



Global Arcade Classics Universal JAMMA Kit Installation Manual

040-0175-01 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 59°—86°F (15°—30°C).

Chapter 1 — Introduction

This manual describes the steps for using the Global Arcade Classics Kit to convert an existing cabinet into a Global Arcade Classics cabinet.

1.1 Kit Package Inventory

Open the shipping package and inspect it for damage. Refer to the table and figure below and check the kit for missing components.

Description	Qty	Part #
1 Button & Joystick Pack	1	----
Blue Pushbutton	12	250-BLUEBTN-HAP
Player 1 Start Button	1	250-PLY1BTN-HAP
Player 2 Start Button	1	250-PLY2BTN-HAP
Exit Button	1	250-EXITBTN-HAP
Joystick, Super 8-Way	2	255-SUP8WAY-HAP
Blue Button for use as Operator Button	1	58-9122-L
2 3.5mm Audio Cable M-M	1	96-0539-00
3 VGA Cable	1	V-0606
4 Fan, Grill, & Power Cord Assy	1	115-0025-01
5 USB A-B Cable	1	USB-AB06MM
6 JAMMA+ Harness	1	115-JAMMAUC-CBL
7 USBlinx II PCB	1	990-USBLNX2-UCT
8 Dongle EGA Med Res.	1	245-MEDRES-DNG
9 PCB Mounting Feet		49-1019-00
10 Computer Mounting Strap	1	60039-00
11 7-Outlet Power Strip/Surge Suppressor		49-0963-40
+5/+12 VDC Extension Cable	1	115-0058-01
Trackball Cable	1	115-TRKBALL-CBL
Trackball Assembly, 3"	1	56-0100-11HLGVR
Computer	1	45071-00



Cabinet Artwork and Labels

Control Panel Overlay	1	GACK-AW-03
Side Panel Artwork	2	GACK-AW-01
Marquee Artwork	1	GACK-AW-2
Label: 110 VOLT	1	L-0001
Label: FOR INDOOR USE ONLY	1	L-0004
Label: DISCONNECT POWER SUPPLY BEFORE SERVICING	1	L-0006
Label: Serial Number	1	L-0144

Documents and Software

Kit Installation Manual	1	040-0175-01
Operator Manual	1	040-0140-01
System Installation CD	1	050-0143-01
Game Base Pack DVD	1	050-0144-01

Table 1. Kit Contents

If you suspect that any part is missing from your kit, please contact GLOBAL VR[®] Technical Support at 408-597-3435.

1.2 Recommended Tools and Supplies

The following tools and supplies are recommended to complete the conversion of your existing cabinet into a Global Arcade Classics System. Exact tools and supplies need will vary depending on the cabinet being converted.

Required Tools:

- Phillips and flat-head screwdrivers
- Wire cutters and strippers
- Power drill
- Drill bits: 1-1/8", 1", 5/32", 1/4"
- Pliers
- Button wrench
- Exacto[®] Knife
- Wire nuts or Butt splices
- Crimpers
- Safety glasses
- **For Cabinet with Metal Control panel only:** Four (4) 10/32 x 3" carriage bolts with washers and nuts for mounting trackball.

Additional Useful Tools:

Depending on your cabinet, you may need the tools listed below, or you may find them useful.

- Assorted cable ties
- Wood and/or sheet metal screws
- Standardized socket set
- Squeegee
- Electrical tape or heat shrink tubing
- Glass cleaner
- C-Clamps
- Rubber mallet or hammer
- Grease pencil
- Multimeter
- Assorted female spade connectors
- Painting supplies
- Vacuum cleaner or air compressor
- Two (2) #10 x 3/4" wood screws with fender washers to secure computer mounting strap
- Second trackball with cable for deluxe 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.

2.1 Determining your Monitor Type

Note: The kit **does not** support CGA or vector monitors, or any monitor that requires a color inverter.

The kit supports EGA (medium resolution / 24.5 KHz) or VGA (high resolution / 31.5 KHz) monitors. If you do not know what type of monitor you have, then you will need to determine this. The easiest way is to check the monitor manual. If you no longer have your monitor manual, write down the picture tube serial number and model, and contact the manufacturer. When working on your monitor, be sure to closely follow all warnings and precautions provided by the manufacturer.

2.2 Prepare the Cabinet for Conversion

2.2.1 PCB Removal

If the cabinet you are converting contains a PCB, it is usually best to remove the PCB along with any cage or mounts. However, if space allows, you may choose to leave the PCB in the cabinet.

2.2.2 Wiring Removal

The Global Arcade Classics System Kit is JAMMA compatible. If you are installing the kit into a JAMMA cabinet, **GLOBAL VR strongly recommends that you replace your existing JAMMA harness with the JAMMA+ harness from the kit.**

If you choose to use the existing JAMMA wiring, you will need to make some modifications. You will also need to use the **Button 5, 6, and Exit button** wiring that is part of the JAMMA+ harness. You **must** remove any wires that provide power to your existing JAMMA Harness.

CAUTION: Failure to remove power wires from the JAMMA harness could damage the USBlinx II PCB.

For best results, remove all of the old wiring from the control panel, test switches, coin door, speakers, and PCB power. **Do not remove any wires that supply power to your monitor or marquee light.**

For an EGA monitor, you may want to keep the existing video wires to ensure adequate length. You will need to connect the monitor to the wires in the JAMMA+ harness.

A VGA monitor connects directly to the 15-pin VGA port on the computer and does not use the JAMMA video wires.

2.2.3 Player Control Removal

Remove all joysticks, buttons, and other controls from the control panel in preparation for the installation of the new control panel overlay.

2.2.4 Artwork Removal

Remove all art from the old cabinet. Remove any stickers from the monitor glass and bezel and clean any glue residue. Remove the marquee. If the old marquee has been silk-screened onto the plastic, you will need a new piece of clear plastic for the marquee. Remove the side panel decals and clean off any glue residue.

2.2.5 Cleaning and Painting

For best results, clean and/or paint your cabinet before installing the kit. Vacuum or blow any dust out of the cabinet. If you decide to paint, fill any dents, chips, or other damage with wood putty and sand smooth. A black semi-gloss paint is recommended for painting the cabinet.

2.3 Control Panel Conversion

2.3.1 Determine Layout and Cut Holes

The control panel is optimally designed for an upright cabinet with two joysticks, 12 buttons, one trackball, two Start buttons, and an Exit button that a player uses to exit from a game and return to the main game selection screen.

The kit will also support a single joystick configuration with six buttons, one trackball and two Start buttons. In this arrangement, Players 1 and 2 take turns using the same controls. Select **Single** in the Cabinet Configuration screen of the Operator Menu to set up this configuration in the software.

The kit also supports using two trackballs (as in the Deluxe and Cocktail configurations shown in Figure 1). Contact GLOBAL VR to order a second trackball and trackball harness.

Additionally, the kit has built-in cocktail cabinet support. Select **Cocktail** in the Cabinet Configuration screen of the Operator Menu to tell the software to flip the image for Player 2.

You may need to modify your control panel to install the controls. Figure 1 shows suggested layouts for the control panel.

The templates listed below are provided to help you cut your control panel. When using the templates, please use accurate measurements as the exact size of the printed templates may vary due to the printing equipment.

- *Figure 4. Drilling Button Holes*, on page 10
- *Appendix A: — Template for Mounting Buttons and Joystick*, on page 23
- *Appendix B: — Trackball Mounting for Wood Control Panels*, on page 25
- *Appendix C: — Trackball Mounting for Metal Control Panels*, on page 26

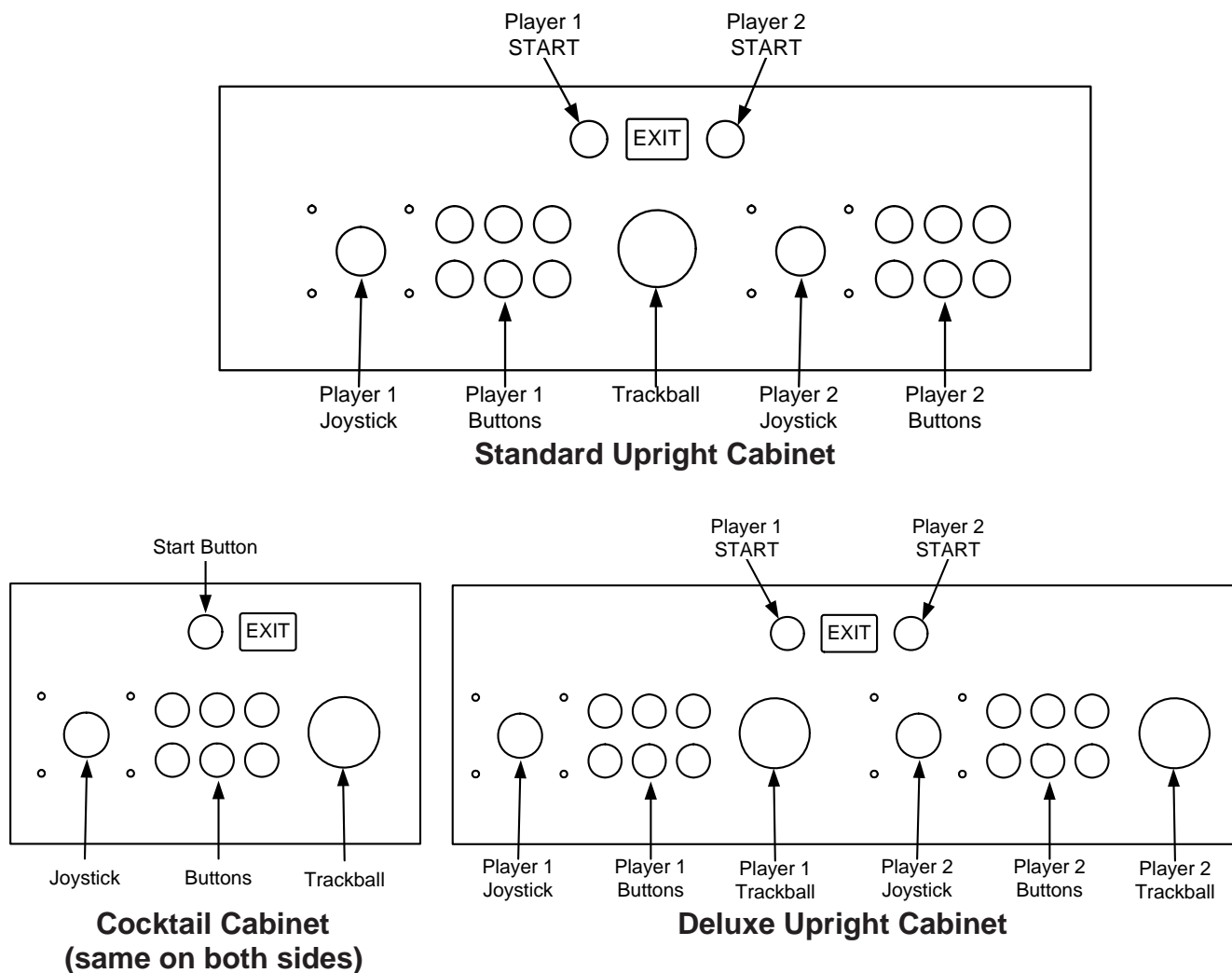
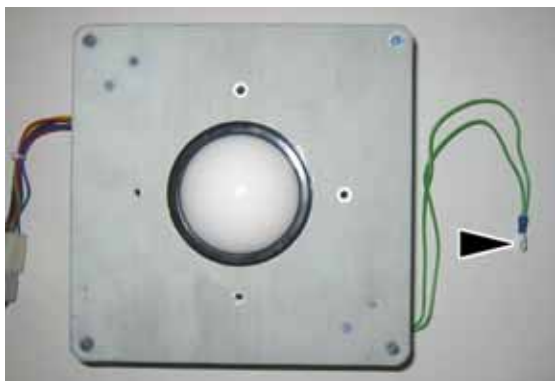


Figure 1. Suggested Control Panel Layouts

2.3.2 Install the Trackball

The trackball should be installed before you apply the Control Panel Overlay. Make sure the trackball is oriented properly before securing it to the control panel. You must ground the Trackball to prevent static electrical shock to the USBlinx II PCB. Connect the two green wires, shown by the arrow in the picture below, to a secure cabinet ground.



Note: You can use any standard arcade trackball with two (2) X and two (2) Y wires, and a 6-Pin Molex[®] connector. For some cabinet configurations you may wish to substitute a smaller trackball.

Figure 2. Trackball in Frame with Ground Wires

2.3.3 Apply the Control Panel Overlay

1. All of the controls except the trackball should be removed when applying the overlay. Cut and drill all holes needed for the controls before applying the overlay. If the control panel has a clear plastic cover, remove and clean it, and cut it to match the wood.
2. Remove any T-molding from the edge of the control panel.
3. If the existing control panel artwork is loose, remove it. In most cases you will place the new overlay over the old artwork. For a clean look, mark around the edges of the old artwork with a black permanent marker. The surface should be as clean and smooth as possible.
4. Carefully align the overlay. Peel off the backing paper and apply it to the control panel. If the graphic has logos or characters, try to place it so they will not be covered by the controls. Use a sharp Exacto knife to trim the edges to fit, and trim away the holes for the controls.
5. Replace the clear plastic control panel cover, if used, and any T-molding that was removed.

2.3.4 Install the Joysticks

Refer to the figure below when installing the joysticks. Your kit comes with two 8-way joysticks with mounting nuts and bolts. When tightening the joystick down, use a 3/8" deep socket.

Make sure the joystick actuator is installed in the 8-way position as shown below. The end that is slightly wider (thicker plastic) should face upwards, towards the handle.

If the actuator is not installed as shown, the joystick will operate in 4-way mode only. The Global Arcade Classics software uses the 8-way joystick, and simulates a 4-way joystick for games that originally used 4-way joysticks.

The actuator is the part that activates the micro switches as the joystick is used. To verify it is installed correctly, move it diagonally and visually confirm that two micro switches are activated.

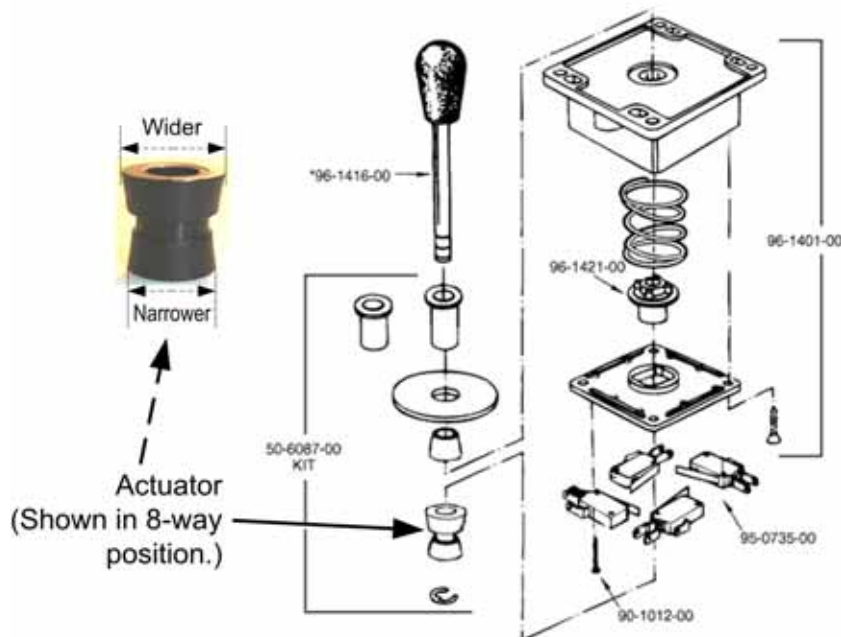


Figure 3. Joystick Exploded View

2.3.5 Install the Buttons

Your kit comes with 12 blue buttons, Player-1 and Player-2 Start buttons, and a lighted Exit button. (An extra blue button is provided to use as the Operator Button.)

1. Drill a 1-1/8" hole for each blue button and start button.
2. Refer to the figure below and drill a 1" hole and two 5/32" holes for the Exit button, as shown. See Figure 9 on page 15 for photos of the assembled buttons.
3. Secure each button in place with a retaining ring.

Note: Your control panel can be no thicker than .79" to install the buttons.

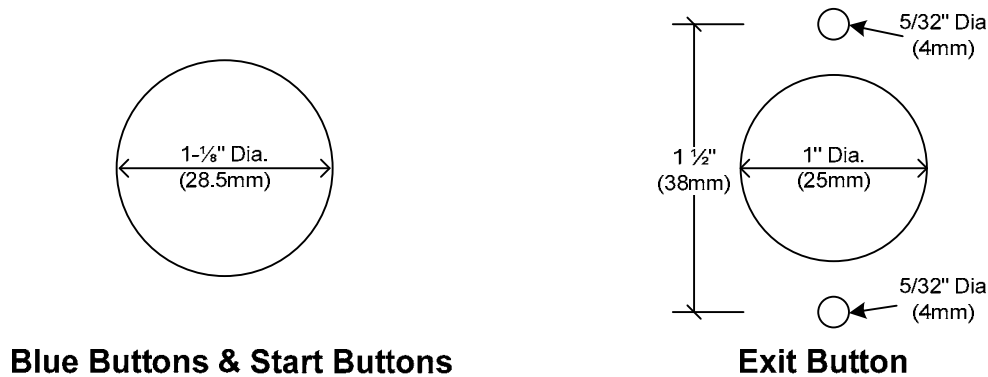


Figure 4. Drilling Button Holes

2.4 Install the Operator Button

If your cabinet does not have an Operator (Service) button, install the extra button from the kit in a convenient location, usually inside the coin door.

2.5 Install the AC Power Strip

The kit uses an AC power strip/surge suppressor to power the computer and ventilation fan.

The easiest way to set up AC power is to route your existing cabinet power cord to the inside of the cabinet and connect it to the power strip, and then route the power cord from the power strip out of the cabinet. This will now be the cabinet power cord.

Alternately, you can connect the Power Strip to your existing AC power distribution. The AC power Strip wiring is as follows: **Green** - ground, **White** - neutral, **Black** – 115 VAC power. Be sure to leave existing AC wiring in place for the monitor and cabinet lighting.

Secure the power strip inside the cabinet using either two screw-mounted cable ties or a strip of adhesive Velcro®.

2.6 Install the Ventilation Fan

The cabinet must have adequate ventilation to prevent the system computer from overheating. Do the following to install the ventilation fan from the kit in the back of the cabinet:

Important: If the fan is in the lower part of the cabinet, make sure it draws air **into** the cabinet. If the fan is in the upper part of the cabinet, make sure it blows air **out** of the cabinet.

1. Install the fan behind existing ventilation holes, or cut a (4.5" diameter) hole in the back of the cabinet. Using the fan as a template, drill four 7/32" holes for the fan mounting bolts. Secure the fan with the four (4) 2-1/2" bolts and Kep nuts.

2. Connect the fan power cord to the AC power strip.



Figure 5. Installing the Ventilation Fan

2.7 Computer Installation

Note: The computer is pre-installed with the Global Arcade Classics Operating System and game software.

2.7.1 Install Fuses in USBlinx II PCB

The USBlinx II PCB is usually shipped without the three fuses installed. Install the three 5 Amp fuses in the PCB as shown below.

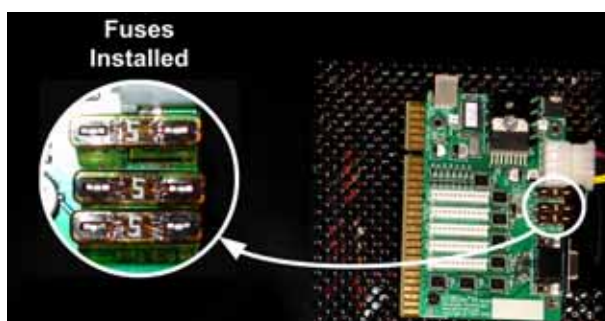


Figure 6. Installing the USBlinx Fuses

2.7.2 Connect Computer and USBlinx II PCB

Refer to the Figure 7 on page 12, and connect the audio, video, and USB cables listed below:

1. Connect the USB cable between the computer and PCB.
2. Connect the 3.5mm audio cable from the green computer audio port to the PCB.
3. **For EGA monitor only:** Connect the VGA Cable from the VGA port on the computer to the PCB, **and** connect the EGA dongle to the parallel port on the computer. Use a small flat-blade screwdriver to tighten the screws to ensure that the dongle does not come loose.
4. **For VGA monitor only:** Connect the monitor directly to the VGA port on the computer using the VGA cable. **Do not** use the EGA dongle with a VGA monitor.
5. Connect the six-pin Molex connector from the Trackball to **Trkball 1** on the PCB.
6. If you are installing the optional second trackball, connect it to **Trkball 2** on the PCB.
7. Connect the 4-Pin DC power connector that is hanging out of the PC to the **Power In** port on the PCB.

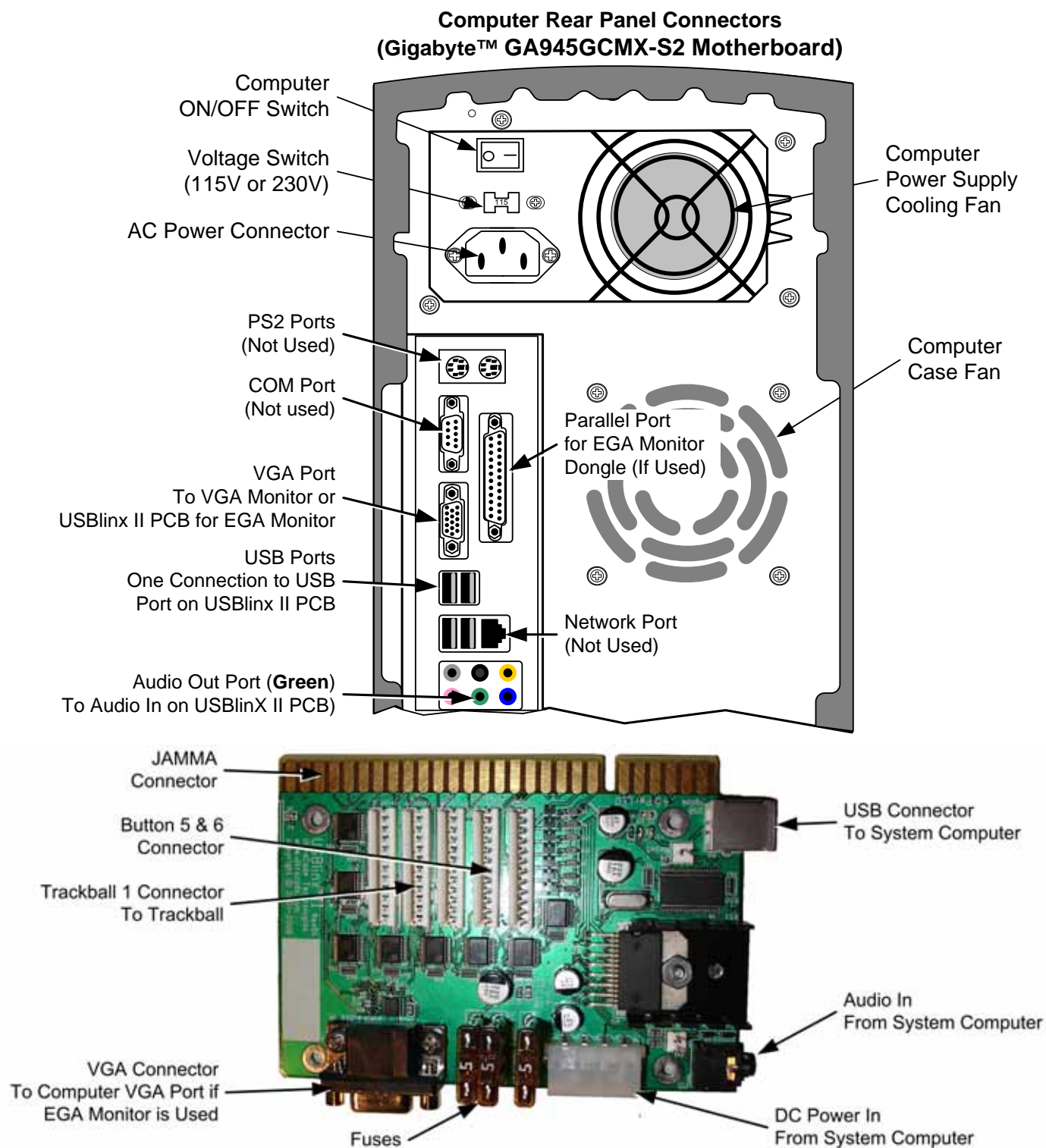


Figure 7. Computer and USBlinx II Connections

2.7.3 Secure the Computer

1. Place the computer so that there is at least a 6-inch clearance in front so the DVD-ROM drive can open. If possible, 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.

2. 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.
3. Refer to Figure 8 for an example of how to secure the computer with the mounting strap. GLOBAL VR recommends using two (2) #10 x 3/4" wood screws with fender washers to 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.
4. Connect the Computer AC Power Cord from the computer to the power strip.

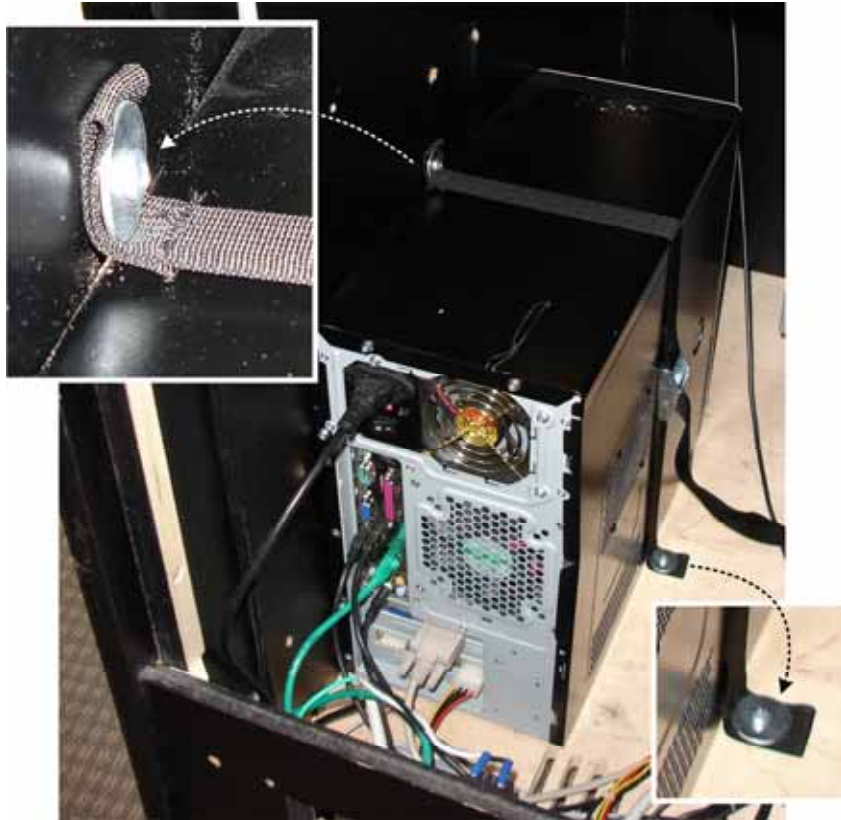


Figure 8. Securing the Computer

2.8 Power ON Test (Optional)

If you wish, at this time you can plug your cabinet in and turn it on to test the AC wiring. If the computer, monitor, or marquee light does not power on, you will need to check the wiring. Also make sure that the LEDs on the USBlinx II PCB are lit to confirm that the USBlinx II PCB is getting DC power from the computer. A multimeter can be used to check the continuity and voltages.



CAUTION: Disconnect the AC power cord before continuing with the installation.

2.9 Wiring Installation



Always disconnect the AC power cord before working on the cabinet. Even when the monitor is powered off, it can carry a **VERY HIGH ELECTRICAL CHARGE** that can result in severe injury or death. The kit should be installed by a **QUALIFIED TECHNICIAN ONLY**.

2.9.1 The JAMMA+ Harness

The table below shows the pins and wire colors for the JAMMA+ Harness.

GLOBAL VR strongly recommends using the JAMMA+ Harness to wire your game.

SOLDER SIDE				COMPONENT SIDE		
Signal	Color	Pin		PIn	Color	Signal
Ground	BLK	A		1	BLK	Ground
Ground	BLK	B		2	BLK	Ground
+5V	RED	C		3	RED	+5V
+5V	RED	D		4	RED	+5V
-5V	BLU	E		5	BLU	-5V
+12V	ORG	F		6	ORG	+12V
Key		H		7		Key
Not Used	WHT-RD	J		8	WHT-BLK	Coin meter 1
Not Used	BLK-GRN	K		9	BLK-YEL	Not Used
Left Speaker -	BLU-RED	L		10	RED-YEL	Left Speaker +
Right Speaker -	BLU-GRN	M		11	RED-BLK	Right Speaker +
Video green	GRN	N		12	RED	Video Red
Video Sync	WHT	P		13	BLU	Video Blue
Service switch	WHT-ORG	R		14	BLK	Video Ground
Not Used	BLK-WHT	S		15	WHT-BRN	Test Switch
Coin 2	BRN-BLK	T		16	YEL-BLK	Coin 1
Player 2 Start	RED-WHT	U		17	RED	Player 1 Start
Player 2 Up	BLU-WHT	V		18	BLU	Player 1 Up
Player 2 Down	GRN-WHT	W		19	GRN	Player 1 Down
Player 2 Left	ORG-WHT	X		20	ORG	Player 1 Left
Player 2 Right	YEL-WHT	Y		21	YEL	Player 1 Right
Player 2 Button 1	BRN-WHT	Z		22	BRN	Player 1 Button 1
Player 2 Button 2	VIO-WHT	Aa		23	VIO	Player 1 Button 2
Player 2 Button 3	GRY-WHT	Ab		24	GRY	Player 1 Button 3
Player 2 Button 4	GRN-YEL	Ac		25	GRN-RED	Player 1 Button 4
Not Used	ORG-BLK	Ad		26	ORG-RED	Not Used
Ground	BLK	Ae		27	BLK	Ground
Ground	BLK	Af		28	BLK	Ground

Table 2. JAMMA+ Harness Pinouts

If you will be using your old JAMMA harness instead of the JAMMA+ harness, use Table 2 to check the wiring. Be sure to check pins **L**, **M**, **10** and **11**, which are for the speaker wires; and pins **Ac** and **25**, which are for Button-4 for each player. You will also need to connect Player Buttons 5, 6, and EXIT to the USBlinx II PCB by using the wires and Molex connector bundled with the JAMMA+ Harness.

CAUTION: Make sure there are no power wires connected to the JAMMA harness or you will damage the USBlinx II PCB.

The JAMMA harness connects directly to the JAMMA edge of the USBlinx II PCB. The JAMMA edge is keyed so that a harness with a corresponding key in the seventh slot cannot be attached incorrectly.

Note: You will **not** use all the wires in the JAMMA+ Harness.

The wires of the JAMMA+ Harness are arranged in eight (8) bundles as described below.

Bundle Name	Description
Player-1 Controls bundle	12 wires, mostly solid colors, with spade connectors. (Multiple spades on ground wire.)
Player-2 Controls bundle	12 wires, mostly striped, with spade connectors. (Multiple spades on ground wire.)
Exit Button bundle	3 wires, including power for the lighted button. (2 spades on black ground wire.)
Speakers bundle	4 wires with spade connectors.
EGA Video bundle	5 wires with no connectors: red, blue, green, black, white.
Service Switch/ Coin Meter bundle	5 wires (2 with spade connectors, 3 with no connectors).
Coin Door bundle	5 wires with spade connectors. (2 spades on power & ground wires.)
Power bundle	9 wires with no connectors. Not used in most configurations.

The JAMMA+ Harness also has a 12-PIN Molex connector that is used to connect Player Buttons 5, 6, and EXIT to the USBlinx II PCB. These buttons are not supported by JAMMA.

CAUTION: DO NOT connect any power wires to the JAMMA harness or you will damage the USBlinx II PCB.

2.9.2 Control Panel Wiring

The button connectors on the Player-1 and Player-2 wire bundles have spade connectors that easily connect to the joystick and the button micro switches (see Figure 3 and Figure 9). Refer to Table 2 for the JAMMA+ wire colors.

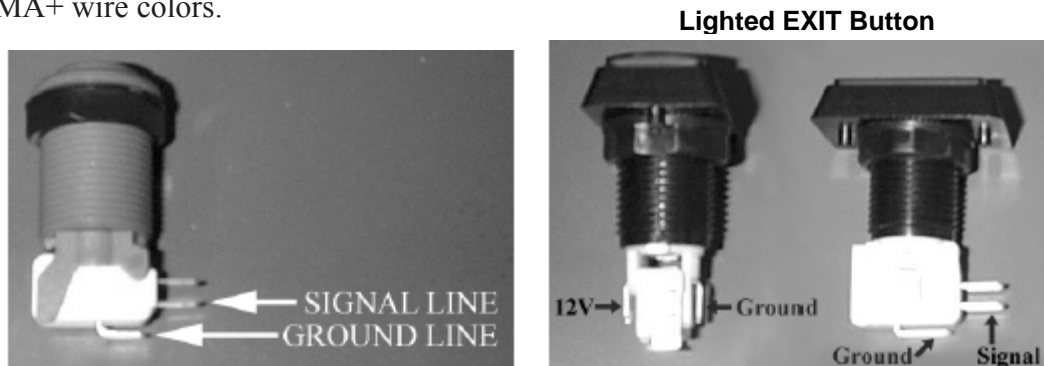


Figure 9. Button Micro Switch Wiring

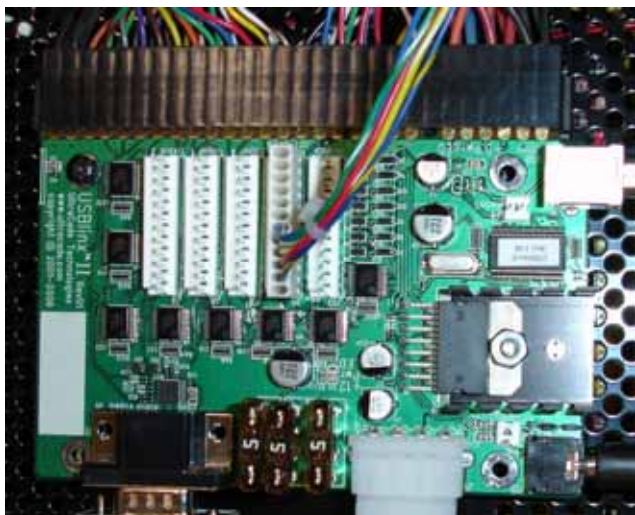
2.9.3 Connecting Buttons 5, 6, and Exit

The wires for player buttons 5 and 6 and the Exit button are not supported by the JAMMA harness, but the wires and 12-pin Molex connector are bundled in the JAMMA+ harness. (If you use your old JAMMA harness you will need to use these wires as well.)

1. Refer to Figure 9 and Figure 10 when connecting the EXIT button. Locate the EXIT wire bundle. The signal line is **blue**. The 12-volt line used to light the button is **orange**, and the ground line is **black**. Connect the spades to the appropriate connectors.

CAUTION: If you connect the 12-volt line to the micro switch you will damage the micro switch.

2. Connect the 12-pin Molex connector to the **Player 3** connector on the USBlinx II PCB, as shown in Figure 10.



Molex Pin #	Wire Color	Connects To
7	Blue	Exit Button
8	Green/White	Player-1 Button-5
9	Yellow/White	Player-1 Button-6
10	Red	Player-2 Button-5
11	Blue/Yellow	Player-2 Button-6

Table 3. Buttons 5 & 6 and Exit Button Pinouts

Figure 10. Connecting Buttons 5, 6, and EXIT

2.9.4 Video Wiring (EGA Monitor Only)

You only need to connect the video wires from the JAMMA harness if you have an EGA monitor. If you have a VGA monitor, skip this section. To determine what type of monitor you have, refer to section 2.1 *Determining your Monitor Type* on page 6.

If your monitor has a Molex connector, you can splice a corresponding connector (not included) to the video wires in the JAMMA+ harness, or you can splice the monitor wires directly to the wires in the JAMMA+ harness.

The video wires in the JAMMA+ Harness are color-coded as follows:

- **Red** wire - Red signal
- **Green** wire - Green signal
- **Blue** wire - Blue signal
- **Black** wire - Video ground
- **White** wire - Composite sync

To determine the wiring pinout for your monitor, refer to the owner's manual or contact the manufacturer for a wiring schematic.

Note: GLOBAL VR[®] is not liable for any damage done to monitors through incorrect wiring.

2.9.5 Speaker Wiring

The Global Arcade Classics Kit uses stereo audio. The table below lists the left and right speaker wire colors in the JAMMA+ harness. Splice the wires from the speakers to the speaker wires in the harness.

Pin #	Color	Connects To
L	Blue/Red	Left Speaker -
M	Blue/Green	Right Speaker -
10	Red/Yellow	Left Speaker +
11	Red/Black	Right Speaker +

Table 4. Speaker Wire Pinouts

2.9.6 Coin Door Wiring

1. Check Table 2 on page 14 to for wire colors, and connect the wires in the JAMMA+ harness Coin Door bundle to the coin switches and coin lamps.
2. Check Table 2 on page 14 to for wire colors, and splice the wires in the JAMMA+ harness Service Switch/Coin Meter bundle to the Service switch and coin meter.

Important: The Orange wire in the Service Switch/Coin Meter bundle carries +12 VDC.

Do not connect it to a 5-volt coin meter.

2.10 Artwork Application

Install the artwork and labels as described in the subsections that follow. Remember to remove all old artwork and clean any glue residue left behind before applying the new art.

2.10.1 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. If you need to trim the graphic, make sure that only the background image and none of the text or logos will be cut.
2. Once the decal is aligned correctly, peel off the backing paper and apply the decal, carefully pushing out any air bubbles.
3. If necessary, use a new Exacto knife to trim the excess material from the decal, using the outside edge of the cabinet as a guide. (Most cabinets will not require any trimming.)

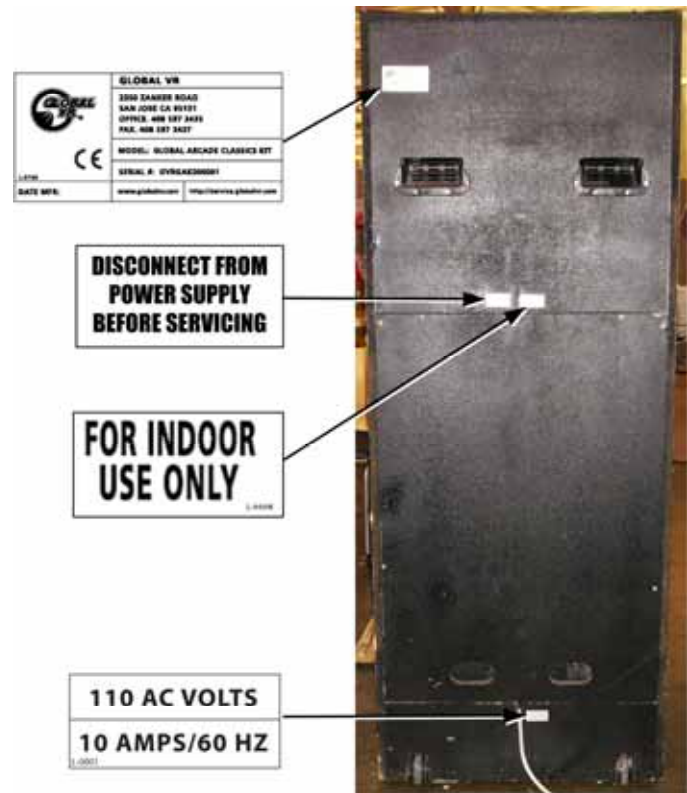
2.10.2 Install the Marquee Artwork

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. Avoid cutting any text or logos.
4. Re-install the glass with the new Global Arcade Classics artwork, and re-install the top bracket.

2.10.3 Apply the Cabinet Labels

Place the serial number and safety labels on the back of the cabinet as described below:

1. Place the Cabinet Serial Number sticker in the upper left-hand area.
2. Place the FOR INDOOR USE ONLY and DISCONNECT FROM POWER SUPPLY BEFORE SERVICING labels just above the cabinet rear door.
3. Place the 110 VOLTS label close to where the AC power cord connects to the cabinet.



Chapter 3 — Power On and Set Up

Your Global Arcade Classics Kit installation is now complete. Power ON your cabinet and press the Operator Button to enter the Operator Setup Menu and adjust the cabinet settings.

3.1 Game Setup

Below is a quick list of settings that you are most likely to want to change. Refer to your *Global Arcade Classics System Operator Manual* for help using the setup menus.

If you experience monitor display problems, refer to *Common Monitor Problems* below.

- **Accounting Information** — Reset the accounting report data so that the software keeps proper accounting dates.
- **Credits/Coins** — Change these settings to adjust the pricing for your cabinet and to turn the bonus credit on or off. The default setting is one coin drop to one play.
- **Cabinet Configuration** — In the Cabinet Configuration menu, set your screen orientation (vertical, horizontal, etc.), the cabinet orientation (upright, single, or cocktail), the location name, and the attract mode volume.
- **Volume** — Adjust the volume to an acceptable level for your location.

3.2 Diagnostics

Your Global Arcade Classics System software has built in diagnostics, which you can use to test the wiring. Select Diagnostics from the Operator Menu, and refer to the Diagnostics section of your *Global Arcade Classics System Operator Manual*.

3.3 Common Monitor Problems

The table below lists common monitor problems and possible solutions.

Problem	Possible Solution
Distorted or discolored image	Degauss the monitor.
Scrambled image	If you have an EGA monitor, make sure you have connected the EGA monitor dongle. If you have a VGA monitor, do not connect the dongle.
No image	For an EGA monitor, make sure the VGA cable is connected from the computer to the USBLinx II PCB. For a VGA monitor, make sure the VGA cable is connected directly from the computer to the monitor.
Vertical or horizontal sync is off	The Global Arcade Classics System uses a composite sync. Make sure the monitor can handle composite sync. If it cannot, then you will need to jump the horizontal and vertical syncs on the monitor together.

Table 5. Common Monitor Problems

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 **Global Arcade Classics Conversion Kit** are defective, a Return Merchandise Authorization (RMA) number will be issued.

LIMITED WARRANTY

LIMITED WARRANTY FOR GLOBAL ARCADE CLASSICS KIT (North America Only)

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[®].

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>

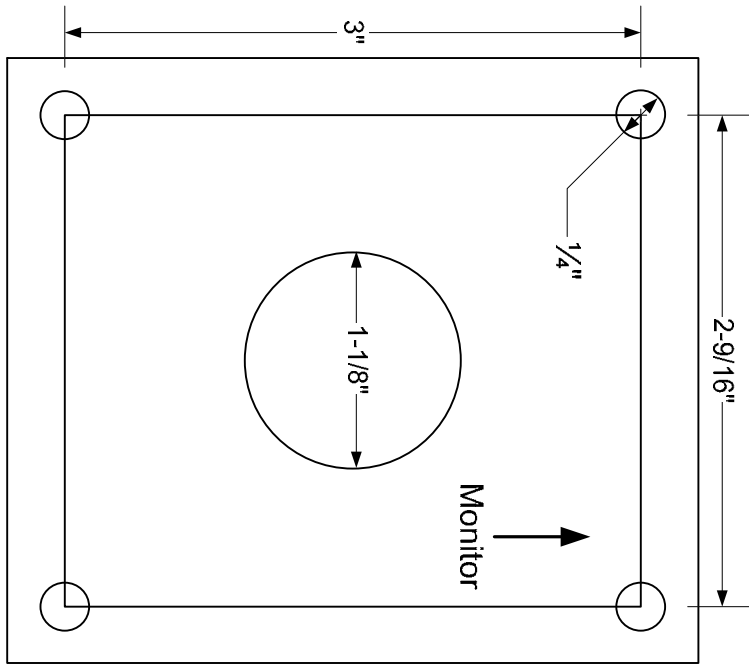
Extended Service Hours: Monday–Friday 5pm—Midnight
 Saturday & Sunday 7:00am—Midnight Pacific Time

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.

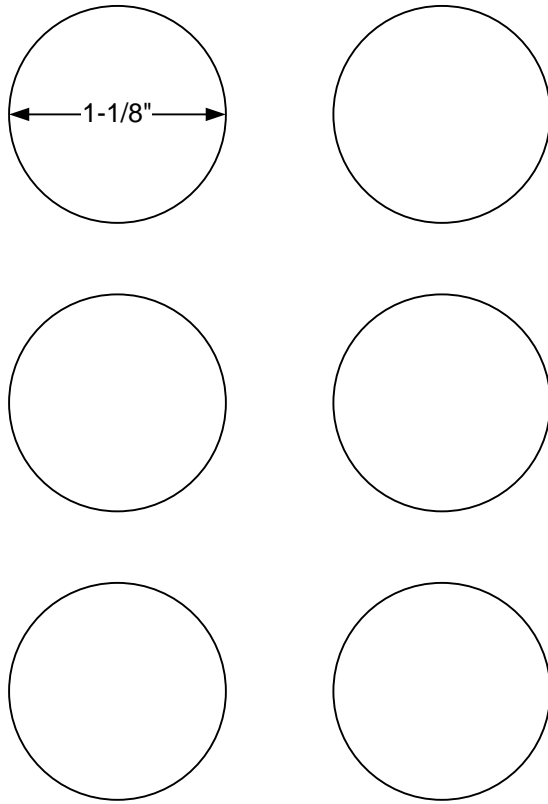
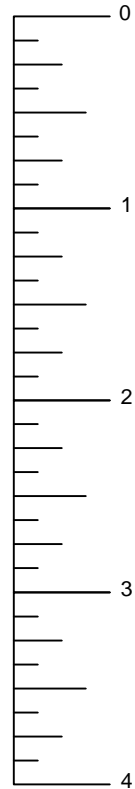
When you contact Technical Support, please provide the information listed below, as applicable, to assist the Technical Support representative in solving your problem quickly. For your convenience, space is provided to write important numbers.

- Cabinet Serial Number: _____
- Software Version Number (from Operator Main Menu): _____
- MCID Number (from Operator Main Menu): _____
- Game Base Pack DVD Serial Number: _____
- Game Base Pack Unlock Code (Obtained from Service): _____
- Proof of Purchase information
- Your mailing address and telephone number
- A summary of the question or a detailed description of the problem
- Specific error message
- Date of latest install or upgrade
- Any changes made to the system
- For game-play issues, the game and number of players
- To comment on this manual, please e-mail: techpubs@globalvr.com

Appendix A: — Template for Mounting Buttons and Joystick



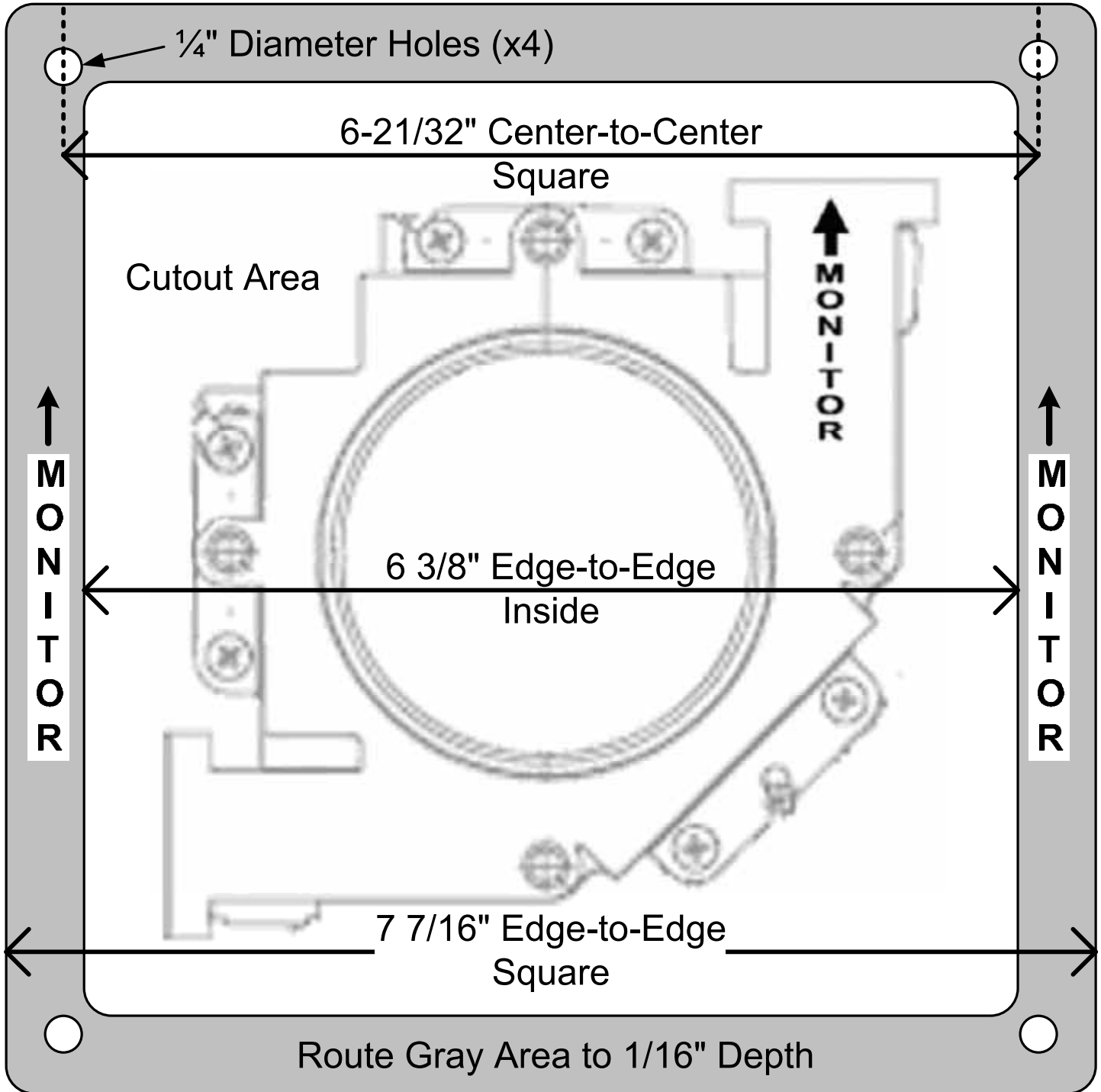
Compare measurement scale below with an accurate ruler to make sure this page has not been scaled in printing.



Appendix B: — Trackball Mounting for Wood Control Panels

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. The trackball frame is not used with a metal control panel.

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.

If possible, cut square bolt holes to prevent the carriage bolts from turning. Otherwise, make the holes as tight as possible to help keep the carriage bolts from turning.

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

