Arcade Collection LIVE Commercial Conversion Instructions

IMPORTANT – PLEASE READ

The conversion process requires replacing: Hard Drive, Cabinet Identification Device (CID), Security Chip, Control Panel and Marquee. The Hard Drive must be physically changed to complete the update to version *10.05.00* Arcade Collection LIVE. System RAM may need to be upgraded if your current system does not have enough memory.

IT highly recommends having two people available when removing and attaching the control panel.

WARNING: AFTER CONVERSION, EXISTING IT CID WILL NO LONGER FUNCTION.

Conversion Contents

- Hard Drive Assembly - Arcade Collection
- Security Chip labeled *ACL 10 USA*
- Arcade Collection (AC) Cabinet Identification Device (CID)
- Fully Dressed Control Panel
- Cabinet Marquee
- 1 GB DDR2 System RAM Card (if necessary)
- Flash Drive
- Setup and Operation Guide

Overview
Section 1: Upgrade Hard Drive
Section 2: Disconnect I/O Board Connections
Section 3: Security Chip Replacement
Section 4: Cabinet Identification Device (CID) Replacement
Section 5: Control Panel Removal
Section 6: Control Panel Installation
Section 7: Final Connections

Reference Videos
All the videos referenced in the procedures can be found on the IT Amusement – Instructions and Videos website (http://amusement.itsgames.com/service/instructions). Direct links to YouTube videos are provided in the procedures.

- How to Remove and Install a Nighthawk System Box
- Security Chip Replacement GT Golf Offline Update Installation Video *(1:28 - 3:00)*

WARNINGS AND NOTICES – PLEASE READ BEFORE STARTING PROCEDURE

IMPORTANT SAFETY INSTRUCTIONS

- Read these instructions
- Keep these instructions
- Heed all warnings
- Follow all instructions
- Do not use this apparatus near water
- Clean only with dry cloth
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- DO NOT expose the apparatus to dripping and splashing. DO NOT put objects filled with liquids, such as vases on the apparatus.
- WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

CAUTION

The motherboard is provided with a replaceable lithium battery. There is a danger of explosion if a battery is incorrectly replaced. Replace the battery only with the same or equivalent type.

WARNING

The apparatus shall be connected to a mains socket outlet with a protective earthing connection. Substitute cords may not provide adequate fault protection. Only use the power cord supplied with this product or an Incredible Technologies, Inc. authorized replacement.

Section 1 – Upgrade Hard Drive

Tools/equipment required to remove and open System Box:

- ¼-inch Hex Nut Driver (no longer than 9 inches)
- Standard/Flat Head Screwdriver
- Good lighting

Note: Take a photo of the System Box wiring before removal. Be sure to have the System Box secured BEFORE removing the final screws holding the System Box in place.
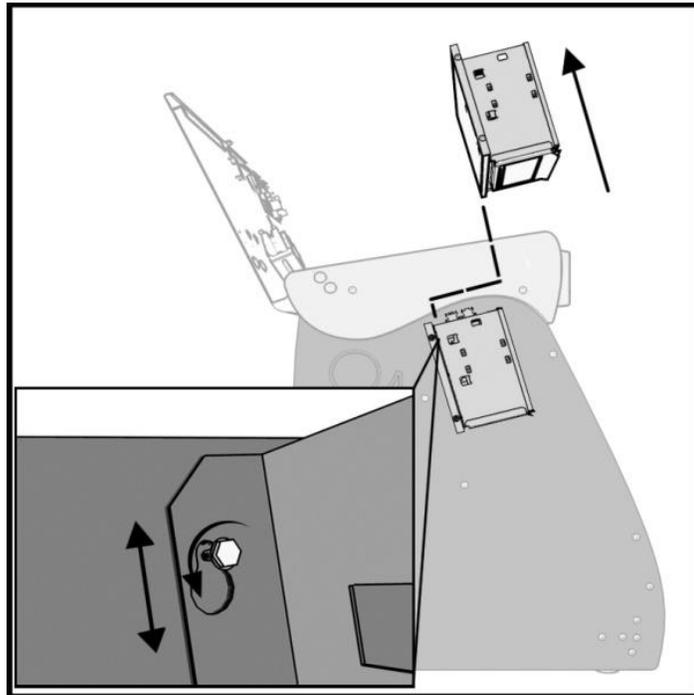
1. Turn OFF game using the switch at the base of the cabinet.
2. Loosen the six ¼" hex-head screws that secure the System Box.
3. Carefully lift the System Box off the screws and up out of the cabinet.

Helpful YouTube Video
For a YouTube video, see [How to Remove and Install Your Nighthawk System Box](https://www.youtube.com/watch?v=e0Ej1QS_Id0&feature=youtu.be)
(https://www.youtube.com/watch?v=e0Ej1QS_Id0&feature=youtu.be)
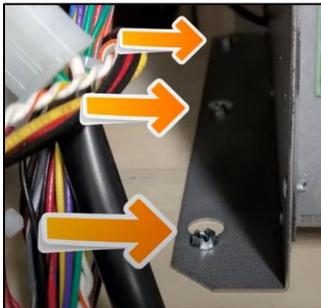
Hex Screw Loosening

System Box Location

WARNING: Electrostatic discharge (ESD) can damage components. Discharge yourself by touching the metal system box while your feet are flat on the ground before touching any components.

Remove these screws
WARNING!
HANDLE WITH CARE!
Loosen but do not remove

4. With the hex nut driver, loosen but do not remove three screws on rear of System Box. Remove three screws on top of System Box and remove top.

5. Locate Hard Drive attached to the interior side wall of System Box.

6. Disconnect SATA and power cables.

7. On the outside of System Box, remove four screws. Set aside and save.

8. Remove Hard Drive. Place new Hard Drive in the same position on the interior side wall.

9. Reattach with same four screws. Connect SATA and power cables.

10. Return System Box back to the cabinet in the exact position it was in before removal. Make sure the peripheral outputs on the rear of System Box are facing upwards. The connections to System Box will be completed later in the procedure.

Helpful YouTube Video

For a YouTube video, see Hard Drive Replacement (https://itsgames.s3.amazonaws.com/production/amusement/videos/Official+Hard+Drive+Replacement.mp4)

NOTE: If necessary, install 1 GB DDR2 System RAM Card.

Section 2 – Disconnect I/O Board Connections

1. Disconnect all connections to the I/O Board. Occasionally it may be necessary to wiggle the connectors to disengage. Do not tug on the wires.

   Note: Arcade Collection is an offline experience. Peripherals for online games, such as keypads, antennas, etc., are not supported. Be sure to remove all connections to these peripherals.

A Card Reader blanking plate can be ordered using part number 752304802R *Blanking Plate, Security Door Card Reader.*

Section 3 - Security Chip Replacement

1. Carefully remove the socketed security chip found at U101 on the I/O Board. (A small flat blade screwdriver works best.) **It is extremely important to note the orientation of the Security Chip.**
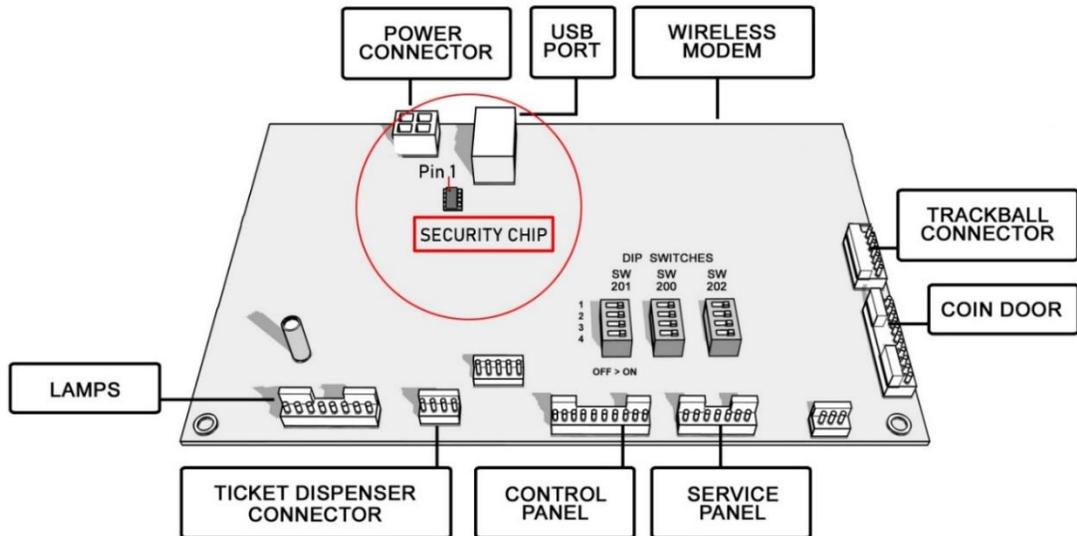
2. Look at the image below and note the location of **Black Dot** and **Pin 1** on the Security Chip in relation to **USB Port**. *Set the Security Chip exactly as it appears in the image.* Make sure the new Security Chip is oriented the same as the old Security Chip before inserting it into the U101 socket. Be sure the chip is seated properly with no bent pins.
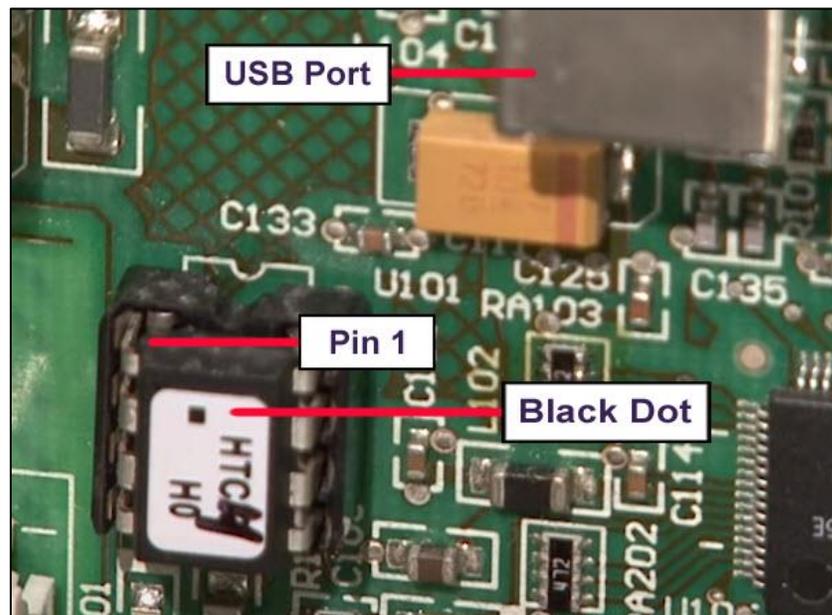
Note: If the Security Chip is damaged, DO NOT THROW IT AWAY. It is required when purchasing a replacement.
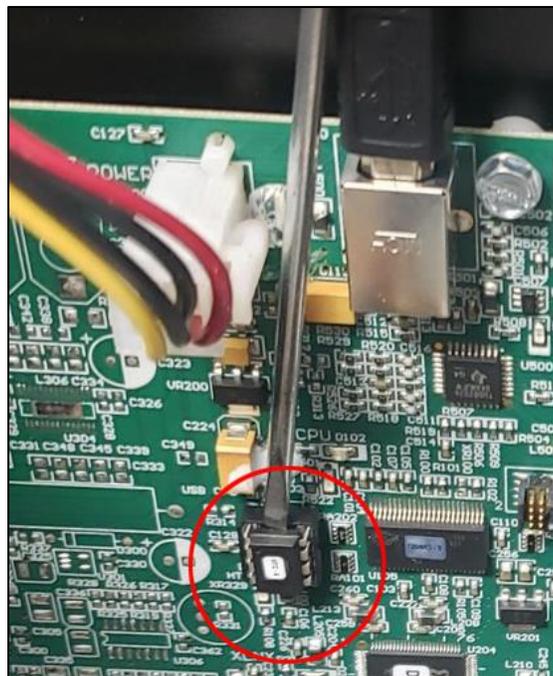
Helpful YouTube Video
For a YouTube video covering Security Chip replacement, see
GT Update Installation Video (1:28 - 3:00 minute marker)
(https://www.youtube.com/watch?app=desktop&v=8pOHvVDhegk&feature=youtu.be)

3. If the I/O Board was removed during this procedure, reattach the I/O Board. New connections will be made with the new Control Panel.

Security Chip

Section 4 - Cabinet Identification Device (CID) Replacement

1. Disconnect the USB cable from the current game CID.

2. Loosen the 4 screws that attach the CID to the cabinet and remove CID.

3. Install the new CID to the cabinet using the 4 screws from the old CID.

4. Attach the USB cable to the new CID.
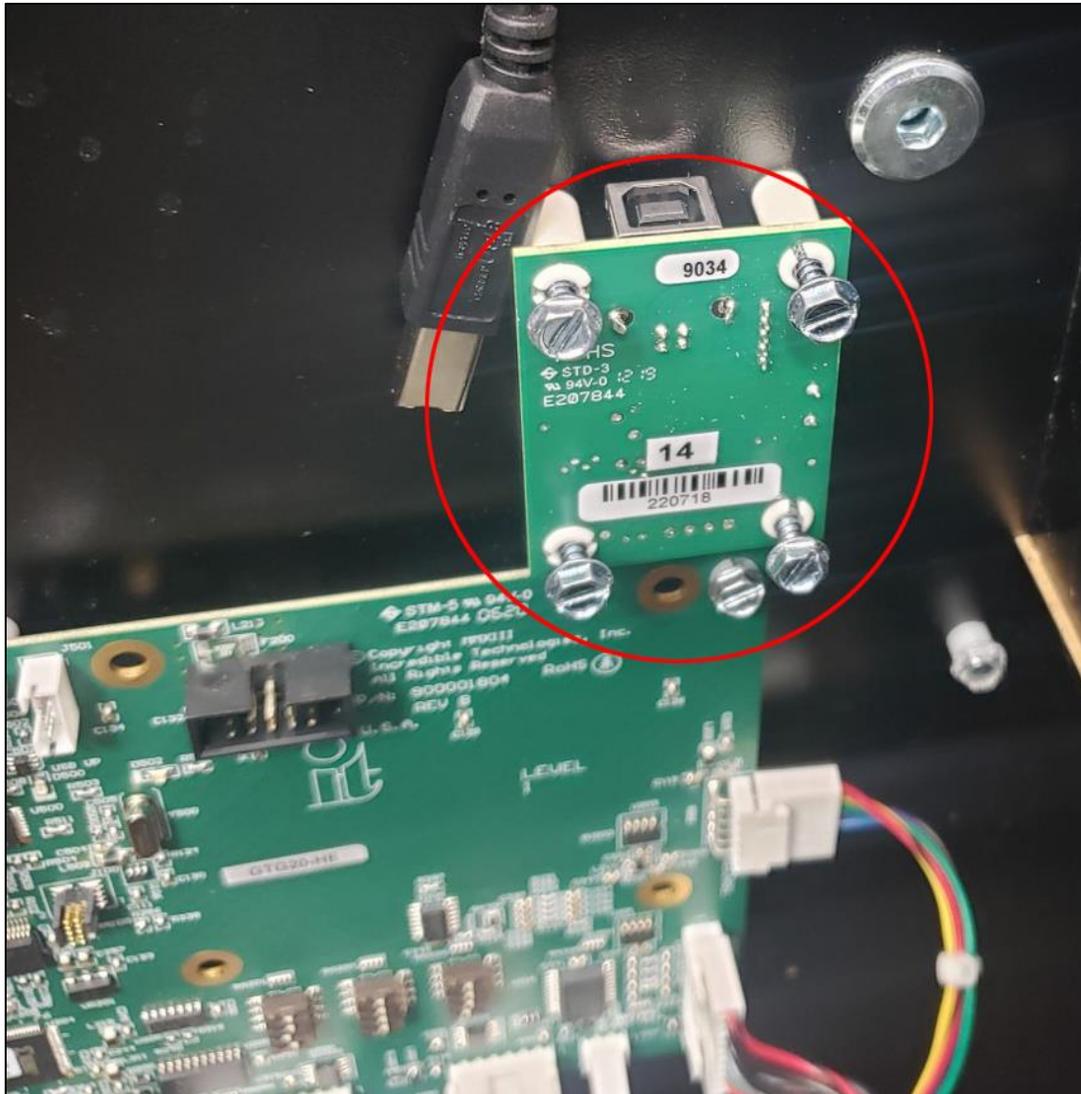
Section 5 – Disconnect and Remove Control Panel

Tools/equipment required to remove Control Panel:

- ¼-inch Hex Nut Driver ~~(no longer than 9 inches)~~
- 11/32-inch Nut Driver

1. Locate the Coin Door 9-pin connector. This connector is on the Main Cable Harness routed to the left (facing the cabinet) coin vault cable opening. It will be located outside the vault behind the System Box wooden mounting board. Follow it to the terminal point and disconnect the 9-pin Coin Door connector.

    Note: The Main Cable Harness is a bundled collection of cables with various cable ties and pigtails. The Coin Door Cable may have cable ties bundling it to other cable bundles. Carefully cut the cable ties where necessary taking care not to cut any wires.
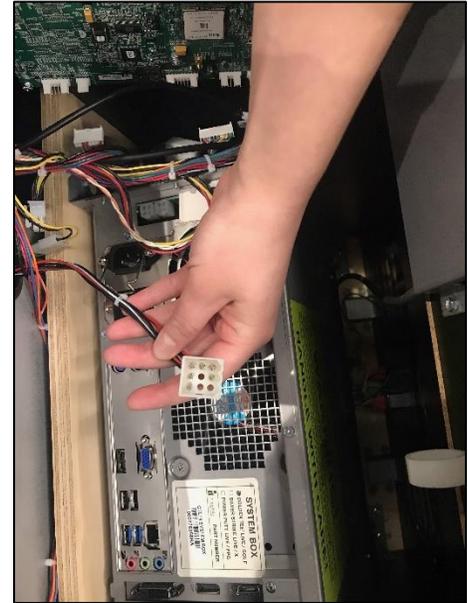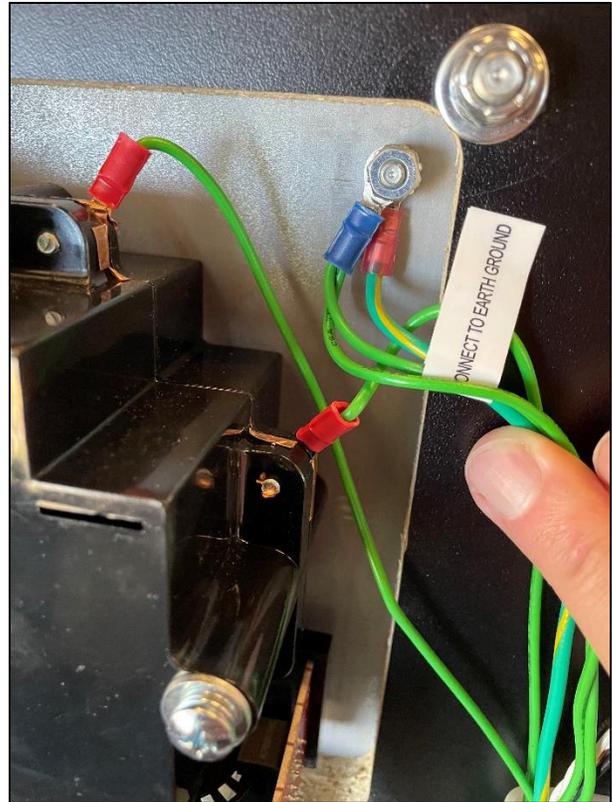

2. Disconnect the Service Panel Pigtail at the coin vault (two connectors to the red push buttons on the coin vault and one connector to the meter).
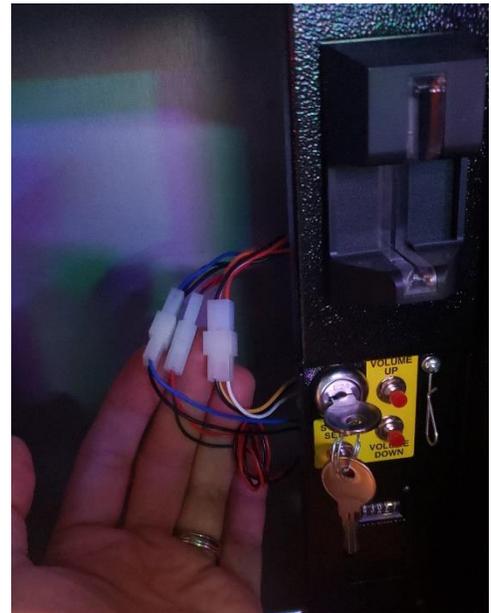
3. Disconnect the field ground wires at the trackball plate.

   - Remove two 11/32" nuts
   - Remove the first nut to remove the trackball ground giving access to the 11/32" nut securing the main field ground wire (the green/yellow wire).

4. Locate three white cable clips and release the Main Cable Harness from the cable clips.

5. Remove Main Cable Harness from cabinet, coil and set aside. It will no longer be needed.
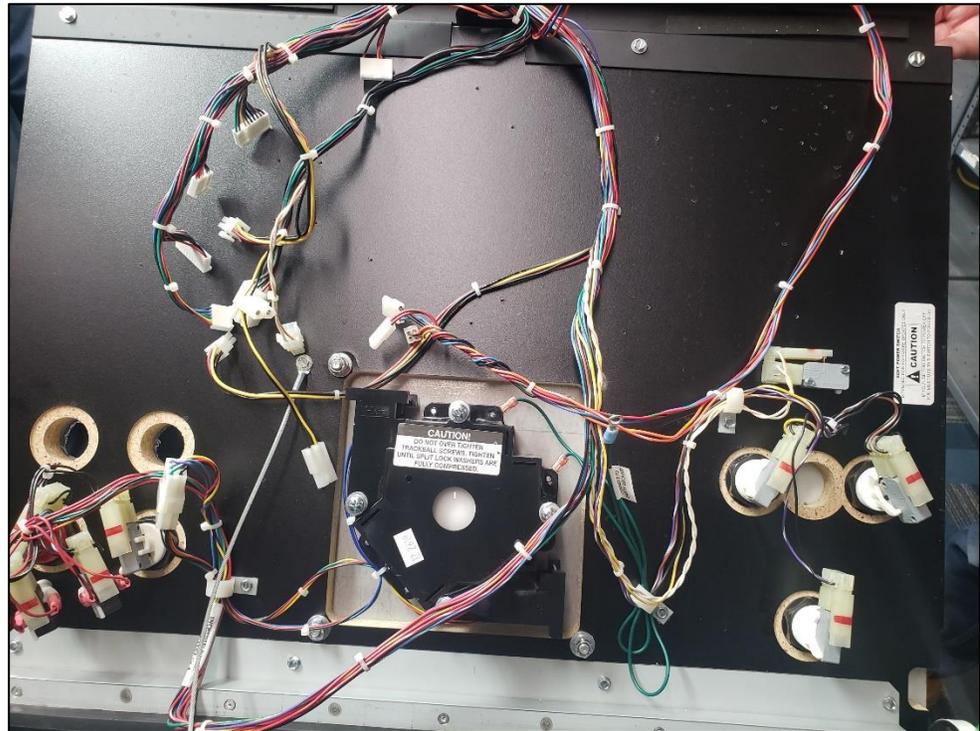

6. Remove one ¼" Hex Head Screw that attaches the open limit cable from the cabinet.

7. Disconnect the Control Panel from the bumper hinge by removing the four ¼"
    Head Screws that attach the Control Panel to the cabinet. See four red circles in
    the image below. Set the Head Screws in a safe area. You will need them to
   attach the new Control Panel. Extra screws are also included with the kit.

    WARNING: Be aware that after the four screws are removed, the Control Panel
    will be **completely** released. To prevent injury, it is helpful to have two people for
    this step.
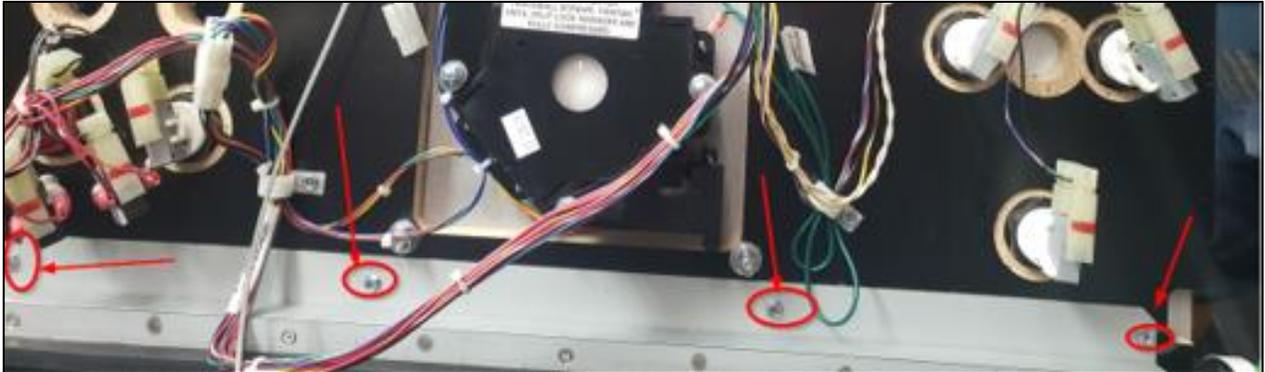
Section 6 – Attach and Connect Arcade Collection Control Panel

1. Attach new Control Panel to the rubber hinge using four ¼" Head Screws removed in the previous section.

2. Reattach one ¼" Hex Head Screw connecting the open limit cable to the cabinet.

3. Reconnect the green/yellow field ground wire to the trackball plate and secure with the 11/32" nut. Attach the solid green wire from the trackball to the stud on the trackball plate and secure with the 11/32" nut.

   Note: It is very important that field ground is reconnected to the new Control Panel Trackball plate.
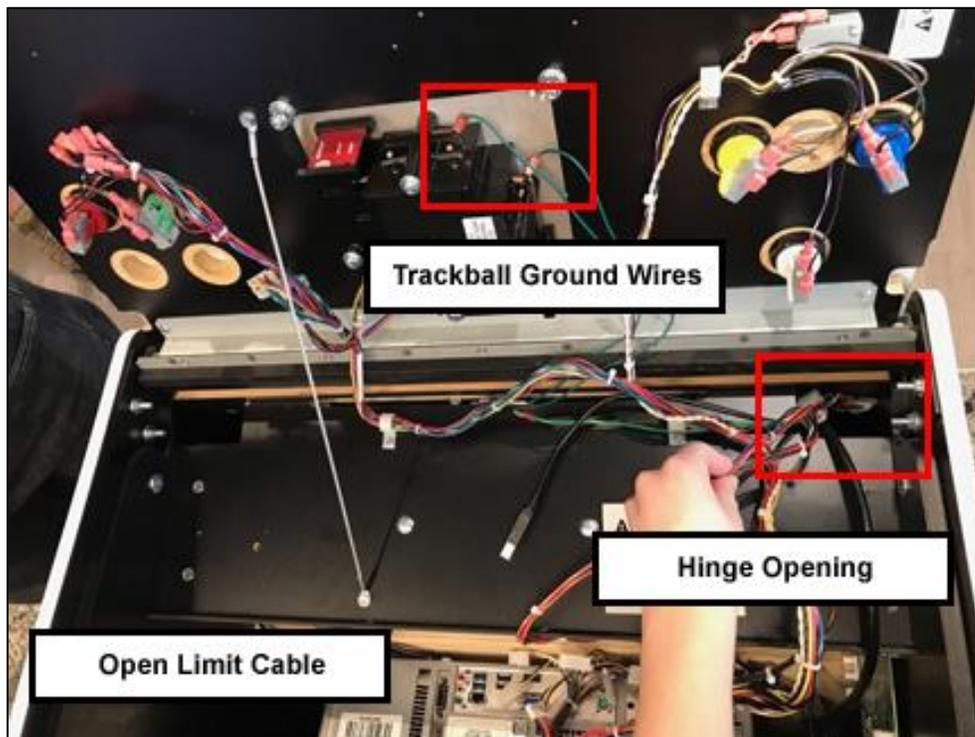
4. Separate the Service Panel Pigtail with 2-pin (meter), 3-pin/4-pin (push button) connectors from the 9-pin connector on the Main Cable Harness. Feed all four connectors down through the Hinge Opening (closest to the Control Panel hinge).

    Note: Make sure the connectors for the I/O board do not pass through the Hinge Opening.

5. Locate the female 9-pin connector on the new Main Cable Harness. Attach the 9-pin connector to the mating 9-pin connector in the cabinet.

6. Feed the Service Panel Pigtail connectors through Mouse Hole 2 (see following page). Connect the meter and red push button connectors on the coin vault and one connector to the meter.

Arcade Collection®LIVE (Conversion Instructions)   www.itsgames.com ● 847.870.7027   6/13/24
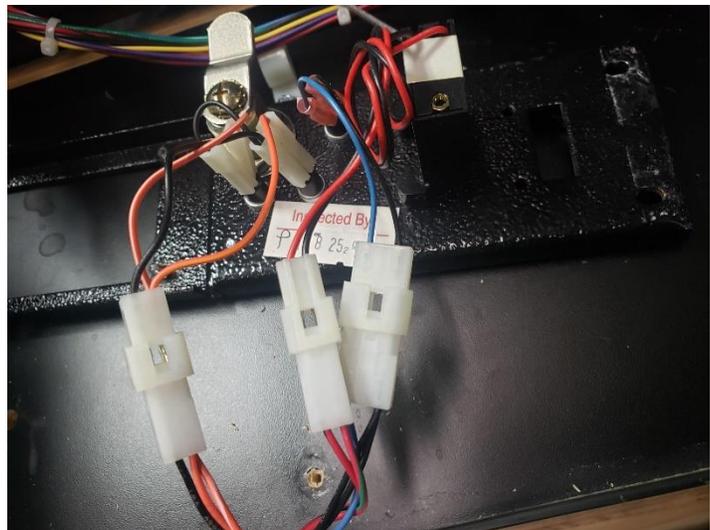
7. Separate the 4-Pin I/O power and 6-pin soft power connector that connects to the system box and feed through the hinge opening. Connect the 6-pin to the system box and the 4-pin to the system box I/O power source.

8. Feed the following connections through the hinge opening and connect to the I/O Board:

    - 10-pin Control Panel
    - 7-pin Service Panel
    - 11-pin Coin Door
    - 6-pin Trackball

9. Connect the 4-Pin I/O Power connector (red/yellow/black wires) to the top of the I/O Board Power output and route to the System Box.

10. Clip the Main Cable Harness under the white cable clips.
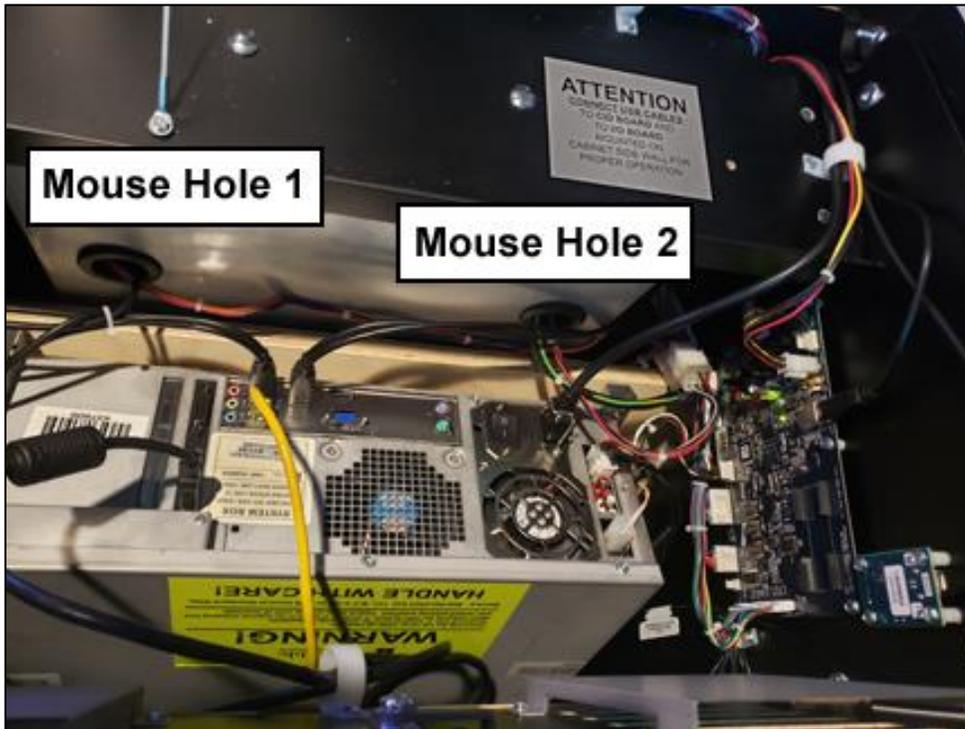
Section 7 - Final Connections to the System Box

Use the diagram below to make the following connections:
- Connect 4-pin I/O Power Cable connector from the cabinet to the System Box.
- Connect 6-pin Soft Power Cable connector from the cabinet to the System Box.
- Connect two USB Cables, one from I/O Board and one from CID to the System Box.
- Reconnect the HDMI cable from the video card in the cabinet to the System Box.

Note: Ignore any connections to card readers, keypads or antennas. These are not necessary for the Arcade Collection.
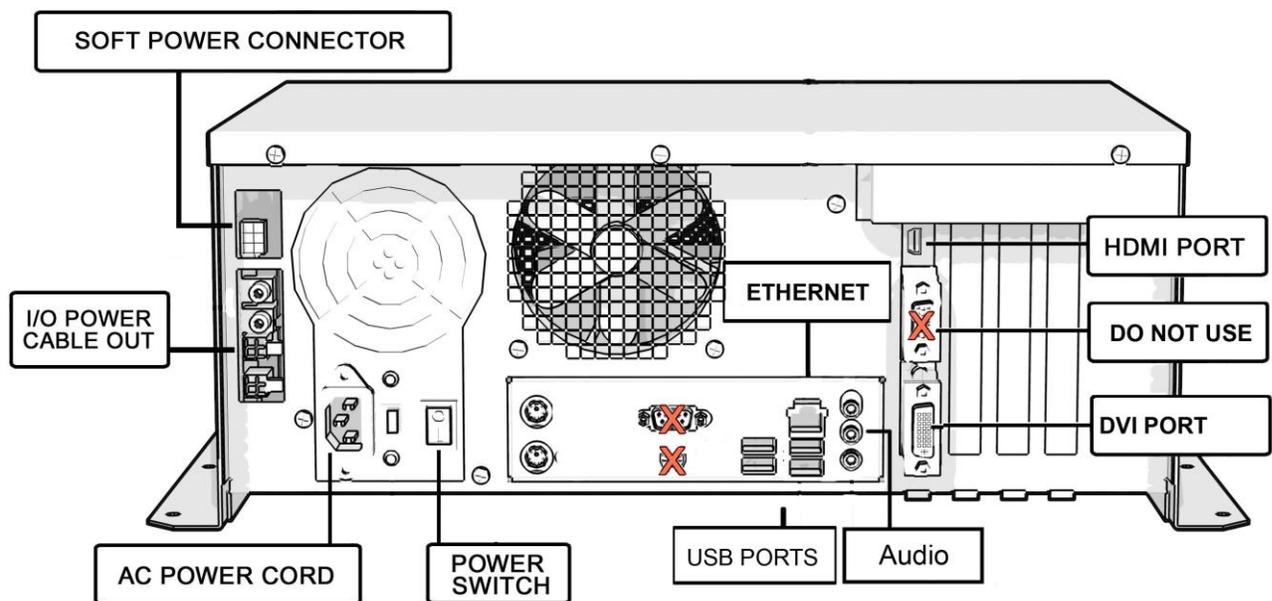
DIP Switch Location on I/O Board

The three DIP switch boxes are located above the Control Panel and Service Panel connections.
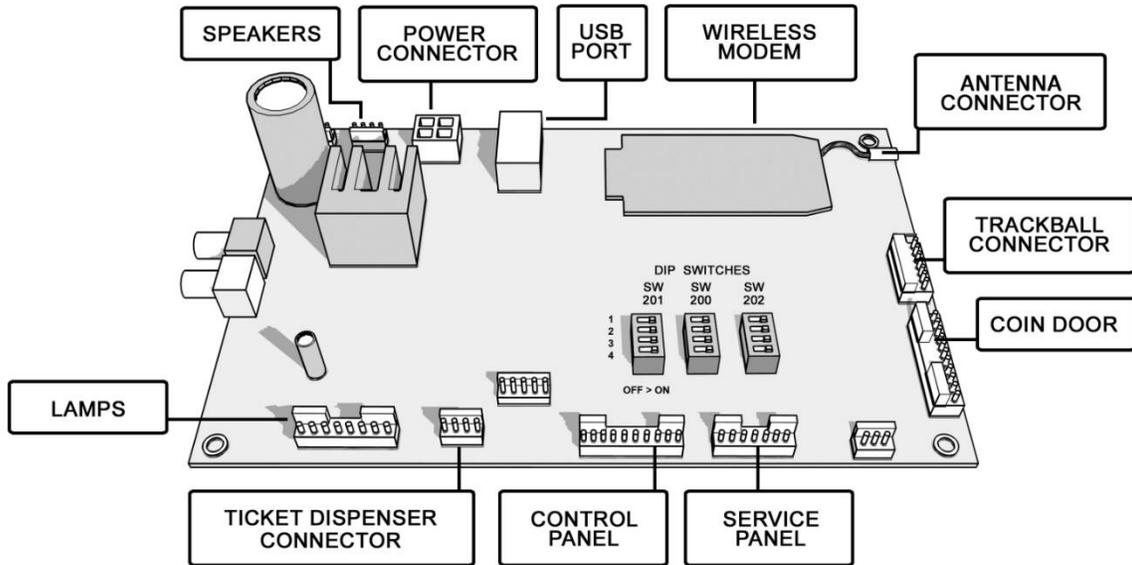
DIP Switch Settings for HDTVs

The DIP switch settings in your Showpiece cabinet have been factory set to accommodate a 1080p HDTV connected through HDMI cables. DIP switch bank Sw201 on the I/O Board controls the video resolution for the main monitor. If using a DVI-D connection, or for different resolutions such as 720p, use this chart: If the previous game was set for 720p, it can be bumped up to 1080p if a 1080p monitor is attached.
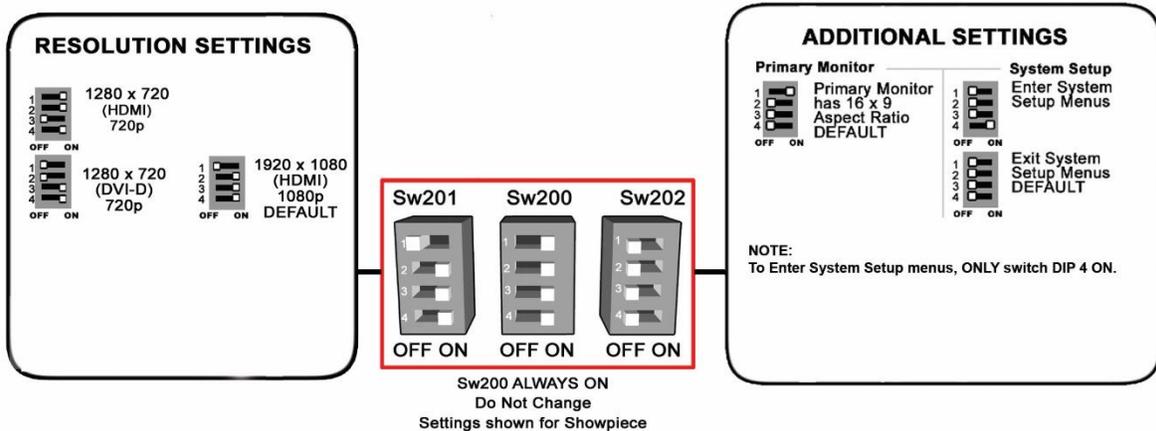
Check All Connections

Go over your entire cabinet again and double-check all the connections. Make sure that all connectors are tight and secure and in their proper place. Look for frayed, broken or exposed wiring and repair as needed. Bundle and cable-tie wiring and secure it to the inside of the cabinet. A thorough and neat job now will save you a lot of time and trouble in the future.

- Close Control Panel. Be careful not to pinch any fingers.
- Reattach power cable at the back of the cabinet and power ON the cabinet.

Getting Online for the Ultimate Player Experience

To take full advantage of all the incredible content in Arcade Collection LIVE, connect your game to the location's network and self-register your game using your ITNET Operator Account information. This will unleash the online features and increase earnings!

Scan for detailed instructions to bring your game online: Arcade Collection LIVE Commercial Online Configuration Guide (PDF 628 KB)

https://amusement.itsgames.com/ac_live_commercial_online_config

Troubleshooting and Frequently Asked Questions (FAQ) Guide

Scan for the Arcade Collection Troubleshooting and FAQ (PDF 405 KB)

https://amusement.itsgames.com/ac_troubleshooting_guide

Additional Resources

Operator Menus and Game Operation Guide

Scan for questions about the Operator Menus, Collections and Game Operation: Arcade Collection Operator Menus and Game Operation Guide (PDF 4.2 MB)

https://amusement.itsgames.com/ac_commercial_op_menu_guide

Additional Service Questions

For help with any additional questions, visit the Resources area of the Arcae Collection website:

https://amusement.itsgames.com/games

Input/Output Connections (I/O Power, Trackball, etc.)

For Standard Online Kit and Deluxe Retrofit Kit

Trackball Harness Connector Pin Outs

I/O Board Connector	Trackball Connector
PIN WIRE #6 – Black	PIN WIRE #1 – Black
PIN WIRE #1 – Red	PIN WIRE #2 – Red
PIN WIRE #2 – Yellow	PIN WIRE #3 – Yellow
PIN WIRE #3 – Green	PIN WIRE #4 – Green
PIN WIRE #5 – Blue	PIN WIRE #5 – Blue
PIN WIRE #4 – Purple	PIN WIRE #6 – Purple

I/O Power Cable Pin Outs

Pin Number	Wire Color	Function
1	Yellow	+ 12 Volts DC
2	Black	Ground
3	Red	+ 5 Volts DC
4	Black	Ground

Control Panel J203 Connector Pin Outs

Pin	Color	Function
1	Green-White	Options (Not Used)
2	Brown-White	Left/High toss (Blue Button)
3		No Connection
4	Yellow-White	Right/Low Toss (Yellow Button)
5	Violet-White	Overhead View (White Button)
6	Black	Volume GND
7	Black-White	Arcade Menu (Green Button)
8	Blue-White	Help (Not Used)
9	Red-White	Options Start (Red Button)
10	Black	Ground

Service Panel J206

Color	Function
Red-Black	Meter Power
Red-Green	Coin Meter
Orange-White	Volume Up
Orange-Yellow	Volume Down
	No Connection
Blue	Test
Black	Test Ground

Input/Output Connections (I/O Power, Trackball, etc.)

Coin Door J205

Pin	Color	Function
1	Red-Black	Lamp Power (Not Used)
2	Black	Lamp Ground (Not Used)
3		No Connection
4	Black	Bill Ground
5	Grey-White	Bill
6		No Connection
7		No Connection
8	Green-Blue	Coin 2
9	Red-Blue	Coin 1
10		No Connection
11	Black	Coin Ground