

TROUBLESHOOTING GUIDE AND DIAGNOSTIC SECTION

<p>Balls misfire or shoot 2 at a time.</p>	<ul style="list-style-type: none"> a. Not enough balls in flex tube. b. Balls stuck in return chute or flex tube. c. Ball height in flex tube not adjusted correctly. d. Ball gate (cup lifter) broken. e. Pawl spring is not holding the ball above lit cylinder. f. Balls worn. Does not have a tight seal in cannon. 	<ul style="list-style-type: none"> a. Check both sides of game. Ensure both sides have at least 25 balls. b. Check for debris in ball return chute. Ensure lifter is operating correctly. c. Look down barrel of gun. The ball to be fired next should be directly in front of nozzle. This position can be adjusted by bending flex tube. If ball is too high – bend flex tube. If ball is too low – straighten flex tube. d. Ensure cupped ball gate has 2 rods coming down. One attached to lift cylinder, one as a guide. If one is broken, replace gate. (A5GA7100) e. Replace pawl and spring. (A5PA7100 and A5SP7100) f. Old balls do not shoot properly. Replace balls. (AABALL-ALL)
<p>Ball lift cylinder is not lifting up all the way.</p>	<ul style="list-style-type: none"> a. Water and/or Oil in the air line. b. Pawl / Spring combination jamming balls. c. Defective ball lift cylinder. d. Mac Valve improperly set. e. Defective Mac Valve. 	<ul style="list-style-type: none"> a. Turn off air. Remove air hoses to ball lift cylinder. If water drains out, an air dryer/ filter must be added to air system. b. Replace pawl (A5PA7100) and/or spring.(A5SP7100) c. Replace ball lift cylinder. (A5BL7101) d. To increase lift up speed – Follow the air line from the bottom of the lift cylinder to the blue Mac valve. Loosen the lock nut on the screw that corresponds to this air line. Increase air flow by turning screw clockwise. Adjust slightly, firing the cannon 3 times before further adjustments. Once set correctly, re-tighten lock nut. e. Replace Mac Valve. (A5VA7103)

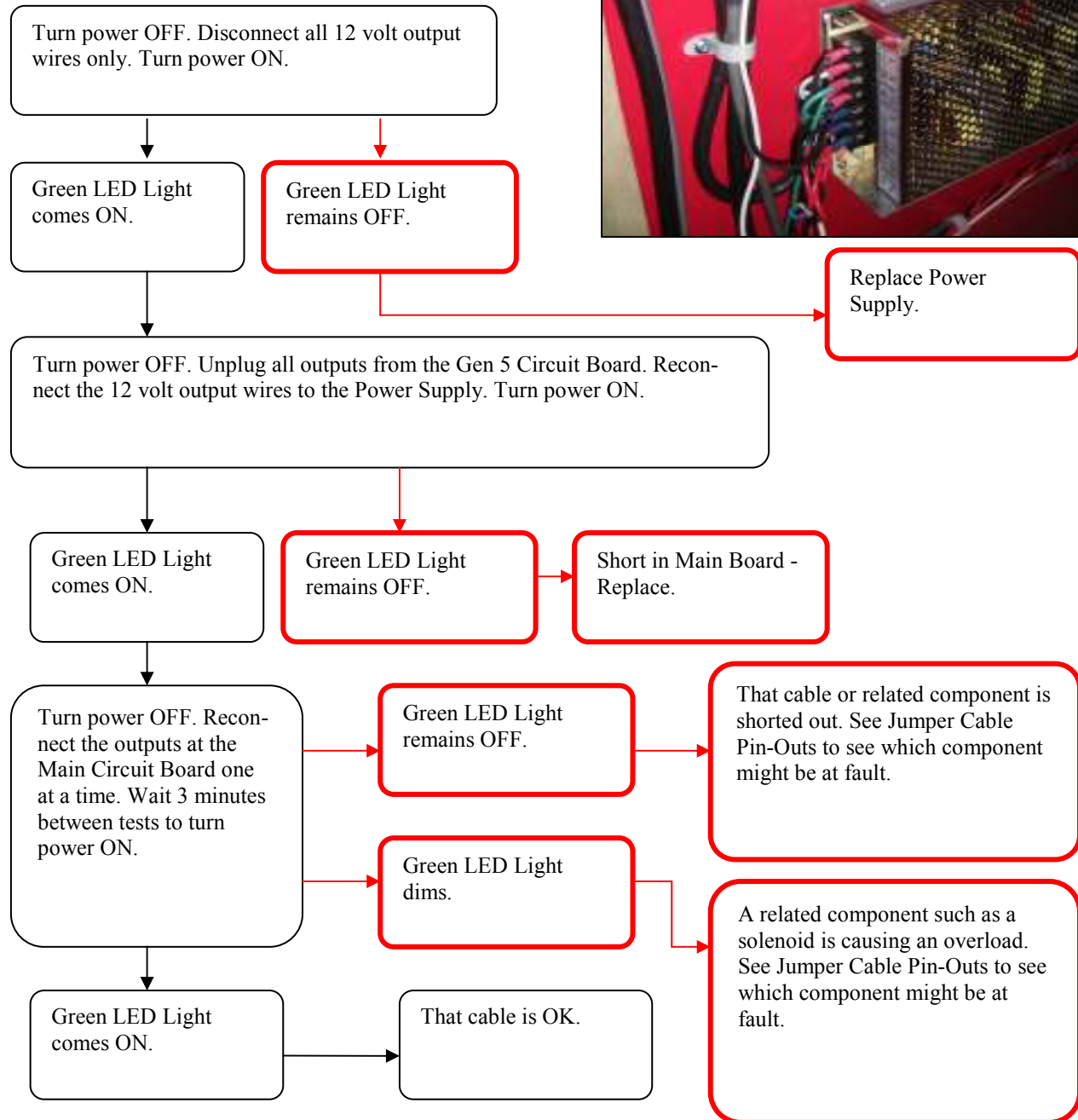
TROUBLESHOOTING GUIDE AND DIAGNOSTIC SECTION

<p>Ball lift cylinder is not dropping down all the way.</p>	<ul style="list-style-type: none"> a. Water and/or Oil in the air line. b. Ball gate (cup lifter) broken. c. Defective ball lift cylinder. d. Mac Valve improperly set. e. Defective Mac Valve. 	<ul style="list-style-type: none"> a. Turn off air. Remove air hoses to ball lift cylinder. If water drains out, an air dryer/filter must be added to air system. b. Replace ball gate. (A5GA7100) c. Replace ball lift cylinder. (A5BL7101) d. To increase down speed – Follow the air line from the top of the lift cylinder to the blue Mac valve. Loosen the lock nut on the screw that corresponds to this air line. Increase air flow by turning screw clockwise. Adjust slightly, firing the cannon 3 times before further adjustments. Once set correctly, re-tighten lock nut. e. Replace Mac Valve
<p>Tickets do not dispense.</p>	<ul style="list-style-type: none"> a. Ticket tray empty due to faulty low ticket sensor switch or broken/loose wires. Sensor switch stuck or switch wire bent out of position. b. Faulty cable to dispenser. c. Dirty opto-sensor or paper dust buildup in ticket dispenser. d. Notch on tickets too shallow. e. Ticket dispenser faulty. f. Main circuit board malfunction. 	<ul style="list-style-type: none"> a. Fill ticket tray. Replace low ticket sensor switch. Repair wiring. Clean ticket tray of dirt and loose tickets or debris. Bend switch wire to correct position under tickets. b. Check wiring continuity from dispenser to main board. Check for pinched, broken or disconnected wires. Replace as necessary. c. Clean with compressed air and if necessary wipe sensor with isopropyl alcohol on a cotton swab. d. Flip tickets and load upside-down to have large cut notch toward opto sensor. e. Replace dispenser with spare working dispenser. f. Replace main board with a spare Gen 5 board if possible to isolate the problem to the main circuit board.

Power Supply Troubleshooting

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.



Service and Repair Section



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.



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

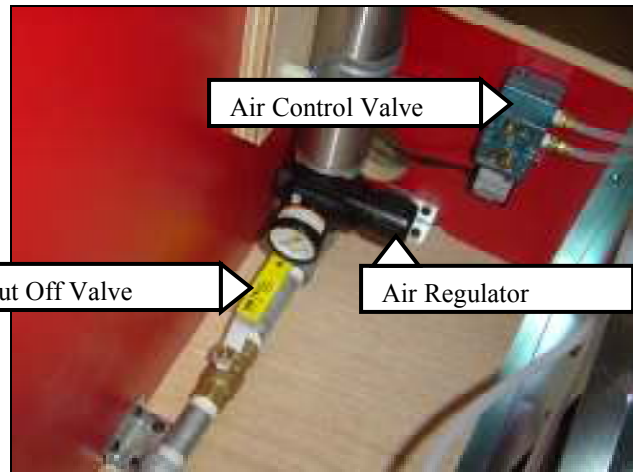
Shut off power to the game at the power strip located in the rear 'target' cabinet.

1. Remove the two wire clips from the solenoid.
2. Remove the hex nut holding the solenoid to the quick release valve.



3. Install the new solenoid and re-attach the wires. It doesn't matter which wire is attached to which terminal.

Turn on the power and test the unit.



1. Shut OFF air pressure at the air shut-off valve or the air regulator. Release system pressure by firing the guns.
2. Disconnect the three air lines in to and out of the control valve.
3. Disconnect the wiring connector from the solenoid. Remove the mounting screws and remove from the game.
4. Install the new plug, re-attached the wire connector from the solenoid and re-attached the air lines.
5. Return power and air pressure to the game and test by firing the gun several times to insure that the balls are being loaded properly into the lift tube.

Service and Repair Section

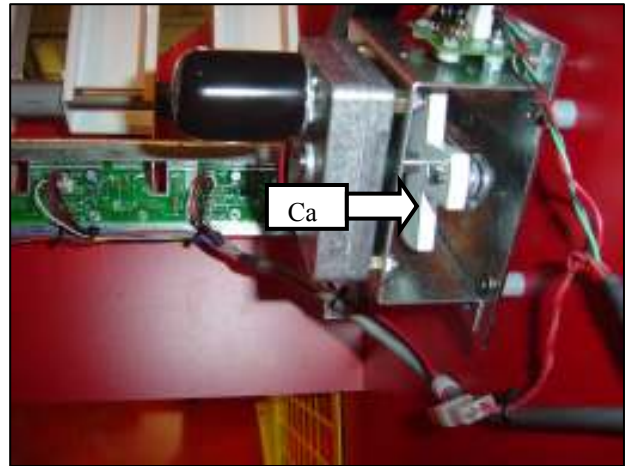
Ball Sorter Gear Motor

The ball sorter gear motor assembly, in the middle cabinet, oscillates the paddles for the ball return chutes to keep the balls from becoming jammed in the chutes. Replace as follows.



1. Remove the four bolts and washers from the two connector plates holding the front and middle cabinets together. Slide the front cabinet away from the middle cabinet slightly to gain access to the gear motor assembly.
2. Pull the two wires up out of the hole in the frame to expose the connector. Unplug the connector.
3. Remove the setscrew holding the connector cam assembly to the gearbox shaft and pull the cam off the shaft.
4. Remove the four locknuts that secure the gear motor assembly to the frame.
5. Install the new gear motor assembly with the four locknuts. The hole in the connector cam is flat on one side so the gearbox shaft may have to be rotated slightly to allow the cam to be installed. Secure with the setscrew.
6. Reconnect the wire connector.
7. Slide the two cabinets together, being careful not to pinch any wiring, and secure with the two connec-

Teeth Reset Gear Motor Replacement

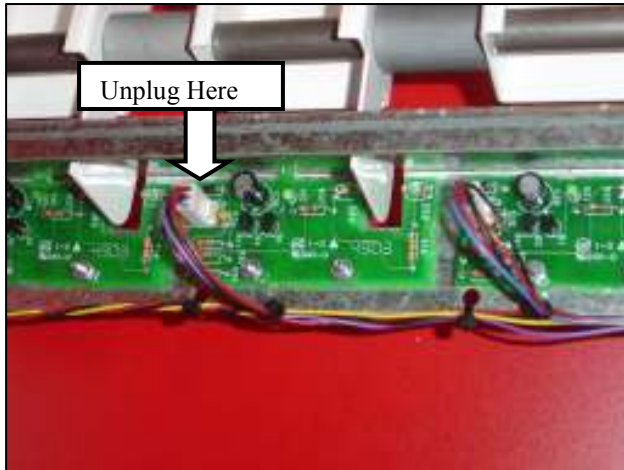


1. Open the access door in the rear cabinet and unplug the gear motor wiring at the connector.
2. Pull the tooth reset arm downward to manually rotate the connector cam to gain access to the setscrew. Loosen the setscrew and remove the cam from the shaft.
3. Remove the four locknuts mounting the motor/gearbox assembly in the mounting frame. Remove the gear motor assembly from the game.
4. Install the new gear motor and secure with the four locknuts.
5. Install the connector cam assembly onto the motor shaft and secure with the setscrew. The hole in the connector cam is flat on one side so the gearbox shaft may have to be rotated slightly to allow the cam to be installed. Secure with the setscrew.
6. Reconnect the wire connector.

Service and Repair Section - Circuit Boards

Target Score Sensors

The score sensors are mounted to a small circuit board and consist of an emitter and a detector on opposite sides of the target flag. To replace the sensor board.



1. Open the access door of the rear cabinet and unplug the sensor wiring at the connectors on the sensor circuit board.
2. Unbolt the sensor boards.
3. Replace the sensor boards and reconnect the wire cables.
4. Test the sensors by moving the tooth so the tooth flag no longer blocks the sensors and scores a hit.

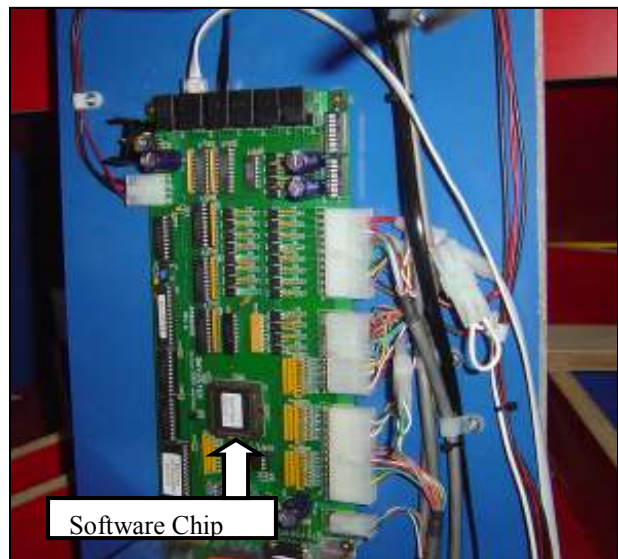
Main Circuit Board

Replacing the main Gen 5 circuit board.

1. Carefully unplug all wiring connectors.
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.

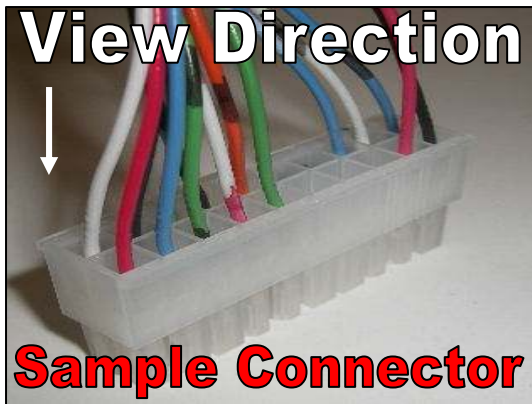
NOTE: If swapping the circuit board with a spare Gen 5 board for testing purposes, be sure to also swap out the software chip. Use extreme care to prevent static electricity and to prevent bending socket pins.

4. Install the board and reconnect the wiring connectors and the white display cable.
5. Re-test the game.



Important

Power must be OFF to the game before removing any cable from the main board. Turn OFF the power strip inside the game.

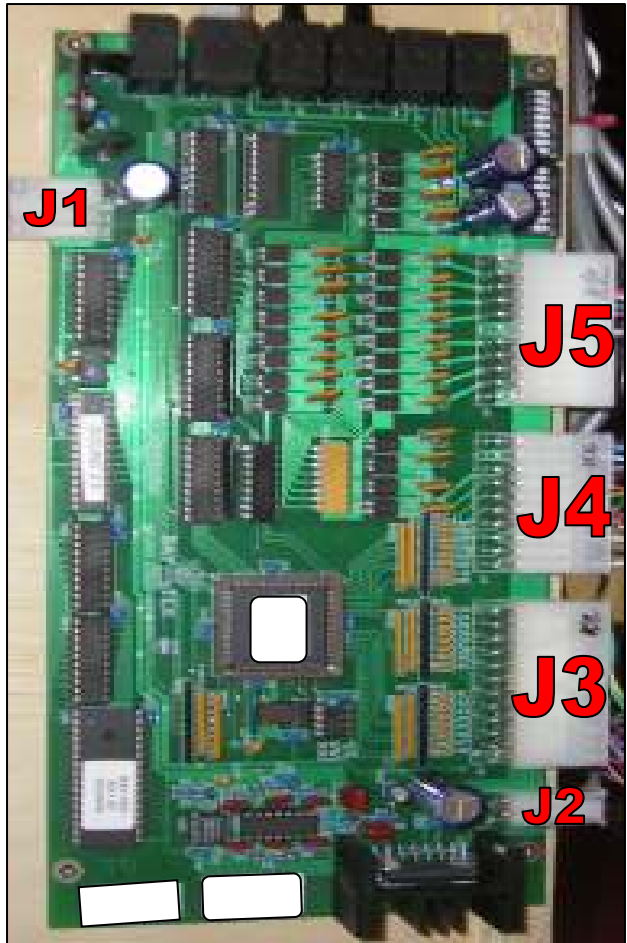


12. Volt Jumper Cable (J1)

BLK	RED	BLK	RED
12V Input	12V Ground	12V Ground	12v Input

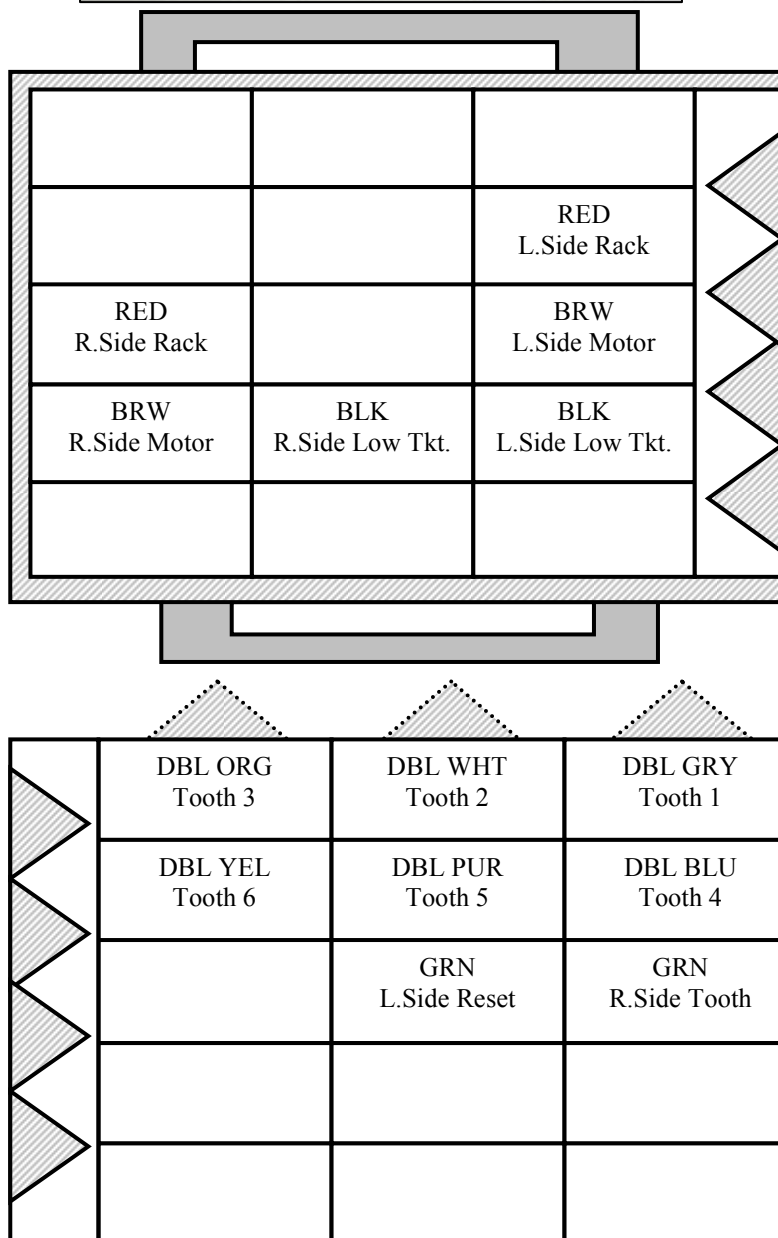
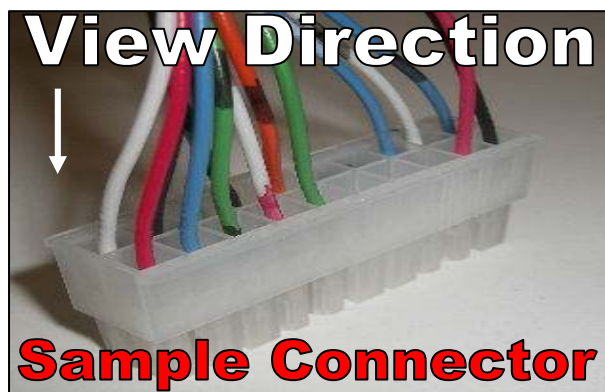
Volume Cable (J2) Connector

RED	GRN
Left Audio Output	Right Audio Output
BLK	WHT
Left Audio Ground	Right Audio Ground



(J3) Connector

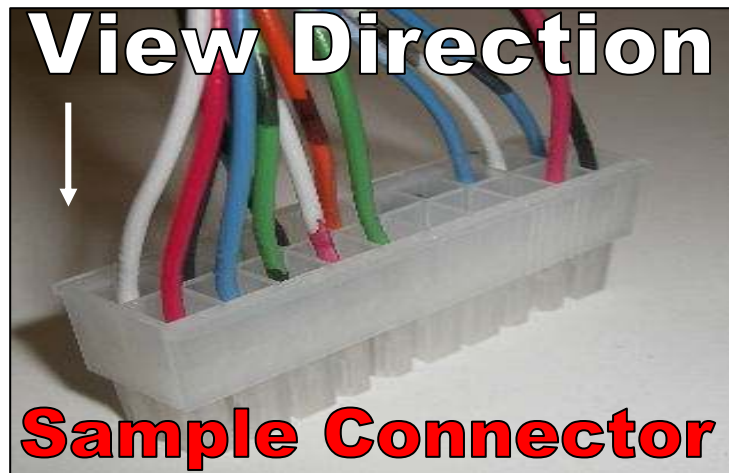
WHT L. Side Trigger Ground	GRN R. Side Trigger Ground
RED L. Side Trigger Input	BLK R. Side Trigger Input
WHT R. Side Low Ticket Signal	GRN L. Side Low Ticket Signal
TAN Unused	ORG Unused
GRY Unused	PNK Unused
RED Tooth #1 Input	WHT Tooth #2 Input
BLU Tooth #3 Input	BRW Tooth #4 Input
GRN Tooth #5 Input	BLK Tooth #6 Input
YEL R. Side Tooth Reset Motor Sensor Input	PUR L. Side Tooth Reset Motor Sensor Input



The cables and connectors used in the ramp “middle” section are universal therefore the number and color of wires does not matter. Match size of connector only. Below is a diagram showing the Inputs to that cable from the target cabinet.

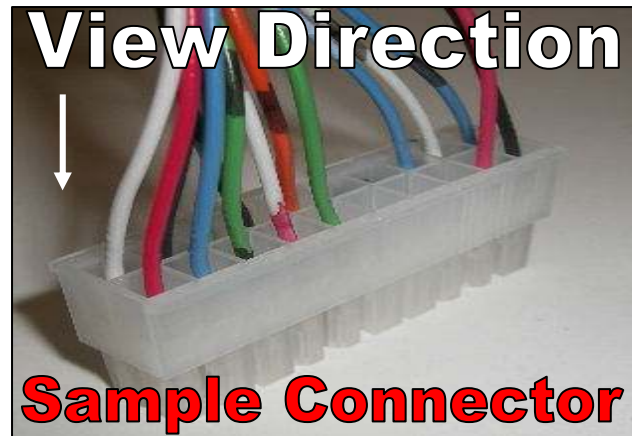
Jumper Cable (J4) Connector

BRW GameCounter Signal	
PNK Counter +12v ORG R.Side Coin Door +12v	
TAN Ticket Counter Signal	
	GRN L.Side Coin Door Ground
GRY L. Side Coin In	
GRY R. Side Coin In	GRN R.Side Coin Door Ground BLK L.Side Tkt.
DBL YEL's Low Ticket Grounds	BLU L.Side Tkt. Notch Signal
WHT L.Side Tkt. Enable	RED L.Side Tkt. +12v ORG L.Side Coin Door +12v
BLK R.Side Tkt. Ground	BLU R.Side Tkt. Notch Signal
WHT R.Side Tkt. Enable	RED R.Side Tkt. +12v

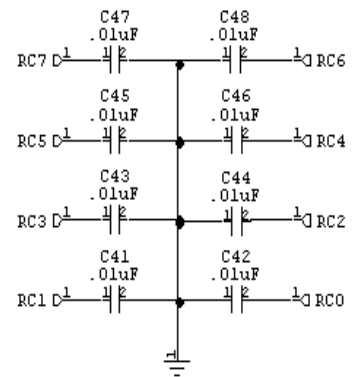
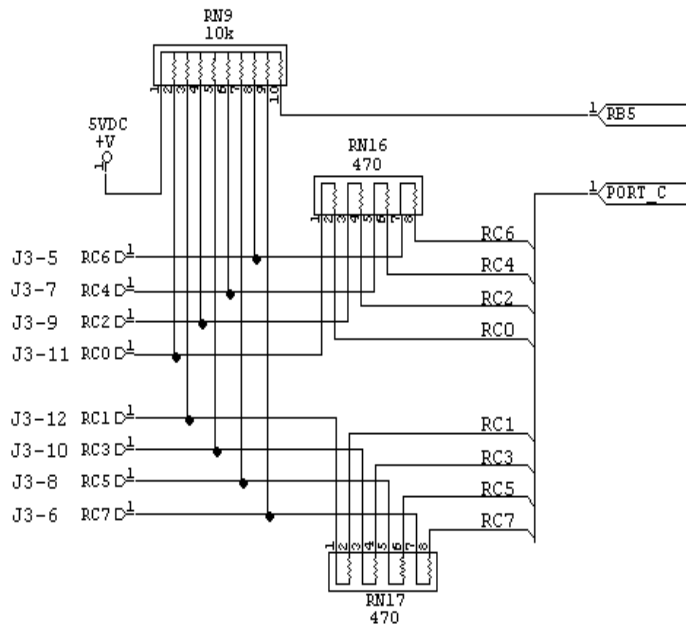
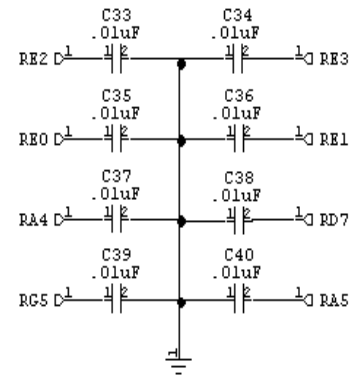
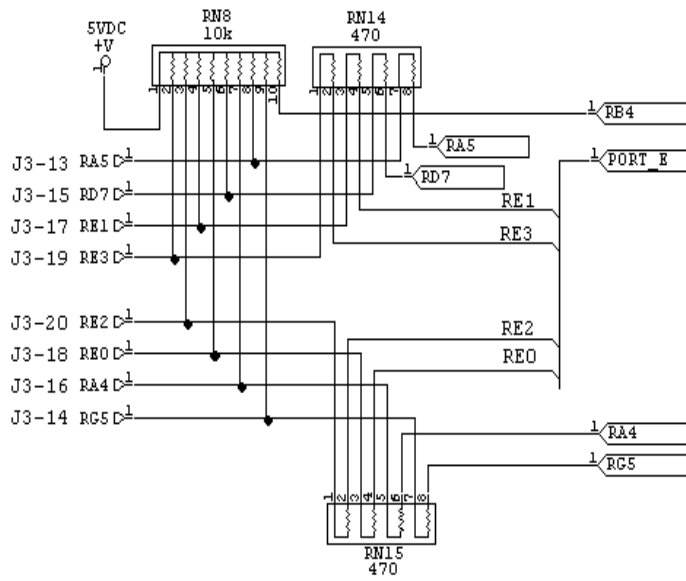


Jumper Cable (J5) Connector

RED Unused	ORG L.Side Tooth Reset Motor Output (inline fuse)
WHT Unused	GRY R.Side Tooth Reset Motor Output (inline fuse)
BLU L.Side Low Tkt. Light Output	PNK Unused
BRW R.Side Low Tkt. Output	TAN Unused
GRN Unused	BLK R.Side Lift Solenoid Output
BLK L.Side Teeth Sensor Enable	GRN R.Side Fire Solenoid Output
YEL R.Side Teeth Sensor Enable	BLK L.Side Lift Solenoid Output
PUR Unused	BRW L.Side Fire Solenoid Output



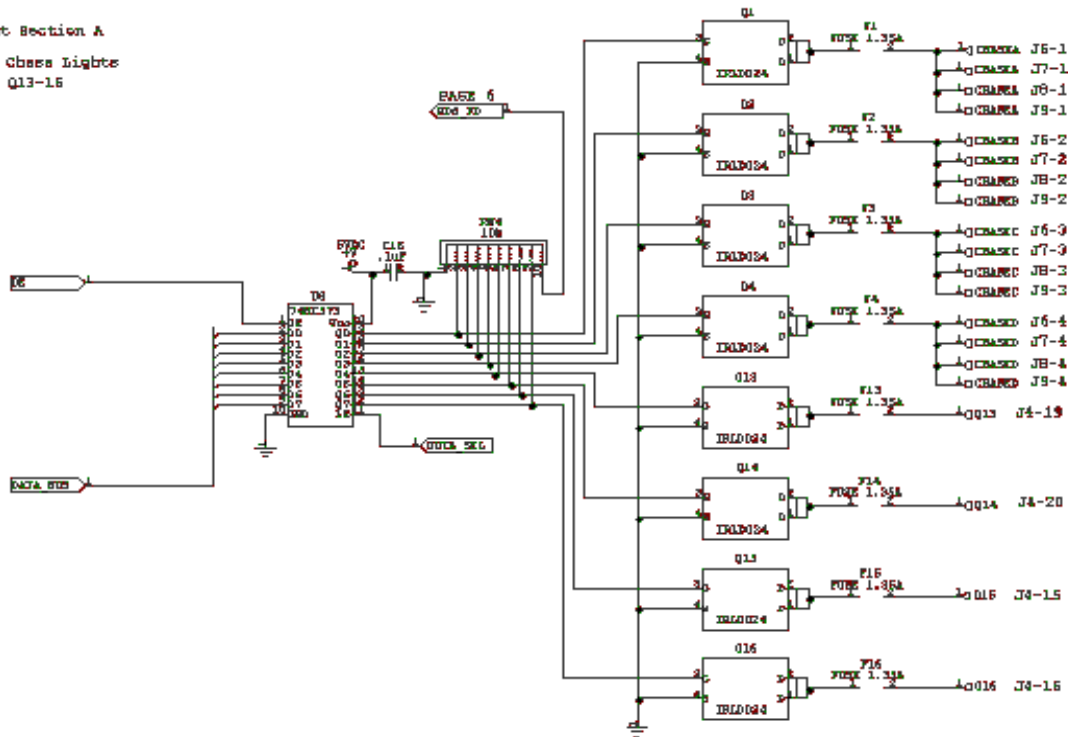
Input Section B - Inputs RE, RC



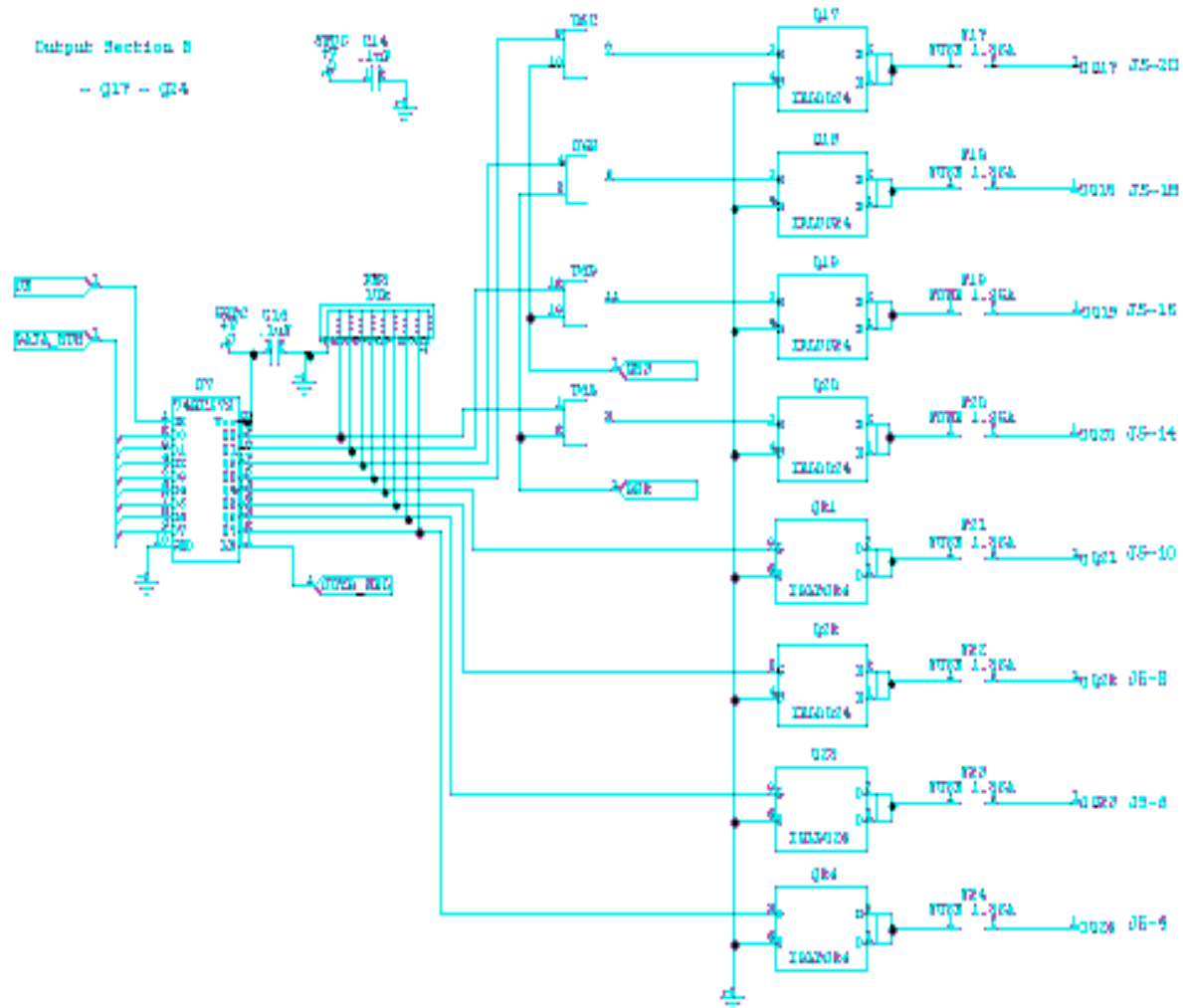
Output Section - Chase lights Q13-Q16

Output Section A

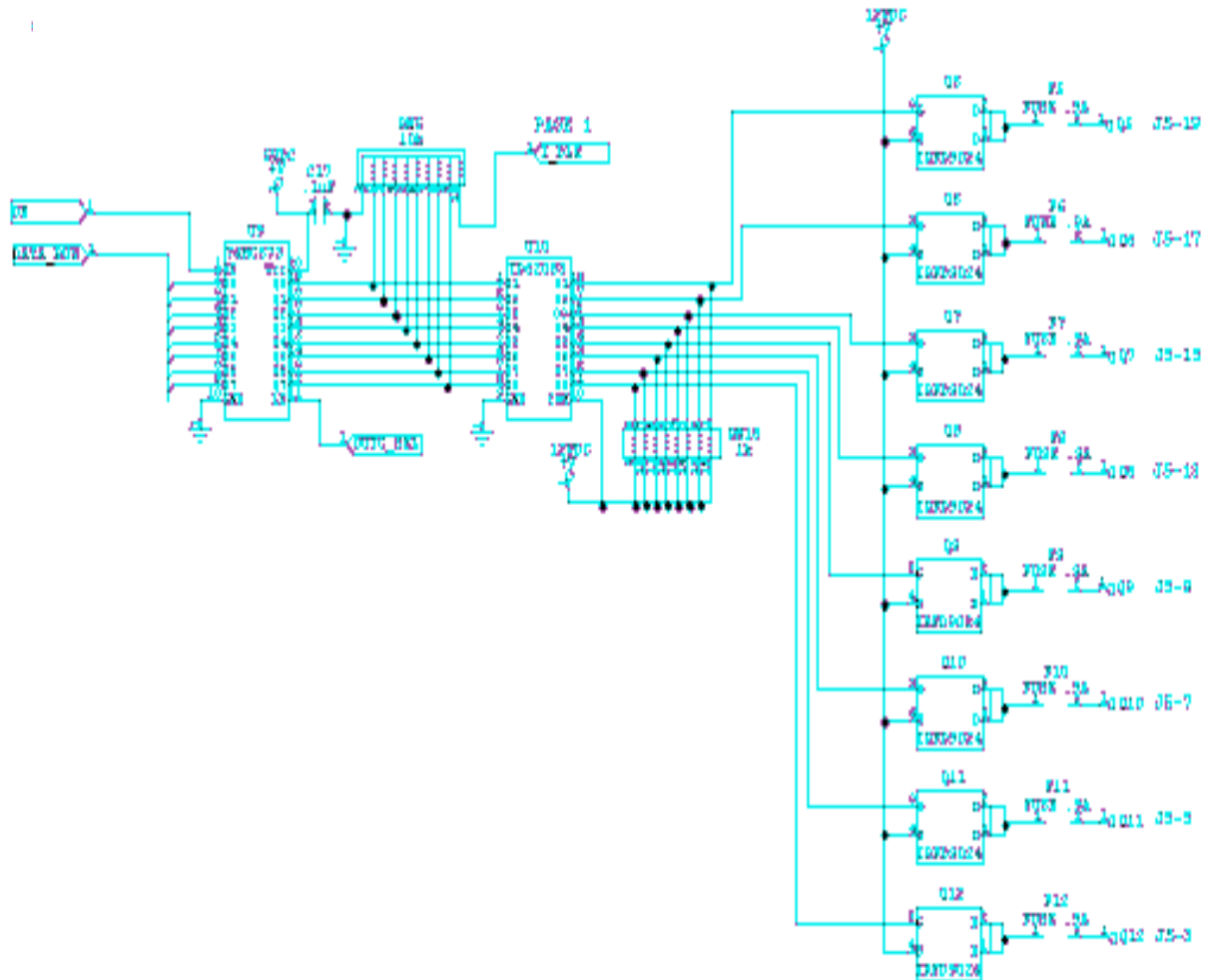
- Chase Lights
- Q13-16



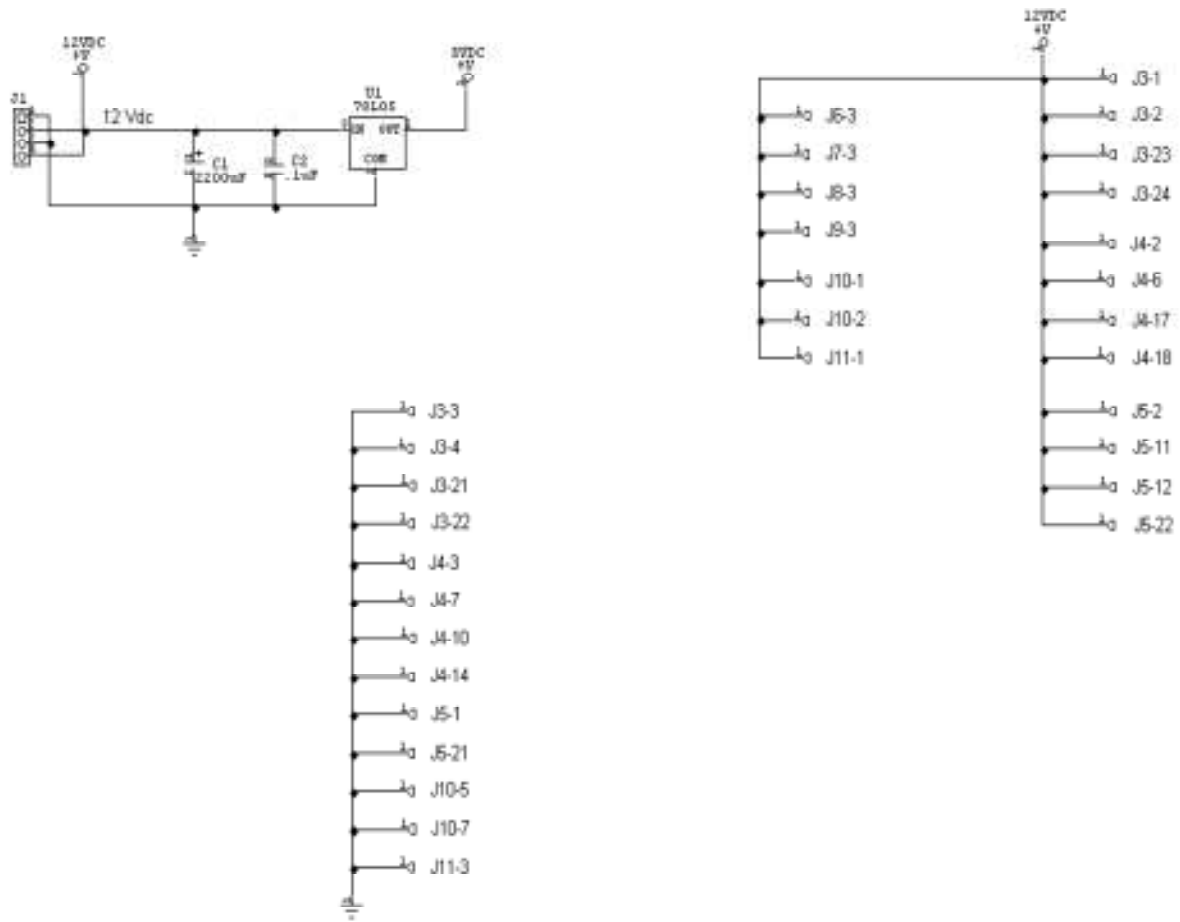
Output Section B Q17-Q24



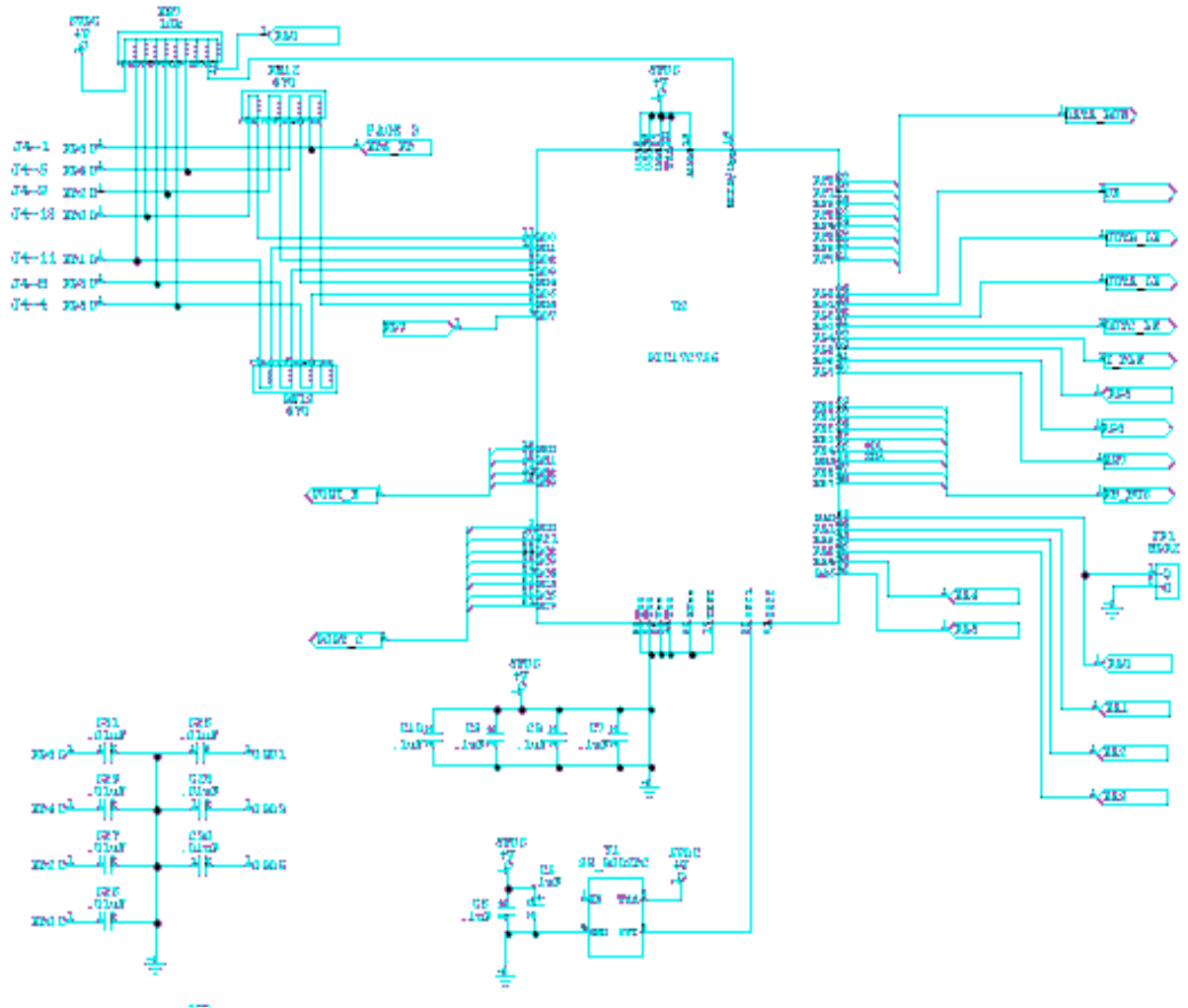
Output Section C Q5-Q12



Power Section



Processor Section - Input RD



MAINTENANCE LOG

If you need to make repairs or order replacement parts it is a good idea to keep a log. Below is a chart you can use to track repairs and maintenance.

[illegible]

TECHNICAL SUPPORT

Excellent customer service is very important to Bay Tek Games! We know that keeping your games in great operating condition is important to your business. When you need us, we are here to help. You can call us for free technical assistance, and you can count on us to have parts on-hand to support your game. When you do need us, it's important that you know what to expect. We offer options that fit your needs.

Electronics / Circuit Boards - Repair Options

Repair & Return – If you have Circuit Board issues with your Bay Tek game, you can send the board to us and we'll repair it right away. Most items sent to us are repaired and returned to you within two days. This option is your best value as we offer this fast turn-around service at the most reasonable price.

Advance Replacement – If you have Circuit Board issues with your Bay Tek game, but you don't have time to send in your board in for repair, give us a call and ask for an Advance Replacement. We'll send you a replacement board that same day (pending availability). When you get your new board, just repackage the defective board in the same box and send it back to us. We make it easy by including a UPS Return Shipping label for you to put on the box (not available for international shipments). This is your best option when you need to get your game up and running as quickly as possible!

Spare Parts – Take matters into your own hands and purchase new spare Circuit Boards for your Bay Tek games. Many of our games share the same main-board electronics. This means you can buy one set of spare electronics to support many of your Bay Tek games. Spare boards allow you to get your game up and running the quickest and provide you a valuable troubleshooting option. Call our technicians to get recommendations for what you should keep on hand for spare parts!

Technical Support:

“You” are the best tool for troubleshooting! Your abilities to understand the game and your skills to repair the game are invaluable to us! If you need help, you know you can call us. It's not easy to diagnose a game remotely by phone, but our technicians do a great job. They'll need your help to perform some troubleshooting steps and convey to them exactly what's happening with your game.

Returns, Credits, & Fees:

NOTICE! ALL ITEMS being sent to Bay Tek Games for repair or return, etc. require prior Return Authorization! Bay Tek Games will provide a Product Return Form with an authorizing Ticket Number for each item to be returned. Please be certain to include this document with all shipments!

Late Fees and Non-Return Fees - Advance Replacement and Warranty Replacement items require the defective items to be returned by Bay Tek games promptly to avoid Late Fees. We would expect items to be returned within 10 working days. Late fees are invoiced monthly. Late fees are non-refundable under any circumstance! Any item not returned within 90 days will be invoiced in full as a replacement part!

Bench Fees - Bench fees will apply for each electronic item returned to Bay Tek Games (this includes unused Advance Replacement items). This charge covers our cost to inspect, evaluate and retest each item. Please note that returned items that do not pass our tests will be charged accordingly as replacement items or advance replacements.

Restocking Fees - Unused items returned for credit will be credited minus a restocking fee. Items must be returned within 30 days of purchase in order to qualify for any credit amount. No shipping charges will be credited.

WARRANTY

Bay Tek Games warrants to the original purchaser that all game components will be free of defects in workmanship and materials for a period of 6 months from the date of purchase.

Hint: Register your new game for an extra 3 months on your warranty (Find registration card in the cashbox)

Bay Tek Games will, without charge, repair or replace at it's option defective component parts upon notification to the parts/service department.

Warranty replacement part(s) will be shipped immediately, via ground service, along with a Product Return Form for the return of defective part(s).

Defective part(s) must be shipped back to Bay Tek Games unless otherwise instructed. Items not returned to Bay Tek Games will be invoiced as replacement parts.

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

ATTENTION



In order to maintain the safety & other compliance certifications of the game, **ONLY** approved parts may be used. For approved parts, refer to the parts list in this manual.



Should you need your game serviced, determine the serial number from the decal placed on the front of this manual, or locate it on the back of the game. Then contact our Service Department at: 920.822.3951 or e-mail: service@baytekgames.com

NON-WARRANTY

Should you need your game serviced, determine the serial number on the front page of this manual, or by locating the decal on the back of the game cabinet, and contact our Service Department at: 920.822.3951 or service@baytekgames.com

Options and estimated charges will be provided to you for your approval.

Please remember that any items being sent to Bay Tek Games must include prior return authorization from our Parts & Service Department. This approval will include a Product Return Form which is required to be included with any incoming shipments. Repaired part(s) will be shipped back using the same method in which they were received. Repairs are warranted for 30 days from the date of return shipment.



passion in ★ fun out

IF WE'RE NOT HAVING FUN...SOMETHING'S WRONG."

- LARRY TREANKLER, CEO

Cannonball Blast

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