



Puck Off

Conversion Kit Instructions 040-0148-01 Rev A

- Read this manual before use.
- Keep this manual with the machine at all times.



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Preface

Safety

Please read this page before preparing your arcade cabinet for game play.

The following safety instructions apply to all game operators and service personnel. Specific warnings and cautions will be included throughout this manual.

Use the following safety guidelines to help protect the system from potential damage and to ensure your personal safety:

- Make sure that the switch on the back of the computer is set to match the AC power in use at your location:
 - 115 volts / 60Hz in most of North and South America and some Far Eastern countries such as Japan, South Korea and Taiwan
 - 230 volts / 50Hz in most of Europe, the Middle East and the Far East
- To help prevent electric shock, plug the system into a properly grounded power source. These cables are equipped with 3-prong plugs to help ensure proper grounding. Do not use adapter plugs or remove the grounding prong from a cable. If you must use an extension cable, use a 3-wire cable with properly grounded plugs.
- To help protect your system from sudden increases and decreases in electrical power, use a surge suppressor, line conditioner or Uninterruptible Power Supply (UPS).
- Be sure nothing rests on the system's cables and that the cables are not located where they can be stepped on or tripped over.
- Keep your system far away from radiators and other heat sources.
- Do not block cooling vents.

Warnings



To avoid electrical shock, unplug the cabinet before performing installation or service procedures.

If the power cord is damaged, it must be replaced by the equivalent power cord available from GLOBAL VR or your distributor.



GLOBAL VR® assumes no liability for any damages or injuries incurred while setting up or servicing the cabinet. Only qualified service personnel should perform installation or service procedures!

Environmental Conditions

Cabinet is intended for indoor use only. Be sure to keep the cabinet dry and maintain operating temperatures of 10°-40°C (50°-104°F).

Chapter 1 — Introduction

This kit lets you convert an existing game cabinet to **Puck Off**. The conversion procedure should be performed only by an experienced technician. Since cabinet styles vary widely, the steps in this document should be used as general guidelines for the conversion procedure. Your steps may be different. Please read and follow all precautions in this document.

1.1 Conversion Requirements

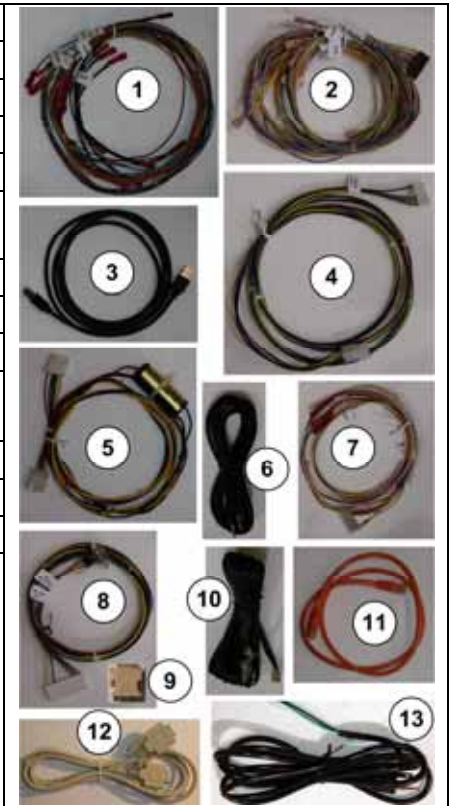
For a successful conversion, a cabinet must have the following:

- AC power distribution
- Left and Right audio speakers
- Control panel suitable for a trackball and five buttons
- Coin mechs (dollar bill validator is also supported)
- Operator **Service** and **Test** buttons (volume buttons are not used)
- Adequate ventilation, including a working ventilation fan in the upper part of the cabinet.

1.2 Conversion Kit Contents

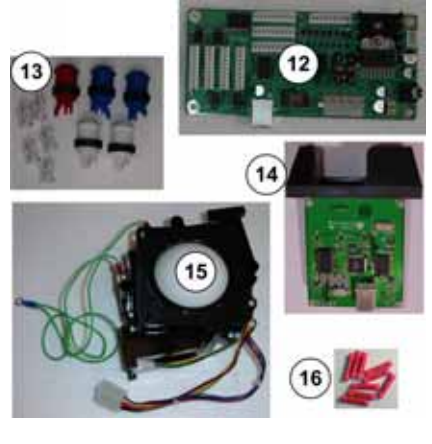
Cables

Ref	Description	Qty	Part Number
1	Control Panel Harness	1	115-0142-01
2	Coin Door Harness	1	115-0143-01
3	USB Cable, 6', USB2-ABO6	2	USB-AB06MM
4	Trackball Cable	1	115-0144-01
5	DC Power Harness with Noise Suppressor	1	115-0140-01
6	Stereo Audio Cable, 3.5 mm, 6'	1	96-0539-00
7	Coin Meter Cable	1	115-0141-01
8	EGA Monitor Cable	1	115-0139-01
9	VGA-to-DVI Adapter (Used with EGA Monitor Cable)	1	--
10	Speaker Cable 120"	1	GLO-TWSPK-01
11	RJ-45 CAT 5E Ethernet Cable	1	115-9635-01
12	VGA Monitor Cable	1	V-0606
13	AC Power Cable	1	GLO-PWR-CORD



Primary Components

Ref	Description	Qty	Part Number
12	GFX I/O PCB	1	990-0016-01
13	Button, Red W/.187 Micro Switch	1	58-9100-LG
13	Button, White W/.187 Micro Switch	2	58-9111-LG
13	Button, Blue W/.187 Micro Switch	2	58-9122-LG
14	Card Reader, XICO Model 7104USB	1	7104USB
15	3" Trackball Assembly, High Lip w/Spacer	1	56-0100-11HLGVR
16	Butt Splices, AWG 22-18	9	--
	Power Strip	1	49-0963-10
	System Computer w/Power Cord & Puck Off Software Pre-Installed	1	45073-00


Documents & Software

Description	Qty	Part Number
Puck Off Conversion Instructions (This Document)	1	040-0148-01
Puck Off Operation and Service Manual	1	040-0161-01
Puck Off System and Game Install Disk (DVD)	1	050-0131-01
VGA Resolution Setup Disk	1	050-0115-01
EGA Resolution Setup Disk	1	050-0116-01

Cabinet Artwork (see Figure 11 on page 17)

Description	Qty	Part Number
Serial Number Label	1	L-0123
Side Panel Graphic	2	POFF-AW-01
Backlit Marquee Artwork	1	POFF-AW-02
Control Panel Decal	1	POFF-AW-03
Button Decals, Set of Five	1	POFF-AW-04
Sub-Marquee Artwork	1	POFF-AW-05
Control Panel Front Decal	1	POFF-AW-07
Card Reader Decal	1	POFF-AW-08
GLOBAL VR Logo Decal	2	GVREU-AW-01

Miscellaneous Hardware

Description	Qty	Part Number
Computer Mounting Strap	1	60039-00
Wood Screw, #10 x 3/4" with Flat Washer (For securing the computer mounting strap.)	2 ea	--
Adhesive Velcro® (For mounting the Power Strip.)	1	--
Card Reader Mounting Plate	1	37051-00
Small Machine Screw (For Mounting Card Reader to Plate.)	2	--
Carriage Bolt, 10-24 x 1-1/2" with Kep Nut & Flat Washer (For mounting the Card Reader to Cabinet.)	4 ea	--
PCB Mounting Feet, Set of 4	1	49-1019-00

1.3 Tools Required

- Screwdriver with assorted Torx[®] Security and Phillips bits
- Medium flat-blade screwdriver
- Assorted nutdrivers or wrenches
- Assorted cable ties and/or clips for securing wires
- Exacto[®] knife
- Wire Snips
- Crimper for Butt Splices

Depending on your cabinet, you may also need:

- Drill with 1/4" bit for installing card reader, and 1-1/8" spade bit or hole saw if you need to add buttons to the control panel
- Jig Saw if you need to modify control panel or cut a hole for the card reader
- Various spade connectors and crimpers for adapting wiring to your cabinet
- DC Power Harness with Female PC Power connector for powering coin lamps
- The kit does not include a trackball mounting plate. If you need to order one, use Happ Controls part number 55-0321-00.



Figure 1. Examples of Finished Cabinets

Chapter 2 -- Conversion Procedure



CAUTION: GLOBAL VR assumes no liability for any damage or injuries incurred while converting the cabinet.

This procedure should be performed **ONLY** by an experienced technician.

To prevent electrostatic discharge (ESD) damage, handle PCBs by the edges only and use a grounding wrist strap or similar precaution.

Power must be off when connecting PCBs. Hot connecting will damage the PCBs.

Please read the service instructions before working on the cabinet.



Always turn the cabinet **OFF** and disconnect the AC power cord before performing the conversion steps.

This document provides general guidelines for converting your cabinet. Your exact steps may vary depending on the cabinet used. The process consists of the primary steps listed below.

- **Clean the Cabinet and Remove Unused Hardware:** Remove all graphics and labels, and the tournament header, if installed. Remove hardware and harnesses that will no longer be used. Clean the cabinet well to ensure that new graphics adhere properly.
- **Set Up the Hardware:** Install the new hardware and wiring, and make all connections.
- **Apply the Cabinet Graphics:** Install the new cabinet artwork and serial number label.

2.1 Remove Old Hardware

Refer to Figure 13 on page 21 for a Puck Off wiring diagram.

The **Puck Off** Conversion Kit uses the following wiring. When you convert the cabinet,

Leave this wiring in place:

- Monitor power connection
 - Power connections for Marquee light and any special lighting
 - Power connection for Dollar Bill Acceptor, if installed
 - AC power strip/surge protector, if installed
 - You may also wish to keep existing harnessing for Operator Buttons and Coin Door (See step 2 below for more information.)
1. Turn off the cabinet and disconnect the AC power cord.
 2. Determine whether to keep the existing coin door harnessing. The coin harness in the **Puck Off** kit will connect to the spade connectors of one coin mech. To use two coin mechs, you can either modify the harness, or leave the existing connectors in place and splice them to the **Puck Off** coin harness. Some butt splices are included in the kit for this purpose.
 3. Check the wiring to the coin lamps and coin meter to see if you can tell whether they use 5 or 12 volts. (If you can't tell, it is best to try 5 volts first.)

4. The wires for the Operator **Service** and **Test** buttons have spade connectors. If your operator buttons do not have spade lugs, leave the existing wires in place so you can splice them to the **Puck Off** harness. Some butt splices are included in the kit for this purpose.
5. Once you have determined which wires to re-use, carefully remove the other old wiring from the cabinet, or tie it out of the way.
6. If you have an existing tournament header on top of the cabinet, as shown below, disconnect the cables from the tournament header, unbolt it, and remove it from the cabinet. Remove the tournament header harness wires from the cabinet or tie them out of the way.



Figure 2. Removing Old Tournament Header.

7. Remove any Jamma harness wiring and PCBs. If there is a DC power supply installed, you may wish to use it to power the coin lamps; otherwise remove it if it is no longer used.
Note: Keep any reusable cable clips and ties for securing the new wiring.
8. Disconnect the wires from the speakers and remove the audio harnessing. (Or, if you prefer, you may be able to adapt the existing speaker harness to work with **Puck Off**.)

2.2 Upgrade the Control Panel



Note: Button locations may vary.

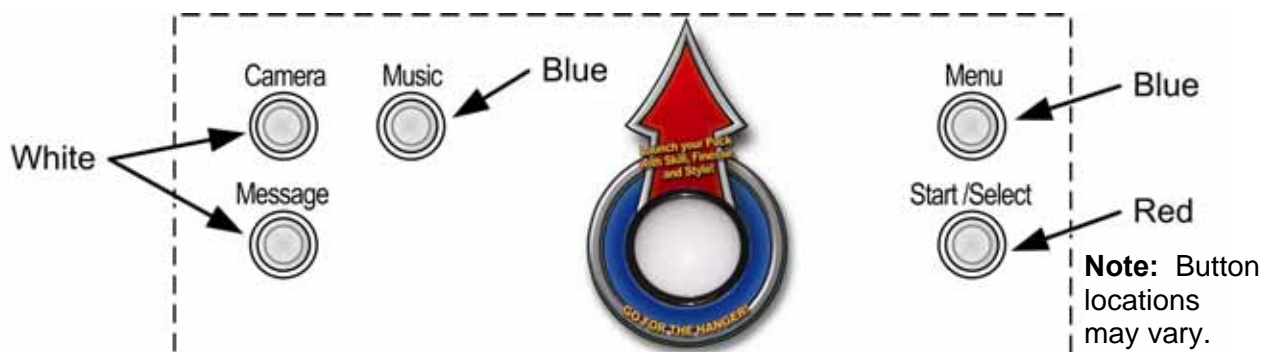
Figure 3. Finished Control Panel

1. Remove the buttons from the control panel along with the button wire harnesses.
2. Remove the screws that hold the plastic cover to the control panel surface, but leave the cover in place unless it is clear plastic.
3. If the control panel has a trackball of the same type as the kit, and it is in good condition, leave it in place and skip to Step 6. Otherwise, remove the trackball from the control panel, keeping the frame for re-use. If your cabinet does not have a trackball frame you will need to purchase one.
4. Remove the old trackball from the metal frame and install the new trackball from the kit. Install the assembly on the control panel and secure it with the hardware removed previously.

Note: If your trackball is installed with carriage bolts on the top surface, install these after you apply the control panel graphic.

5. If your control panel does not have a trackball, you will need to cut the trackball mounting holes. The Appendixes at the end of this manual have Templates to use as a general guide for cutting the control panel. Please use accurate measurements as the exact size of the printed templates may vary due to the printing equipment.
6. Your control panel will need holes for five buttons. If you need to drill new holes, refer to the picture of the finished control panel (Figure 3) to determine where to drill the holes. Use a 1-1/8" Spade drill bit or hole saw to drill the new button holes in the control panel.
7. Remove any T-molding from the edge of the control panel to make graphic application easier.

Note: If your control panel has a clear plastic cover, apply the control panel graphic to the wood surface underneath, and replace the plastic cover. Otherwise, apply the graphic to the existing plastic surface. Make sure the surface is clean so the graphic will adhere properly.
8. Position the control panel graphic so the hole for the trackball lines up properly and the decal extends to the edges of the control panel. Make sure the arrow points straight toward the monitor to help players line up their shots. Peel off the backing and apply the graphic.
9. Using a new Exacto[®] knife, use the outside edge of the control panel as a guide to cut off the excess graphic material.
10. Cut the graphic material from the five button holes.
11. Place the button stickers around the button holes, according to the labels shown below:

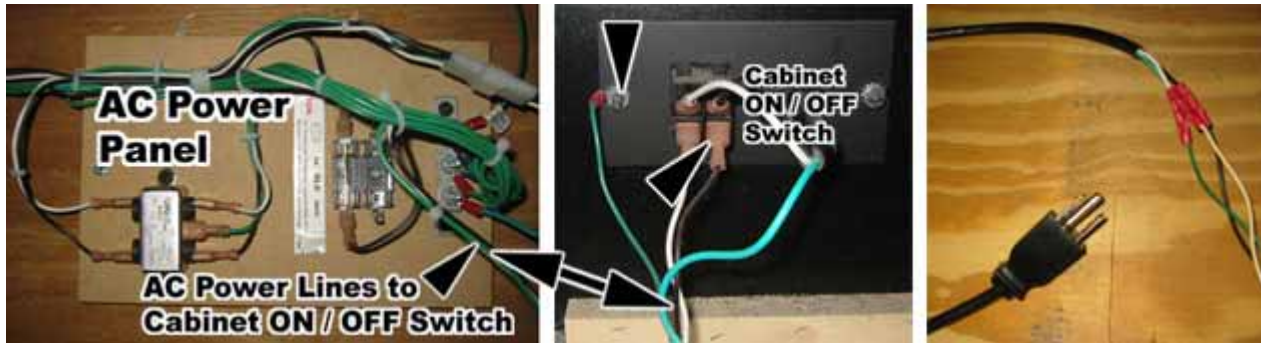


12. Re-install the T-molding and clear plastic control panel cover, if used.
13. Install the trackball carriage bolts first, if used, and then install any outside screws in the control panel to ensure there are no warps or bubbling in the control panel cover.
14. Install the buttons on the control panel. Refer to the picture above for color placement.

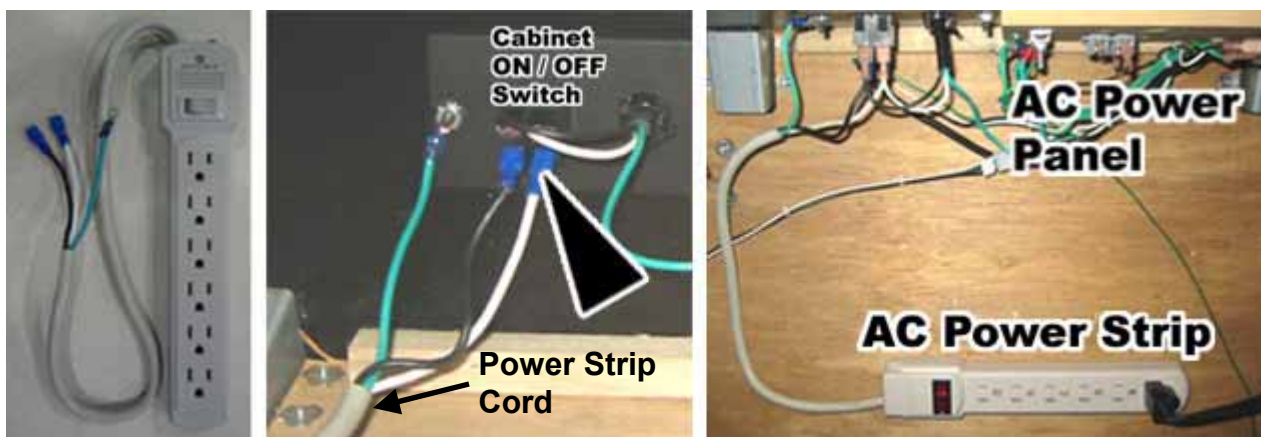
2.3 Set Up AC Power Distribution

The kit uses an AC power strip/surge suppressor to power the computer. If your cabinet already has a surge-protected AC power outlet for the computer, skip to *Section 2.4*.

The procedure that follows describes how to wire the power strip into the cabinet power panel and wire the existing AC power distribution to an AC plug that will connect to the power strip. The actual wiring will vary depending on what type of cabinet you are converting. Use the instructions that follow as a general guideline for setting up AC power distribution.



1. Locate the AC power panel inside the cabinet. The panel is usually the distributing point for all of the AC power lines inside the cabinet. If the panel is on the floor of the cabinet, you may need to move it to one of the side walls to make enough room to secure the computer to the floor of the cabinet (see *Section 2.4* on page 11).
2. Locate the three wires (line, neutral, and ground) that connect the AC power panel to the cabinet ON/OFF switch, and disconnect them from the ON/Off switch, as shown by the arrows in the picture above.
3. Strip these three wires and connect them to the AC power cord from the kit, using the butt splices provided. (You will be plugging this power cord into the power strip.)



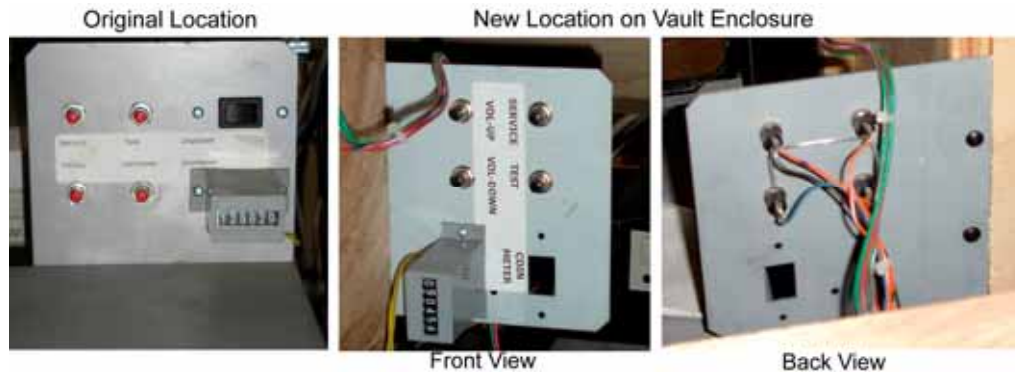
4. Connect the power and ground wires from the AC power strip to the three connectors on the ON/OFF switch where you removed the wires in step 2, as shown by the arrow in the picture above. Now the incoming AC power is routed to the power strip.
5. Plug the AC power cord from the Power Panel into the AC power strip. Now the existing cabinet AC power distribution is powered from the power strip.

Note: You may wish to connect AC power and turn on the cabinet now to make sure lighting and the monitor work. Disconnect the cabinet power cord before proceeding with the conversion.

2.4 Install the Computer

Note: The computer comes with the **Puck Off** software pre-installed and registered.

1. If the operator button panel in your cabinet looks like the picture below, you may wish to relocate it so that you can access the front of the computer through the coin door. Remove the two screws that secure the panel to the coin door assembly and move it to the side of the vault assembly, as shown below. Secure it with the two screws.



2. Place the computer so that there is at least a 6-inch clearance in front for the DVD-ROM drive to open. Try to place the computer so that you can reach the rear panel connectors through the back door, and the DVD-ROM drive through the coin door.
3. The computer should be against the side wall. If a cleat along the bottom of the cabinet prevents putting the computer against the wall, install a piece of wood of the same width to the side of the cabinet near the top of the computer to keep it from wobbling sideways. For extra protection, you may wish to install a sheet of dense packing foam under and at the side of the computer.
4. Refer to Figure 4 for an example of how to secure the computer with the mounting strap. Using the two (2) #10 x 3/4" wood screws with fender washers from the kit, secure the ends of the strap as close as possible to the top and side of the computer. Make sure the two parts of the strap are lined up so they will buckle near the center of the computer. Buckle and tighten the strap.

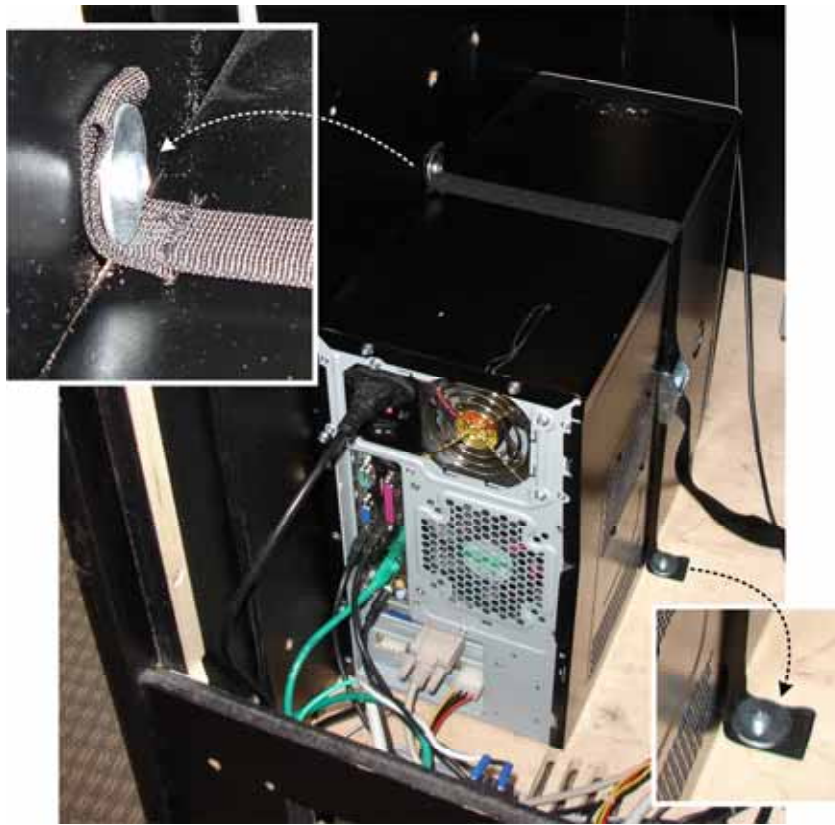


Figure 4. Securing the Computer

2.5 Install the Card Reader

The kit contains a XICO Model 7104USB Magnetic Stripe Card Reader. The card reader lets players associate their name and puck design with a credit card or driver's license. If the cabinet already has this type of card reader and it is in good condition, you can keep it and skip this section.

1. If your cabinet has an existing card reader or blank plate, unbolt it from inside the control panel, and remove it along with any associated cables.



Figure 5. Card Reader or Blank Plate Removal

2. If your cabinet does not have a hole for a card reader, do the following to cut one:
 - a. Refer to the picture above for suggested Card Reader placement.

Caution: Before cutting, make sure there is nothing inside the cabinet that could interfere with the card reader installation or be damaged when you cut the cabinet.

- b. Using the Card Reader Mounting Plate as a template, cut a hole for the card reader and drill three 1/4" holes for the mounting bolts.
3. Secure the Card Reader to the Mounting Plate with two (2) small machine screws.

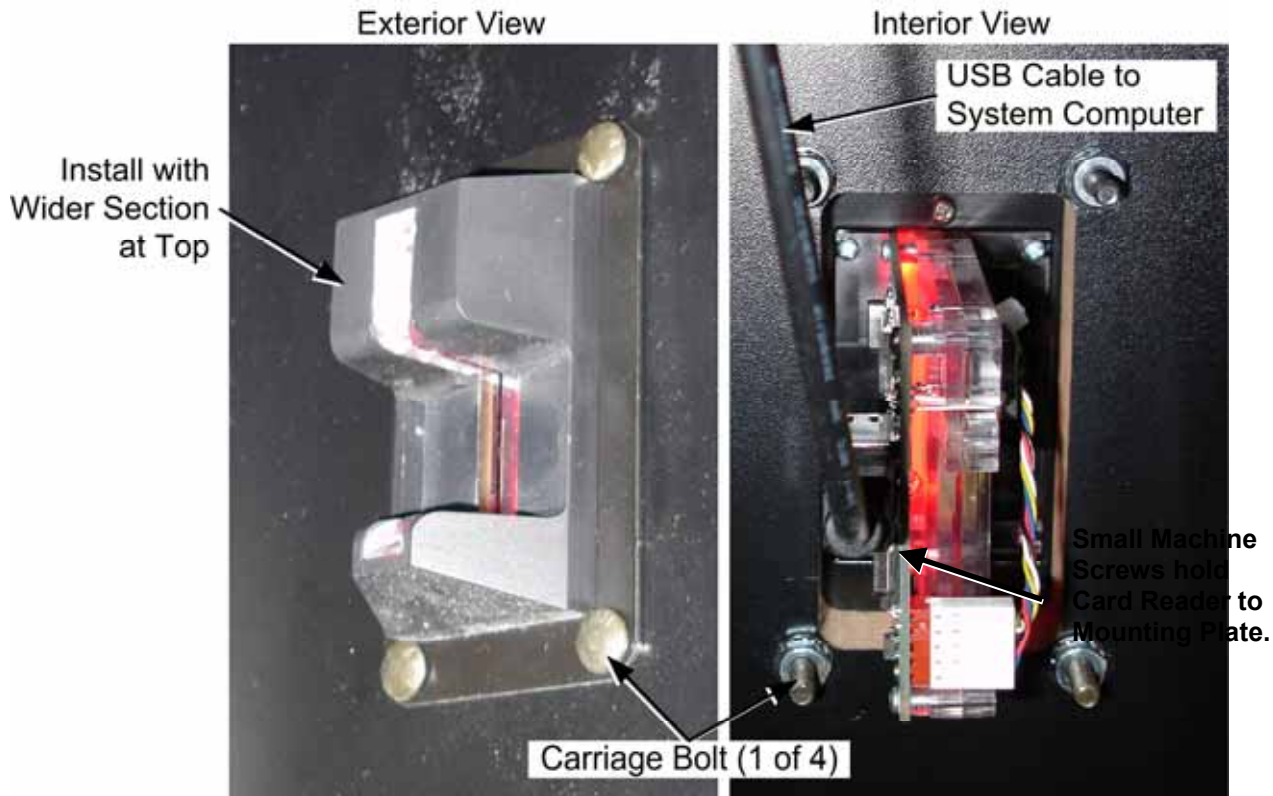


Figure 6. Card Reader Installed

4. Connect a USB Cable to the Card Reader, as shown above.
5. Secure the Card Reader to the cabinet with four (4) carriage bolts, flat washers, and Kep nuts from the kit, with the wider part up, as shown above.

2.6 Make Connections

1. Find a convenient location in the cabinet to mount the GFX I/O PCB. If the cabinet has a service tray, this is probably a good location. Otherwise, the best place is probably a wall inside the back of the cabinet. Make sure that all harnesses will reach the PCB without being pinched or pulled, and that the PCB will not be exposed to excessive heat. (If you install on a wall, place the PCB so the USB connector faces up. This will help keep the USB cable securely connected.)
2. Mount the PCB with the plastic feet from the kit as shown in Figure 7.

3. Refer to Figure 7, below, when making connections to the GFX I/O PCB. Also see Figure 13 on page 21 for general wiring information.

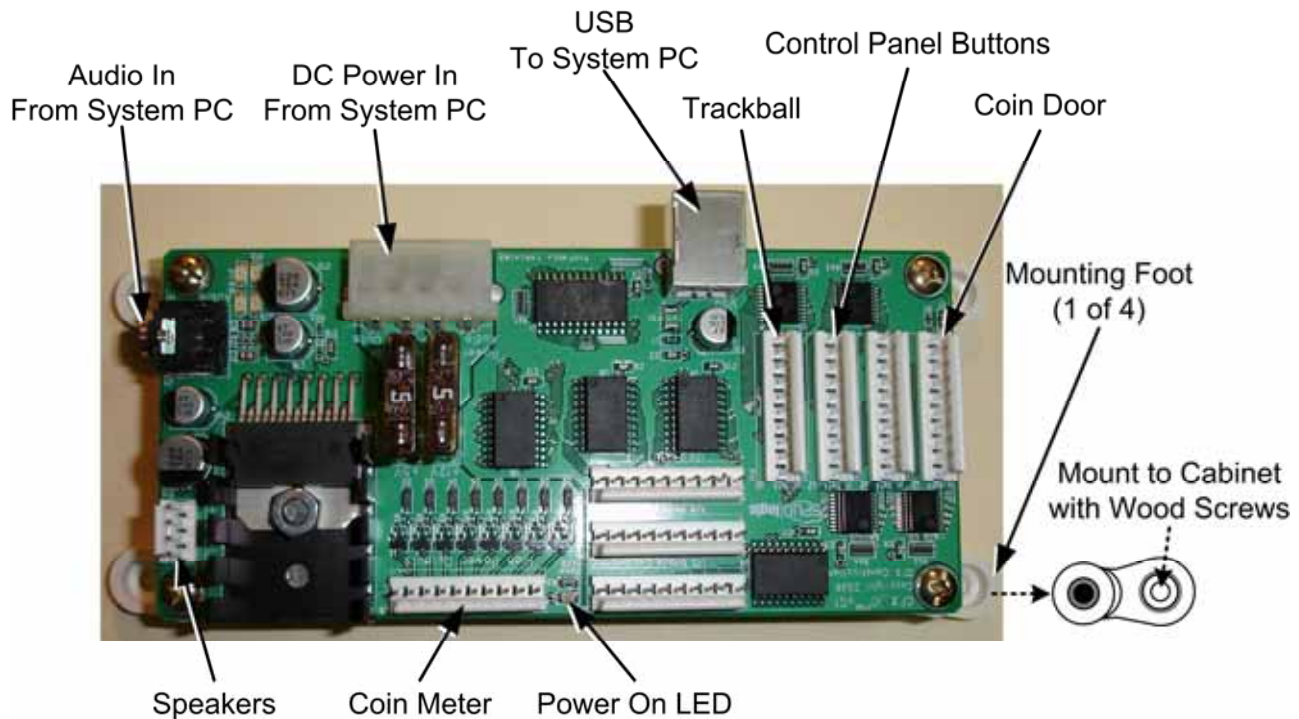


Figure 7. GFX I/O PCB Connections

4. Connect the trackball harness to the trackball and **J2** on the GFX I/O PCB.
5. Connect the button harness to the buttons, referring to the label on each wire. Connect to the correct terminals on the micro switch, as shown below. Connect the button harness to **J3** on the GFX I/O PCB.

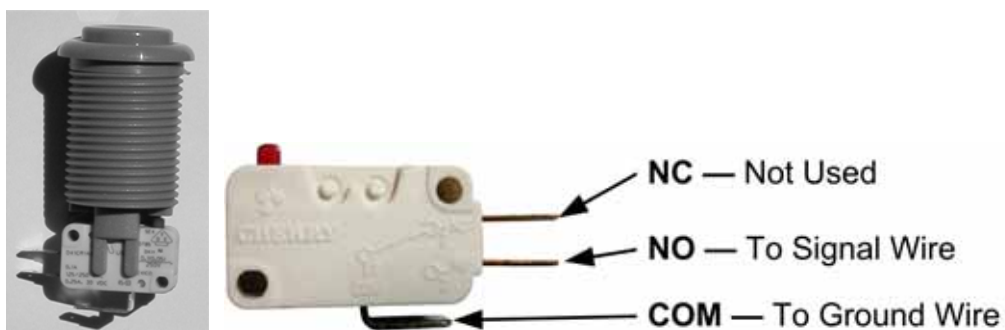


Figure 8. Connecting the Buttons

6. Connect the coin harness to the coin mechs and **J5** on the GFX I/O PCB. (Depending on your cabinet, use either the spade connectors on the harness, or use butt splices to connect the wires to the existing coin mech wiring.)
7. Connect the speaker harness to **J12** on the GFX I/O PCB and the speakers, being careful to connect the + and – wires to the same terminals on each speaker.

Note: On some cabinets you will need to remove the metal panel with the sub-marquee to reach the speaker connectors. In this case, you may wish to install the sub-marquee artwork now, as described in Section 2.7.2 on page 18.

8. The Coin Meter Harness has a 5 VDC wire, a 12 VDC wire, and a ground wire. Each wire has a butt splice pre-installed for connecting to the existing wiring. If you cannot determine the voltage of your Coin Meter, it is best to try 5 VDC first and see if it works. Connect the harness to **J9** on the GFX I/O PCB.

You can also use the power connection from the Coin Meter Harness to power the Coin Lamps. Alternately you can use a standard PC power connection to wire the coin lamps to the DC Power Card in the system computer.

9. Refer to Figure 14, *Computer Rear Panel Diagram*, on page 22 when making connections to the computer.
 10. Connect the USB cable from a computer USB port to the GFX I/O PCB.
 11. Connect the 3.5 mm audio cable from the **Green** audio out port on the computer to the Audio In port on the GFX I/O PCB.
 12. Connect the DC Power Cable from the power connector in the back of the computer to **J10** on the GFX I/O PCB. The harness is fitted with a noise filter that should be secured so that it does not pull on the wires.
 13. Connect the computer power cord to the computer and the AC power strip.
 14. If you have a medium-resolution (EGA) monitor, use the EGA cable and DVI-to-VGA adapter from the kit to connect the monitor to the DVI Port on the computer.
- Note:** The pinouts on EGA monitors can vary. If you do not get a good video image, you may need to change the pins on the monitor connector of the EGA cable. Check your monitor documentation, and see Figure 9 below for the wiring of the EGA cable from the kit.
15. If you have a VGA monitor, use the VGA cable to connect the monitor to the VGA port on the computer.
 16. Connect the Card Reader USB Cable to a computer USB port.
 17. Use wire ties to secure the cables and harnesses in the cabinet. Make sure no wires will be pulled or pinched when the control panel or service tray is opened or closed. Tie the wires to the cabinet so that they are secure and out of the way. Bundle and tie wrap any old harnesses that are no longer used.
 18. Use the adhesive-backed Velcro[®] from the kit to secure the power strip inside the cabinet.

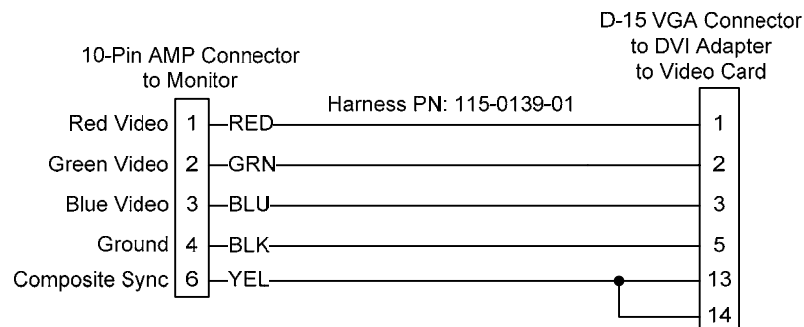


Figure 9. Wiring of EGA Cable from Kit

2.6.1 Install the Ethernet Cable

The Ethernet Cable is used for online gameplay features and to download software updates for Puck Off.

1. Refer to Figure 14 on page 22 for computer connections. Connect the CAT-5 Ethernet cable to the Ethernet port in the computer.
2. If there is an Ethernet port on the back of the cabinet, connect the Ethernet cable from the computer to the inside connector of this port, and connect an Ethernet cable from your network to the outside connector of this port. Otherwise, drill a hole for the cable or use an existing hole or air vent as shown in Figure 10 to run the Ethernet cable out of the cabinet.

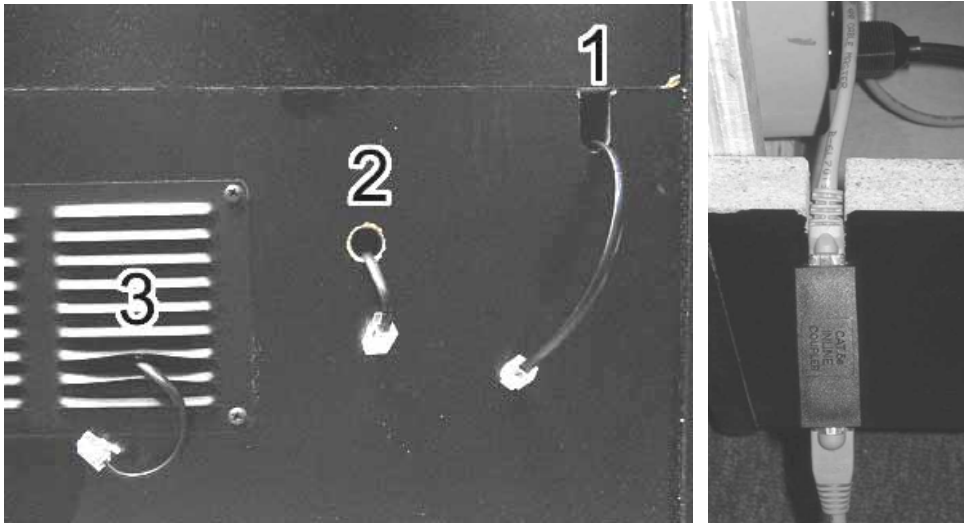


Figure 10. Running the Ethernet Cable out of the Cabinet

3. If needed, use an Ethernet coupler (**not** a crossover coupler) to extend the length of the Ethernet cable, as shown in the second part of the picture above.

2.7 Apply the Cabinet Artwork

Refer to the figure below and install the artwork as described in the subsections that follow.



Figure 11. Puck Off Artwork

2.7.1 Apply the Side Panel Graphics

1. Position the decals on the sides of the cabinet so they are straight and in the same position on both sides. If the cabinet has carriage bolts on the sides, avoid applying the decals over the carriage bolts.
2. Once the decal is aligned correctly, peel off the backing paper and apply the decal, carefully pushing out any air bubbles.
3. Using a new Exacto knife, trim the excess material from the decal, using the outside edge of the cabinet as a guide.
4. Apply the GLOBAL VR Logo Decal to each side near the top and front of the cabinet.

2.7.2 Install the Marquee Artwork

1. Remove the screws for the top bracket that holds the marquee glass and artwork to the cabinet, and remove the glass and old artwork.
2. Clean both sides of the marquee glass.
3. Use the glass as a guide to trim the graphic to fit the marquee.
4. Re-install the glass with the new **Puck Off** graphic, and then re-install the top bracket.

2.7.3 Apply the Sub-Marquee Artwork

1. Remove the screws that secure the metal plate with the sub-marquee artwork in place. The cabinet speakers may also be mounted to this plate. Be careful not to pull the speaker wires.
2. Remove the metal plate and old artwork. Clean both sides of the glass or clear plastic.
3. Align the new graphic behind the glass and trim as necessary to fit.
4. Replace the metal plate and screws.

2.7.4 Apply the Control Panel Front and Card Reader Graphics

Apply the Control Panel Front decal to the front of the control panel as shown in Figure 11. Trim the ends if necessary to make it fit.

Apply the Card Reader Decal next to the Card Reader or below it, depending on your cabinet.

2.7.5 Apply the Serial Number Label

Place the Cabinet Serial Number sticker on the outside of the cabinet in the upper left-hand corner, as shown by the arrow in the picture below.



Figure 12. Applying the Serial Number Label

2.8 Power ON and Test the Cabinet

1. Before powering the cabinet ON for the first time, please verify the following:
 - AC power is set up correctly inside the cabinet.
 - The GFX I/O PCB is connected to the DC power port in the computer.
 - All connections are correct and secure.
2. Power ON the cabinet and verify that the Attract Mode starts and runs properly. (If the picture is scrambled and you have a medium resolution (EGA) monitor, run the EGA Resolution Setup Disk as described in the next subsection.)
3. Start a game and verify that the Trackball and buttons function properly.

Note: If the trackball was installed backwards, you can compensate by selecting X Invert and Y Invert from **Cabinet Setup**→**Controls Setup** in the Operator Menu.
4. Press the Operator **Test** button inside the coin door to access the Operator Menus, and then select the menus described in the subsections that follow to test cabinet functions and set up your game. See the *Puck Off Operation & Service Manual* for more information on using the Operator Menus.

2.8.1 Run EGA Disk, as Applicable

1. If your video image is scrambled, and you have a medium resolution (EGA) monitor, insert the EGA Resolution Setup Disk in the Computer DVD-ROM drive and then reboot the game. The disk will run automatically on reboot and set up the monitor.
2. When the update is finished, the drive will eject the CD. Remove the disk and reboot the game.

Note: The system is set up for VGA resolution by default. You only need to run the VGA Resolution Setup Disk if you run the EGA disk by mistake.

2.8.2 Player Control Test

1. Select **DIAGNOSTICS** from the Operator Menu, and then select **CONTROL PANEL TEST** to verify that the buttons and coin inputs are working properly.
2. Press each button and activate each coin input, and verify that the correct button highlights onscreen. If a button is not working, or the wrong onscreen button responds, make sure the wires are connected correctly.
3. To test the card reader, select **DIAGNOSTICS**→**CARD READER TEST** and insert a credit card or driver's license. Verify the name from the card appears onscreen.

2.8.3 Cabinet Setup

1. Select **CABINET SETUP**→**LOCATION INFO** and enter information about your location to identify your cabinet online.
2. Use other options in the CABINET SETUP menu to set up network, pricing, and other features.

2.8.4 Volume Adjustment

Select **VOLUME** from the main **OPERATOR MENU** to adjust the Attract, Game, and Announcer volume levels.

2.8.5 Monitor Test

Select **DIAGNOSTICS→MONITOR TEST** to access monitor test screens to help you to adjust the colors and geometry of the monitor. If you notice color distortion on the monitor, check for a degausser button on the monitor remote control board.

2.8.6 Using a Computer Keyboard

There may be times it is useful to connect a keyboard to the computer for troubleshooting purposes. You can use either a USB or PS-2 Keyboard, but you must reboot the computer after connecting a PS-2 keyboard.

Below is a list of the keyboard commands that work with **Puck Off**:

Key	Function
T	Opens the Operator Menu
↓↑	Moves Up or Down through menus
Enter	Control panel Start/Select button
M	Control panel Menu button
Q	Control panel Camera button
R	Control panel Music button
C	Add Coins
Esc	Restart Software

2.9 Connect to the Internet

Puck Off requires a Broadband Internet connection to use the online gameplay features and download software updates. Refer to Chapter 2 of your *Puck Off Operation & Service Manual* for detailed information on setting up your Internet connection and game network.

If you already have a typical broadband network set up at your location, you should be able to connect Puck Off and start using online features immediately. Be sure to select **Cabinet Setup→Location Info** in the Operator Menu and enter your Location Information to identify your cabinet to remote players.

This completes the conversion. Refer to your *Puck Off Operation & Service Manual* for troubleshooting help and operation instructions. Keep this conversion instruction document for future reference.

Chapter 3 – Diagrams and Schematics

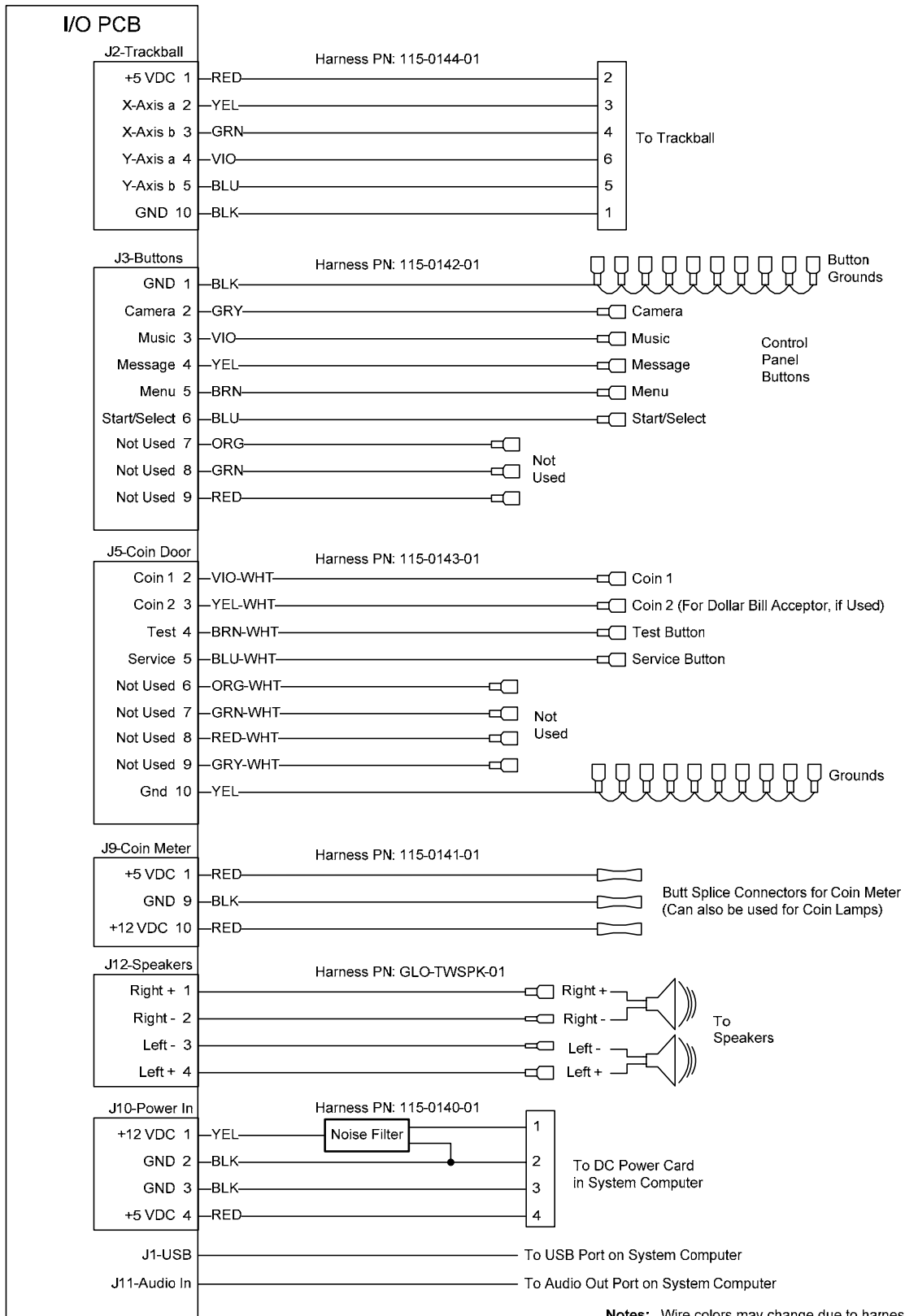


Figure 13. Detailed Wiring Diagram (GFX I/O PCB)

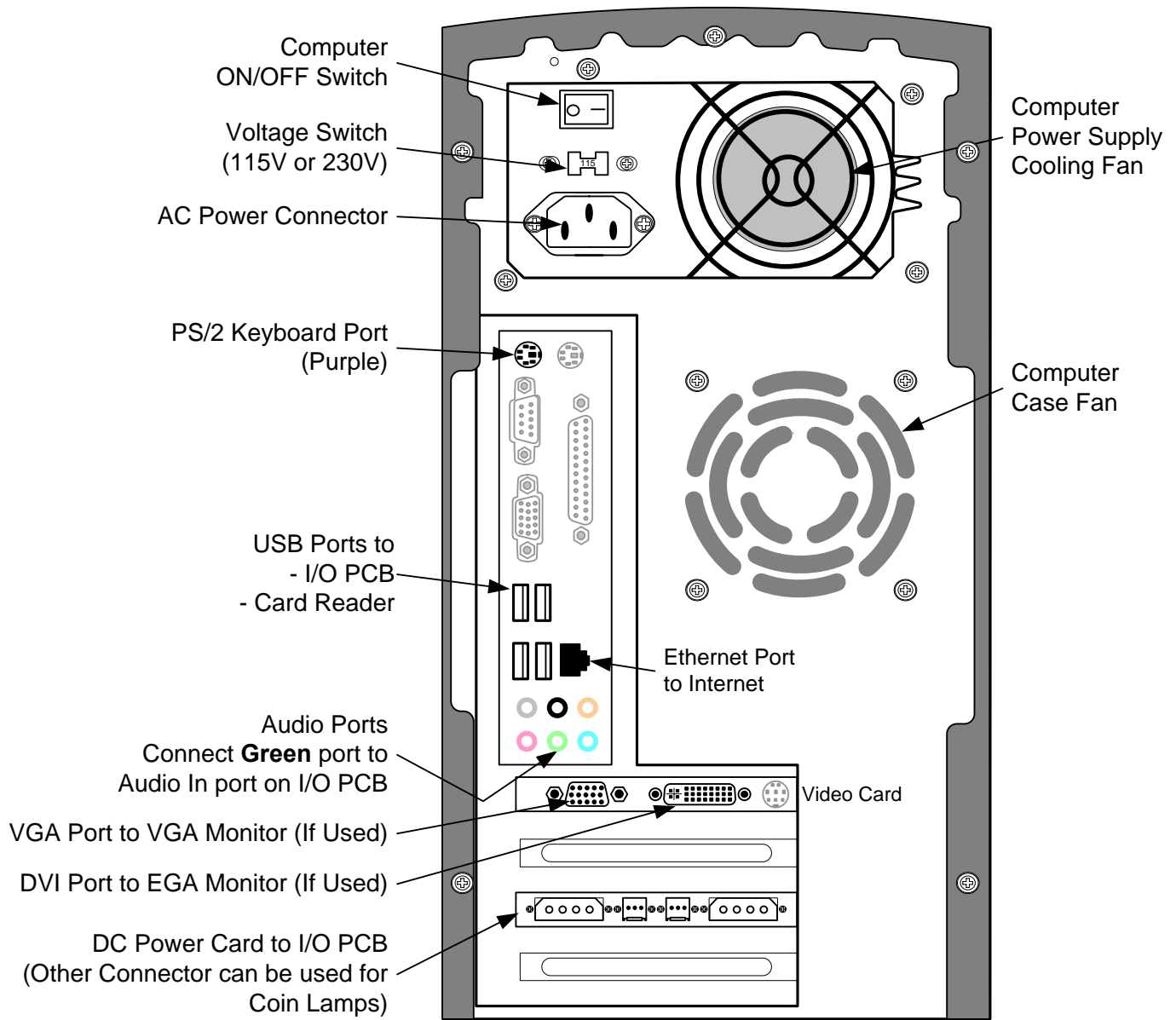


Figure 14. Computer Rear Panel Diagram

Appendix A: – Conversion Kit Warranty Information

Warranty Service

If you should require warranty service, please contact your authorized GLOBAL VR[®] distributor. If the technical support staff determines that parts on your **Puck Off** Conversion Kit are defective, a Return Merchandise Authorization (RMA) number will be issued.

LIMITED WARRANTY

GLOBAL VR[®] warrants that its computer circuit boards, hard drives, power supplies, monitors, displays, controls, sensors, and mechanical structures are free from defects in materials and workmanship under normal use and service for a period of ninety (90) days from the date of shipment.

All software and accompanying documentation furnished with, or as part of the Product, is supplied "AS IS" with no warranty of any kind except where expressly provided otherwise in any documentation or license agreement furnished with the Product.

During the warranty period, GLOBAL VR[®] will, at no charge, repair the Product, provided:

- Purchaser believes that the Product is defective in material or workmanship and promptly notifies GLOBAL VR[®] in writing with an explanation of the claim;
- All claims for warranty service are made within the warranty period;
- Products are returned adequately packed and freight prepaid to GLOBAL VR[®]'s designated service center;
- GLOBAL VR[®]'s inspection or test of the Product verifies to GLOBAL VR[®]'s satisfaction that the alleged defect(s) existed and were not caused by accident, misuse, neglect, unauthorized or attempted repair or testing, unauthorized modification, incorrect installation, vandalism, failure to follow the maintenance schedule or procedures; or operation in out-of-specification environmental conditions.

GLOBAL VR[®] will return the repaired Product freight prepaid to the Purchaser. All freight costs associated with replacement of warranty parts after expiration of the original warranty period are the responsibility of the Purchaser. GLOBAL VR[®] is not obligated to provide the Purchaser with a substitute unit or on-site service during the warranty period or at any time. If after investigation GLOBAL VR[®] determines that the reported problem was not covered by the warranty, Purchaser shall pay GLOBAL VR[®] for the cost of investigating the problem at its then prevailing per incident billing rate. No repair or replacement of any Product or part therein shall extend the warranty period as to the entire Product. The warranty on the repaired part only shall be in effect for a period of ninety (90) days following the repair or replacement of that part or the remaining period of the Product parts warranty, whichever is greater.

Purchaser's exclusive remedy and GLOBAL VR[®]'s sole obligation is to supply or pay for all labor necessary to repair any Product found to be defective within the warranty period and to supply, at no extra charge, new or rebuilt replacements for defective parts. If repair or replacement fails to remedy the defect, then, and only in such event, shall GLOBAL VR[®] refund to Purchaser the purchase price for said Product. Purchaser's failure to make a claim as provided above or continued use of the Product shall constitute an unqualified acceptance of said Product and a waiver by Purchaser of all claims thereto.

IN NO EVENT SHALL GLOBAL VR[®] BE LIABLE FOR LOSS OF PROFITS, LOSS OF USE, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM OPERATION OF THE GAME IN ANY CONDITION. GLOBAL VR[®] SHALL NOT BE RESPONSIBLE FOR THE SUITABILITY, PERFORMANCE, OR SAFETY OF ANY NON- GLOBAL VR[®] PART OR ANY MODIFICATION PERFORMED BY ANY PRODUCT DISTRIBUTOR UNLESS SUCH WORK IS EXPRESSLY AUTHORIZED IN ADVANCE BY GLOBAL VR[®].

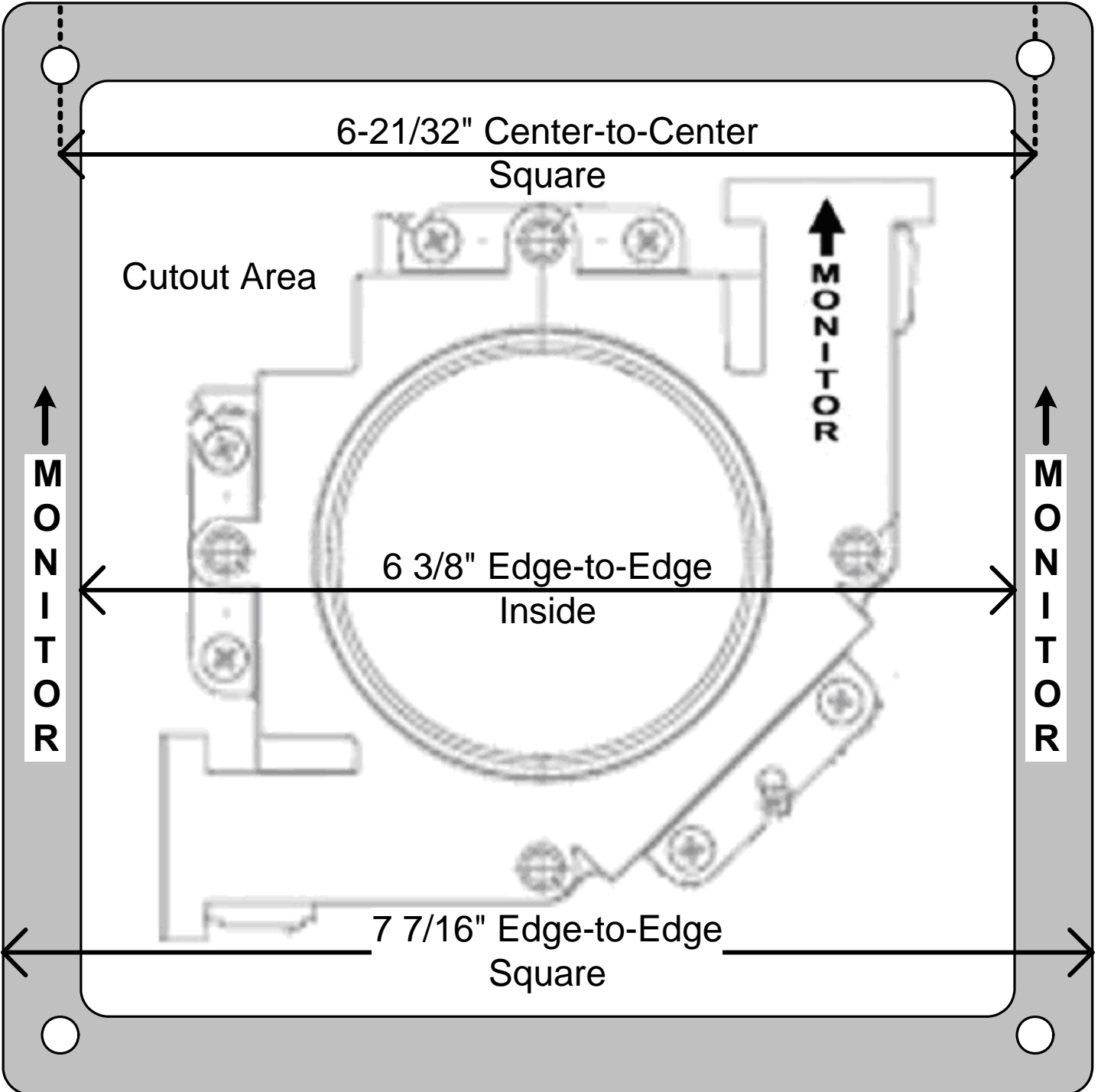
THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESSED OR IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ALL OTHER OBLIGATIONS OR LIABILITIES ON GLOBAL VR[®]'S PART, EXCEPT FOR ANY EXPRESS WARRANTY SET FORTH IN A WRITTEN CONTRACT BETWEEN GLOBAL VR[®] AND PURCHASER CONTAINING SPECIFIC TERMS WHICH SUPERSEDE THE TERMS HEREIN. THIS WARRANTY DOES NOT AUTHORIZE ANY OTHER PERSON TO ASSUME OTHER LIABILITIES, IF ANY, CONNECTED WITH THE SALE OF PRODUCTS BY GLOBAL VR[®].

Appendix B: Trackball Mounting for Wood Control Panels

You will need a metal frame mounting plate to mount the trackball to a wooden control panel.

Use the template below as a guide to cut and route the control panel for the trackball. Be sure the arrow with the word **MONITOR** is pointing towards the monitor in the cabinet when referring to the template.

Template drawing may not be to scale. Use accurate measurements.

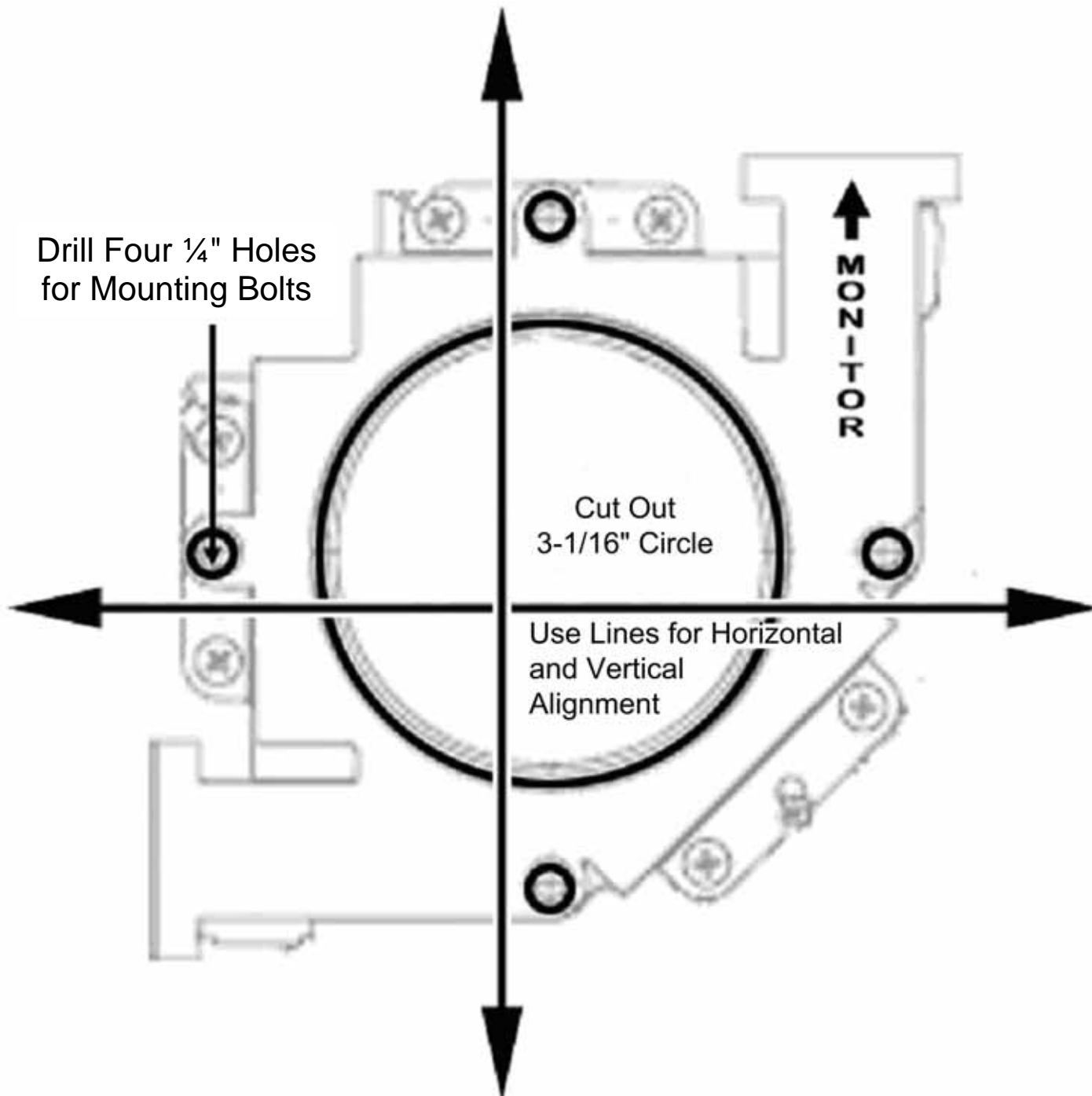


Appendix C: Trackball Mounting for Metal Control Panels

Use four (4) 10/32 x 3" carriage bolts with washers and nuts to mount the Trackball to a Metal control panel. No additional frame is required.

Use the drawing below as a guide to cut the control panel for the trackball. Be sure the arrow with the word **MONITOR** is pointing towards the monitor in the cabinet when referring to the drawing. Square bolt holes are recommended to prevent the carriage bolts from turning.

Template drawing may not be to scale. Use accurate measurements.



Technical Support

Hours: 7:00AM–5:00PM Pacific Time, Monday–Friday

Phone: 408.597.3435

Fax: 408.597.3437

E-mail: techsupport@globalvr.com

Website: <http://service.globalvr.com>

Extended Service Hours: Monday–Friday 5pm—Midnight
Saturday & Sunday 7:00am—Midnight Pacific Time

Free telephone, e-mail, and online support are provided for systems during the warranty period. GLOBAL VR[®] Technical Support can help you troubleshoot problems and diagnose defective parts. We can also answer questions about the operation of your game.

When you contact Technical Support, please provide the information listed below to assist the Technical Support representative in solving your problem quickly. For your convenience, space is provided to write important numbers.

Cabinet Serial Number (from label on cabinet rear): _____

Hard Drive Serial Number (from System Info screen): _____

Game Version (from System Info screen): _____

IP (from System Info screen): _____

Your mailing address and telephone number.

A summary of the question or a detailed description of the problem with your cabinet.

The additional information listed below, as applicable, may assist Technical Support in solving your problem quickly.

Specific error message

Date of latest install or upgrade

Any changes made to the system

For game-play issues, the game mode and number of players

To comment on this manual, please e-mail: techpubs@globalvr.com