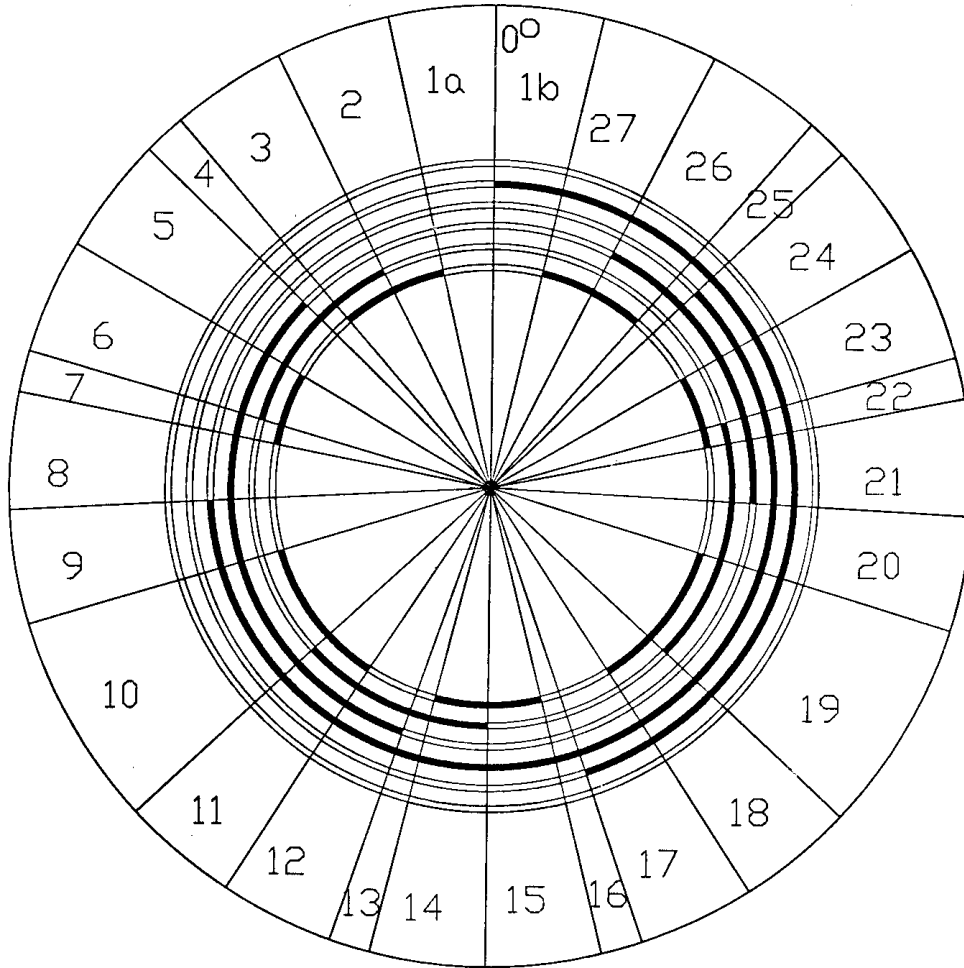


Figure 1- Encoding Wheel (Rear View)

Appendix A Encoding Wheel Details Continued

Target Location	Small Angle	Large Angle	Ring 1	Ring 2	Ring 3	Ring 4	Ring 5	Ring 6
1b	0.0	13.0					■	
27	13.0	27.0	■				■	
26	27.0	41	■		■		■	
25	41.0	46.0			■		■	
24	46.0	60.0			■	■	■	
23	60.0	74.0	■		■	■	■	
22	74.0	79.0	■	■	■	■	■	
21	79.0	93.0		■	■	■	■	
20	93.0	107.0		■		■	■	
19	107.0	133.0	■	■		■	■	
18	133.0	147.0	■			■	■	
17	147.0	161.0				■	■	
16	161.0	166.0				■		
15	166.0	180.0	■			■		
14	180.0	194.0	■	■		■		
13	194.0	199.0		■		■		
12	199.0	213.0		■	■	■		
11	213.0	227.0	■	■	■	■		
10	227.0	253.0	■		■	■		
9	253.0	267.0			■	■		
8	267.0	281.0			■			
7	281.0	286.0	■		■			
6	286.0	300.0	■	■	■			
5	300.0	314.0		■	■			
4	314.0	319.0		■				
3	319.0	333.0	■	■				
2	333.0	347.0	■					
1a	347.0	0.0						

Figure 2 - Encoding Wheel Geometry and Codes

Appendix A Encoding Wheel Details Continued

Baseball Gray Code Table

Wheel Position	Ring Code	Hexadecimal Representation
1B	000010	02
27	100010	22
26	101010	2A
25	001010	0A
24	001110	0E
23	101110	2E
22	111110	3E
21	011110	1E
20	010110	16
19	110110	36
18	100110	26
17	000110	06
16	000100	04
15	100100	24
14	110100	34
13	010100	14
12	011100	1C
11	111100	3C
10	101100	2C
9	001100	0C
8	001000	08
7	101000	28
6	111000	38
5	011000	18
4	010000	10
3	110000	30
2	100000	20
1A	000000	00

Appendix B Wiring Diagrams

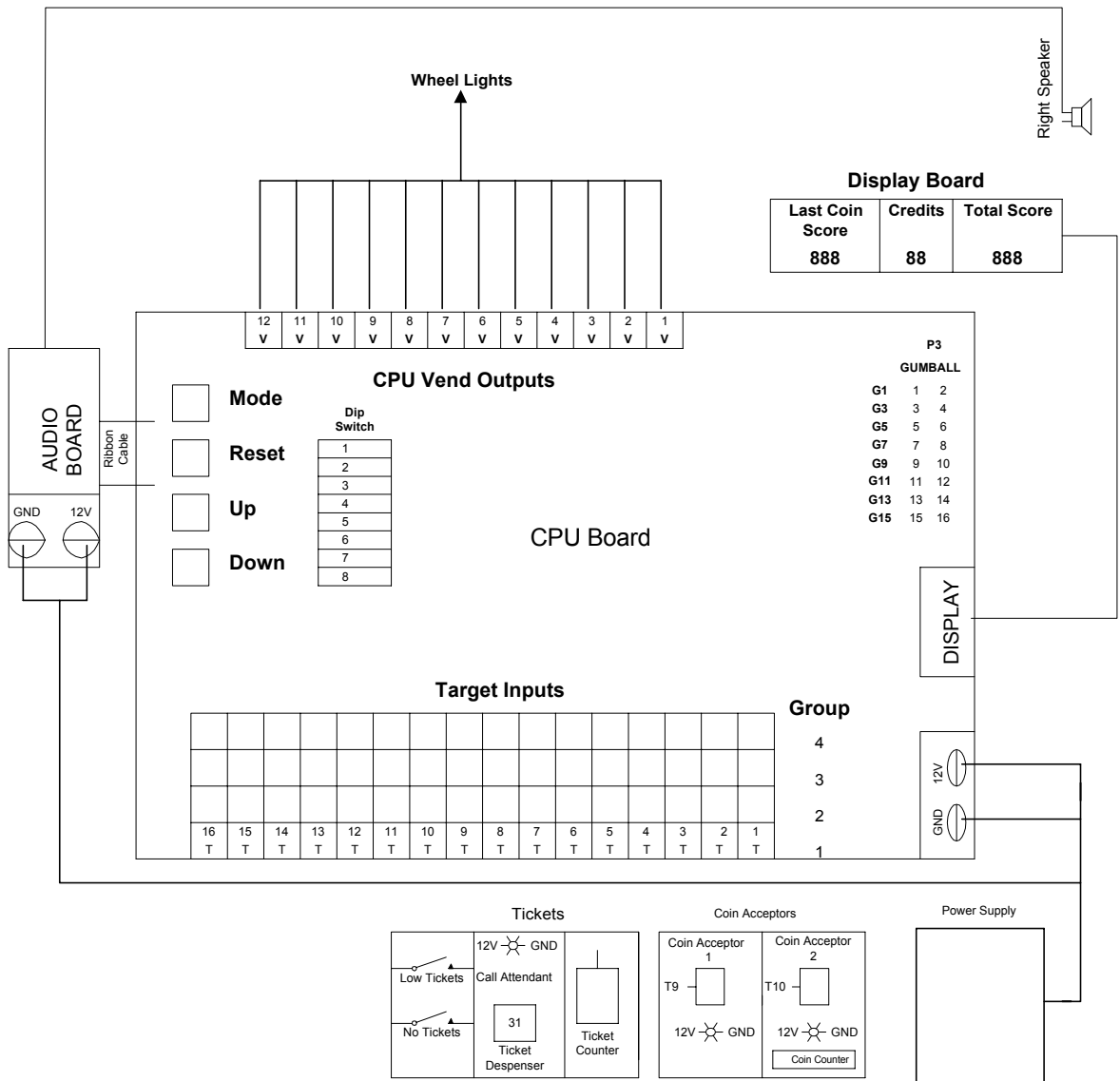


Figure 1 – Main Wiring Diagram

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Appendix B Wiring Diagrams Continued

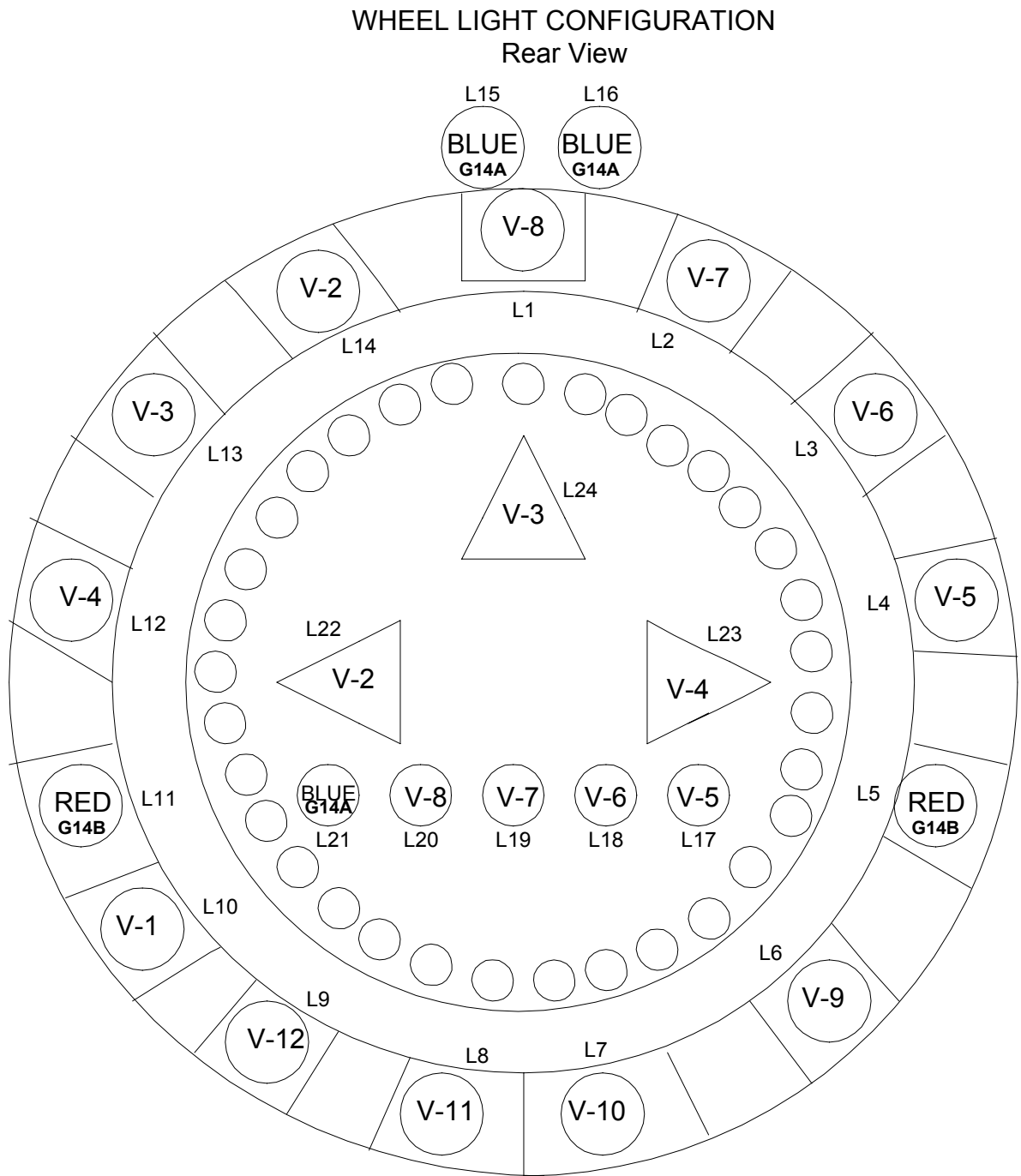


Figure 2 - Rear View Target Face

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Appendix B Wiring Diagrams Continued

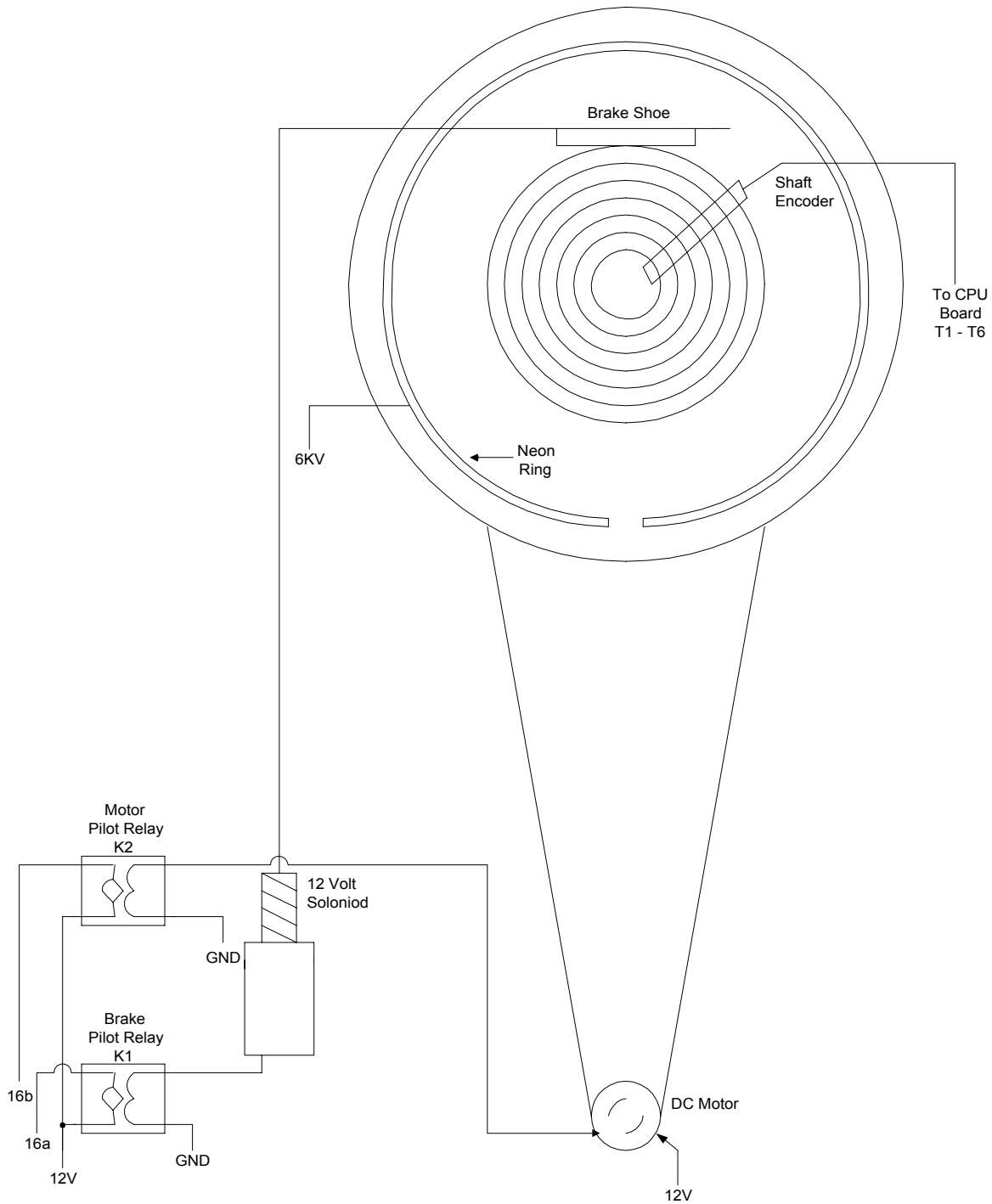


Figure 3 – Wheel with Motors

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Appendix B Wiring Diagrams Continued

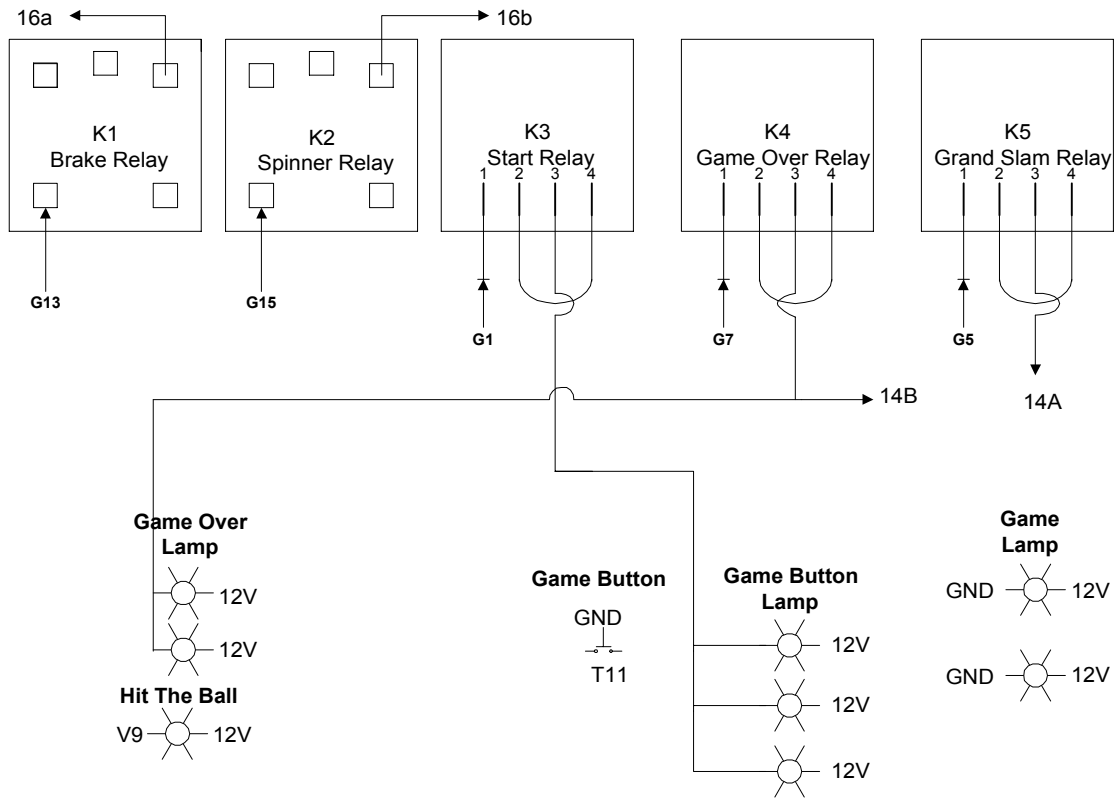


Figure 4 – Player Console with Brakes/Motors

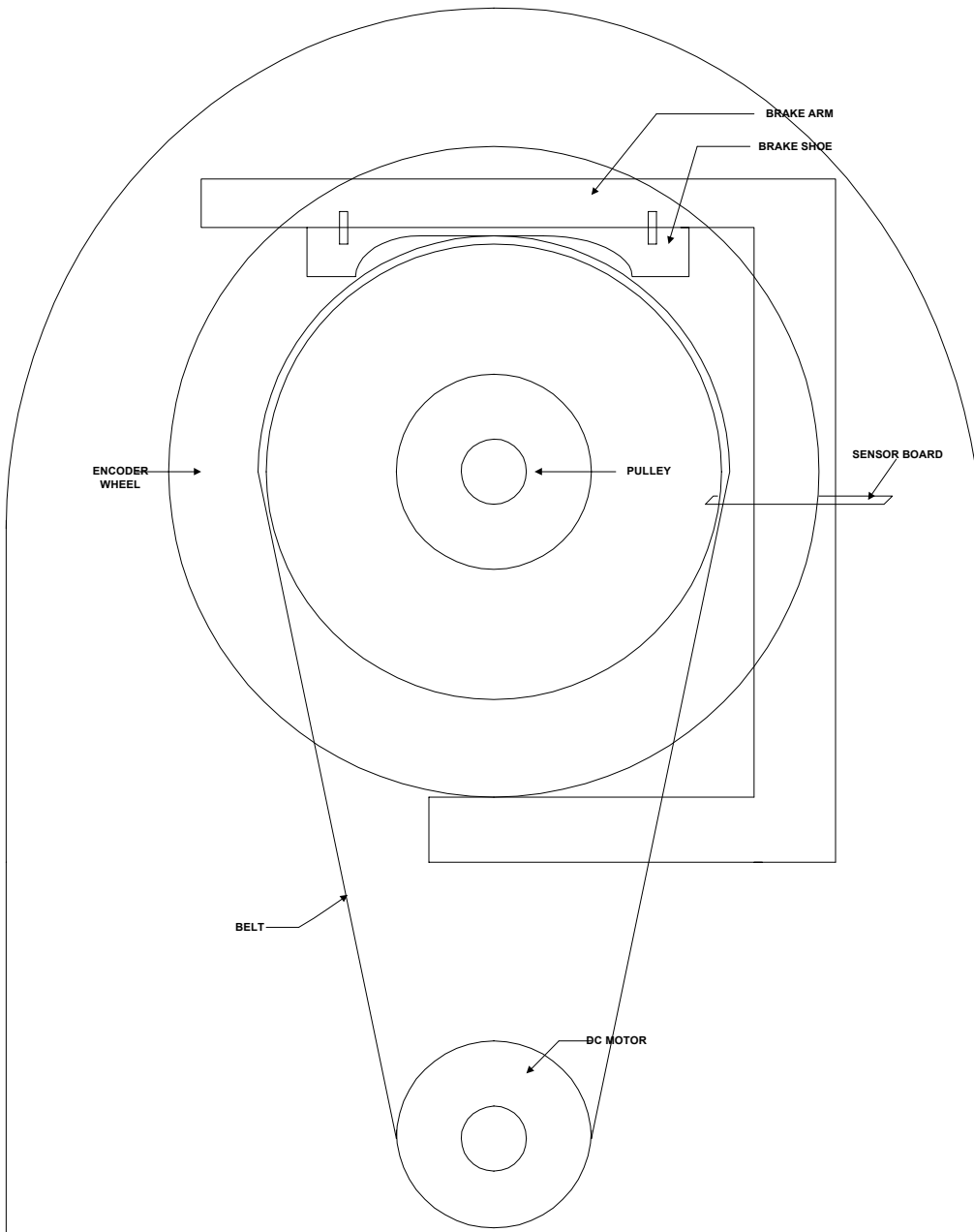


Figure 6 - Wheel Assembly

Appendix C Replacement Parts

Part Number Listing

#	PART NUMBER	PART DESCRIPTION	QTY
1	CA1 - 0001	HINGE (.5)	
2	CA1 - 0002	CASTERS	4
3	CA1 - 0007	SPEAKER	1
4	CA1 - 0008	SPEAKER COVER	1
5	CA1 - 0011	POWER SUPPLY (10/15 A)	
6	CA1 - 0021	COIN DOOR OVER UNDER	
8	CA1 - 0043	BACK DOOR LOCK & KEY	
9	CA1 - 0134	FLOURESENT LIGHT (18")	1
11	CA2 - 0261	SENSOR BRACKET	
12	CA2 - 0262	BRAKE STOP BRACKET	
13	CA2 - 0263	MOTOR SUPPORT BRACKET	
15	CA2 - 0265	LARGE BUTTON PLATE	
16	CA2 - 0274	LOCKDOWN BRACKET	
18	CA2 - 0277	MOTOR SUPPORT PLATE	
19	CA3 - 0024	FRONT METAL TRIM	
20	CA3 - 0090	MAIN SUPPORT FRAME	
21	CA3 - 0091	BRAKE ARM (3/4" TUBE 14" LONG)	
22	CA3 - 0092	BRAKE CONNECTING ROD	
23	CA4 - 0083	PLASTIC FRONT PANEL	
24	CA4 - 0084	INSIDE PLASTIC LEFT & RIGHT	
26	CA4 - 0085	SIDE PANELS LEFT & RIGHT	
27	CA4 - 0086	TARGET FACE	
28	CA4 - 0089	LARGE BUTTON	
29	CA4 - 0093	BRAKE PAD ASSY.	
30	CA4 - 0097	WOOD CABINET	
31	CA5 - 0028	FLY WHEEL SENSOR	
33	CA5 - 0031	FLY WHEEL BEARINGS PLASTIC	
34	CA7 - 0046	FRONT WOOD	
35	CA9 - 0062	FOAM FOR LG. BUTTONS	
36	CA9 - 0065	RUBBER LAMP HOLDER LG.	
37	GR1 - 0001	WIRE TAG CARD	
38	GR4 - 0030-5	STICKER KIT	
39	GR4 - 0033-BB	FACE TARGET GRAPHIC	
41	GR4 - 0076	STICKER, "ON"	
42	GR4 - 0077	STICKER, "OFF"	
43	GR4 - 0150-BB	DISPLAY GRAPHICS	
44	GR4 - 0161	MANUAL	
45	HA1 - 0001	WIRE,BLACK,22GA,UL1007 (9.3')	

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Appendix C Replacement Parts Continued

47	HA1 - 0002	WIRE,RED,22GA,UL1007 (19.8')	
49	HA1 - 0003	WIRE,WHITE,22GA,UL1007 (11.4')	
50	HA1 - 0005	WIRE,BLUE,22GA,UL1007 (4.1')	
51	HA1 - 0006	WIRE,GREEN,22GA,UL1007 (20')	
53	HA1 - 0007	WIRE,YELLOW,22GA,UL1007 (4.1')	
56	HA1 - 0008	WIRE,BROWN,22GA,UL1007 (1')	
57	HA1 - 0011	WIRE,WHI./RED,22GA,UL1007 (60')	
58	HA1 - 0012	WIRE,BLACK,22GA,1932ST. (24')	
59	HA1 - 0013	WIRE,GREEN,22GA,1932ST. (24')	
60	HA1 - 0015	POWER STRIP	
61	HA1 - 0017	LED, RED, T1 - 3/4	
64	HA1 - 0027	CONNECTOR, MOLEX, 6 POS KK	
66	HA1 - 0029	TOGGLE SWITCH, SPDT	
67	HA1 - 0030	LOW TICKET SWITCH (2)	
69	HA1 - 0030-PR	RELAY	
70	HA1 - 0031	RELAY, 12VDC, SPDT	
71	HA1 - 0034	TICKET & COIN COUNTER 12VDC	
72	HA1 - 0035	MOLEX,CONN. 03-06-1023 MALE	
73	HA1 - 0038	MOLEX,CONN. 02-06-1103 (6)	
74	HA1 - 0040	CAPACITOR, .1 MFD, 50 VDC (2)	
75	HA1 - 0043	MOLEX PIN 08-50-0108 (4)	
76	HA1 - 0088	MOLEX CONN. 03-09-2032	
77	HA1 - 0089	MOLEX CONN. 03-09-2022	
78	HA1 - 0090	PIN MALE (2)	
79	HA1 - 0091	PIN FEMALE (2)	
80	HA1 - 0094	MINIATURE FLASHING LIGHTS (19)	
81	HA1 - 0095	MINATURE LIGHT SOCKET (19)	
82	HA9 - 0002	MODULAR CABLE, 4P4C, 10'	
83	HA9 - 0004	MODULAR CABLE, 8P8C, 10'	
84	HA9 - 0005	MODULAR CABLE, 4 COND.,SPOOL	
85	HA9 - 0006	RIBBON CONNECTOR	
86	HA9 - 0024	BRAKE SOLENOID	
87	HA9 - 0025	REOSTAT (POTONTTOMETER)	
88	HH1 - 0017	1/4 - 20 X 1/4" SET SCREW	
89	HH1 - 0019	1/4 - 20 X 1 1/2" HEX HEAD BOLT	
90	HH1 - 0106-Z	4 - 40 X 3/8" PHIL	
91	HH1 - 0111-Z	1/4 - 20 X 1 1/2" PHIL. PAN HD. (6)	
92	HH1 - 0113-Z	1/4 - 20 X 2 1/2" PHIL. PAN HD.	
93	HH1 - 0120-Z	1/4 - 20 X 1 3/4" FLAT HD. (2)	
94	HH1 - 0316-Z	6 - 32 X 1" PHIL. (10)	
95	HH1 - 0416-Z	8 - 32 X 1" PHIL.	
96	HH1 - 0424-Z	8 - 32 X 1-1/2" PHIL.	
97	HH1 - 0432-Z	8 - 32 X 2" PHIL. (14)	
98	HH1 - 0508-N	10 - 32 X 1/2" PHIL. NYLON (2)	
99	HH1 - 0512-Z	10 - 32 X 3/4" PHIL. PAN (12)	
100	HH1 - 8608-Z	10 - 24 X 1/2" (2)	
101	HH2 - 0308-B	6 X 1/2" SHT. MTL. PHIL. BLK (70)	

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Appendix C Replacement Parts Continued

102	HH2 - 5508-Z	10 X 1/2",TEK HEX HD. (47)	
103	HH2 - 5512-Z	10 X 3/4",TEK HEX HD. (30)	
104	HH2 - 6333-B	#6 X 3/4" DRY WALL BLACK (10)	
105	HH3 - 2100-Z	4 - 40 HEX NYLOC NUT	
106	HH3 - 2400	8 - 32 HEX NYLOC NUT (20)	
107	HH3 - 9512-Z	1/4 - 20 KEP NUT	
108	HH3 - 9518	ALUM. STANDOFFS	
109	HH4 - 0016	# 10 ID WASHER 11/16 OD (14)	
110	HH4 - 0024	WASHER,.875 OD 0205 ID .025 THK.	
111	HH4 - 0032	WASHER, EXTERNAL TOOTH, #8 (20)	
112	HH5 - 0002-N	SPACER,#10 ID,1/4 OD,1/4",NYLON (4)	
113	HH5 - 0024	NYLON .196 ID, .307 OD, 200 LG.	
114	HH6 - 0001	BLUE WIRE NUTS (2)	
115	HH6 - 0002	PCB STANDOFFS, 1/4" CLIP-ON (14)	
116	HH6 - 0004	WIRE TIES, 5", BLACK (41)	
117	HH6 - 0004-W	TIE WRAPS 5" WHITE (8)	
118	HH6 - 0005	CABLE WRAP, TSP-1-1 (6)	
119	HH6 - 0006	SHRINK WRAP TUBING, 3/32" DIA. (2)	
120	HH6 - 0007	SHRINK TUBE 1/4"	
121	HH6 - 0008	RIBBON CLAMP, SELF ADHESIVE (25)	
122	HH6 - 0011-B	NYLON LOOP CLAMP, 1/4",BLACK (40)	
123	HH6 - 0013-B	NYLON LOOP CLAMP, 1/4",BLACK (20)	
124	HH6 - 0016	LED PANEL MOUNT CLIP T1-3/4	
125	HH6 - 0021	WIRE NUTS, ORANGE (2)	
126	HH6 - 0022	WIRE TIES, 4", BLACK (60)	
127	HH6 - 0024	SHRINK WRAP TUBING,CLEAR,3/4" DIA. (4)	
128	HH7 - 0003	ADHESIVE SPRAY (.15)	
129	HH7 - 0004	RTV 408C SILICONE (.5)	
130	HH7 - 0007	TAPE, DOUBLE FOAM, 1/2" WIDE (.1)	
131	HH7 - 0019	EPOXY GEL (.5)	
132	HH7 - 0020	ELECTRICAL 3/4" TAPE (1)	
133	HH8 - 0007	MARS BLACK, PAINT (.5)	
134	HH9 - 0002	POP RIVETS SB6-2 (42)	
135	HH9 - 0015	SILCAST PART "A",55 GAL. DRUM (.01)	
136	HH9 - 0016	SILCAST PART "B",55 GAL. DRUM (.01)	
137	HH9 - 0024	SILINOID 12X19-1-12VDC	
138	HH9 - 0084	BRAKE SPRING #954104-00	
139	HH9 - 0097	3/4" RETAINING RING (2)	
140	HH9 - 0101	SPRING, BRAKE, SOLENOID	
141	HH9 - 0109-C	URETHANE BELT	
142	MA2 - 0025	FLYWHEEL BEARING	
143	MA3 - 0001	PETG SHEETS 4'X8' (3.5)	
144	MA3 - 0005	PLASTIC SHEET,BRONZ, 4'X8'X1/8" (.02)	
145	MA3 - 0006	PLASTIC SHEET,WHT., 4'X8'X1/16" (.02)	
146	MA4 - 0001-BB	PLASTIC BAT	
147	NE1 - 0002	WIRE, GTO # 15 (480)	
148	NE1 - 0004	SHORT STOP, NEON TUBE, 14MM (8)	

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149	NE1 - 0005	TUBING,GTO # 3858, BLACK (8)	
150	NE1 - 0007	NEON TRANSFORMER (7500 V)	
151	NE6 - 0052	NEON RING (CLOCK FACE)	
152	NE6 - 0053	SIDE NEON (L & R) (2)	
153	NE6 - 0054	CONTROL PANEL NEON (LID)	
154	NO P/N	MOLD RELEAST (.7)	
155	PC1 - 1007-1	DISPLAY	
158	PC1 - 1025-3	AUDIO BOARD W/O CHIP	
160	PC1 - 2010	CPU BOARD 7 BUTTON. W/O CHIP	
161	PC1 - 2040	FLYWHEEL SENSOR BOARD	
162	PC2 - 2010-14-3	CPU BOARD 3 BUTTON	
163	PC2 - 2010-15	AUDIO CHIP	
164	TB4 - 1001	PLASTIC LID NO BUTTONS (RAW)	
165	TB4 - 1002	PLASTIC FRONT PANEL (RAW)	
166	TB4 - 1003	PLASTIC BUTTONS LG. (RAW)	
168		PLASTIC BUTTONS SM. (RAW)	
169	TR2 - 0016	FLYWHEEL SENSOR BRACKET	
170	TT1 - 0001	TICKET DISPENSER	
174	TT1 - 0001-1	TICKET DISPENSER WIRE HARNESS	
176	TT1 - 0001-H	TICKET HOLDER	
177	TT1 - 0005	TICKET DOOR WITH LED HOLE	
178	TT1 - 0006	CHAIN, JACK, # 12, ZINK (5.5)	

**Five Star Redemption
Address and Telephone Numbers**

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