



Wonder Wheel

OWNER'S MANUAL

Version WW-2.01



TABLE OF CONTENTS

OPERATION AND SETUP SECTION.....	3
Safety Precautions.....	3
How the Game Works.....	3
Service Connections.....	4
Unpacking, Assembly and Installation.....	4
Alarm/Sounds.....	5
Counters.....	5
PROGRAMMING SECTION.....	6
Programmable Options.....	6
Group #1 (S1).....	6
Group #2 (S2).....	7
Ticket Patterns.....	9
LUBRICATION & PREVENTIVE MAINTENANCE SECTION.....	10
Maintenance Chart.....	10
TROUBLESHOOTING & DIAGNOSTICS SECTION.....	11
Troubleshooting Strategy.....	13
Diagnose Power Supply.....	14
SERVICE AND REPAIR SECTION.....	15
Playfield Access.....	15
Conveyor Belt Maintenance.....	16
Cleaning.....	16
Tension Adjustment.....	16
Belt Replacement.....	16
Drive Belt Tensioning and Motor Replacement.....	17
Color Wheel Drive Belt and Motor Replacement.....	18
Circuit Boards and Sensors.....	19
Display Circuit Boards.....	19
Main Circuit Board.....	20
ELECTRICAL DRAWINGS SECTION.....	21
12 Volt Jumper Cable (J1) Connector.....	21
Volume Cable (J2) Connector.....	21
Sensor Cable (J3) Connector.....	22
Jumper (J4) Connector.....	23
Jumper (J5) Connector.....	24
Gen 5 Main Board Schematics.....	25
Communications – Serial EEprom.....	26
Input Section A – Configuration Switches.....	27
Input Section B – Inputs RE, RC.....	28



Output Section A – Chase Lights, Q13 - Q16	29
Output Section B – Q17 – Q24	30
Output Section C – Q5 – Q12	31
Power Section.....	32
Processor Section – Input RD.....	33
SPARE PARTS – WONDER WHEEL	34
WARRANTY INFORMATION	36
NOTES	37



OPERATION AND SETUP SECTION

Safety Precautions



CAUTION: Electrical Shock Hazard.

Do not perform repairs or maintenance on this game with power ON. Unplug the unit from the wall outlet or shut off power at the power strip inside the cabinet.



CAUTION: Electrical Shock Hazard.

Always plug game into a grounded circuit.



CAUTION: Cutting Hazard.

Always replace broken or scratched glass panels with tempered glass. Never use window glass in this game.



CAUTION: Use of flammable substances can cause severe burns or personal injury.

Always use non-flammable solvents for cleaning parts and surfaces of this game. Do not use flammable substances such as gasoline, kerosene or thinners.

How the Game Works

Timing and skill reward players with tickets in this game. The player drops a coin or token into the slot that then drops down a chute onto a spinning belt that propels the coin up and toward a rotating slotted wheel. If the coin goes through a slot the player wins tickets based on the value of that wheel segment.

The rotating wheel is divided into several colored segments, with different size scoring slots including a bonus slot. Ticket payout is based on

the ticket value of each slot. The jackpot bonus slot awards additional bonus tickets with up to five (5) consecutive hits, within a preset period of time. Consecutive misses will also increase the ticket multiplier, increasing the ticket payout for the next winner.

The owner can easily set ticket value for each segment, number of misses for each increment of the ticket multiplier, change the multiplier limits, bonus ticket amounts, countdown timer and wheel speed.

The 'Tickets Owed' amount increases as they are won and decrease as they are paid out. If the ticket dispenser runs out of tickets, the payout will continue after the dispenser is refilled.



Figure 1 Wonder Wheel Playfield



Service Connections

All Bay-Tek games are 110V or 220V(optional) and draw 2-3 amps at startup. Outlets should be rated for 20 amps or higher.

IMPORTANT: *Be sure that the electrical power outlets match the game requirements. See outlet labeling at rear bottom of game cabinet.*

Unpacking, Assembly and Installation

1. Inspect the game for any damaged, loose or missing parts. If damage is found please contact the carrier first. Then contact Bay-tek at: service@bay-tek.com, or phone (920) 822-3951 to order replacement parts.



CAUTION: *Lifting Hazard.*
Lifting heavy objects can cause back, neck and other injuries. Be sure adequate lifting and moving devices are available when unloading, unpacking and moving this game.

2. Place the game near the final location and remove the keys taped to the top glass.

3. Open the rear door panel and uncoil the power cord and feed it through one of the holes in the bottom board at the back of the cabinet. Plug the power cord into the wall outlet.

4. Remove any tape securing game lighting or other components.

5. Turn the power ON at the power strip under the rear door opening. Close and lock the rear door panel.

6. Place the game in its final position. If leveling is necessary, use adequate shims and blocking to prevent tipping.



Figure 2 Circuit Breaker Power Strip

7. The game is set up for standard factory defaults. See the Programming section on page 6 and tables on page 7 for default values. Make any dipswitch setting changes you need to make prior to operating the game.

8. Fill the ticket dispenser.

9. Play the game a few times to make sure that everything is working. If something is not working properly, review the troubleshooting section first. If the problem cannot be resolved, contact the Bay-tek service department at: service@baytek.com, or phone (920) 822-3951.

10. Once everything is set and working properly, use glass cleaner and a soft clean cloth to clean all the glass on the game. Do not use solvents to clean the game decal surfaces. The game is now ready to play.

Note: *The coin box lock is provided with a different set of keys allowing operators to hand out maintenance keys without compromising security to the coin box.*

Note: *If ticket credits are displayed which must be cleared, a 'Ticket Clear' button is provided inside the front door of the game to clear those values. See Figure 3*



Alarm/Sounds

A voice chip enhances the visual effects of the game during normal play and during 'Attract' mode of operation. A volume control is located near the prize counter.

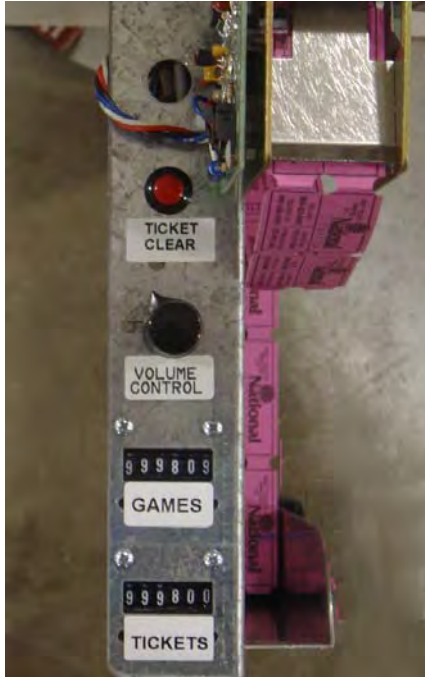


Figure 3 Counters, Volume Control, Ticket Clear

Counters

Counters are mounted inside the front cabinet door next to the ticket dispenser. The counters track the number of games played and tickets dispensed. The counters cannot be reset.



PROGRAMMING SECTION

Programmable Options

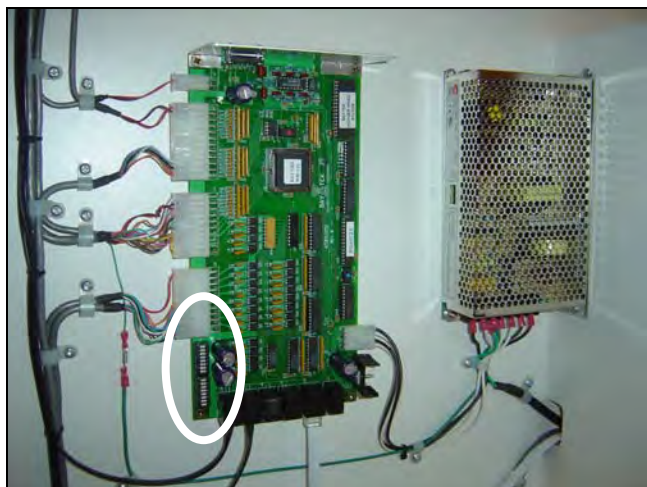


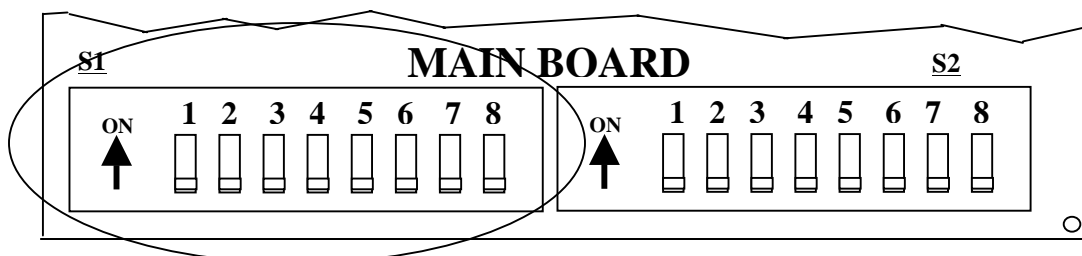
Figure 4 Dipswitch location on Gen 5 Main Board

The owner can easily set ticket value for each segment, number of misses for each increment of the ticket multiplier, change the multiplier limits, bonus ticket amounts, countdown timer wheel speed and more. See default settings below.

The main circuit board is located on the inside sidewall of the cabinet. Be sure power is off before setting these dipswitches.

IMPORTANT: Power must be OFF to the game when setting dipswitches. Turn OFF the power strip inside the cabinet. Set the dipswitches to the desired settings, wait 30 seconds and then turn ON power at the power strip.

Group #1 (S1)



X – Closed or ON position
O – Open or OFF position

* - indicates the default setting

TICKET PATTERN SELECT DIPSWITCHES

SWITCH #	PATTERN		DESCRIPTION
<u>1 2 3</u>			
O O O	1		Dipswitches #1, #2 and #3 (S1) are used to set the ticket pattern number for ticket payout per win. The drawing to the left shows the default factory setting of five. Match this setting to the Ticket Tables on page 9.
X O O	2		
O X O	3		
X X O	4		
O O X	5 *		
X O X	6		
O X X	7		
X X X	8		



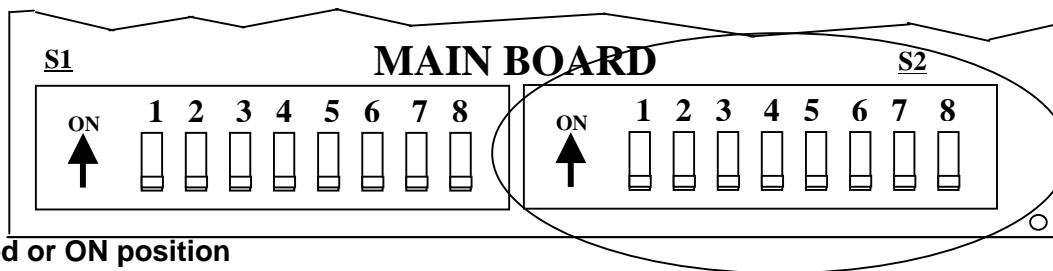
BONUS TICKET TABLE DIPSWITCHES

SWITCH #	PATTERN		DESCRIPTION
<u>4 5 6</u> O O O X O O O X O X X O O O X X O X O X X X X X	1 2 3 4 5* 6 7 8	<p>S1</p>	Dipswitches #4, #5, and #6 (S1) are used to set the bonus ticket pattern number for bonus ticket payout per win. The drawing to the left shows the default factory setting of five. Match this setting to the Bonus Ticket Tables on page 9.

BONUS COUNTDOWN TIMER DIPSWITCHES

SWITCH #	TIME		DESCRIPTION
<u>7 8</u> O O X O O X X X	7 seconds 8 seconds 9 seconds 10 seconds*	<p>S1</p>	Dipswitches #7 and #8 (S1) are used to set the length of time the player has to make consecutive bonus shots to qualify for increased bonus payout. The drawing to the left shows the default factory setting of ten seconds. This time shows on the Bonus Countdown display during bonus play.

Group #2 (S2)



X – Closed or ON position
O – Open or OFF position

* - indicates the default setting

MISSES TO INCREMENT MULTIPLIER DIPSWITCHES

SWITCH #	MISSES		DESCRIPTION
<u>1 2</u> O O X O O X X X	1 2 3* 4	<p>S1</p>	Dipswitches #1 and #2 (S2) are used to set the number of misses required to increment the ticket multiplier. The drawing to the left shows the default factory setting of three. This number is shown on the Ticket Multiplier display.



WHEEL SPEED DIPSWITCH

SWITCH #	SPEED		DESCRIPTION
<u>3 4</u> O O X O O X X X	8 RPM 10 RPM 12 RPM * 15 RPM	<p>S1</p>	Dipswitches #3 and #4 (S2) are used to set the speed the color wheel. The drawing to the left shows the default factory setting of 12 RPM.

MAXIMUM MULTIPLIER VALUE DIPSWITCHES

SWITCH #	VALUE		DESCRIPTION
<u>5 6</u> O O X O O X X X	3 * 5 7 9	<p>S1</p>	Dipswitches #5 and #6 (S2) are used to set the maximum number of times the ticket multiplier can advance. The drawing to the left shows the default factory setting of three.

ATTRACT MODE DIPSWITCH

SWITCH #	VALUE		DESCRIPTION
<u>7</u> X O	Enable * Disable	<p>S1</p>	When dipswitch #7 (S2) is enabled, the game will start to run in 'Attract' mode for 2.5 minutes every 5 minutes. During the 'Attract' mode, the attraction lighting will light up, and the audio will play select tracks from the audio bank embedded in the software. The drawing to the left shows the default factory setting of 'enable'.

TABLE SELECT DIPSWITCH

SWITCH #	VALUE		DESCRIPTION
<u>8</u> X O	Enable Disable *	<p>S1</p>	Dipswitch #8 (S2) selects ticket payout based on either the Standard or the New Jersey Ticket Tables as shown on page 9.



Ticket Patterns

STANDARD TABLE (Group 1 – Dip #1, #2 and #3 settings) (Group 2 – Dip #8 OFF)												
Ticket Pattern	Yellow	Red	Blue	Green	Blue	Red	Yellow	Red	Green	Blue	Red	Coin Miss
1	Bonus	8	15	20	10	5	Bonus	8	10	15	5	0
2	Bonus	5	10	15	8	3	Bonus	5	8	10	3	0
3	Bonus	8	15	20	10	5	Bonus	8	10	15	5	0
4	Bonus	5	10	15	8	3	Bonus	5	8	10	3	0
5	Bonus	8	12	15	10	5	Bonus	8	10	12	5	0
6	Bonus	4	8	10	5	2	Bonus	4	5	8	2	0
7	Bonus	3	8	10	5	2	Bonus	3	5	8	2	0
8*	Bonus	3	8	10	5	2	Bonus	3	5	8	2	1

* Pattern 8 automatically gives one mercy ticket per miss.

BONUS VALUE TABLE (Group 1 – Dip #4, #5 and #6 settings)					
Bonus Value	1st	2nd	3rd	4th	5th
1	30	50	150	300	500
2	20	40	80	160	320
3	100	200	300	400	500
4	30	60	120	240	480
5	50	100	200	400	800
6	75	150	300	600	1200
7	25	50	75	100	250
8	30	60	90	120	700

NEW JERSEY TABLE (Group 1 – Dip #1, #2 and #3 settings) (Group 2 – Dip #8 ON)												
Ticket Pattern	Yellow	Red	Blue	Green	Blue	Red	Yellow	Red	Green	Blue	Red	Coin Miss
1	4	4	4	4	4	4	4	4	4	4	4	4
2	5	5	5	5	5	5	5	5	5	5	5	5
3	6	6	6	6	6	6	6	6	6	6	6	6
4	7	7	7	7	7	7	7	7	7	7	7	7
5	8	8	8	8	8	8	8	8	8	8	8	8
6	9	9	9	9	9	9	9	9	9	9	9	9
7	10	10	10	10	10	10	10	10	10	10	10	10
8	11	11	11	11	11	11	11	11	11	11	11	11



LUBRICATION & PREVENTIVE MAINTENANCE SECTION

Maintenance Chart

Use the following maintenance chart as a guide only. Actual maintenance will depend on usage and environmental conditions at the location of the game.

Keep a log of all inspections, even if no problem exists, with date and time of inspection, action taken.

IMPORTANT: Do not use cleaning solvents on game graphics. Use only a mild soap solution and dry with a clean lint free cloth.

IMPORTANT: Do not use denatured alcohol, lacquer thinner or similar solvents to clean the conveyor belt as they will cause damage to the belt surface.

IMPORTANT: The game should be shut OFF for cleaning and maintenance.



CAUTION: Use of flammable substances can cause severe burns or personal injury. Always use non-flammable solvents for cleaning parts and surfaces of this game. Do not use flammable substances such as gasoline, kerosene or thinners.

	Daily	Weekly	Monthly	Quarterly
Fill ticket tray	X			
Inspect game for physical damage. Repair as necessary. **	X			
Inspect game lighting and replace lamps as necessary. **	X			
Test to insure game is working properly.	X			
Clean outside surfaces and glass	X			
Empty cash box.	X			
Open game and clean playfield and inner surfaces with a clean soft cloth and glass cleaner. **		X		
Lubricate all four conveyor bushings with one to two drops of super-lube that was sent with the game. **			X	
Check conveyor tension. **				X
Check conveyor drive belt tension. **				X
Clean dirt and debris from conveyor. **				X
Color Wheel Assembly - Check drive belt tension. Test the wheel to see that it turns freely. **				X
Check all hardware for tightness. **				X

** See Service Procedures on page 15 for information on playfield access and steps required for service, repair and adjustments.



TROUBLESHOOTING & DIAGNOSTICS SECTION

Troubleshooting Chart		
Problem	Probable Cause	Remedy
No power to the game.	<ul style="list-style-type: none"> a. Unplugged. b. Blown Fuse. c. Circuit breaker tripped. d. Power supply unplugged. e. Bad power supply. 	<ul style="list-style-type: none"> a. Check wall outlet. b. Check transformer fuse (220v applications only 7 amp fast burn). c. Reset power strip breaker switch or building circuit breaker. d. Insure unit is plugged into power strip. e. See power supply diagnostic.
No Audio	<ul style="list-style-type: none"> a. Volume too low. b. Loose wire. c. Main circuit board malfunction. 	<ul style="list-style-type: none"> a. Increase the volume at the volume control at the inside of the front door panel. a. Check audio cable connections to speaker, volume control and main circuit board. Check continuity. b. Replace main board with board from another Gen 5 game if possible to isolate the problem to the main circuit board.
Conveyor Lighting not functioning properly.	<ul style="list-style-type: none"> a. Cable problem. b. Main circuit board malfunction. 	<ul style="list-style-type: none"> a. Check for proper connection to main board. Check continuity. Replace grey cable. b. Replace main board with a spare Gen 5 board if possible to isolate the problem to the main circuit board.
Fluorescent Lighting not functioning properly.	<ul style="list-style-type: none"> a. Lamp out. b. Fixture unplugged. 	<ul style="list-style-type: none"> a. Replace burned fluorescent tubes. b. Plug power cable into power strip.
Upper displays not functioning properly.	<ul style="list-style-type: none"> a. Cable problem. b. Circuit board faulty. c. Main circuit board malfunction. 	<ul style="list-style-type: none"> a. Check for proper connection to main board. Check continuity. Replace white cable. b. Replace faulty board. c. Replace main board with a spare Gen 5 board if possible to isolate the problem to the main circuit board.



Troubleshooting Chart		
Problem	Probable Cause	Remedy
Upper backlighting not functioning properly.	<ul style="list-style-type: none"> a. Cable problem. b. Lamp out. c. Lamp circuit board faulty. d. Main circuit board malfunction. 	<ul style="list-style-type: none"> a. Check for proper connection to main board. Check continuity. Replace grey cable. b. Replace burned out lamps. c. Replace main board with a spare Gen 5 board if possible to isolate the problem to the main circuit board.
Conveyor belt not rotating.	<ul style="list-style-type: none"> a. Blown fuse. b. Drive belt loose or broken. c. Conveyor belt jammed with coins/debris. d. Motor bad or unplugged. e. Loose wires. 	<ul style="list-style-type: none"> a. Check in-line fuse and replace if blown. b. Tension green belt or replace if broken. c. Remove coins jammed near bearings or drive belt. d. Reconnect motor wiring or replace drive motor. e. Check for loose or broken wiring at connectors for motor and main circuit board. Check continuity.
Color Wheel not rotating.	<ul style="list-style-type: none"> a. Drive belt loose or broken. b. Motor bad or unplugged. c. Loose or broken wires. d. Faulty main circuit board. 	<ul style="list-style-type: none"> a. Tension flat belt or replace if broken. b. Reconnect motor wiring or replace drive motor. c. Check for loose or broken wiring at connectors for motor and main circuit board. Check continuity from plug to crimped ends. d. Replace main board with a spare Gen 5 board if possible to isolate the problem to the main circuit board.
Game doesn't score.	<ul style="list-style-type: none"> a. Loose or broken wiring to the coin cup sensor. b. Coin not tripping switch in coin mechanism. 	<ul style="list-style-type: none"> a. Check for loose or broken wiring at connectors. Check continuity. b. Check operation of the coin mechanism and switch. Replace if necessary.
Tickets do not dispense.	<ul style="list-style-type: none"> a. Disconnected, loose or broken wiring. b. Faulty main circuit board. 	<ul style="list-style-type: none"> a. Check connectors. Check for continuity. b. Replace main board with a spare Gen 5 board if possible to isolate the problem to the main circuit board.



Troubleshooting Strategy

Use common sense and a systematic method of troubleshooting to determine the exact problem, probable cause and remedy. Use the process of elimination to find the faulty component. Always check for the simple and obvious causes first such as unplugged, loose or broken wires and bad sensors, bent, pinched, stuck or jammed components.

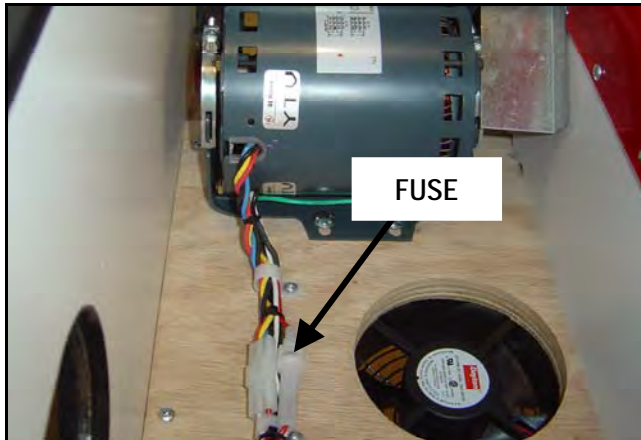


Figure 5 Conveyor Motor Fuse

Use 5 amp Fast Burn fuse.



Diagnose Power Supply

Use the following procedure to check the power supply for Gen 5 games.

Check the small green LED light on the power supply circuit board. If the light is out there is a short somewhere. If the light dims, there is an overload in one of the circuits such as a bad motor.

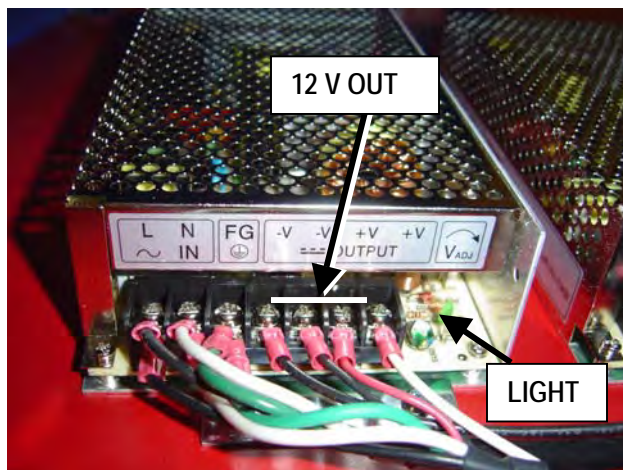
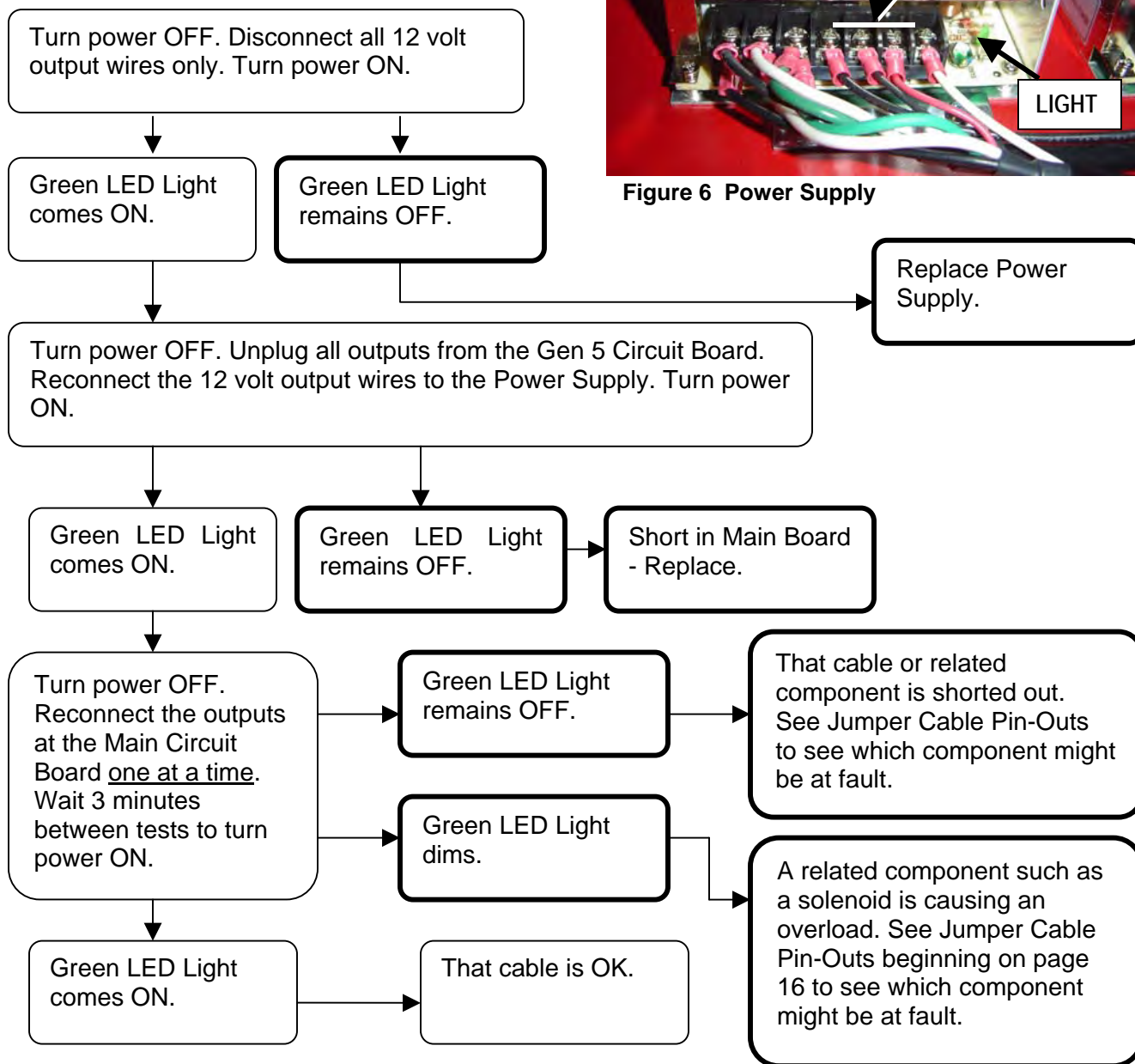


Figure 6 Power Supply





SERVICE AND REPAIR SECTION



CAUTION: Electrical Shock Hazard.

Do not perform maintenance or repair of this equipment with power ON. Unplug the unit from the wall outlet or shut off power at the power strip inside the cabinet.

Playfield Access

1. Turn power OFF at the power strip located inside the back door of the game.
2. Unlock and open the coin slot service panel.
3. Unplug the coin mechanism and lift straight up and out of the game.

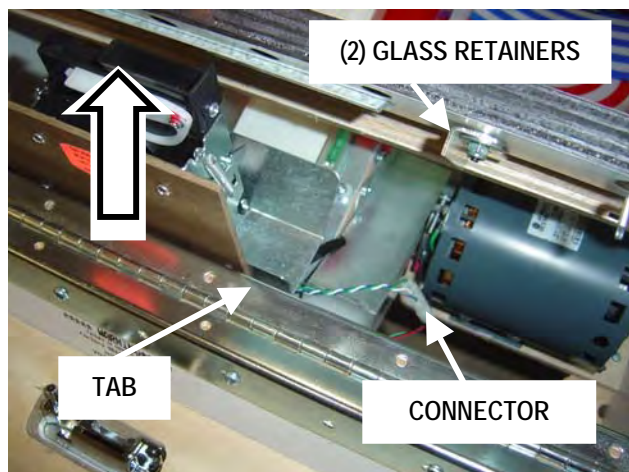


Figure 7 Glass Removal

4. Rotate the two holding tabs that hold the black aluminum glass retainer and remove the retainer.
5. Slide the glass downward and out of the game to gain access to the conveyor belt.
6. There are two acrylic covers over the playfield. These covers can be removed as follows.

- a. Open the rear access panel. Pull down on the upper two corners of the acrylic to release the acrylic from the groove in the upper frame. Fold slightly and pull the cover straight out the back of the game. (To replace the cover, be sure the lower corners are tucked down and under the front cover. Also insure that the cutout in the cover is positioned under the wedge blocks at the back of the wheel frame).

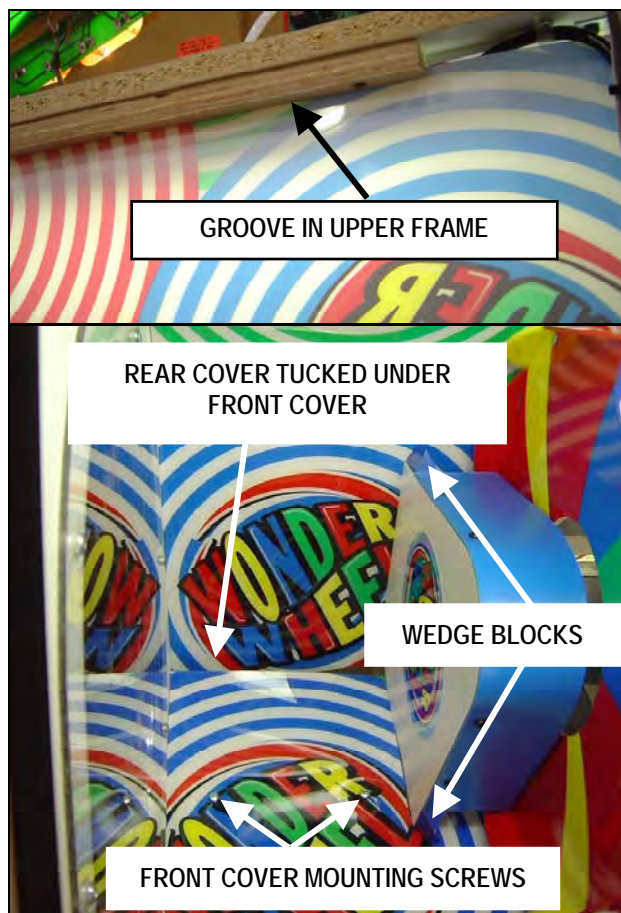


Figure 8 Removing Playfield Covers

- b. To remove the rear cover, remove the four wood screws at the lower edge of the cover. At the top edge of the cover, push downward while pulling away from the mounting frame and lift out of the game. (To replace the cover, insure that



the lower cutout in the cover is under the wedge blocks at the front of the wheel).

7. Perform maintenance or cleaning.



CAUTION: *Use of flammable substances can cause severe burns or personal injury. Always use non-flammable solvents for cleaning parts and surfaces of this game. Do not use flammable substances such as gasoline, kerosene or thinners.*

8. After performing maintenance or cleaning, replace the glass and secure with the black aluminum retainer.

9. Insert the coin mechanism in the slots at the front of the game. Connect the wire connector.

10. Close and lock the access door. Allow the conveyor to dry before operating the game.

Conveyor Belt Maintenance

Cleaning

With power to the game OFF, clean with damp cloth or sponge.

IMPORTANT: *Do not use denatured alcohol, lacquer thinner or similar solvents to clean the conveyor belt as they will cause damage to the belt surface.*

Tension Adjustment

1. Remove the four screws holding the red light covers onto the conveyor sides.
2. Slightly loosen the four hex head nuts toward the upper portion of the conveyor frame assembly.
3. Using a screwdriver or other adequate tool, push outward on the sliding conveyor bracket. Push evenly on both side brackets. The belt should be snug but not over tightened. If the

belt is too tight the bearings will generate excess heat and wear faster.

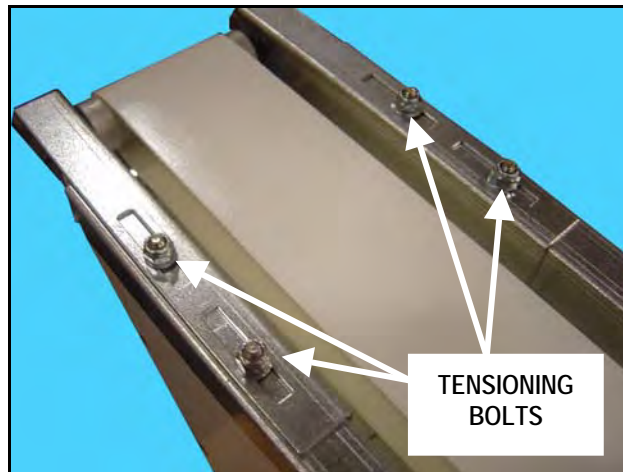


Figure 9 Conveyor Adjustment

4. When the belt is tensioned properly, re-tighten the four hex nuts.

5. Replace the red light covers and secure with the four wood screws.

Belt Replacement

1. Remove the four screws holding the red light covers onto the conveyor sides.
2. Loosen the four hex head belt tensioning nuts on the conveyor frame assembly and slide the assembly backward to loosen the belt.
3. On the exit end of the belt, roll the belt over enough to gain access to the setscrews on the two belt rollers. Loosen the setscrews.



Figure 10 Belt Removal – Exit End



4. Slide out the shaft and raise the roller and belt up and away from the frame.

5. On the drive end, loosen the motor mounting bolts, from underneath, enough to loosen the drive belt.

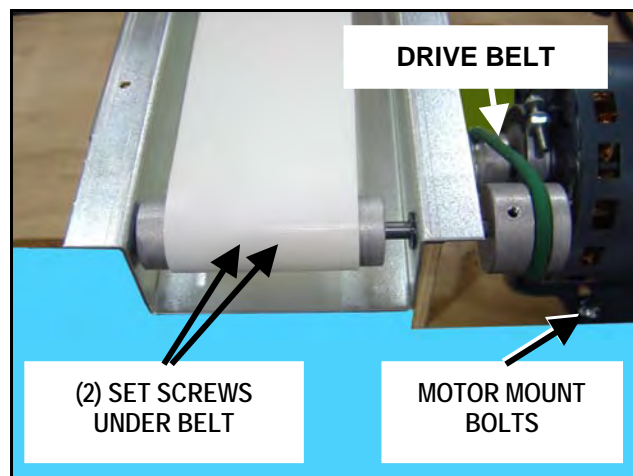


Figure 11 Belt Removal – Drive End

6. Roll the belt over enough to gain access to the setscrews on the two belt rollers. Loosen the setscrews.

7. Slide the shaft out toward the belt side of the assembly while lifting the rollers.

8. Slide the old belt off and install the new belt. Inspect the shaft bearings before re-assembly and replace if necessary.

9. Position the roller between the frames and insert the shaft. Tighten the setscrew. Be sure the setscrew is recessed in the screw hole so that it does not touch the bottom of the belt.

10. Lubricate the bearings and then tension the conveyor belt as described above.

11. Re-install the light covers and test the game before putting back into operation.

Drive Belt Tensioning and Motor Replacement

1. Remove the sheet metal screws holding the belt guard in place.

2. If replacing the motor, remove the wire clip and disconnect the fuse and power wiring at the connectors. Disconnect the green ground wire.

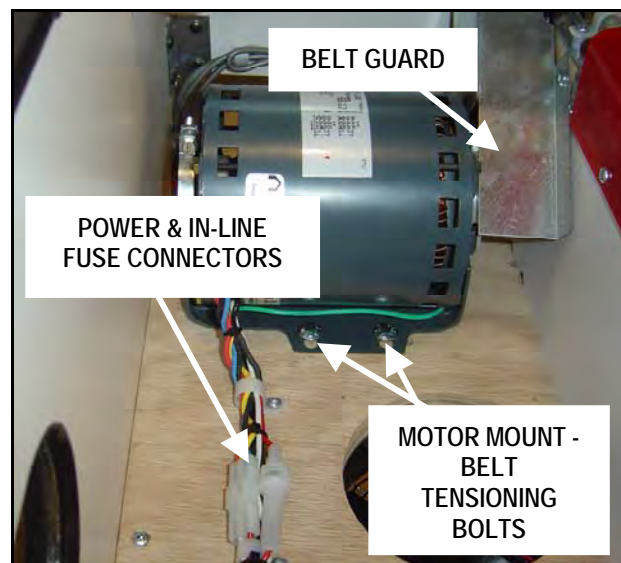


Figure 12 Conveyor Drive Belt Tensioning

3. Loosen the motor mounting carriage bolts from underneath the mounting board.

4. Slide the motor toward the front of the game to replace the belt or motor. Slide the motor toward the back of the game to tighten the belt tension.

NOTE: A spare green belt was included in the maintenance package shipped with the game.

5. If the motor was replaced, re-connect the wiring connectors and green ground wire.

6. Reinstall the belt guard.



Color Wheel Drive Belt and Motor Replacement

1. Disconnect the black cable to the circuit board under the wheel. Disconnect the wheel position wiring and the coin detection sensor at their respective wire connectors and wire clips.

2. Remove the four square head wood screws holding the wheel assembly in the game. (Two screws are accessed from the front of the game and two are accessed from the rear). Remove the wheel assembly to a clean work surface.

3. Remove the four wood screws holding the left side panel (side opposite the belt) onto the base panels. Remove the single shaft screw.

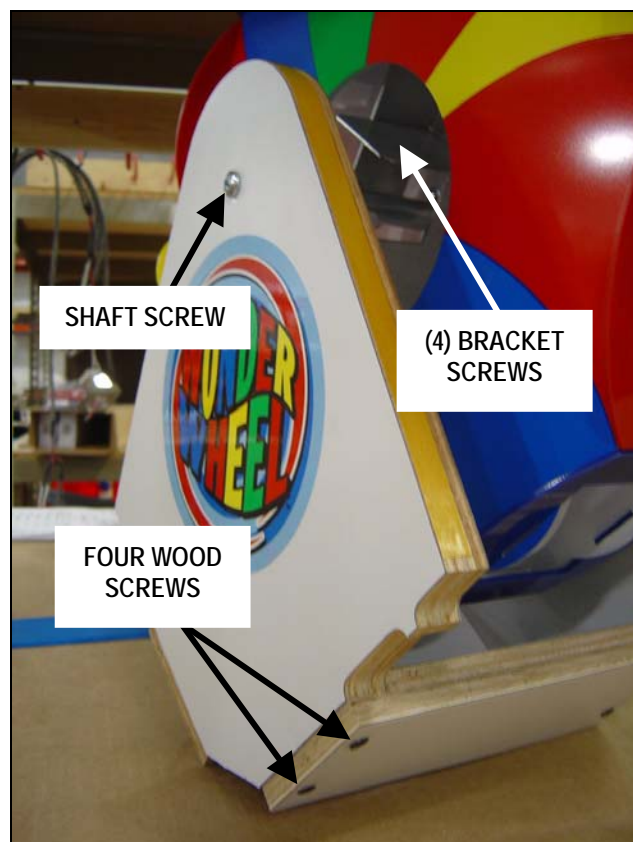


Figure 13 Wheel Disassembly

4. Remove the four small machine screws and washers holding the wheel brackets to the side panel bracket. See above and Figure 14. Pull the side panel from the shaft.

5. Loosen the setscrew on the shaft collar and remove the shaft collar and nylon washer. See Figure 14.

6. Remove the three machine screws holding the wheel assembly to the large belt pulley. Slide the wheel assembly off the shaft.

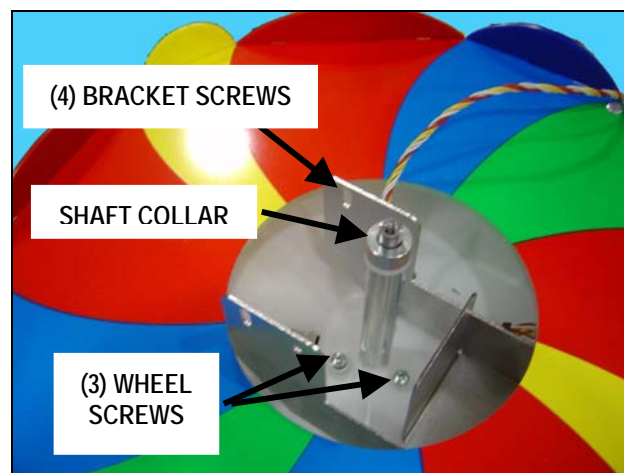


Figure 14 Wheel brackets

7. Loosen the four hex head bolts used for belt tension adjustment. Slide the motor toward the large pulley to loosen or remove the belt.

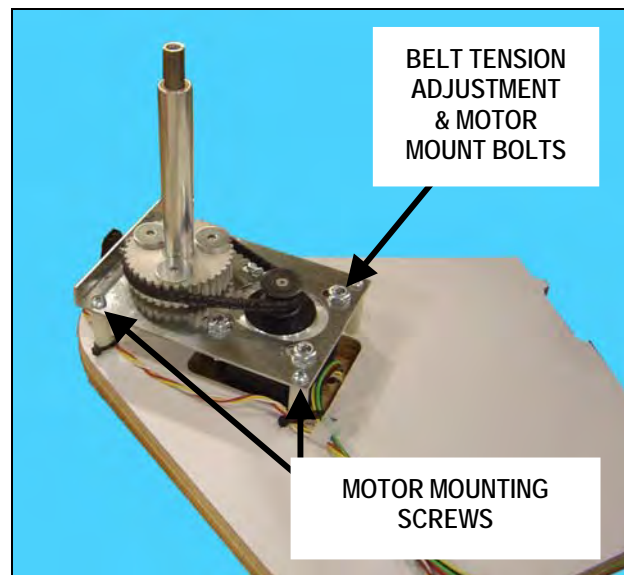


Figure 15 Belt Replacement

8. If replacing the drive motor, completely remove the four tensioning bolts and remove the belt. Unscrew the single shaft screw in the



remaining side panel and lift the large pulley/shaft assembly from the unit. Note the position of the nylon washer on the end of the shaft for reassembly. Unscrew the four motor mounting bracket screws and remove the motor bracket and motor. Install the new motor and reassemble.

9. When re-tensioning the belt, the belt should be tight with only a slight deflection on either side.

10. Reinstall the wheel assembly and secure it to the belt pulley with the three machine screws.

11. , Install the nylon washer and shaft collar. Secure the collar with the setscrew.

IMPORTANT: *The nylon washer must be loose on the shaft. This will allow the wheel to rotate freely.*

12. Reposition the side panel and secure to the wheel brackets the single shaft screw and the four machine screws holding the wheel brackets to the side bracket.

13. Install the four wood screws in the bottom of the side panel to complete the wheel assembly. Re-install the wheel assembly into the game.

14. Re-connect the motor and sensor wiring.

Circuit Boards and Sensors



CAUTION: *Static electricity could harm circuit boards and processor chips. Always ground yourself by cable or by touching metal surfaces prior to removing or servicing electronic equipment in this game. Avoid working on carpeted surfaces.*

Display Circuit Boards

The 'Tickets Owed', 'Ticket Multiplier' and 'Bonus Countdown' display circuit boards are replaced as follows.

1. Open the rear door panel and shut off power to the game by turning the power strip OFF.

2. Unplug the white phone cord from the display circuit boards as needed.

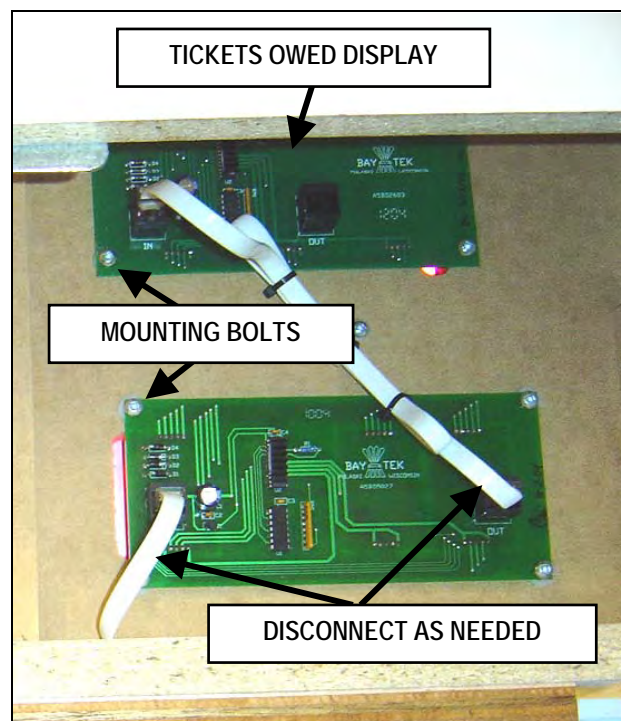


Figure 16 Display Boards

3. Remove the screws holding the display circuit board to its mounting board.

4. Install the new board in the reverse manner.

5. Test after re-assembly to insure proper operation.

Coin Detector Sensor (on Color Wheel)

1. Gain access to the playfield. See Page 15.

2. Disconnect the black cable to the circuit board under the wheel. Disconnect the wheel position wiring and the coin detection sensor at their respective wire connectors and wire clips.



3. Remove the four square head wood screws holding the wheel assembly in the game. (Two screws are accessed from the front of the game and two are accessed from the rear). Remove the wheel assembly to a clean work surface.

4. Rotate the wheel for access to the sensor mounting screws. Remove the two Phillips head screws holding the sensor board to the black plastic frame. The two grey nylon spacers under the screws are glued to the board but the three spacers around the diodes are loose.



Figure 17 Coin Sensor Board

5. To ease reassembly, the metal bracket, which is tack glued to the black plastic, will have to be removed. Pull the grey spacers from the old circuit board and glue them onto the new one in the same position.

6. Assemble the spacers and new circuit board in the metal bracket and place in the black plastic frame. Secure with the two Phillips head screws.

7. Re-assemble the wheel assembly in the game, reconnect the wiring and test before operation of the game.

Main Circuit Board

Replacing the main Gen 5 circuit board.

1. Carefully unplug the various connectors, black chase lighting cables and the white display cable.

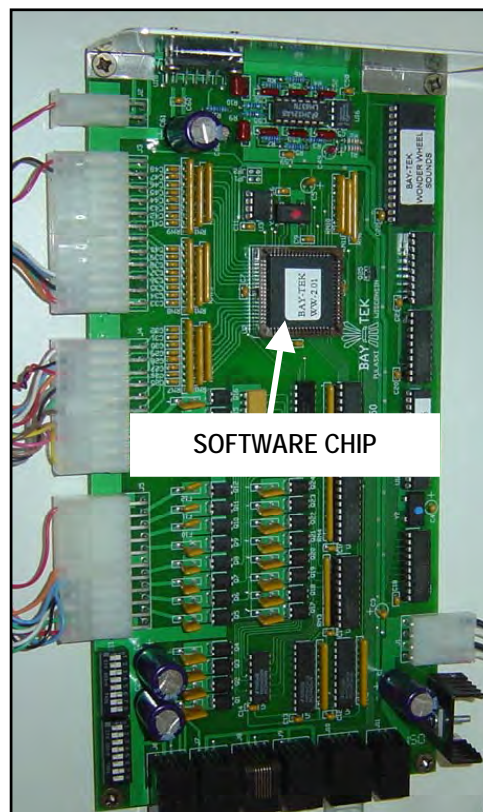


Figure 18 Gen 5 Main Board

2. Remove the four Phillips head screws at the four corners of the board and remove the board from the mounting panel.

3. Before installing the new board, check to be sure that the dipswitches are set in the same position as the old board.

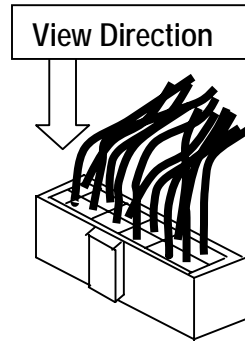
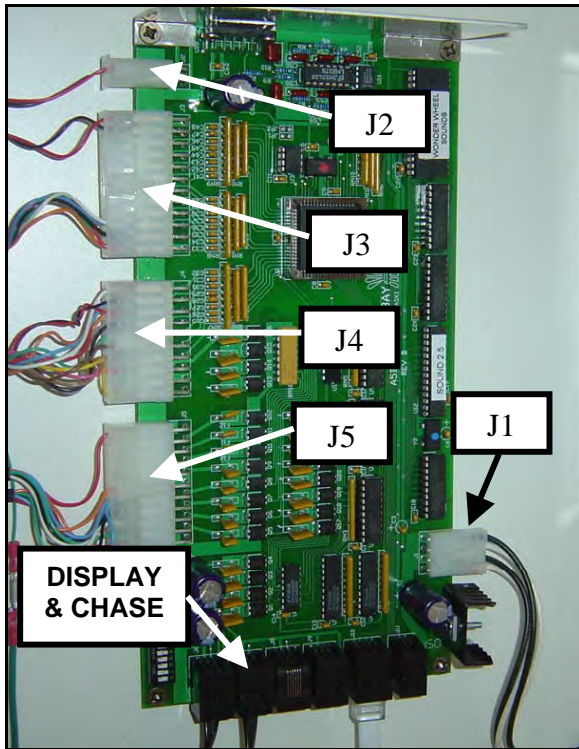
NOTE: *If swapping the circuit board with a spare Gen 5 board for testing purposes, be sure to also swap out the software chip. Use extreme care to prevent static electricity and to prevent bending socket pins.*

4. Install the board and reconnect the wiring connectors, black chase lighting cables and the white display cable.

5. Re-test the game to insure everything is working properly.



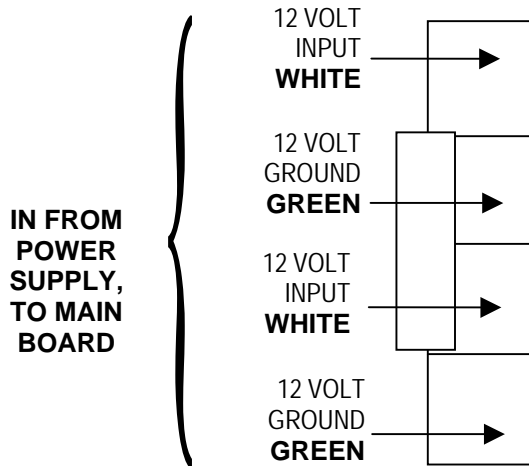
ELECTRICAL DRAWINGS SECTION



All connector drawings are as Viewed from the pin out position.

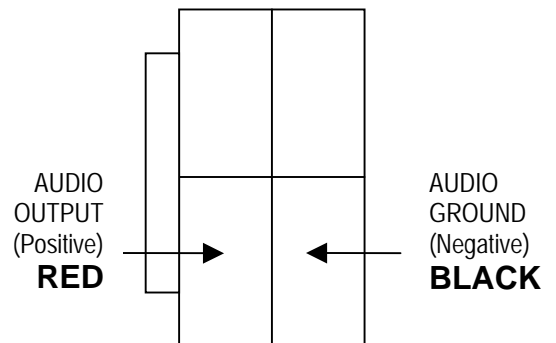
12 Volt Jumper Cable (J1) Connector

PIN – OUT



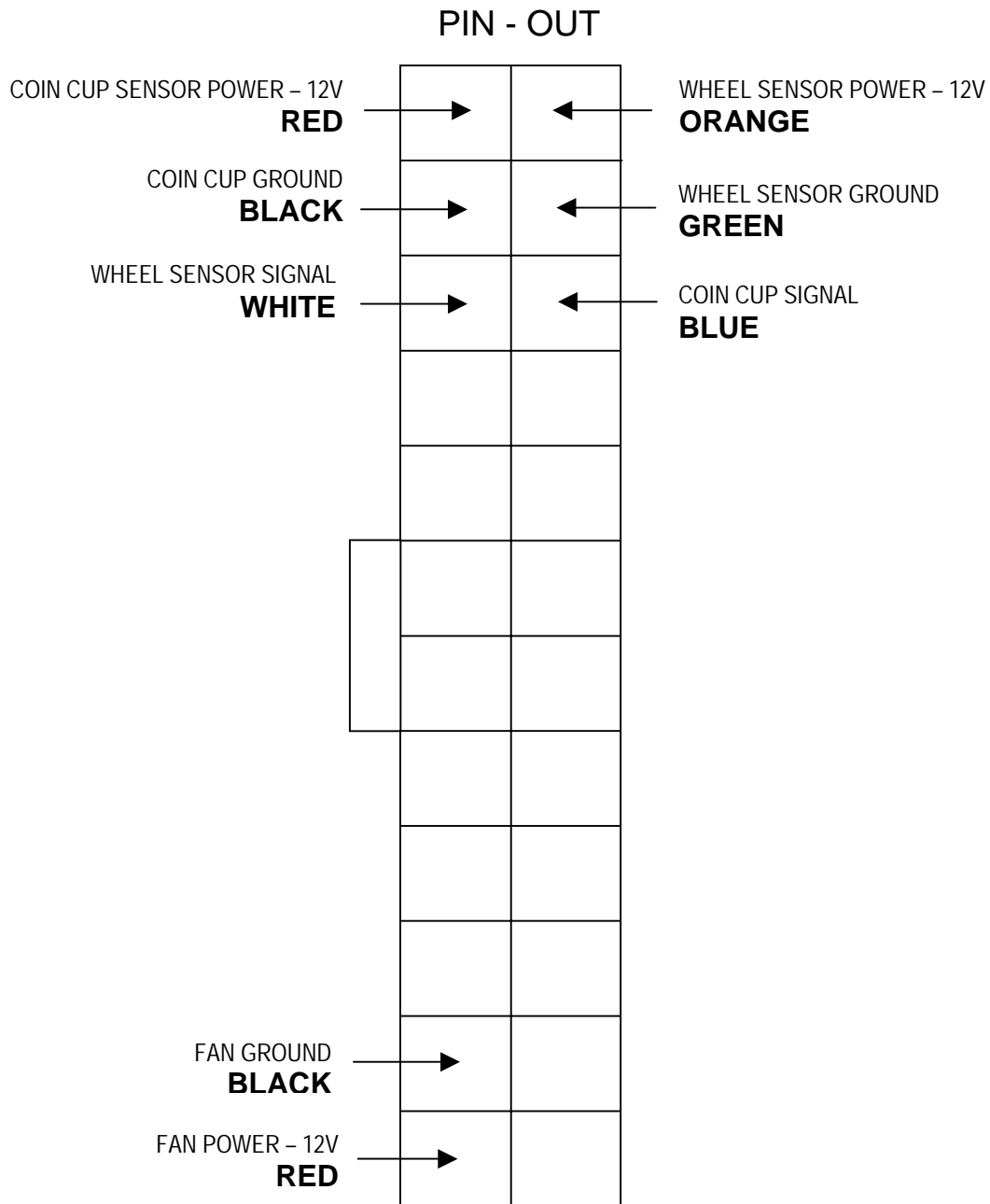
Volume Cable (J2) Connector

PIN – OUT





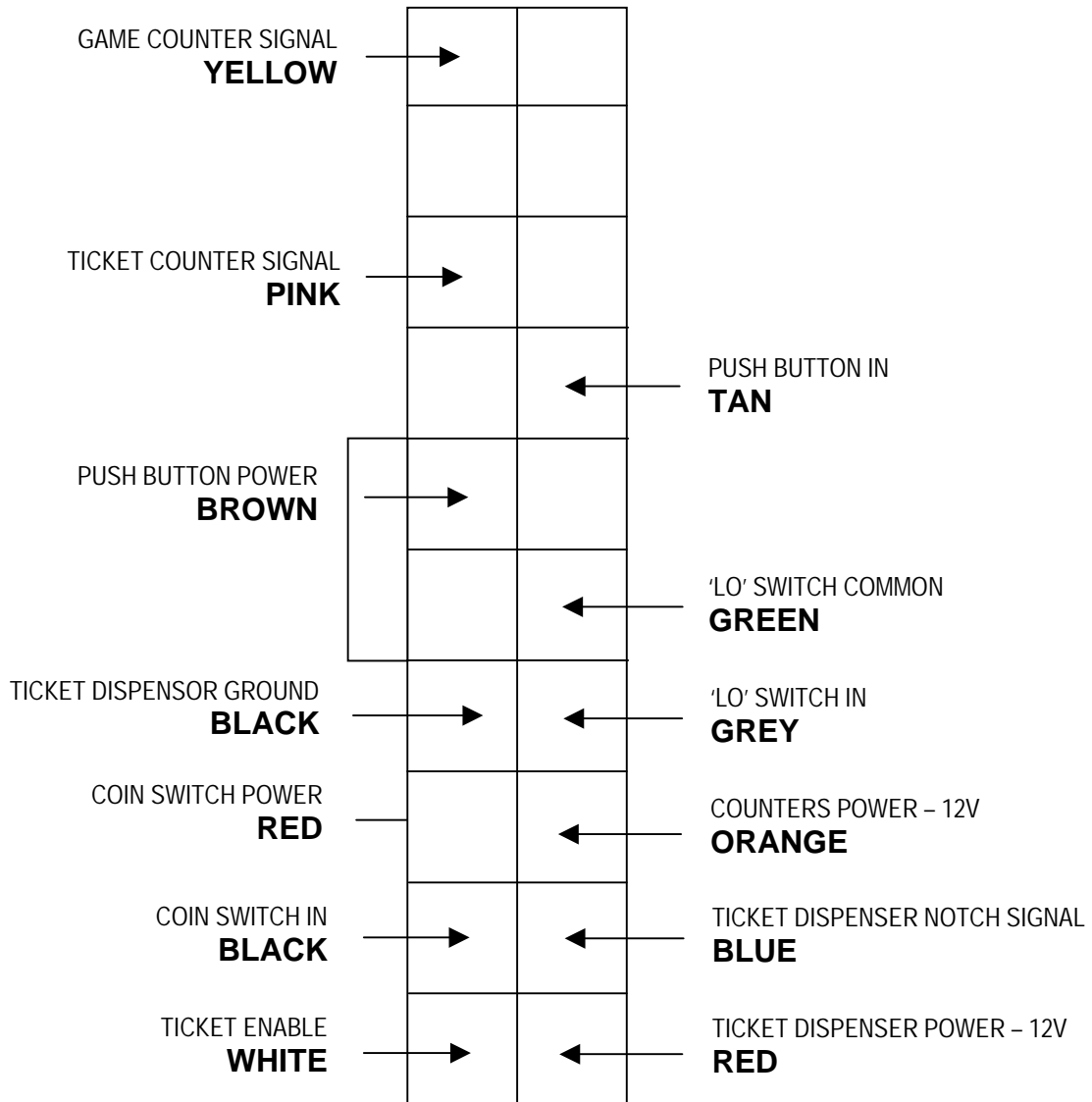
Sensor Cable (J3) Connector





Jumper (J4) Connector

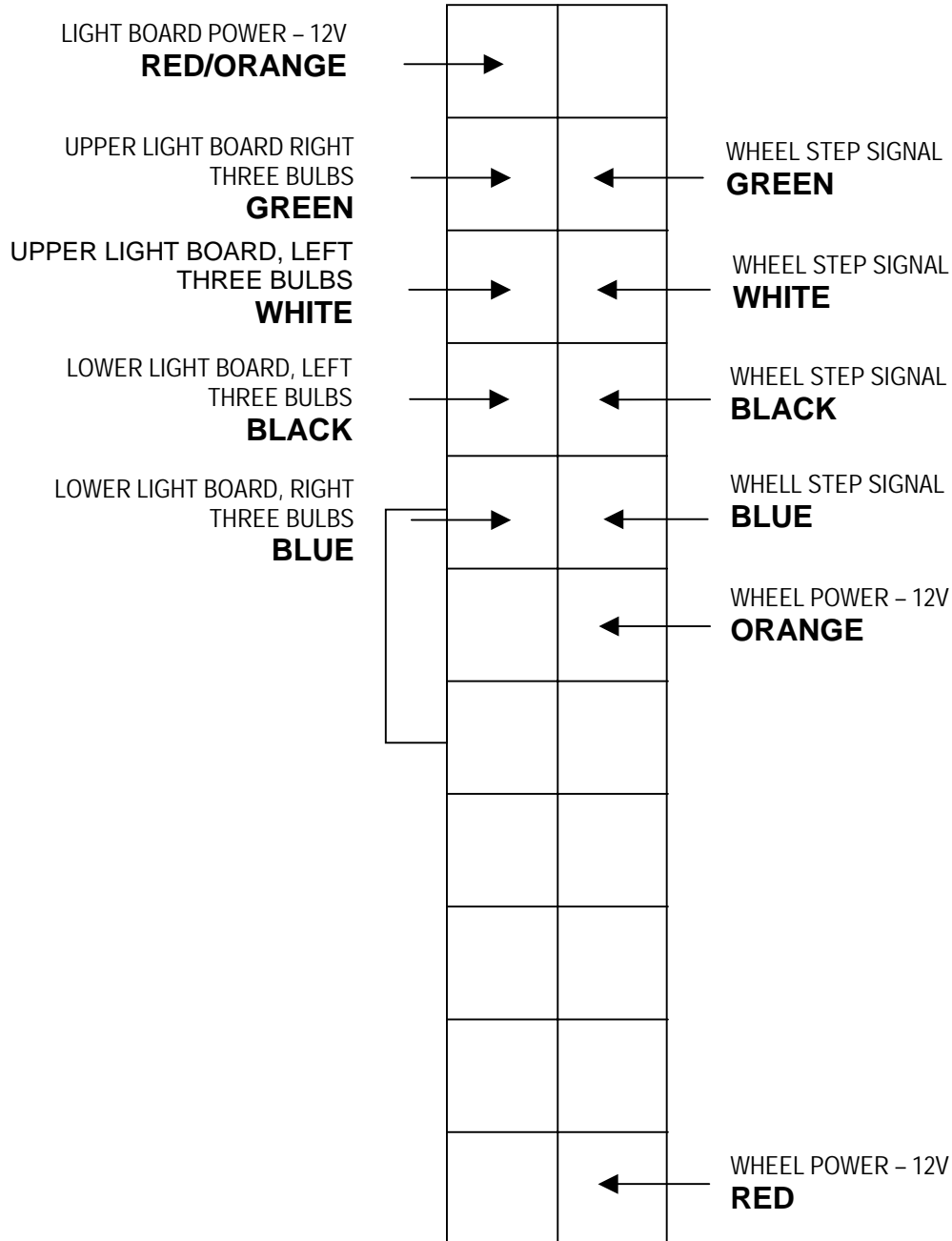
PIN - OUT





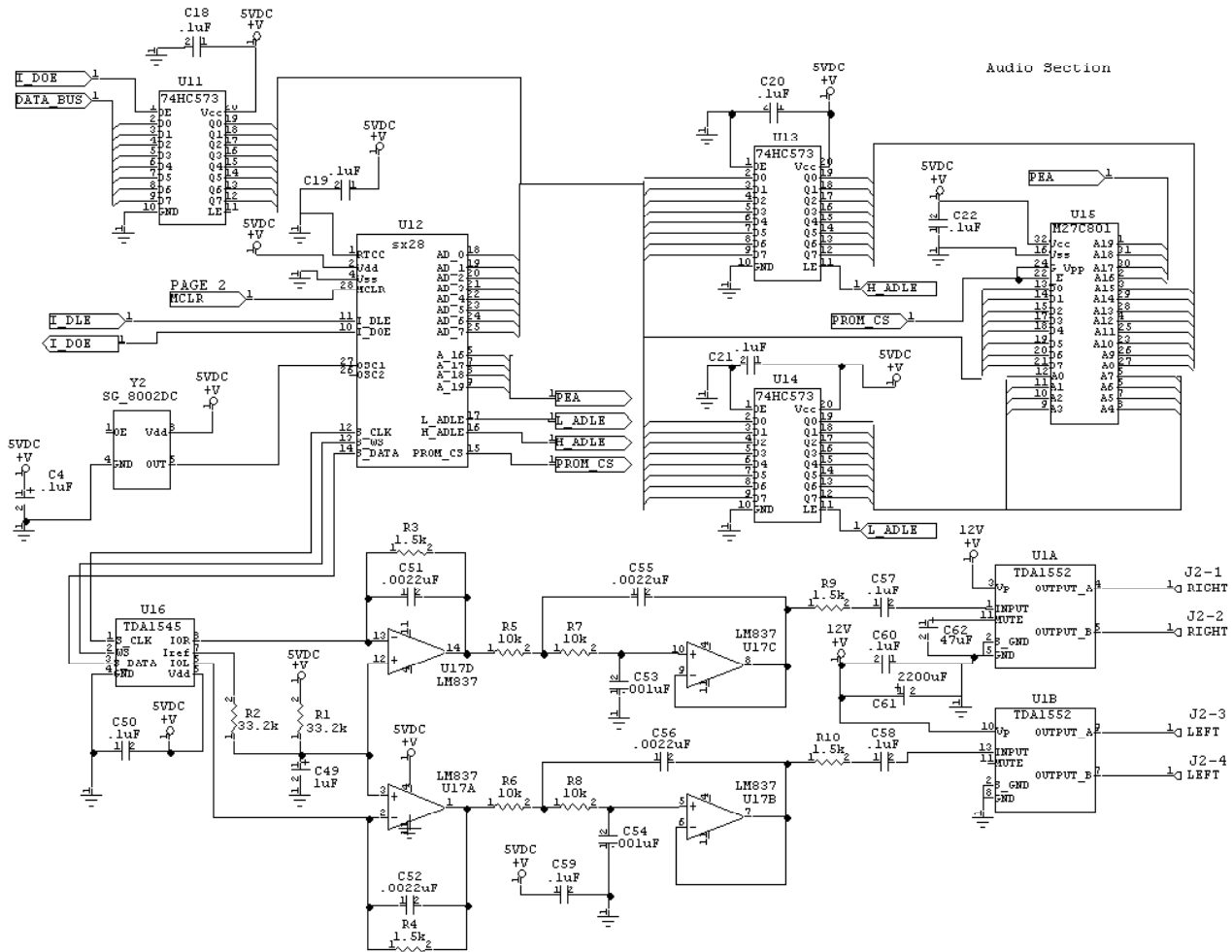
Jumper (J5) Connector

PIN - OUT



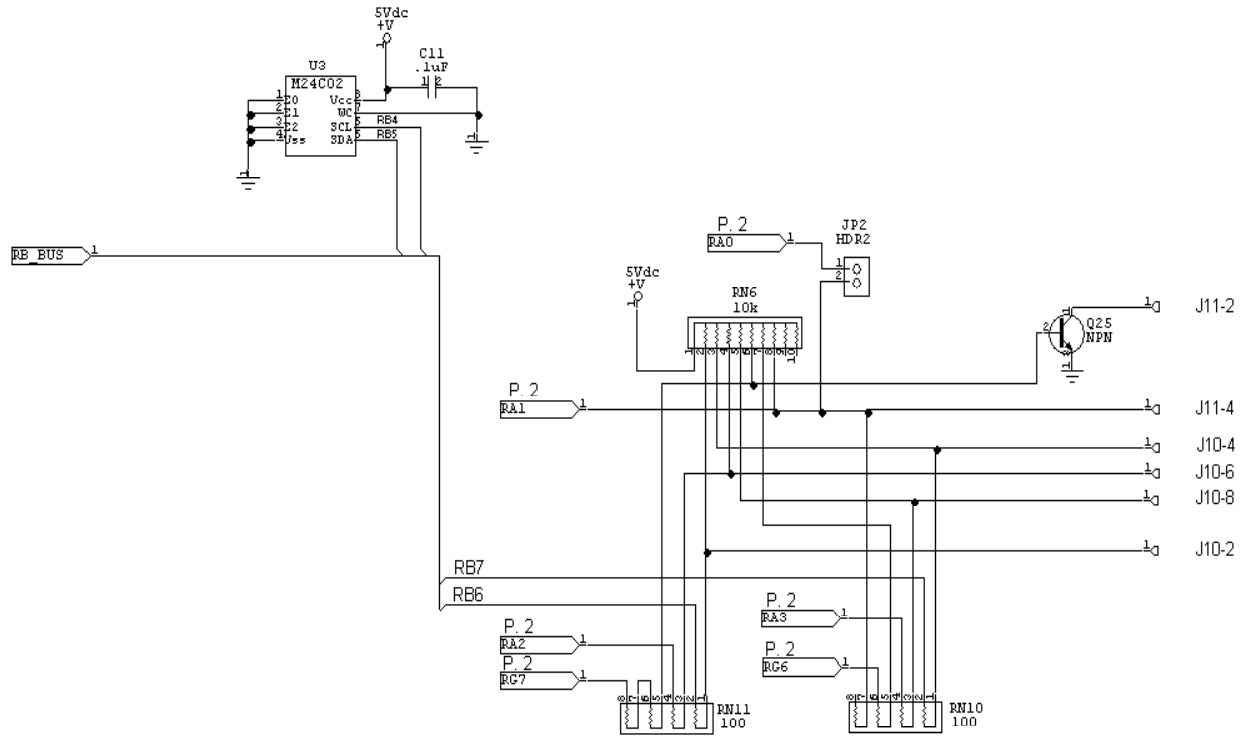


Gen 5 Main Board Schematics



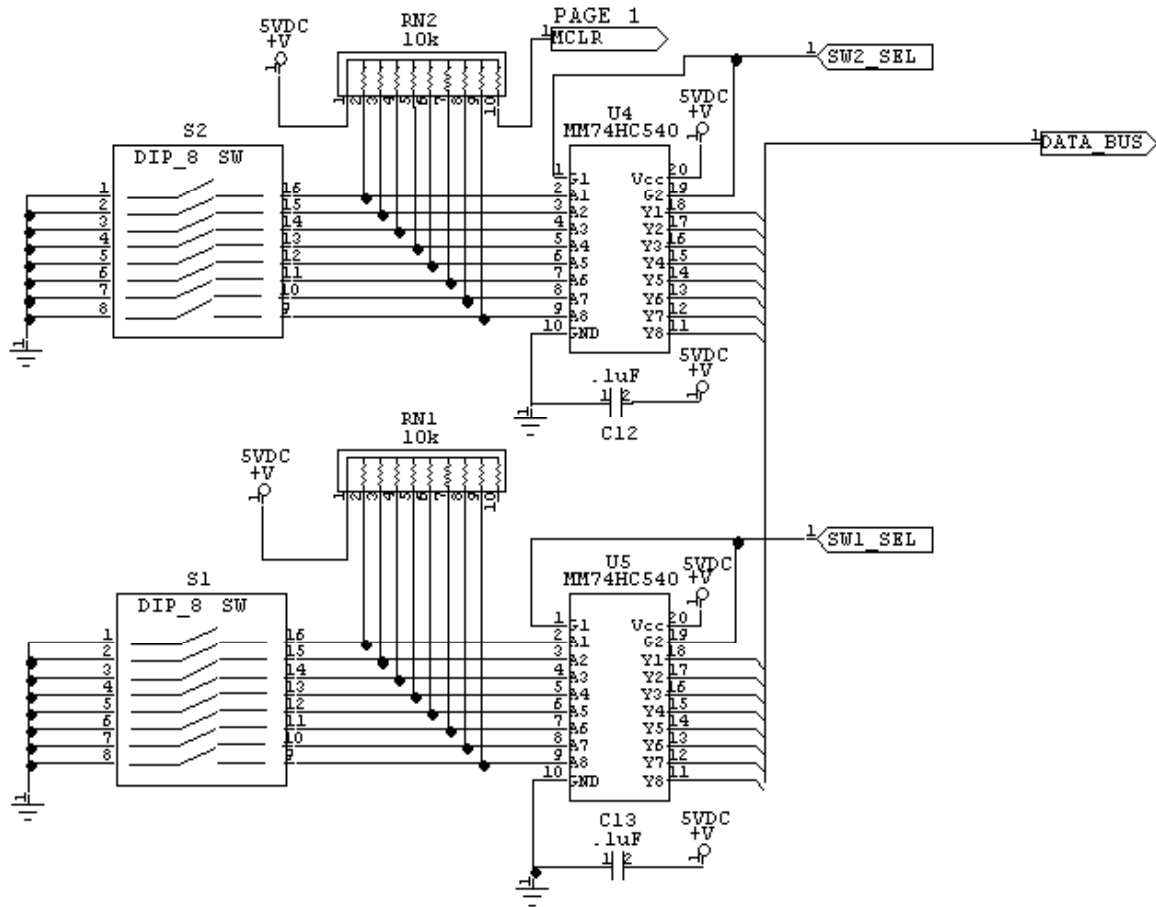


Communications – Serial EEprom



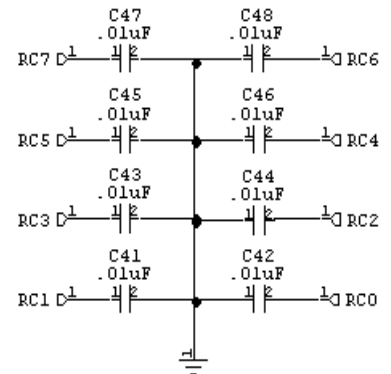
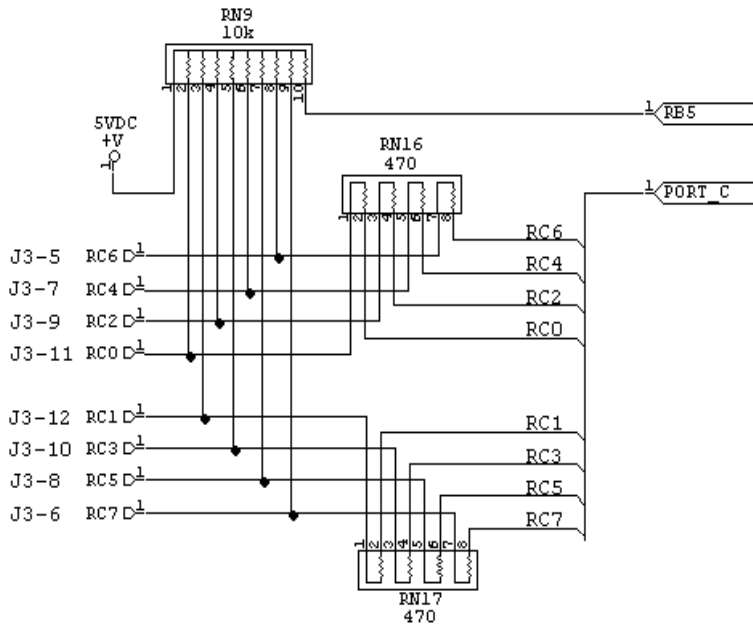
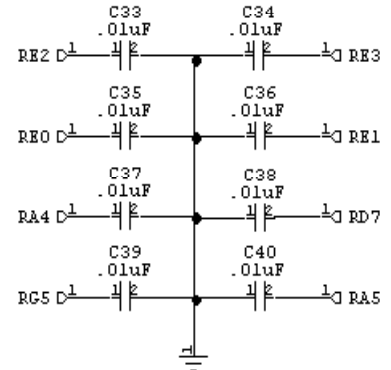
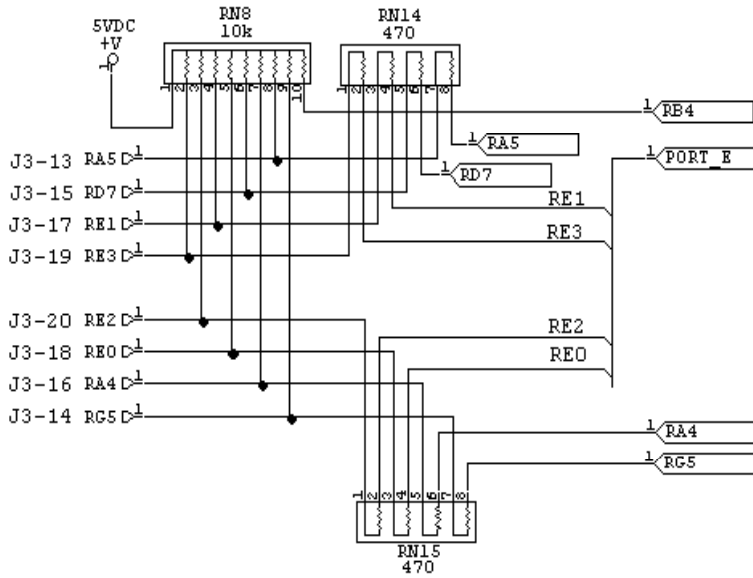


Input Section A – Configuration Switches



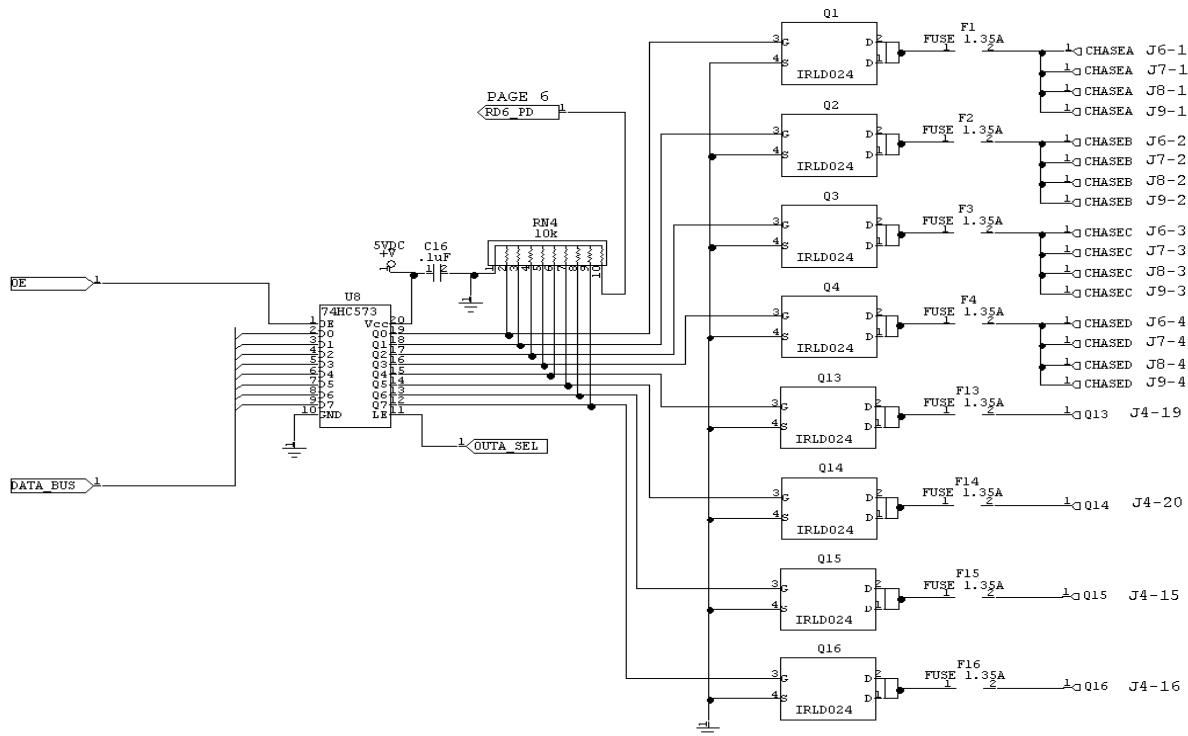


Input Section B – Inputs RE, RC



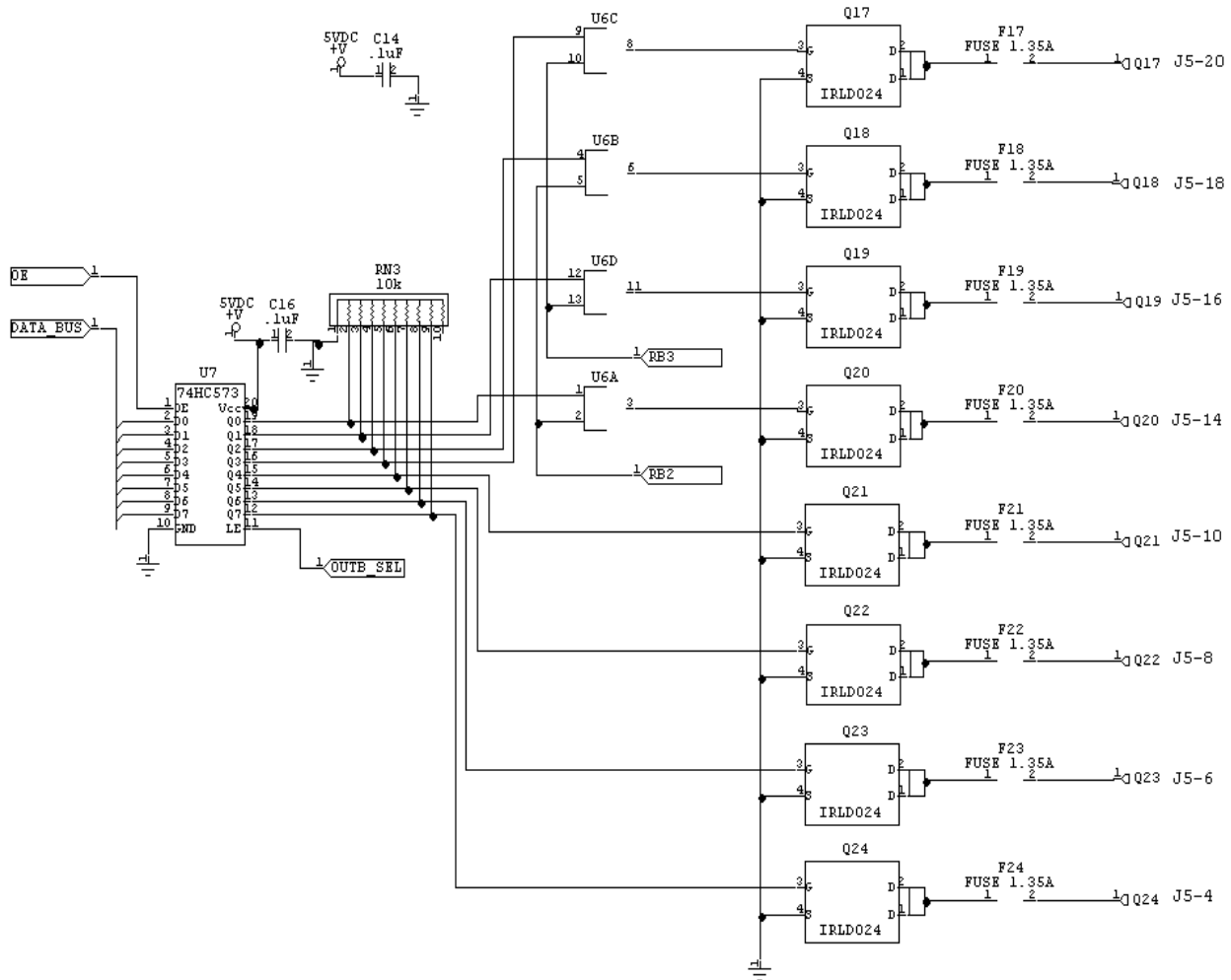


Output Section A – Chase Lights, Q13 - Q16



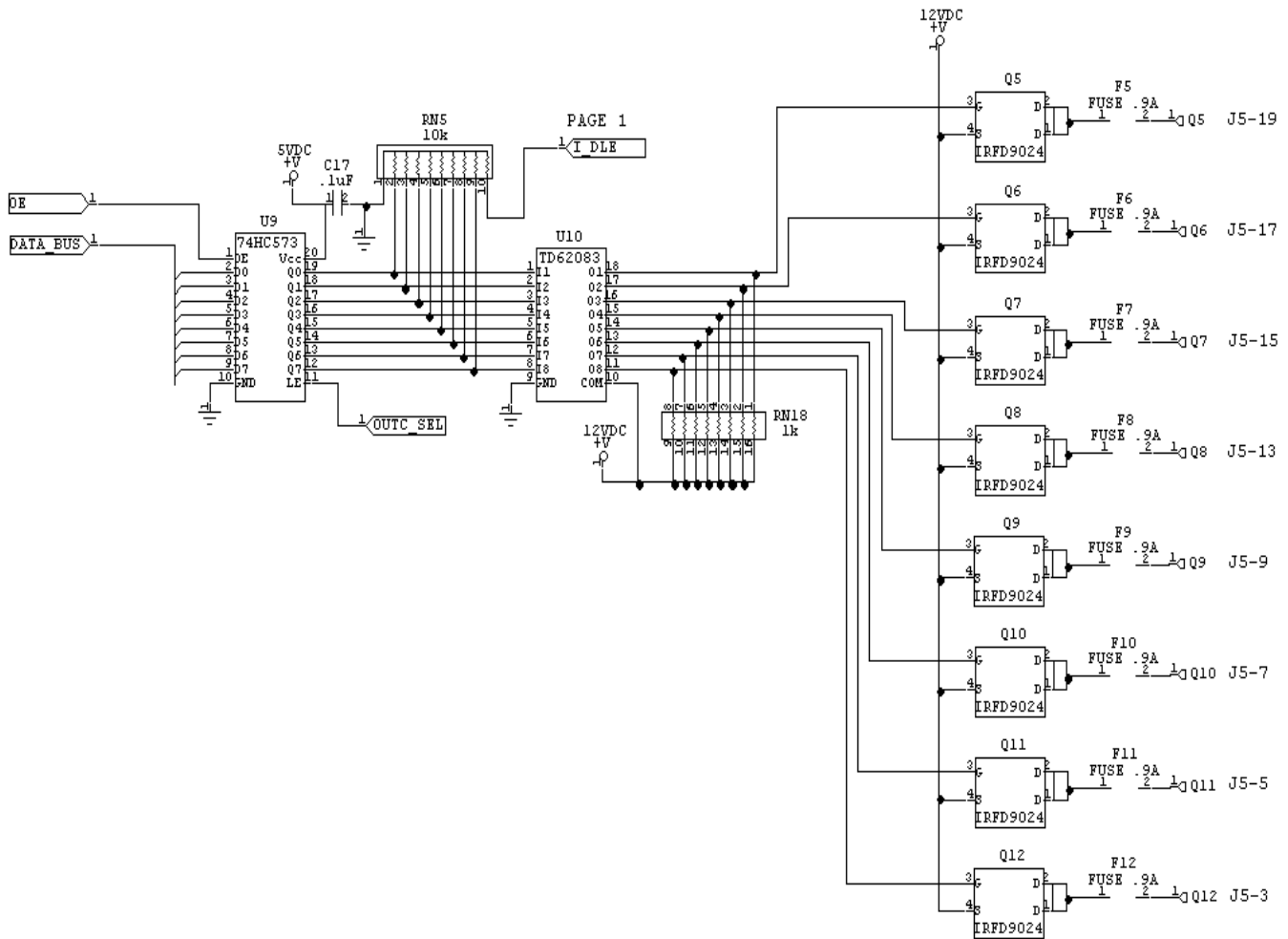


Output Section B – Q17 – Q24



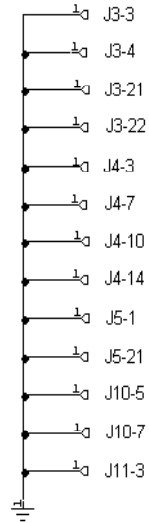
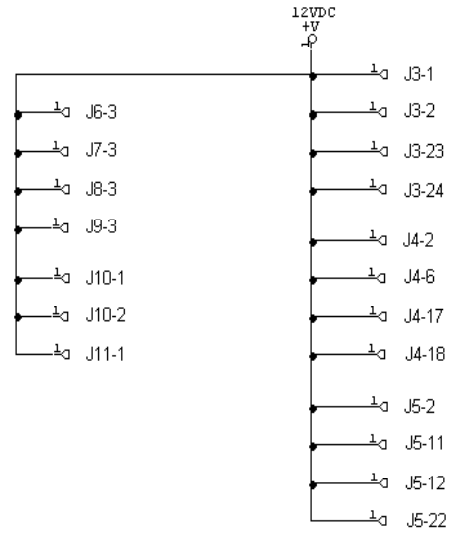
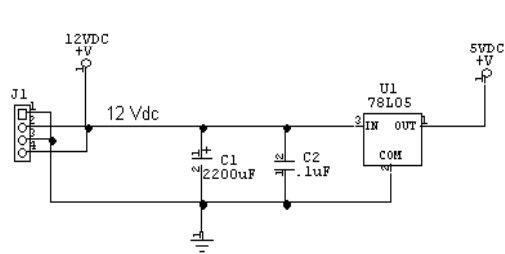


Output Section C – Q5 – Q12



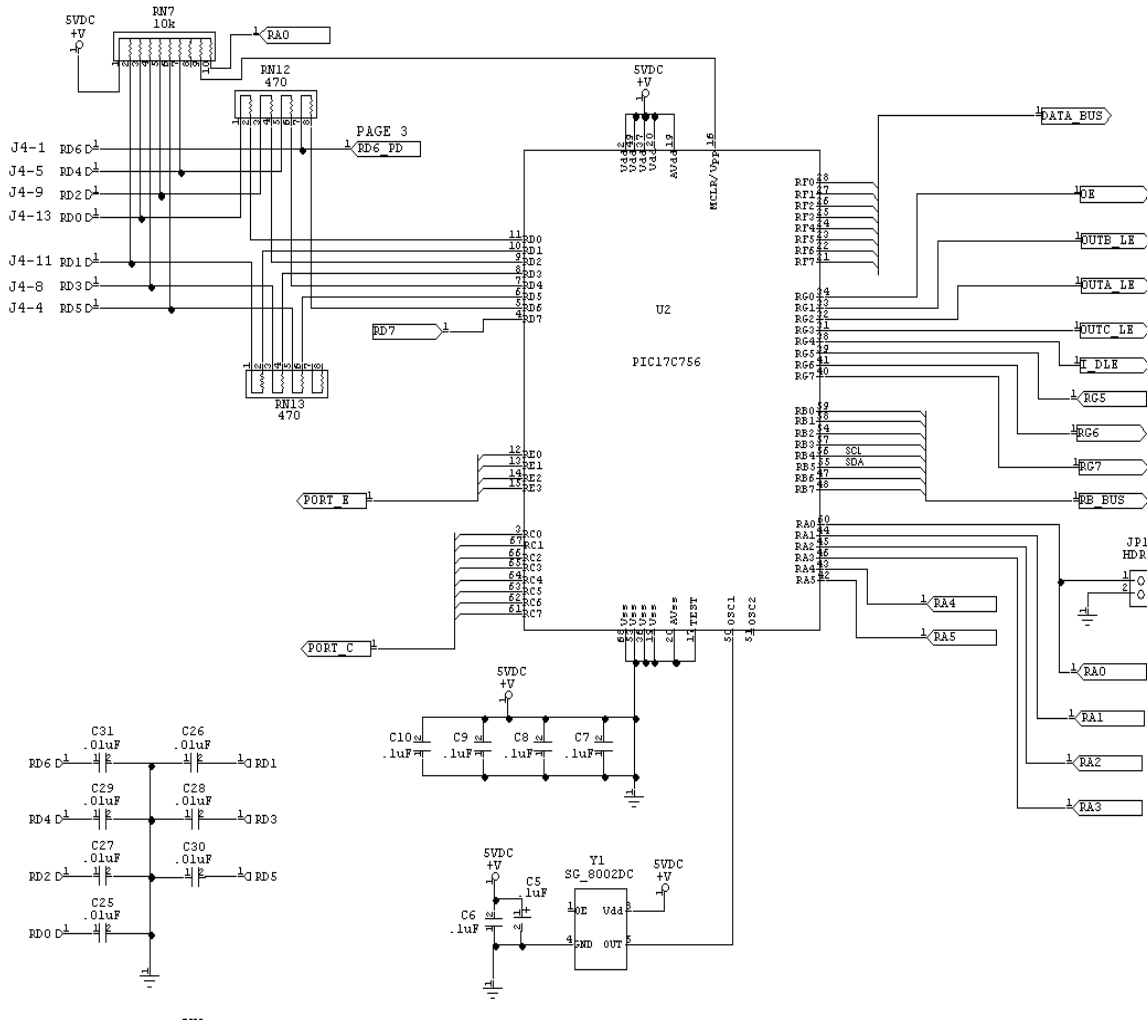


Power Section





Processor Section – Input RD





SPARE PARTS – WONDER WHEEL

Always use genuine Bay-Tek replacement parts. For 24 hour pricing and ordering visit our web site at www.bay-tek.com.

Description	Part #
WHEEL FACE (RED 5 9/16" – 4 PER	A5AC5033
WHEEL FACE (YELLOW 7/16" – 2 PER.....	A5AC5034
WHEEL FACE (BLUE 4 14/16" – 1 PER	A5AC5035
WHEEL FACE (BLUE 4" – 2 PER	A5AC5036
WHEEL FACE (GREEN 4 14/16 " – 1 PER.....	A5AC5037
WHEEL FACE (GREEN 3 1/4" – 1 PER.....	A5AC5038
LEFT SIDE OF WHEEL.....	A5AC5031
RIGHT SIDE OF WHEEL W/ TAB	A5AC5032

GRAPHICS

SIDE DECAL (WW)	A5AC5037
CRADLE SIDE DECAL (WW).....	A5DC5038
FRONT DECAL (WW)	A5DC5039
MARQUEE, SCORE GLASS.....	A5FP5020
FRONT TOP PANEL (WW)	A5FP5021
OVAL SET OF NUMBERS FOR WHEEL.....	AADC5020
BONUS LABEL (3/4" X 2 1/8").....	A5DC5020-BONUS
ARROW LABELS	A5DC5036

BELTS

BELT 2 1/2" X 35 7/8" (WW)	A5BE5022
BELT DRIVE, GREEN (WW)	A5BE5021
BELT KEVLAR STP MTR (WW).....	A5BE5020

MISC. PARTS

CASH BOX PLASTIC	A5CB2700
ANTI-COIN TRIANGLE.....	A5BU5021
SWITCH, LOW TICKET	A5SW0003
SWITCH, INTERLOCK	A5SW5020
SOFTWARE, PROGRAM	AAMC-WW/5
COIN MECH SLIDE ASSY. (WW)	AACM5020
HAS THE WOOD AND BRACKETS. WITHOUT COIN MECH	
BRACKET BELT DRIVE (WW).....	A5BK5029
COVERS THE GREEN BELT	
COIN ENTRY, CHROME (WW/LXI)	A5EN5020
PLUNGER W / SPRING	AAPL1000
COIN FUNNEL.....	A5FU0001

BOARDS

LIGHT BULB BOARD	AABD2705
COUNTER DISPLAY BOARD	AABD5027
TICKETS DISPLAY BOARD.....	AADB2603
CONVEYOR CHASELIGHTS	AACL9095



WHEEL PARTS

TUBE SPACERS	AATU5020
POSTS FOR WHEEL	A5PO5020
SENSOR, COIN CUP ASSY. (WW)	AACC5020
PCB- COIN SENSOR (EMMITER)	AABD5022
PCB- COIN SENSOR (DETECTOR)	AABD5023
DIODE INFRARED EMMITTER	A5DI1300
DIODE INFRARED DETECTOR	A5DI1310
RAINBOW WHEEL -PLASTIC ONLY	AAWH5025
ASSY. W/ WHEEL ASSY.WOOD+MOTOR	AAWH5020
WHEEL MOTOR ASSY.W/SENSOR	AAMO5025
WHEEL MOTOR REPLACEMENT	AAMO5020
SENSOR, WHEEL (WW).....	AASE5020
BLUE COVERS FOR SIDES OF THE WHEEL	A5CO5025
SMALL PULLEY ON MOTOR.....	A5PU5021
LARGE PULLEY ON WHEEL.....	A5PU5022

BELT PARTS

CONV. BOX 120 V COMPLETE-	AACC5025
INCLUDES MOTOR, GREEN BELT AND PULLEYS, WHITE BELT ON THE ROLLERS , BRACKET, HARDWARE, CHASELIGHTS, AND COVERS	
REPAIR KIT, WW CONVEYER BUSHINGS	AARE5020
INCLUDES: 1 GREEN BELT, 4 BUSHINGS, SUPER LUBE, 2 SHAFTS	
SHAFT FOR BELT 6 1/4" X 1/4"	A5RO5020
SHAFT FOR BELT 4 3/4" X 1/4"	A5RO5021
SHAFT FOR WHEEL 1/4" X 6"	A5SH5020
BUSHING NON-STATIC RULON	A5BU5020
ROLLERS (4 PER GAME).....	A5RO5022
MOTOR 120V CONVEYER.....	A5MO5022
RED COVER FOR LEFT SIDE OF BELT	A5AC5040
RED COVER FOR RIGHT SIDE OF BELT	A5AC5041
UPPER BRACKET FOR WHITE BELT	A5BK5027
LOWER BRACKET FOR WHITE BELT.....	A5BK5028
PULLEY, COMES OFF MOTOR	A5PU5024
PULLEY - DRIVES SHAFT WHITE BELT	A5PU5025



WARRANTY INFORMATION

Bay-Tek, Inc. warrants to the original purchaser that the game will be free of defects in workmanship and materials for a period of six months from the date of installation.

Bay-Tek, Inc. will, without charge, repair or replace at its option defective product or component parts upon notification to the factory service department. Serial number identification will be required for warranty consideration.

Warranty replacement part(s) will be shipped immediately via ground service, along with a Return Material Authorization (RMA) number for the return of the defective part(s). Defective parts must be shipped back to Bay-Tek, Inc. unless otherwise instructed.

This warranty does not apply in the event of any misuse or abuse of the product, or as a result of any unauthorized repairs or alterations. This warranty does not apply if the serial number is altered, defaced or removed from its original position.

Should your game need servicing, determine the serial number from the logic unit of the game, and call 920-822-3951 or email service@bay-tek.com

REPAIR OF NON-WARRANTY UNITS

Should your game need servicing, determine the serial number from the logic, and call 920-822-3951 or email service@bay-tek.com. An estimate of repair charges will be quoted to you for approval.

Proceed in one of the two following ways:

- Request immediate shipment of advanced replacement parts.
- Send in the defective unit for repair and return.

If advanced replacement(s) are requested, you will receive with your parts an RMA number for the return of the faulty part(s). You must return defective parts within 14 days to avoid additional charges.

Should you choose to return parts for repair, include the following:

- Name, address and phone number including area code.
- Game serial number information.
- A purchase order number, work order number or signed authorization to perform service.

Repair and Return parts will be shipped back using the same mode of transportation under which they were received. Repairs are warranted for a period of thirty (30) days from the date installed into service.

For future reference;

Date of Installation _____

Serial number _____

Installed by _____

