

Shh...! WELCOME TO FRIGHT FEARLAND

Universal Conversion Kit Instructions 040-0247-01

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



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Chapter 1 — Introduction

This kit lets you convert an existing game cabinet to **Shh..! Welcome to Frightfearland**. 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 vary. Please read the instructions before beginning the procedure, and follow all precautions in this document.

Please keep this document with your cabinet for future reference.

Warnings & Cautions



To avoid electrical shock, unplug the cabinet before performing conversion, 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 converting, setting up, or servicing the cabinet. Conversion procedures should be performed ONLY by experienced technicians.



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 or disconnecting PCBs or guns. Hot connecting will damage the PCBs.

Please read all instructions before beginning the conversion.

1.1 Conversion Requirements

For successful conversion, the cabinet must have the following:

- AC Power Distribution
 - DC Power Supply if Coin Doors use 5 VDC
 - Left and Right Audio Speakers
- Note:** If your existing Audio Amp provides acceptable stereo sound quality and uses a standard 3.5 mm mini phone plug for audio input, you can keep your audio wiring intact and connect the audio out from the computer to the existing Audio Amp.
- SVGA or HD Monitor with VGA, DVI, or HDMI Video Cable
 - Control Panel area suitable to mount a new control panel approximately 36" wide x 15" deep for Guns and Start Buttons.
 - Coin Mechs (dollar bill validator is also supported)

1.2 Conversion Kit Contents

Note: Some part numbers may vary due to revisions.

Primary Components (Not Shown to Scale)

Ref	Description	Qty	Part Number
1	GVRI/O Mini PCB	1	990-0014-02
2	PCB Mounting Feet	1	49-1019-00
3	USB Game Dongle	1	FFL-DONGLE-01
4	Blue Start Button	1	59-6584-8222232
5	Red Start Button	1	75-6584-800H2878
6	System Computer Assembly, with AC Power Cord (Frightfearland Software, HD Version, Pre-Installed)	1	45086-00
7	USB Cable, 6', Type A Male to Type B Male	1	USB-AB06MM
8	Stereo Audio Cable, 3.5mm, 6', M-M	1	96-0539-00
9	Control Panel Housing	1	26091-00
10	Gun Assembly	2	NA
11	AC Ventilation Fan with Grill & Power Cord	1	115-0025-01
12	AC Power Strip/Surge Suppressor	1	23-1913-00
13	DC Power Supply (+12/+24 VDC) with mounting brackets and screws	1	44-0600
14	USB Extension Cable, 6', A Plug/A Jack	2	USB-EXT-6
15	Control Base Cover	2	37102-00
16	Operator Button Panel (with Harness, not shown)	1	990-0020-01
17	Upper Gun Base Cover	2	37105-01
18	Lower Gun Base Cover	2	37104-01
--	Wood Control Panel Base (Not Shown)	1	25206-00
--	DVI-to-VGA Adapter (Not Shown)	1	--



Miscellaneous Hardware

Ref	Description	Qty	
1	#8-32 x 3/4" pan head screw (black)	14	
2	#8 flat washer (black)	14	
3	1/4-20 x 3/4" pan head screw (black)	10	
4	1/4" flat washer (black)	10	
5	1/4" lock washer (black)	10	
6	#8 x 3/4" wood screw (black)	8	
7	#10 fender washer (black)	8	
8	#8-32 x 3" bolts	4	
9	#8 flat washer	8	
10	#8-32 Kep nut	4	
11	#10 x 3/4" wood screw	2	
12	#10 fender washer	2	
13	1/4-20 x 2" bolt	4	
14	1/4" flat washer	16	
15	1/4-20 Kep nut	12	
16	#8 x 5/8" wood screw	4	
17	Butt Splice, 22-18 AWG	5	
--	Computer mounting strap, two pieces (Part # 60039-00)	1	
--	Adhesive Velcro, one large & one small piece	--	

Harnesses

Description	Qty	Part Number
Cable, AC Power Strip to DC Power Supply	1	115-0008-01
Audio Harness, GVRI/O Mini PCB to Speakers	1	115-0100-01
DC Power to GVRI/O Mini PCB	1	115-0079-01
Main Wiring Harness	1	115-0095-01
Start Button Harness	1	115-0096-01
24 VDC Gun Power Harness W/ Fuse	1	115-0097-01
Earth Ground Cable	1	115-0099-01

Documents & Software

Description	Qty	Part Number
Universal Conversion Kit Instructions (This Document)	1	040-0247-01
Operation Instructions for Kit Systems	1	040-0243-01
Service Instructions for Universal Kit Systems	1	040-0249-01
Software Restore Guide for Kit Systems	1	040-0250-01
Software, Frightfearland Game Install Disk for HD Monitors	1	050-0199-01
Software, Frightfearland Game Install Disk for SVGA Monitors	1	050-0200-01
Software, Frightfearland SVGA Patch Disk	1	050-0201-01
Software, System Recovery Disk	1	050-0214-01

Cabinet Labels

Description	Qty	Part Number
Frightfearland Cabinet Serial Number Label	1	L-0178
TAITO Serialized License Sticker (Pre-Installed on Backlit Marquee Artwork)	1	FFL-LICENSE-TAITO-KIT
Label: For Indoor Use Only	1	L-0004
Label: Disconnect Power Supply Before Servicing	1	L-0006
Label: Shock Hazard Do Not Open	1	L-0133

Cabinet Artwork

Description	Qty	Part Number
Instruction Panel Artwork	1	FFL-AW-03
Button Panel Decal	1	FFL-AW-04
Upper Gun Base Decal, Player 1	1	FFL-AW-05
Upper Gun Base Decal, Player 2	1	FFL-AW-06
Lower Gun Base Decal, Player 1	1	FFL-AW-07
Lower Gun Base Decal, Player 2	1	FFL-AW-08
Gun Crosshair Decal, Player 1	1	FFL-AW-11
Gun Crosshair Decal, Player 2	1	FFL-AW-12
Backlit Marquee Artwork	1	FFLKIT-AW-01
Side Panel & Coin Door Decal	3	FFLKIT-AW-02
Frightfearland Logo Decal	2	FFLKIT-AW-03
New Game Sign	1	NTR-AW-06



Figure 1. Example of Finished Cabinet

1.3 Tools Required

Tools needed may vary depending on cabinet used and component variations.

- Screwdriver with assorted bits, including medium Phillips head and T-10 & T-27 Torx[®] security bits
- Assorted nutdrivers and/or wrenches, including 11/32" & 7/16"
- Wire snips, stripper, and crimper
- Exacto[®] knife
- Assorted cable ties and/or clips for securing wires
- 4-1/2" Hole Saw or Jig Saw to cut hole for Ventilation Fan
- Drill with assorted bits, including 1" or larger, 1/4" and 7/32"
- Black paint (if you wish to touch up cabinet or paint underside of control panel)
- Vinyl Application Squeegee (or Similar Tool) for Smoothing Decals

1.4 General Conversion Steps

This document provides general guidelines for converting your cabinet. Your steps may vary depending on the cabinet used.

- Remove old wiring and electronics (keep power distribution, grounds, coin door harness, and any other components you wish to use) and clean the cabinet
- Mount Control Panel Base
- Assemble Control Panel
- Install new wiring, PCB, and System Computer
- SVGA Systems Only: Install SVGA Version of the software
- Install artwork
- Calibrate guns and test game

Chapter 2 — Conversion Procedure

This document provides general guidelines for converting your cabinet. Your exact steps will vary depending on the cabinet used.

Please heed all Warnings & Cautions on page 3.

2.1 Remove Old Components and Clean Cabinet

Important: The **Shh..! Welcome to Frightfearland** Conversion Kit uses the existing Power Distribution Wiring. Be sure to leave AC (and DC if applicable) power wiring in place.

1. Turn off the cabinet and disconnect the AC power cord.
2. Remove the old electronics and harnesses from the cabinet. Leave power wiring in for lighting, coin mechs, and dollar bill validator (if installed) in place.

Note: If your existing Audio Amp provides acceptable stereo sound quality and uses a standard 3.5 mm mini phone plug for audio input, you can keep your audio wiring intact and connect the audio out from the computer to the existing Audio Amp.

Keep any reusable cable clips and ties for securing the new wiring.

3. Remove any artwork that is not in good condition, and any proprietary labeling from the cabinet. Clean the cabinet well so the new artwork will adhere properly. You may wish to apply a fresh coat of black paint to the cabinet.

2.2 Set Up the AC Power

The kit uses an AC power strip/surge suppressor to power all components in the cabinet. If you wish, you can splice the power strip/surge suppressor to your existing AC power distribution. The steps below provide a quick and easy method for setting up AC power.

1. Route your existing cabinet power cord to the inside of the cabinet and connect it to the power strip.
2. Route the power cord from the power strip out of the cabinet. This will now be the cabinet power cord.
3. Secure the power strip inside the cabinet using the strip of adhesive Velcro from the kit.

2.3 Install Earth/Ground Harness

Secure the terminal with multiple wires on the Earth Ground Cable (Part # 115-0099-01) to the ground lug on the AC power plate (or another secure earth ground in the cabinet).

The cable has four more terminals. Two must connect to the ground lugs on the gun assemblies, one should connect to the GVRI/O Mini PCB, and the other can be used to ground the coin door or CRT monitor as needed. (It is very important that the coin door and CRT monitor are properly grounded.)

Note: Ground connections to the Guns and GVRI/O Mini PCB are described later in this document.

2.4 Install the Control Panel Base

The exact procedure for mounting the control panel to the cabinet will vary depending on your cabinet. You may need to alter the existing woodwork to properly mount the control panel. Test fit all components before securing the Control Panel Base in place.

A level control panel is recommended for optimal gameplay. For cabinets with a sloping control panel, such as many golf and bowling cabinets, refer to the document *Leveling a Sloped Control Panel for Frightfearland* (Part #: 040-0251-01), included in the kit.

Refer to Figure 2 and be sure to consider the following points:

- GLOBAL VR recommends bolting the control panel to a flat surface using the four (4) ¼-20 x 2" bolts with two flat washers and Kep nut included in the kit. If this does not work with your cabinet you may use a different method.
- Make sure that the area below each gun is clear. This general area is shown in Figure 2.
 - The holes labeled "Holes for Gun Mounting Posts" in Figure 2 are for the four threaded mounting posts on each gun. You will need to thread washers and nuts on these mounting posts. (The posts are not long enough to extend through two sheets of wood.)
 - The area labeled "Opening for Clearance Under Gun" in Figure 2 must be clear for the gun harnesses and gun base.
- The gun harnesses will extend through the holes in the control panel and must be routed into the cabinet. You may need to cut holes in the cabinet to route these harnesses.
- The two control base covers in the kit are provided to cover the area below the guns, with the mounting posts and harnesses, once the guns are installed. The way the covers are installed will vary depending on how far the control panel base extends beyond the width of the cabinet. You may prefer to improvise different covers for this area.
- The plastic Control Panel Housing fits around the wooden Control Panel Base like a glove. Make sure there is adequate clearance for the housing and the guns.
- Make sure that the angle and distance between the guns and monitor will allow both players to shoot at all areas of the monitor.
- Make sure that you have a good location to drill a hole for the Start Button Harness near the center of the Control panel Base.
- You may wish to paint areas of the underside of the control panel that will be visible with black paint.

Once you are satisfied with the placement of components, perform the following steps:

1. Drill four (4) ¼" holes through the wood control panel and the flat surface below.
2. Insert a ¼-20 x 2" bolt in each hole, with a flat washer above and below the surface, and secure it with a Kep nut.
3. Drill a hole, 1" diameter or larger, near the center of the control panel for the Start Button Harness.

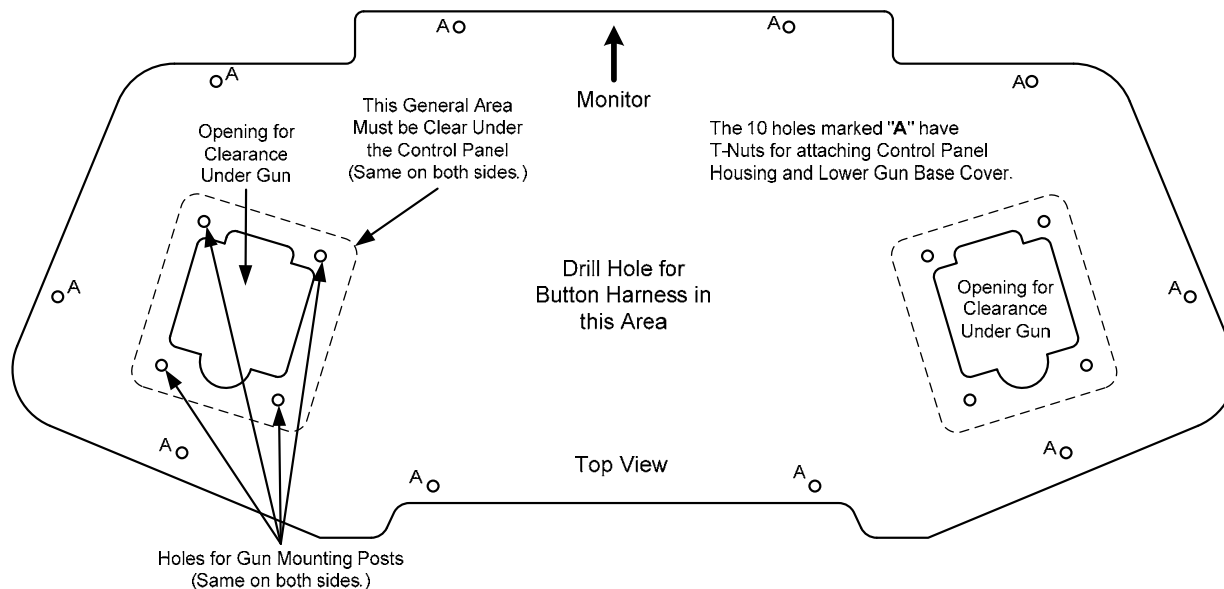


Figure 2. Control Panel Base

2.5 Assemble the Control Panel

Note: Some assembly steps in this section may have been performed before the kit shipped. Refer to Figure 4 for a picture of a finished control panel.

1. Install the Instruction Panel Artwork in the plastic Control Panel Housing with four (4) #8-32 x 3/4" black pan head tamper-proof screws with black flat washers. (If desired, you can install LED Lighting to the Control Panel Base under the Instruction Panel for backlight illumination.)
2. Apply the Button Panel Decal to the Control Panel Housing.
3. Refer to Figure 3 and Figure 4, and install the Player 1 (red) and Player 2 (blue) Start Buttons and micro switches into the Control Panel Housing.
4. Connect the Start Button Harness (Part # 115-0096-01) to the button connectors, referring to Figure 3 and the labels on the harness connectors. Below is a key to the labels:

Label	Description	Wire Color
ST1 SW	START 1 Signal	White / Black stripe
ST1 GRND	START 1 Ground	Black / White stripe
LT1 12V	START 1 Lamp Power	Yellow
LT1 GRND	START 1 Lamp Ground	Black / White stripe
ST2 SW	START 2 Signal	White / Brown stripe
ST2 GRND	START 2 Ground	Black / White stripe
LT2 12V	START 2 Lamp Power	Yellow
LT2 GRND	START 2 Lamp Ground	Black / White stripe

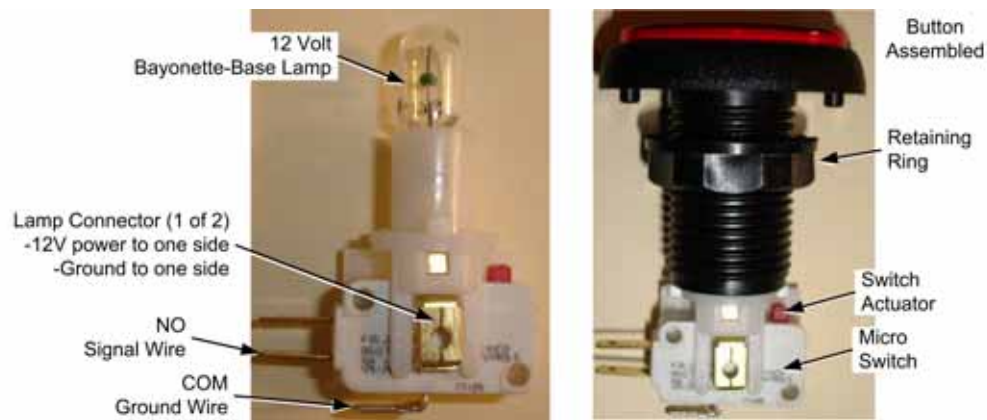


Figure 3. Start Button Assembly



Figure 4. Finished Control Panel

5. Place the plastic Control Panel Housing over the wood Control Panel Base and route the Start Button Harness into the cabinet.
6. Secure the plastic Control Panel Housing to the T-Nuts installed in the Control Panel Base with the eight (8) ¼-20 x 3/4" black pan head screws with black flat washer and lock washer. (Install with lock washer first and flat washer against the plastic.)
7. Slide each gun into the Control Panel Housing as shown in Figure 5 and place it on the Control Panel Base with the threaded mounting studs extending through the holes in the wood. Secure each gun below the Wood Control Panel Base with four (4) ¼-20 Kev nuts with flat washers.
8. Secure a terminal on the Earth Ground Cable (Part # 115-0099-01) to the ground lug on the base plate of each gun with the #8-32 Kev nut already installed.
9. Route the gun harnesses into the cabinet. If needed, install each Control Base Cover in place to cover the area below the guns and secure with black wood screws and fender washers.
10. Apply the Decals to the Gun Base Covers as shown in Figure 5.

11. Secure each Upper Gun Base Cover to the Control Panel Housing using two (2) #8-32 x 3/4" black tamper-proof pan head screws with #8 flat washers, and one (1) 1/4-20 x 3/4" black tamper-proof pan head screw with 1/4" lock washer and flat washer.
12. Secure each Lower Gun Base Cover to the Control Panel Housing using three (3) #8-32 x 3/4" black tamper-proof pan head screws with #8 flat washers.
13. Apply gun Crosshair Decals as shown in Figure 5: **Red Decal - Player 1, Blue Decal - Player 2.**

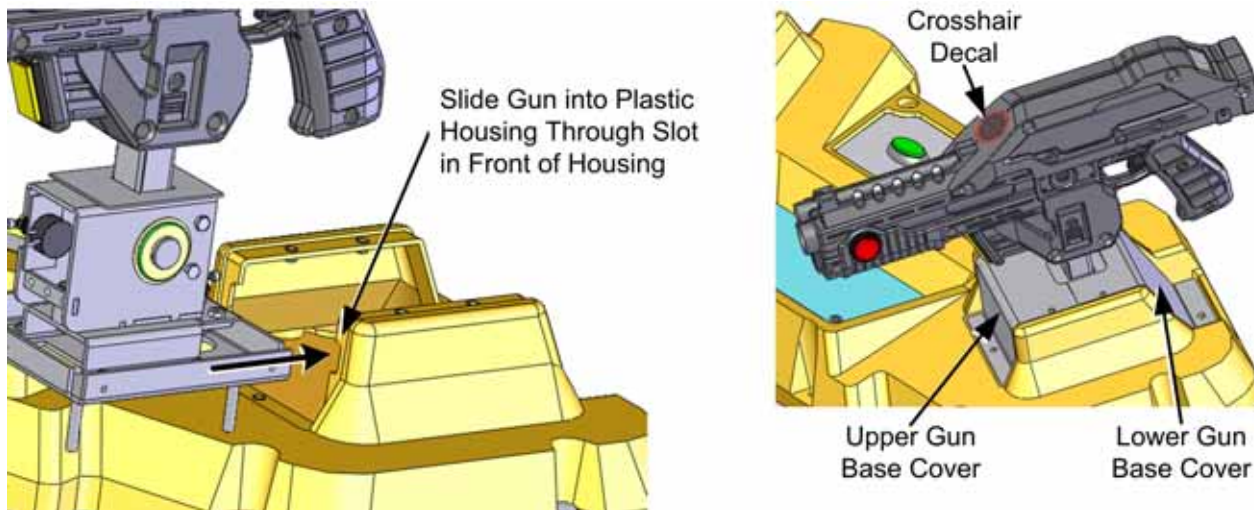


Figure 5. Install Guns & Gun Base Covers

2.6 Install the +12/+24 VDC Power Supply

The +12/+24 VDC Power Supply provides 24 VDC power to the guns and 12 VDC power to the GVR I/O Mini PCB.

If the cabinet has an existing +5/+12 VDC power supply, GLOBAL VR recommends that you use it to power the GVR I/O Mini PCB and any other applicable components. You **must** keep the existing power supply if your cabinet has a 5-Volt Coin Door.

Refer to Figure 6 for a diagram of connections to the Power Supply.

1. Connect the Gun Power Harness (Part # 115-0097-01) to the power supply terminals as follows:
 - **Black Wire: GND** ● **Yellow Wire: +12V** ● **Red Wire: +24V**
2. Connect the Gun Power Harness to the corresponding connectors from the guns.
3. If you are using the +12/+24 VDC Power Supply to provide +12 VDC to the GVRI/O PCB, connect the +12 VDC Harness (Part # 115-0079-01) to the power supply terminals as follows:
 - **Black Wires (Both): GND** ● **Yellow Wire: +12V** ● **Red Wire: Not Used**
4. Connect the AC Power Harness (Part # 115-0008-01) to the power supply terminals as follows:
 - **Green Wire: FG** ● **Black Wire: AC L** ● **White Wire: AC N**
5. Locate the mounting bracket packaged with the power supply and secure it to the power supply with the included screws.
6. Install the Power Supply in a location where there is good air circulation and the harnesses will reach the components. Secure it in place using the mounting bracket and two (2) #8 x 5/8" woodscrews.

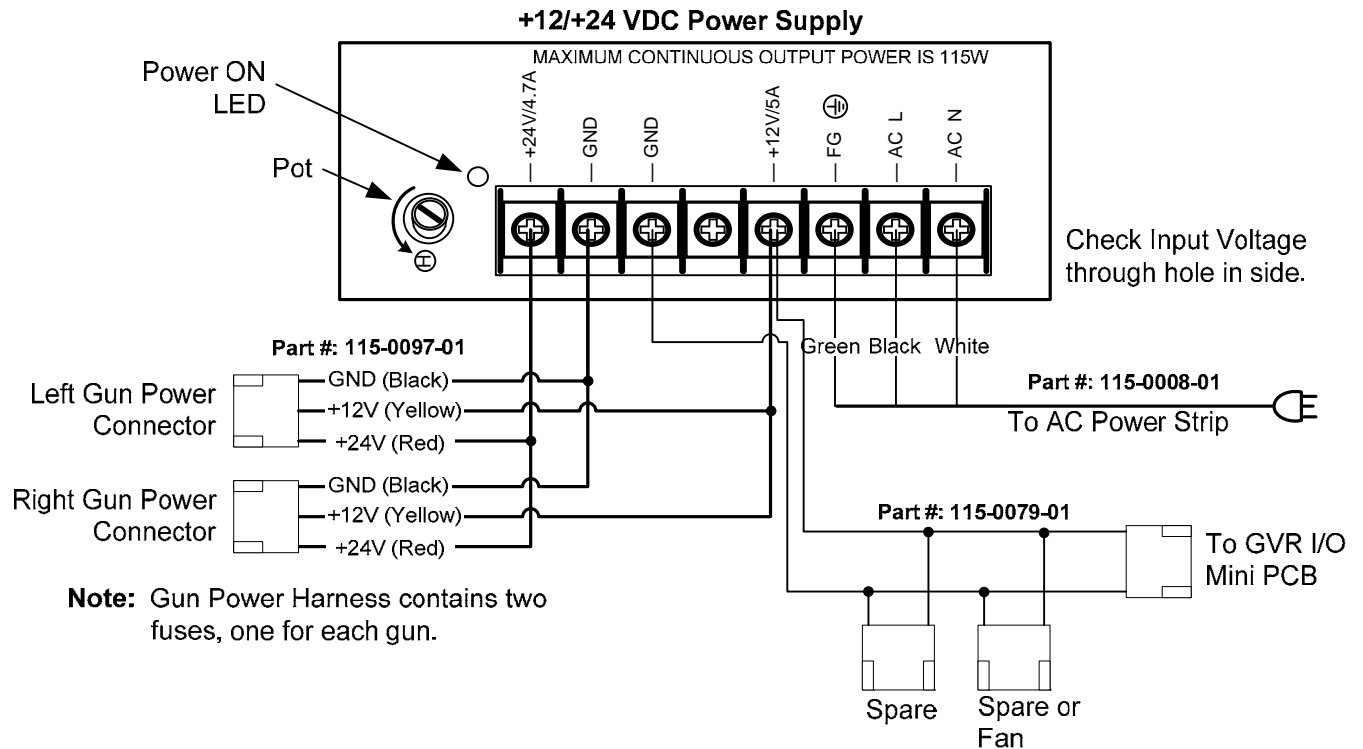


Figure 6. +12/+24 VDC Power Supply Connections

2.7 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:

Note: A 12-volt fan, powered by the DC power supply, can be used but may cause audio noise.

1. Install the fan behind existing ventilation holes, or cut a 4.5" diameter hole in the back of the cabinet. Use the included grill as needed. Using the fan as a template, drill four 7/32" holes for the fan mounting bolts. Secure the fan to the cabinet with four (4) #8-32 x 3" screws with two #8 flat washers and Kep nuts. (Place a flat washer on each side of the fan.)
2. Connect the power cord to the fan and the AC power strip.
3. 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.



Figure 7. Installing the Ventilation Fan

2.8 Install the Computer

Important: The computer comes with the HD version of the software pre-installed. If your cabinet has an SVGA (CRT) monitor, you will need to install the SVGA version of the software. Refer to *Frightfearland Software Restore Guide for Kit Systems* for complete instructions. Keep the software disks in case you need to re-install the software in the future.

1. Place the computer in the cabinet 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 placed against the side wall. If a cleat along the bottom of the cabinet prevents putting the computer firmly against the wall, install a piece of wood of the same width to support the top of the computer and keep it from wobbling sideways. For extra protection, you can 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. Using two (2) #10 x 3/4" wood screws with fender washers, 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.

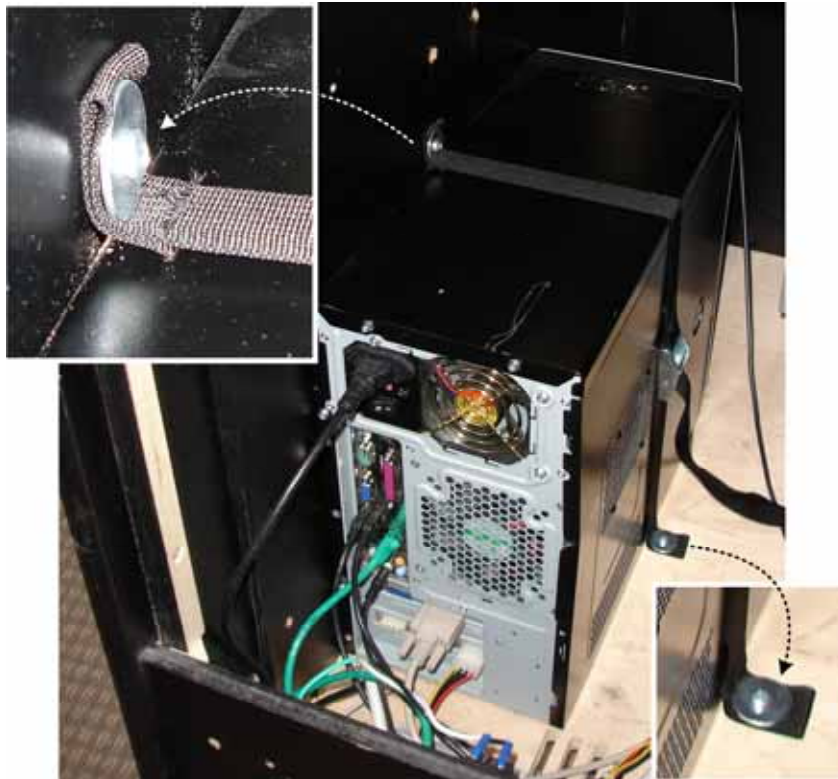


Figure 8. Securing the Computer

2.9 Install Operator Button Panel and Connect Coin Door

Refer to Figure 13 on page 24 to see how the operator buttons and coin door components connect to the Main Harness from the kit.

If your cabinet already has an Operator Button Panel with four buttons, you may be able to connect directly to the Main Harness in the kit. In most cases you will need to use the Operator Button Panel and harness from the kit, and splice the leads to the coin door components as described in the table below.

1. Connect the 9-pin Molex connector from the Operator Button Panel harness to the corresponding connector on the main harness (Part # 115-0095-01).
2. Connect the 6-pin Molex connector from the Operator Button Panel harness to the corresponding connector on the main harness.

Important: If your coin door has 5-volt lamps or coin counter you must connect them to +5 VDC from your existing power supply and connect only the ground leads on the harness from the kit.

3. Splice the leads on the Operator Button Panel harness to the appropriate coin door components using the butt splices from the kit or your preferred splicing method.
4. Use adhesive Velcro to secure the Operator Button Panel to a convenient location inside the coin door.

Label	Description	Wire Color
12V Lamp*	+12 VDC to Coin Lamps	Yellow
12V CC*	+12 VDC to Coin Counter	Red
GND CC	Coin Counter Ground	White / Brown stripe
Switch GND	Coin Mech Ground	Black / White stripe
Lamp GND	Coin Lamp Ground	Black / White stripe
Coin 1	Coin 1 Signal	White / Red stripe
Coin 2	Coin 2 Signal	White / Orange stripe

*If your coin door uses +5 VDC coin counter and lamps, do not connect these leads.

2.10 Install the GVRI/O Mini PCB

The GVRI/O Mini PCB routes all signals between the controls and System Computer, and also contains the Audio Amp. The PCB requires +12 VDC power through a 4-pin PC Power Connector.

1. Find a good location in the cabinet to mount the GVRI/O Mini PCB. Make sure that all harnesses will reach the PCB and the PCB will not be exposed to excessive heat. (If you install on a wall, placing the PCB so the USB connector faces up will help keep the USB cable securely connected.)
2. Mount the PCB with the plastic feet from the kit, securing a terminal of the Earth Ground Cable (Part # 115-0099-01) under one of the screws so it is between the screw head and the PCB.

2.11 Make Remaining Connections

Caution: Power must be **OFF** when making connections.

Note: Connectors on the GVRI/O Mini PCB are keyed to accept only the correct connector.

Refer to Figure 9 for connections to the GVRI/O Mini PCB. Also see Figure 13 and Figure 14 on pages 23 and 25 for detailed wiring diagrams. Refer to Figure 15 on page 26 for a diagram of ports on the back of the computer.

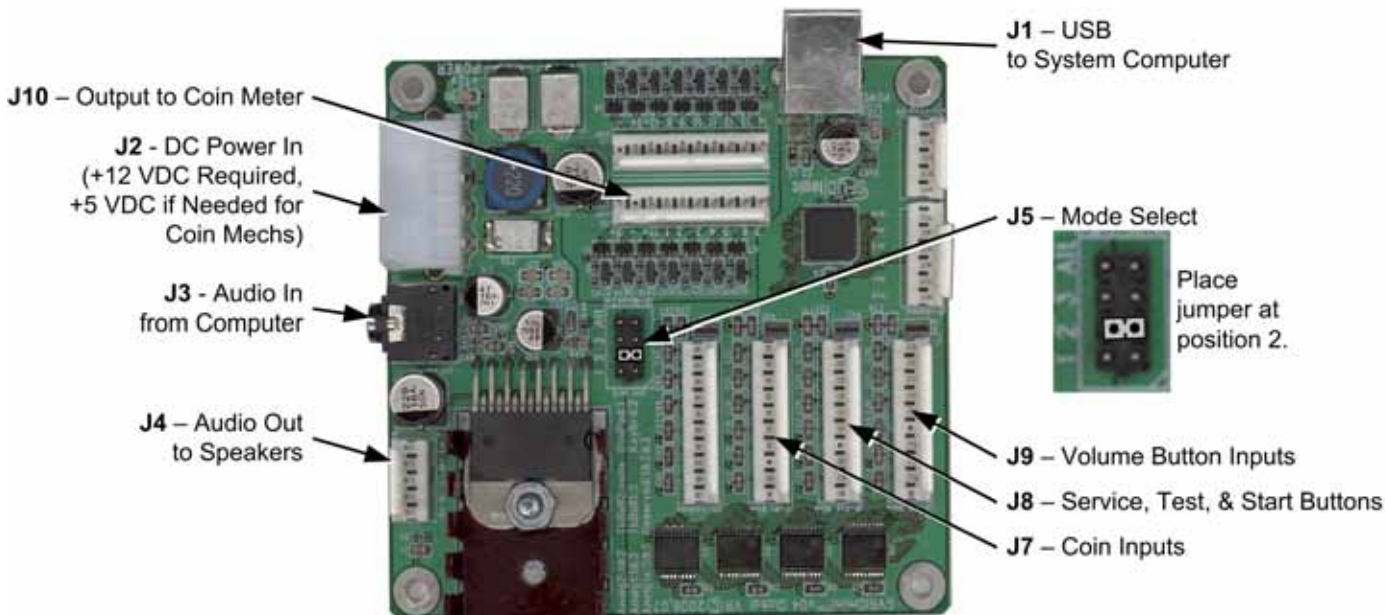


Figure 9. GVRI/O Mini PCB, Version 04

1. Verify that the Ground Cable (Part # 115-0099-01) is secured to the following:
 - Secure earth ground (usually on AC power plate)
 - GVRI/O Mini PCB
 - Ground lug on mounting plate of each gun
2. Make sure the coin door and CRT monitor (if used) are properly grounded.
3. Make sure a jumper is installed at position 2 of **J5** on the GVRI/O Mini PCB.
4. Connect the Main Harness (Part # 115-0095-01) as follows:
 - a. Connect the **START BUTTONS** connector of the Main Harness to the Start Button Harness.
 - b. Connect **J7** of the Main Harness to **J7** on the GVRI/O Mini PCB.
 - c. Connect **J8** of the Main Harness to **J8** on the GVRI/O Mini PCB.
 - d. Connect **J9** of the Main Harness to **J9** on the GVRI/O Mini PCB.
 - e. Connect **J10** of the Main Harness to **J10** on the GVRI/O Mini PCB.
5. Connect a 4-Pin PC Power Connector from the DC Power Harness to **J2** on the GVRI/O Mini PCB.
6. Connect the Audio Harness (Part # 115-0100-01) to the speakers and **J4** on the GVRI/O Mini PCB.
7. Connect the USB cable (Part # USB-AB06MM) from the first (left-hand) PCI USB port in the computer to **J1** on the GVRI/O Mini PCB.
(Do **Not** use a motherboard USB port to prevent static shock to the PCB.)

8. Connect the 3.5 mm audio cable from the **Green** audio out port on the computer to **J3** on the GVRI/O Mini PCB (or to the existing audio amp if you are using it).
9. Connect the VGA, DVI, or HDMI cable from the monitor to the video card in the computer. For VGA monitors, use the VGA-to-DVI Video Adapter from the kit.

Important: Do not use the motherboard video ports or you will get poor-quality video.

10. Connect a USB Extension Cable (Part # USB-EXT-6) to each gun cable and then connect the cable from **Player 1 gun** to the second USB port from the left, and **Player 2 gun** to the third USB port from the left on the PCI USB card in the computer. (**Do Not** use motherboard USB ports to prevent static shock.)
11. Connect the computer power cord to the computer and the AC power strip.
12. Use wire ties to secure the cables and harnesses in the cabinet. Make sure wires are positioned where they will not be pinched or pulled. If you left old harnesses in the cabinet that are no longer used, bundle and tie them out of the way.

Note: The technical part of the conversion is now complete. You can power on and test the cabinet now, as described in Section 2.13.4 on page 19.

2.12 SVGA (CRT) Games Only

If your game has an SVGA (CRT) monitor, install the SVGA version of the software as described in *Frightfearland Software Restore Guide for Kit Systems*. Computers ship with the HD software installed. If you run the HD version of the software on an SVGA monitor, you will see a blank screen.

2.13 Apply Remaining Artwork and Labels

Install the artwork and labels as described in the subsections that follow. See Figure 10 on page 18 for an example of a finished cabinet.

2.13.1 Apply the Cabinet Decals

1. Refer to Figure 10 on page 18 and position a Side Panel & Coin Door Decal on each side of the cabinet so it is 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. Peel off the backing paper and apply the decal, carefully pushing out any air bubbles.
2. Use a new Exacto knife to trim any excess material from the decal, using the outside edge of the cabinet as a guide.
3. Apply a Logo Decal to each side panel in a visibly pleasing location.
4. Trim the remaining Side Panel & Coin Door Decal to fit the front of the cabinet around the coin door, as shown in Figure 10.



Figure 10. Cabinet Artwork Placement

2.13.2 Install the Marquee Artwork

The TAITO Serialized License Sticker is pre-applied to the marquee artwork. This sticker must be clearly visible from the front of the cabinet or your game will not be legal.

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. (This step may vary depending on the cabinet used.)
2. Clean both sides of the marquee glass.
3. Use the glass as a guide to trim the graphic to fit the marquee, making sure the TAITO Serialized License Sticker is intact and will be clearly visible once the marquee is installed.
4. Re-install the glass with the new artwork, and re-install the top bracket.

2.13.3 Apply the Rear 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. (You will need this number if you contact GLOBAL VR Service.)
2. Place the FOR INDOOR USE ONLY, DISCONNECT FROM POWER SUPPLY BEFORE SERVICING, and SHOCK HAZARD labels just above the cabinet rear door.
3. Place the 110 VOLTS label close to where the AC power cord enters the cabinet.



2.13.4 Install the New Game Sign

Install the New Game Sign from the kit behind the marquee or the monitor so the "NEW" starburst is visible above the cabinet.

Test and Set Up the Game

Before powering the cabinet ON for the first time, please verify that all connections are correct and secure.

1. Connect the AC power cord to an AC outlet. Power ON the cabinet and verify that the Attract Mode starts and runs properly. Follow onscreen prompts as applicable to set date and time and calibrate the guns.
2. Press the **Test** button on the operator button panel to open the Operator Menu.
Note: Refer to the Operation Manual for detailed information on using the Operator Menus to test and set up the game.
3. Select **I/O Check** from the **Test Mode** menu, and then test each item on the **Input Check** and **Output Check** menus. If a button or other control is not working, or the wrong onscreen item responds, make sure the wires are connected correctly.
4. Select **Screen Check** to view cross hatch and color bars screens to help you adjust the monitor.
5. Select **Sound Options** to verify each speaker is working and adjust the volume.
6. Select **Game Options** and **Coin Options** to set up pricing, and other gameplay features.
7. Calibrate the guns as described in the next section.
8. Select **Game Mode** to return to the game, and then play a game to verify proper operation.

2.13.5 Gun Calibration

If a gun has not been calibrated the message "NOT CALIBRATED PLEASE CALIBRATE" will appear on the Gun Check screen, as shown for P2GUN (Player 2 Gun) in Figure 11.

Note: If the gun harnesses are swapped (pressing START 1 initiates calibration for Gun 2, and vice versa) you can swap the guns in the software by selecting **GUN I/O SWAP** from the GAME OPTIONS Menu so the guns are correct in game play.

Do the following to calibrate a gun:

1. Press the Operator Test Button to open the Operator Menu, and then navigate to the Gun Check screen.
2. At the Gun Check screen, press the **START** button for the gun you wish to calibrate.
3. The message "*Shoot Here" will appear in the upper left corner of the screen. Move the gun to the farthest up and left travel position and squeeze the trigger.
4. The message "*Shoot Here" will appear in each corner in turn; point the gun toward that corner and squeeze the trigger.
5. Repeat for the other gun.
6. Press the Operator TEST button to save the calibration settings and exit.

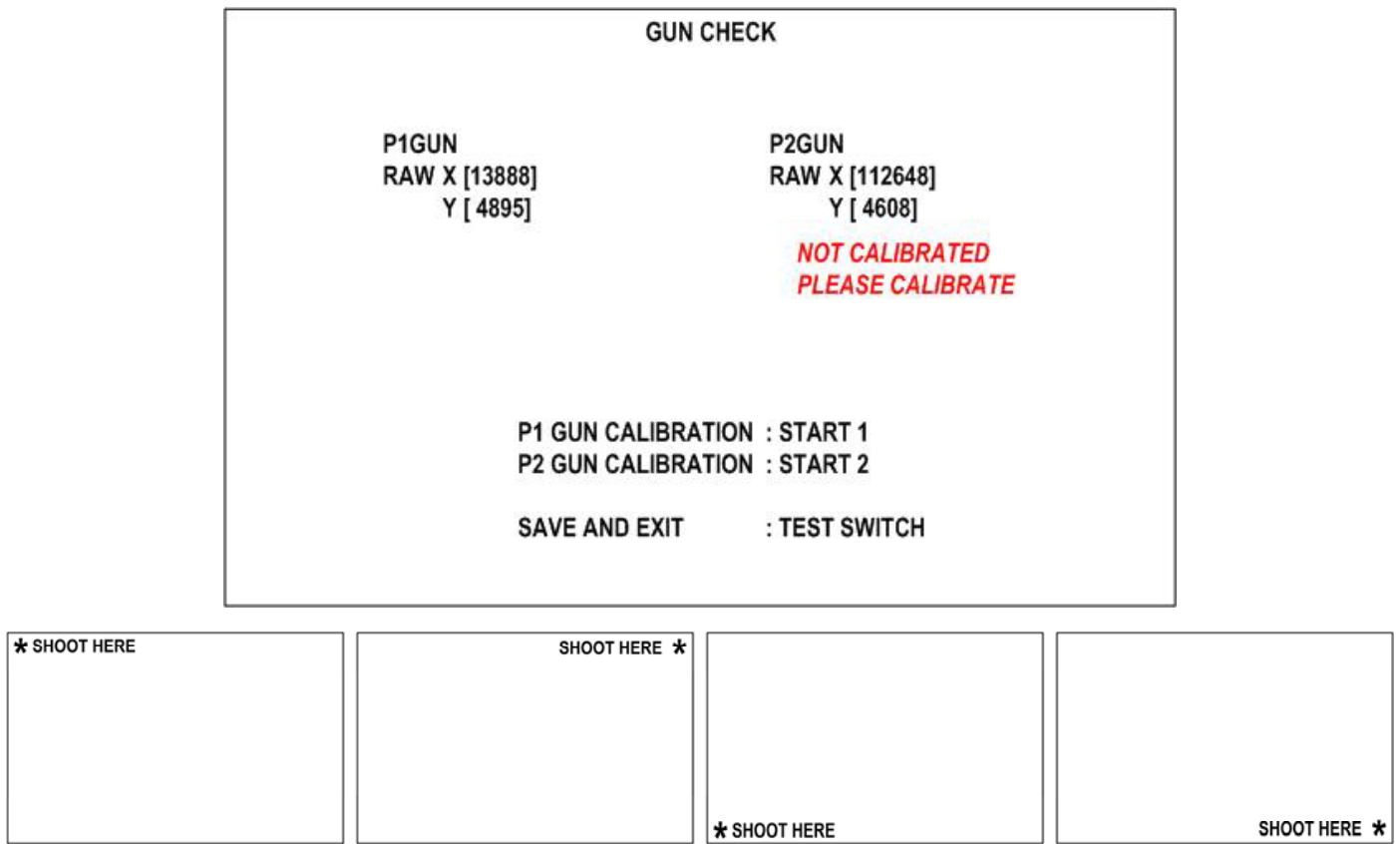


Figure 11. Gun Check Screens

Chapter 3 — Kit Troubleshooting

This table lists issues that are most likely to occur after assembling a kit system. Please see *Troubleshooting* in the *Frightfearland Operation Manual for Kit Systems* for additional troubleshooting tables.

Problem	Possible Cause	Possible Solution
No image on monitor (SVGA Systems only)	HD software version running on SVGA (CRT) monitor or SVGA Patch was not run	Install the SVGA version of the software as described in the <i>Software Restore Guide for Kit Systems</i> . Computers ship with the HD software installed. If you run the HD version of the software on an SVGA (CRT) monitor, you will see a blank screen.
	No power to monitor	Make sure the monitor is connected to AC power.
	Bad video cable	Make sure the video cable is firmly connected to the monitor and a port on the video card in the system computer and is not kinked or frayed. Replace with new cable.
No audio	Bad connections	Make sure the audio cable is connected from the green audio out port on the system computer to the GVRI/O Mini PCB or separate audio amp. Make sure speakers are properly wired to the GVRI/O Mini PCB or separate audio amp. Connect headphones the green audio out port to test audio output from the computer.
	Volume set too low	Set volume from Sound Options in the Operator Menu. Check volume pot on separate audio amp if applicable.
Guns are not working	No power to guns	Make sure the guns are properly connected to +12 and +24 VDC from the power supply and the power supply is properly connected to AC power. Make sure fuses in gun power harnesses are not blown. Note: Gun lights require +12 VDC from the power supply. Force-feedback requires +24 VDC from the power supply.
	Bad USB connection	Make sure the guns are connected to PCI USB ports, not motherboard USB ports. (Turn off cabinet before changing USB connectors.) Check connections to USB extension cables.
Force-Feedback recoil and LED flash in the wrong gun	Gun wiring is reversed	To compensate, set <i>GUN I/O SWAP</i> to <i>ON</i> under Game Options in the Operator Menu.
Start Buttons do not work	Bad connections	Make sure wires are connected to the correct spades on the button micro switches (see Figure 3). Check the Main Harness connections to J8 on the GVRI/O Mini PCB and the button harness.

Chapter 4 — Diagrams and Schematics

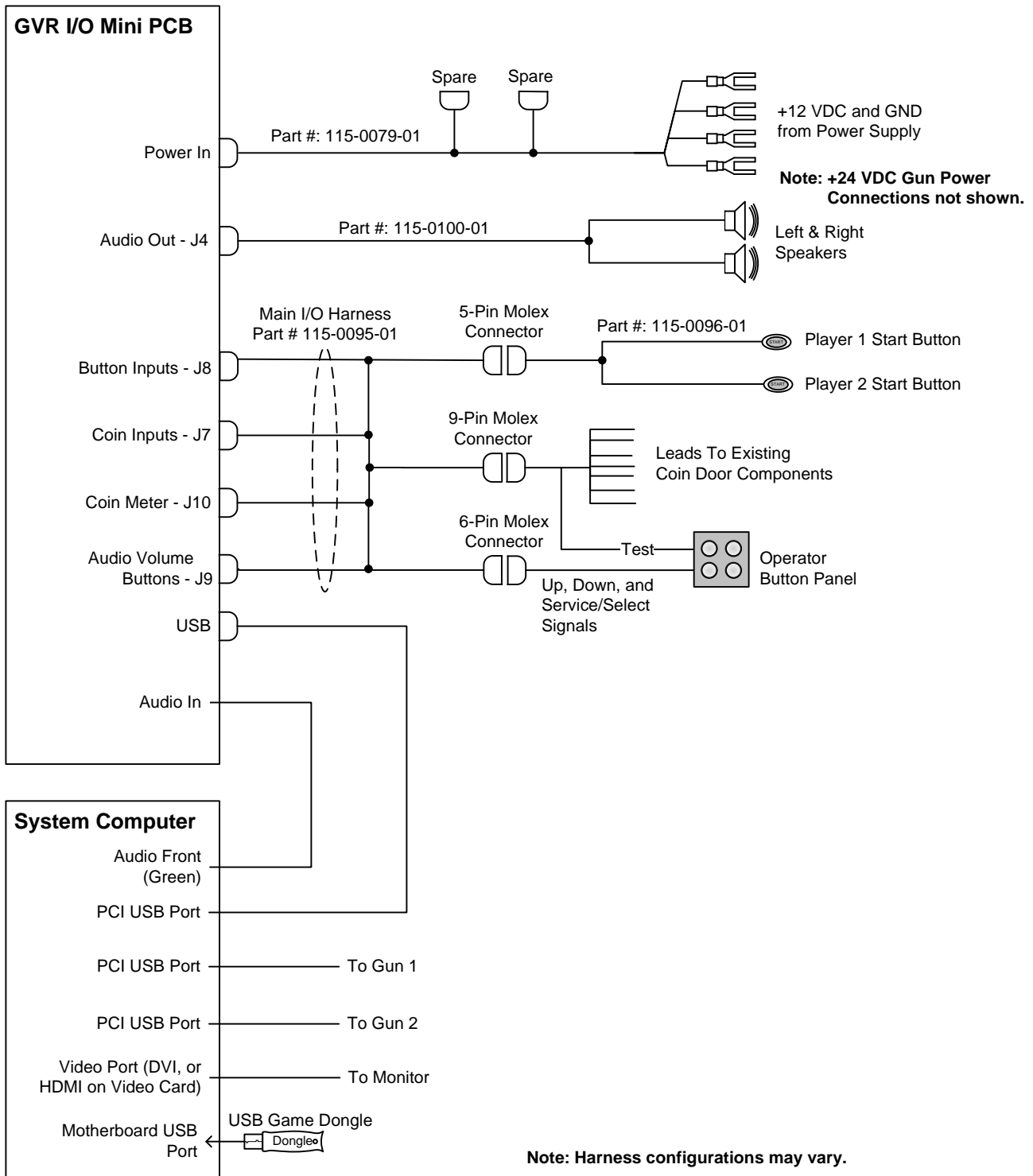


Figure 12. Simplified Wiring Diagram

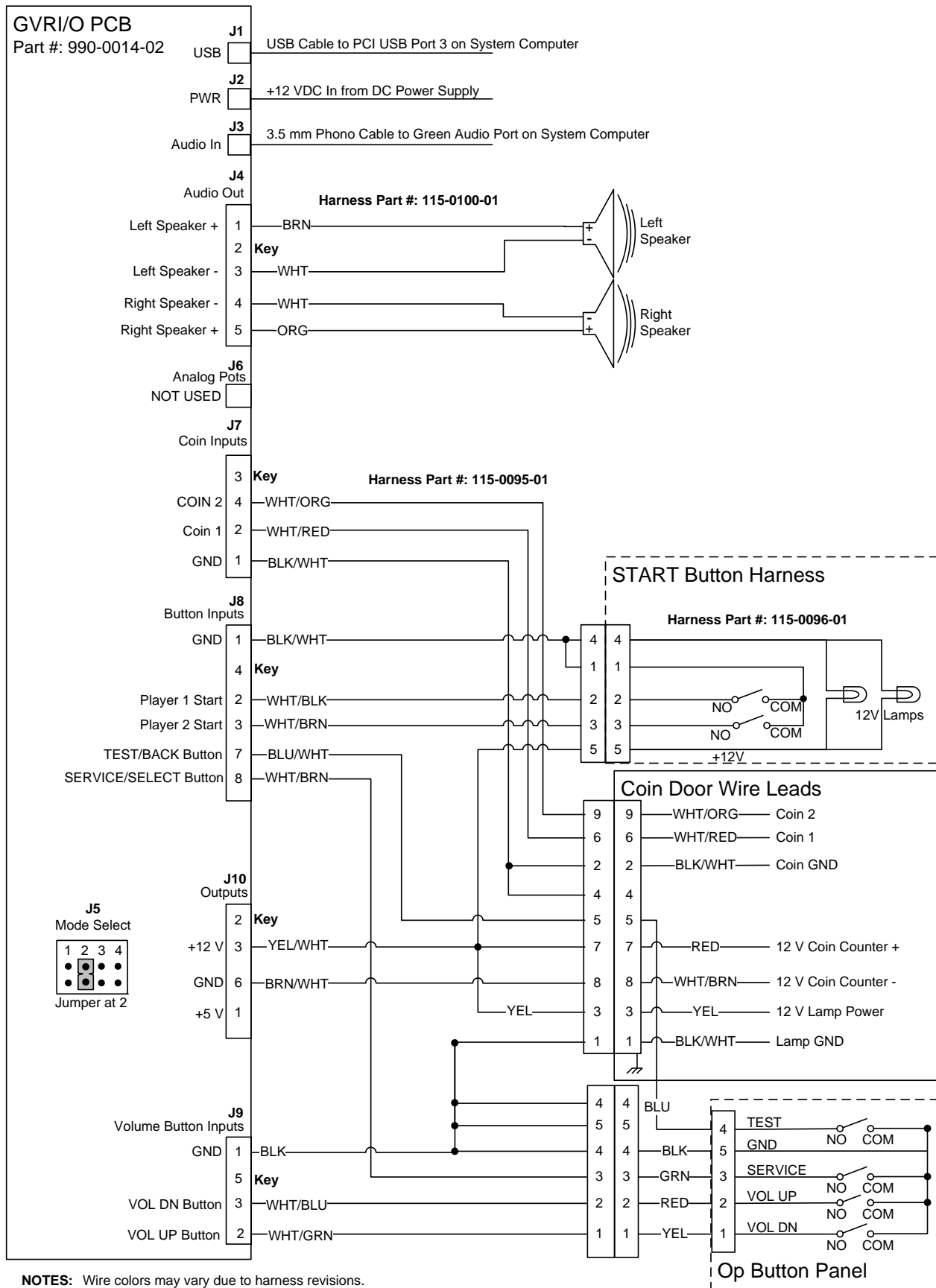
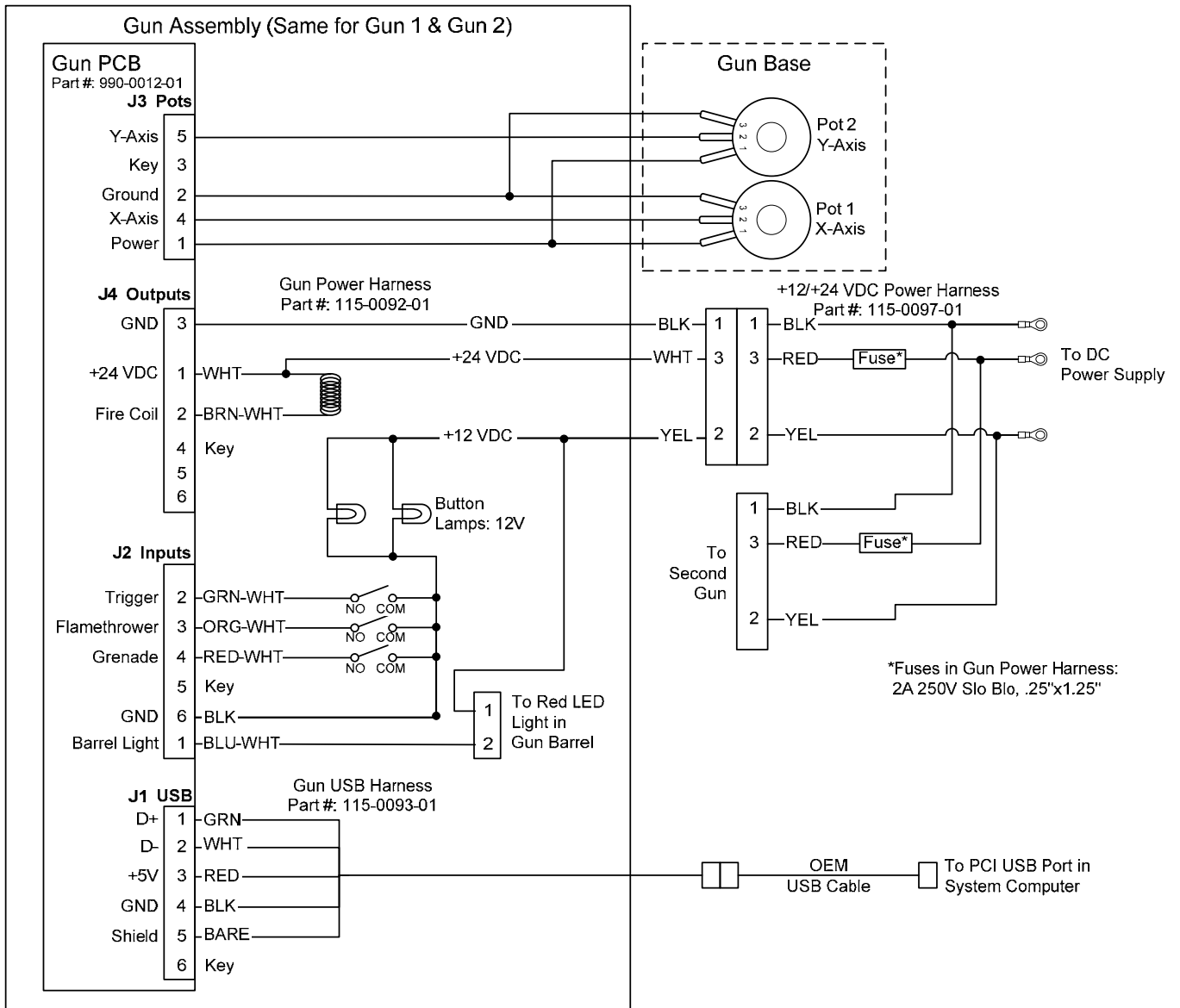


Figure 13. GVRI/O Mini PCB Wiring Diagram



NOTE: Wire colors may vary due to harness revisions.

Caution: Disconnect power before changing any USB connections or you will damage the PCBs.

Figure 14. Gun Wiring Diagram

PC Rear with Intel DG41TX Motherboard

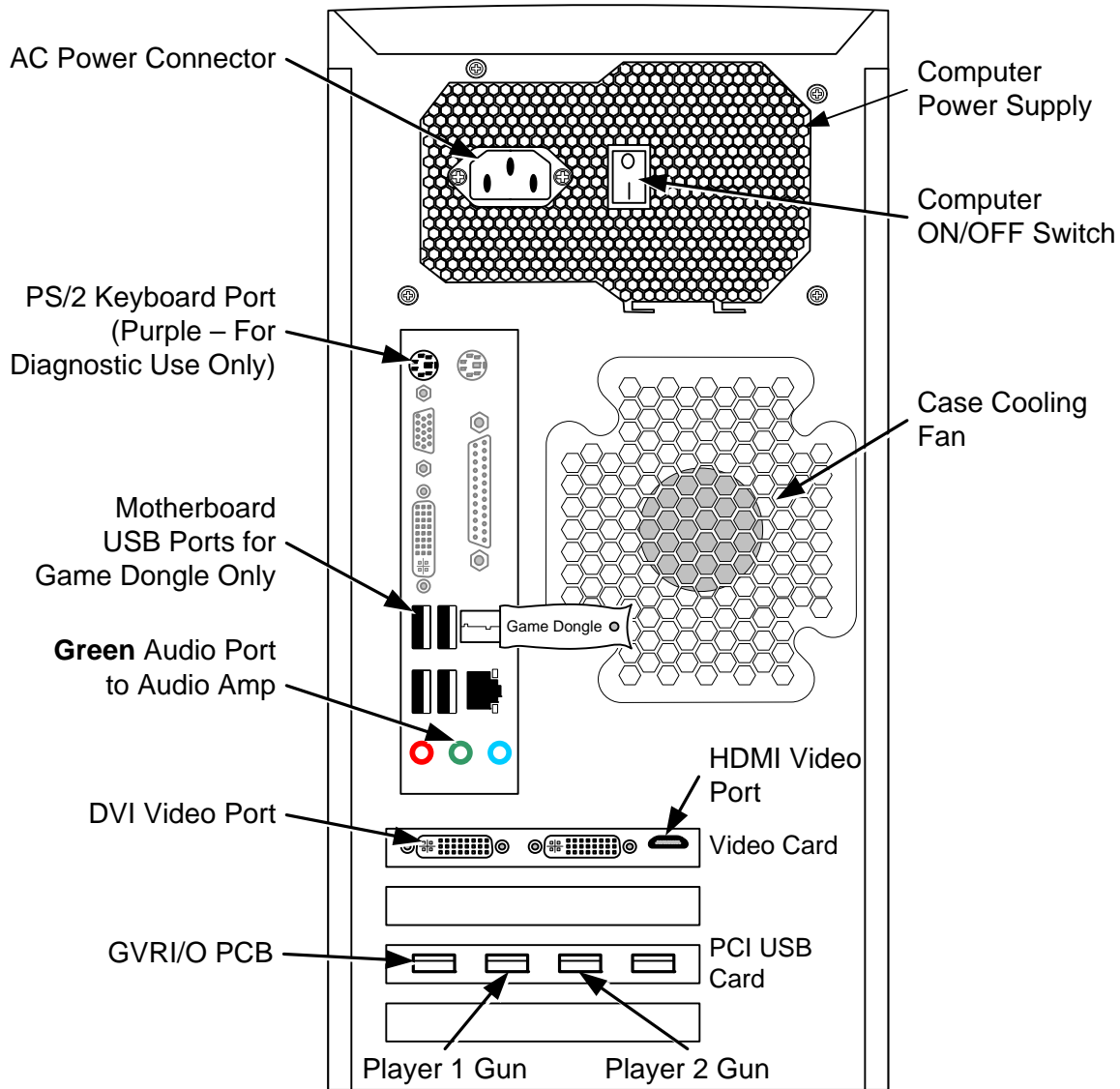


Figure 15. Computer Rear Panel Diagram (DG41TX Motherboard)

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 **Shh..! Welcome to Frightfearland** Conversion Kit are defective, a Return Merchandise Authorization (RMA) number will be issued.

LIMITED WARRANTY

LIMITED WARRANTY FOR **Shh..! WELCOME TO FRIGHTFEARLAND** (North America Only)

GLOBAL VR[®] warrants that its Major Electronic Components are free from defects in materials and workmanship under normal use and service for a period of one (1) year from the date of sale.

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 shall be in effect for the remainder of the original warranty period, but will not exceed the original warranty period.

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[®].

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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): _____
- Build (from Operator Menu): _____
- I/O Board Version (from Operator Menu): _____
- 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

Visit the **GLOBAL VR Online Store:** <http://parts.globalvr.com> to buy replacement graphics and other parts and supplies to keep your games running and looking their best.

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