



Feeding Frenzy

System Documentation

040-FF_OPER-UCT Rev B

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



www.globalvr.com
<http://service.globalvr.com>
techsupport@globalvr.com
Phone: 408.597.3435
Fax: 408.597.3437



Table of Contents

Chapter 1 - INTRODUCTION

1.1	Safety	3
1.2	Warnings	3
1.3	Environment Conditions	4
1.4	FCC Regulatory Notices	4
1.5	Feeding Frenzy Game Features	5
1.6	Cabinet Models and Features	6

Chapter 2 - GAME SETUP

2.1	Pre-Game Installation	7
2.2	Fish Panel Installation	8
2.3	Playing a Feeding Frenzy Game	10

Chapter 3 - OPERATOR MENUS

3.1	How to Use the Operator Menus	11
3.2	Operator Menu	12
3.3	Settings Menu	13
3.4	Statistics Menu	16
3.5	Diagnostics	16
3.5.1	Video Test	17

Chapter 4 - SERVICE

4.1	System Restore CD	18
4.2	Troubleshooting	19
4.3	Cabinet Specifications	24
4.4	Jamma Harness Wire Diagram	25
4.5	Computer Diagram	26
4.6	Technical Support Contact Info	27
4.7	Feeding Frenzy Warranty Info	28

Chapter 1 - INTRODUCTION

1.1 SAFETY NOTICES

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

We recommend that you read this page before preparing your Feeding Frenzy for game play. Use the following safety guidelines to help protect the system from potential damage and to ensure your personal safety.

- To help avoid damage to the computer, be sure the voltage selection switch on the power supply is set to match the AC power available at the 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 power cables into properly grounded power sources. 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, transient 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.
- Do not spill food or liquid on your system.
- Do not push any objects into the openings of the system. Doing so can cause fire or electric shock by shorting out interior components.
- Keep your computer far away from radiator and heat sources.
- Do not block cooling vents.

1.2 WARNINGS

 CAUTION	<p>To avoid electrical shock, unplug the cabinet before performing the installation procedures.</p>
 STOP	<p>GLOBAL VR assumes no liability for any damages or injuries incurred while setting up the cabinet. Only qualified service personnel should perform this installation!</p>



1.3 ENVIRONMENTAL CONDITIONS

Feeding Frenzy is intended for indoor use only. Be sure to keep the cabinet dry and maintain an operating temperatures of 10-40° Celsius or 50-105° Fahrenheit.

1.4 FCC NOTICES (UNITED STATES)

Electromagnetic Interference (EMI) is any signal or emission, radiated in free space or conducted along power or signal leads, that endangers the functioning of a radio navigation or other safety service or seriously degrades, obstructs, or repeatedly interrupts a licensed radio communications service. Radio communications services include but are not limited to AM/FM commercial broadcast, television, cellular services, radar, air-traffic control, pager, and Personal Communication Services (PCS). These licensed services, along with unintentional radiators such as digital devices, include computer systems, contribute to the electromagnetic environment. Electromagnetic Compatibility (EMC) is the ability of items of electronic equipment to function properly together in the electronic environment.

While this computer system has been designed and determined to be compliant with regulatory agency limits for EMI, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference with radio communications services, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna
- Relocate the computer with respect to the receiver.
- Move the Feeding Frenzy away from the receiver
- Plug the Feeding Frenzy into a different outlet so that the computer and the receiver are on different branch circuits.

If necessary, consult a Regulatory EMC representative of Feeding Frenzy Technologies or an experienced radio/television technician for additional suggestions. You may find the FCC Interference Handbook, 1986, to be helpful. It is available from the U.S. Government Print Office, Washington, DC 20402, Stock No. 004-000-00450-7 or on the word wide web at: <http://www.fcc.gov/bureaus./compliance/www/tvibookt.html>.

This device has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, and if not installed and used in accordance with the instruction manual, may cause harmful interference with radio communications. Operation of this equipment in an residential area is likely to cause harmful interference, in which case you will be required to correct the interference at your own expense. Operation is subject to the following conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.



1.5 FEEDING FRENZY GAME FEATURES

Congratulations on choosing Feeding Frenzy. Feeding Frenzy is available in a 27" VGA custom cabinet, and a ¾ height 19" VGA cabinet designed for ten year old children, Feeding Frenzy is designed to work as a standard Coin-OP cabinet where the player competes against the game through forty different game levels, or as a redemption game with the ability to dispense tickets as the player earns points in the game. In either mode, Feeding Frenzy offers a unique fun game for men, women, and children.

Feeding Frenzy provides the following benefits to operators:

- A unique game targeting all ages including women and children
- Easy-to-use operator menu interface.
- Fish Bubblers built into the sides of the cabinet help attract players.
- The Feeding Frenzy cabinet can be run as a story mode Coin-Op or offer full Redemption Mode play to players.
- Operator Menu Features in Feeding Frenzy
 - Intelli-Tune™ allows the operator to set an average play time for the game. Intelli-Tune™ will then automatically adjust the difficulty of game play so that a beginner or expert player's average play time meets the operator's desired settings.
 - Intelli-Ticket™ allows the operator to set the average amount of tickets dispensed in a redemption game. Intelli-Ticket™ will then automatically adjust the redemption settings so that the average amount of tickets dispensed per game meets the operator's desired setting.



1.6 CABINET MODELS & FEATURES

Feeding Frenzy comes in 2 cabinet models: a 27" VGA custom cabinet, and a 19" $\frac{3}{4}$ " height VGA cabinet designed around the average height of a 10 year children. All the cabinets share similar components, but each one will have a slightly different set-up and service procedure. Unless otherwise noted, the procedures in this manual apply to all models

**Feeding Frenzy 19-Inch Cabinet
Approximate Weight = 200Lbs**



**Feeding Frenzy 27-Inch Cabinet
Approximate Weight = 250Lbs**



Hardware Features

- Intel® Pentium® 4 Computer
- 640 x 480 VGA Flat Screen Monitor
- Ticket Dispenser for Redemption Play
- Aquatic Bubbling Fish Panels on both sides of cabinet

Chapter 2 - GAME SETUP

2.1 PRE-GAME INSTALLATION

Use the following steps to setup a new cabinet at your location:

1. Carefully remove the cabinet from the shipping container. Give yourself plenty of space around the cabinet as you remove it from the shipping container. Inspect the exterior of the cabinet for any damage. Move the Feeding Frenzy cabinet to the location where it will be operated. Avoid installing the game where it is damp and dusty or where the cabinet will receive excessive sunlight or heat, to protect the game from rising internal temperatures.
2. Remove the keys from the coin return slot. Open the coin door to locate the second set of keys as shown in the picture below.



3. Open the cash-box door and remove the loose parts inside the cash box. You will find the following items (may vary with cabinet style):
 - Feeding Frenzy Operator Manual (this document)
 - Feeding Frenzy System OS CD
 - AC power cord
 - Monitor Service Manual
4. Remove the back door from the cabinet and inspect the computer system. Verify that all cables and wires are securely connected to the computer. See page 25 for a guide to the cable connections. Verify all major assemblies are securely mounted and that there are no loose objects inside the cabinet that could cause any damage.
5. Install the Fish Panels and fill up with water. See section 2.2 on page 8 for instructions.
6. Connect the wall cord to a grounded (3-terminal) AC wall outlet.
7. Power ON the cabinet using the On/Off switch located on the lower rear of the cabinet to verify proper operation.
8. After you power the cabinet on the picture on the monitor may be temporarily distorted; this is caused by the change in the Earth's magnetic field as you move the cabinet from one location to another. You can fix this problem by using the degaussing feature built into the monitor. If your monitor does not have a degaussing feature you can use a degaussing coil to restore the color variations on your monitor.



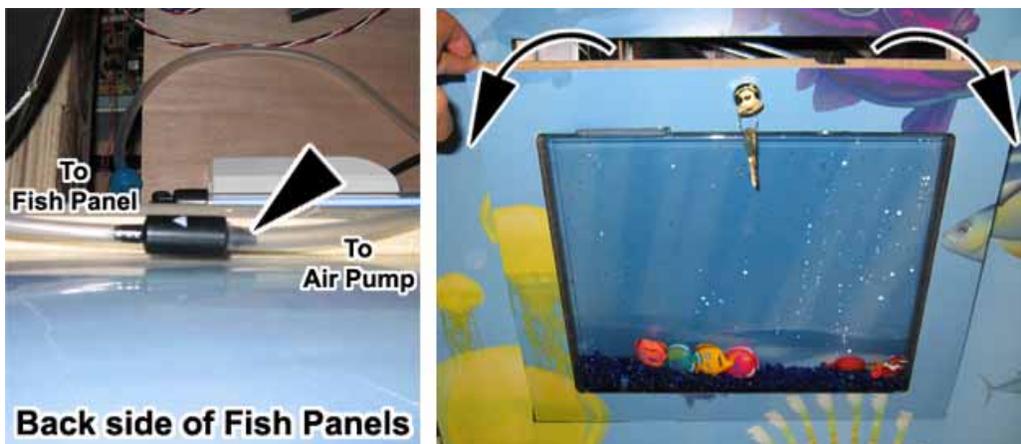
9. Once the game is powered on and you can see the attract mode running, open the Coin Door and press the test switch to enter the operator menu. Use the operator menu to adjust the amount of coins needed to start a game, to turn redemption on or off for the cabinet, and set the sound levels for your location.

Please read through CHAPTER 3 – OPERATOR MENU for more detailed information about setting up the software features on your Feeding Frenzy cabinet.

2.2 FISH PANEL INSTALLATION

Follow the below steps to setup and fill the fish panel with water on the side of the cabinet.

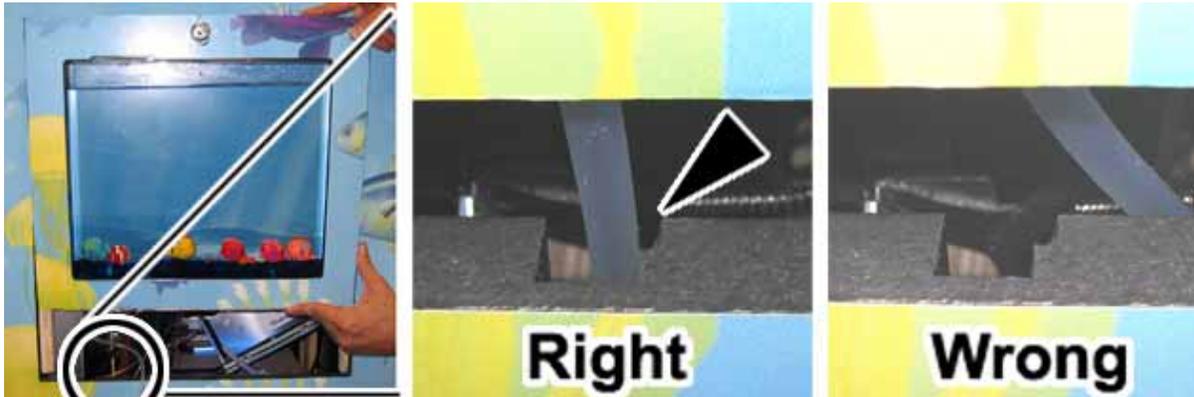
1. Begin by opening up the rear cabinet door to get access to the air pumps. Next unplug the air hose from the one way air valve from the side that goes to the air pump as shown by the arrow in the picture below. Do not unplug the hose that goes to the fish panel as water will begin to leak when you fill the Fish Panel with water. Now unlock the Fish Panel doors and pull them open from the top and remove them from the cabinet.



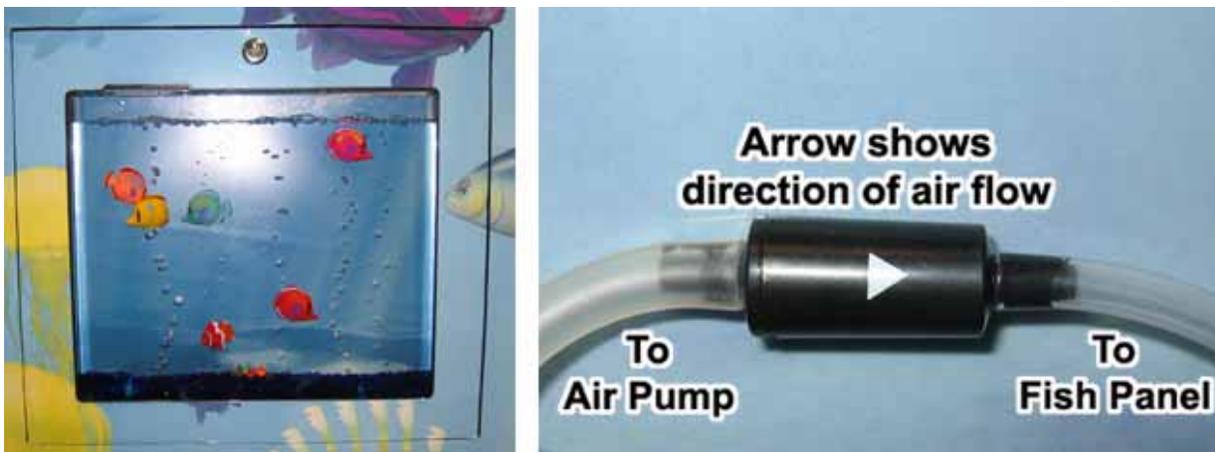
2. Take the Fish Panel doors over to your sink where you will fill the Fish Panel with water. On the back side of the Fish Panel door is a water fill hole as shown in the picture below. Do not fill the Fish Panel completely full of water as it will spill over the top edge when powered on; instead leave a 1 inch gap of air at the top as shown in the picture below.



3. Insert the Fish Panel door back into the cabinet. Make sure the air hose coming out of the bottom of the Fish Panel door goes into the slot on the bottom edge of the Fish Panel cutout on the cabinet as shown in the picture below. If the air hose is not installed correctly the Fish Panel door will pinch the air hose when closed and you will get very little air flow to bubble the fish inside the Fish Panel.



4. Close and lock the Fish Panel doors. Next, from the back of the cabinet plug the air hose from the air pump into the one way valve from the Fish Panel and you are finished. When the cabinet is powered on the fish inside the Fish Panel will begin to swim around from 4 or 5 streams of bubbles creating a very unique cabinet.



GLOBAL VR recommends displaying the Feeding Frenzy cabinet so that at least one Fish Panel can easily be seen by customers as they walk through your arcade location. The Fish Panels draw attention to this unique cabinet and help drive up earnings.



2.3 PLAYING A FEEDING FRENZY GAME



The outer edge of the screen is filled with information bars that help explain the size of the fish and what fish you can eat in the game. Each information bar is described below. The goal of the game is to eat as many fish as you can without being eaten yourself and to complete the growth bar before the clock runs out to move onto the next level.

- A. The Menu bar tells you what fish you can eat for that level. As you eat fish you grow in size, when you grow in size another fish becomes available to eat off the screen.
- B. This shows your total score for the game. The more fish you eat, the more points you earn.
- C. The Growth Bar shows how many fish you have to eat for this level. Eating more fish will add to the bar. When you reach the red triangles in the Growth bar, you grow to the next size fish, and you can now eat the next available fish shown in the Menu bar (A).
- D. The Ability bar is only used after stage eight when you are a Lion Fish or better. When the Ability bar is charged you can use the INHALE button to suck fish into your mouth. As you use the INHALE button the energy from the ability bar is used. The Ability bar, when empty, will slowly recharge as you play the game.
- E. This shows the total amount of credits inserted for the game.
- F. This shows the total amount of time left to eat fish and complete the growth bar to move onto the next level.

Trackball: This is used to move Andy the fish across the screen. Andy will move in the direction the trackball is rolled.

Dash Button: This button is used to quickly move Andy across the screen. Be careful you don't swim right into the mouth of another fish.

Inhale Button: This button is used to vacuum up fish you can eat in a small area in front of you. This button is only used with certain fish, like the Lion fish shown above.

Chapter 3 - OPERATOR MENU

3.1 HOW TO USE THE OPERATOR MENU

This chapter describes how to use the operator menu to setup and adjust the settings on your Feeding Frenzy cabinet.

All game settings such as Language, Cabinet Setup, Game Configuration, Accounting, and Diagnostics are options of the Operator Menu. Press the test switch behind the coin mech door as shown in the figure below to display the operator menu.



Once in the operator menu you will use the trackball to highlight menu options and the DASH button will be used to select the menu items. You can use the test switch at any time to exit the operator menu and return to the game.



Use the trackball to move the selection arrow through the operator menu. Press the DASH button to select a menu or to change a game setting.



3.2 OPERATOR MENU



The operator menu is the default screen displayed when you press the test switch. Use the BACK option to return to the previous menu screen throughout the different menus.

Settings	This menu holds the game, sound, credit, and redemption settings.
Statistics	This menu shows the accounting data for the game. The amount of credits earned, games played, and last time the statistics data was reset.
Diagnostics	Use this menu to test and validate that the hardware on the cabinet is working correctly.
Language	Use this setting to adjust the default Language used in the game and operator menu.
Reset Defaults	Use this setting to reset the operator menu settings to the default factory settings the cabinet shipped with.
Reset High Score	Use this setting to reset the high score table displayed in the attract mode.

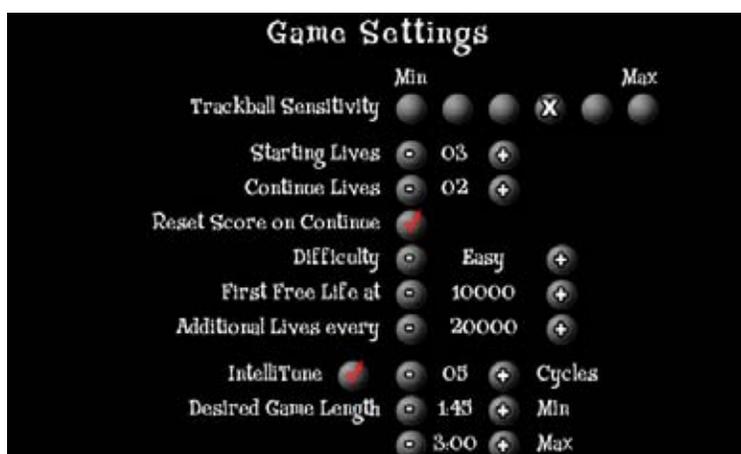
3.3 SETTINGS MENU



The Settings menu has seven sub-menus that are used to setup the cabinet location information, the amount of coins that are needed to start a game, sound levels, redemption play, and tournament settings. Below is a detailed description of each menu found under the Settings menu.

3.3.1 Game Settings – The Game Settings will adjust the playing functions and software settings of the game.

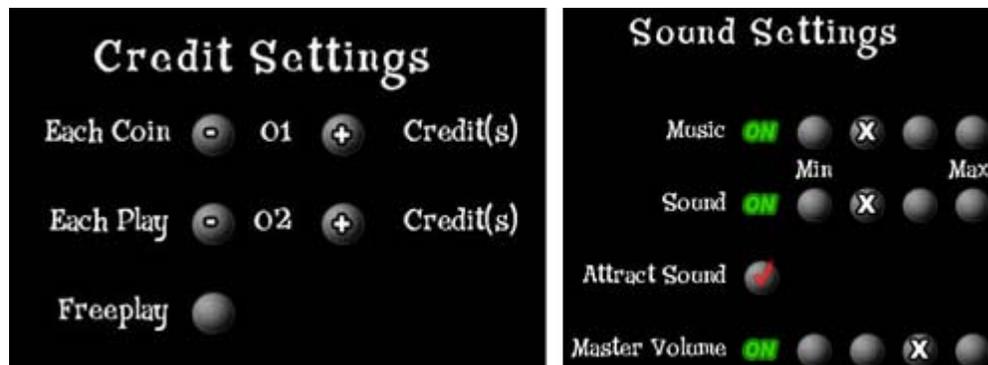
- **Trackball Sensitivity.** This will adjust how fast or slow trackball responds to the player. This will also affect how much the DASH button works.
- **Starting and Continue Lives.** This will adjust how many lives a player gets when they start or continue a game.
- **Difficulty.** This will adjust the speed of the enemy fish and the amount of time give to clear a level.
- **First Free Life & Additional Lives.** This will set the amount of points needed to earn an extra life within the game.
- **Intelli-Tune™.** This is an automatic game difficulty adjusting tool that helps optimize the earnings of the cabinet. Intelli-Tune™ will measure the players' performance in the game and adjust the game difficulty to achieve the desired game length. This helps beginners learn the game and helps to limit experts to a set amount of playing time. Adjust the desired game length min and max time limits as needed.





3.3.2 Credits Settings – The credits menu will set how many credits each coin drop is worth and how many credits it takes to play a game. You can also set the game to freeplay from this menu.

3.3.3 Sound Settings – The sound menu will adjust the sound levels for both the music and game play sound. You can turn the attract mode sound on or off. The global sound will control the over all sound levels of the cabinet instead of having to adjust the music and sound levels individually.



3.3.4 Timers – The input timeout will adjust how long a game will stay in play without any input from the trackball or buttons from a player. The intro and wrap up timeouts will adjust how long the game will display the game info screens when a game level is started (intro) and when the game level has ended (wrap up).



3.3.5 Redemption – The redemption menu is used to modify the redemption settings for the game. Redemption can be turned on or off. The redemption ticket settings read from left to right as shown here with the menu below:

Award **01** ticket(s) every **200** fish points up to **2000** fish points; then award **01** ticket every **400** fish points.

- **Intelli-Ticket™** when turned on will automatically adjust the difficulty of the game to dispense the amount of tickets in the target tickets per game setting.
- **Ticket Frenzy** will turn the game into full redemption mode, where the goal of the game is to collect as many fish as possible in a set amount of time to earn the most tickets from the game.



3.3.6 Tournament Settings – When world high scoring is turned on, the cabinet's game settings will automatically be adjusted to the match the tournament server's game settings. The location, city and state will be displayed along with the player's name in the high score table to show where people are placing high scores.

- **Location.** Enter the name of the location running the cabinet in this space.
- **City and State.** Enter the city and state the cabinet is located in.



3.3.7 Location Settings – Use this menu to set the location address and phone number for the cabinet. The address bar highlighted in grey can be edited, select the press button to edit another address bar. The location address and location phone should be the street address and phone number the cabinet is located at. Web password should be reset to a selection of your choice.

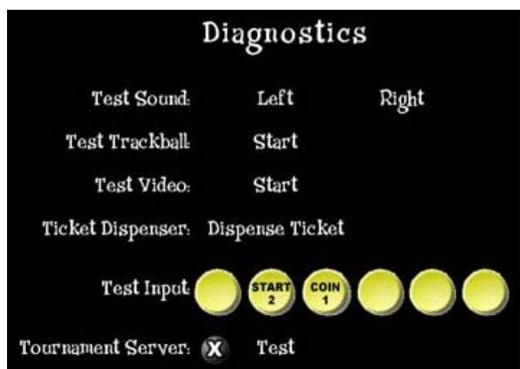


3.4 STATISTICS MENU



The statistics menu shows the accounting information for the cabinet. The coins dropped is then broken down into the number of one player, two player, and continues played. The tickets awarded shows the total amount of tickets dispensed and the ticket average per game breaks down the total tickets into an average per game. The average play per coin shows the average amount of time a game lasts. Lifetime coins shows the total amount of coins dropped even after you have reset the statistics. Dump to USB key allows you to save the statistics information to a USB flash memory device. The reset statistics button is used to zero out the statistics info, when selected the last reset date will be updated to the current date and time.

3.5 DIAGNOSTICS

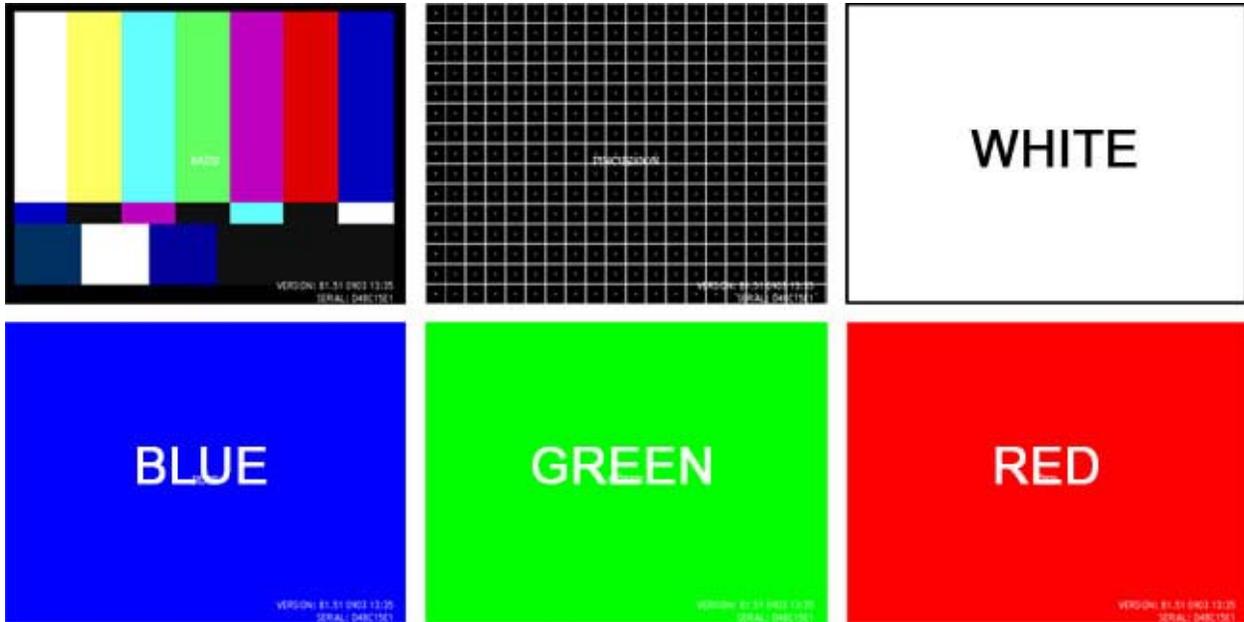


Test Trackball Screen

Use the diagnostics menu to test the cabinet hardware. If you press a button on the control panel it will show what button was pressed in the test input screen above. You can test the left and right speakers to verify each speaker is working correctly. The test trackball screen will verify the trackball is working correctly. The dispense ticket button will dispense one ticket when pressed to test the ticket dispenser. The tournament server test is reserved for future use.

3.5.1 VIDEO TEST

When you begin the video test to calibrate the monitor, use the DASH button to start the test, and the DASH button to scroll through the screens. When you have scrolled through all the test patterns you will return to the diagnostics menu.



Use the video test screens to evaluate the monitor's calibration and color. Each screen is designed to help you align the horizontal and vertical sync, or adjust the white balance and color hues.

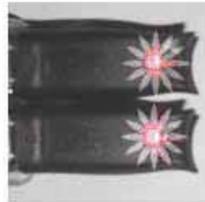
Use the monitor control panel buttons to adjust the monitor. The monitor control panel is located underneath the front control panel. Use the buttons on the monitor control panel to bring up the O.S.D or On Screen Display to select, adjust, and set the available monitor calibration options.



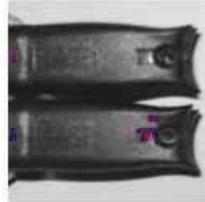


Chapter 4 – SERVICE

4.1 SYSTEM RESTORE CD



**USB HASP
Security Dongle
Activated**



**USB HASP
Security Dongle
NOT Activated**

In the event the software on the computer becomes corrupt, or you run into software problems, you can restore the software on your Feeding Frenzy computer. The System Restore CD will load the operating system and game software from CD. Please be aware, when you use the System Restore CD, you will erase all history for the coin and game statistics held in the game.

Operating System and Game Restore CD

1. Power on the cabinet and open the computer CD-ROM drive. Insert the CD labeled Feeding Frenzy Disc 1. Next power the cabinet off, wait 5 seconds, then power the cabinet back on. The CD should automatically start up (wait about 60 seconds) and on screen you should see the hard-drive image process starting.
2. When the hard-drive image process has finished, open the CD-ROM drive and remove the CD. Power the cabinet off, wait 5 seconds, then power the cabinet back on.
3. When the game has started the attract mode will begin. Press the test switch behind the coin door to enter the operator menu. You will need to set the sound volume, attract mode volume, game difficulty, coin settings, and redemption settings. You should play one complete game to ensure the correct operation of the cabinet's hardware.

Feeding Frenzy requires a USB HASP Security Dongle to activate the game software. The Feeding Frenzy game dongle plugs directly into the USB ports on the computer. When the USB Dongle is installed and working properly a red LED light will illuminate inside the dongle. In order for a USB HASP Security Dongle to be recognized correctly it must be inserted into the USB port before the cabinet is powered on. If for some reason the USB dongle is not recognized, power the cabinet off then on to see if this resolves the problem.

4.2 TROUBLESHOOTING

4.2.1 Video Troubleshooting

Problem	Cause	Possible Solution
No picture on monitor	Power problem	Verify the AC power connection to the monitor. You can verify that the monitor has power by looking for a small glow in the neck of the CRT.
	Bad video cable	Verify that the video cable is firmly connected from the monitor to the video port on the computer. While the monitor is powered ON, unplug the video cable from the monitor. You should see a message on screen saying <i>No Signal</i> to verify the monitor is working.
	Bad chassis PCB	Verify that the fuses on the chassis PCB are good.
Picture is out of color or misaligned	Picture is dim or faded	Use the monitor control panel to adjust the brightness and contrast settings.
	Picture is out of color	Use the monitor control panel to adjust the red, green, and blue color settings.
	Picture geometry is misaligned	Use the monitor control panel to adjust the height and width as well as other geometric adjustments to see if this corrects the problem.
	Distorted colors on screen	Press the degauss button on the monitor control panel to see if this corrects the problem.



4.2.2 Audio Troubleshooting

Problem	Cause	Possible Solution
No audio	Volume setting	Enter the Operator Menu and adjust the volume setting for the cabinet. Verify that the attract volume is ON.
	Bad wiring	Turn off the cabinet. Verify that all the wires are firmly connected to each speaker. Verify that no wires are frayed or improperly shorting to ground.
	Blown speakers	Remove the speaker's grill covers, and visually inspect each speaker is in working order. Run the Sound Test from the Operator Menu to verify each speaker is working.
	Bad UGCI-P	You can verify the UGCI-P is working by installing it into another working cabinet. If that is unavailable to you, plug a simple computer speaker into the audio ports on the computer and verify that sound is working from the computer.
Audio is distorted or muffled	Blown speakers	Remove the speaker's grill covers, and visually inspect each speaker is in working order. Run the Sound Test from the Operator Menu to verify each speaker is working.
	Faulty wiring	A weak or low muffled sound is a sign of reversed speaker wires. Check for reversed wires on each speaker.
	Bad Power Supply	A constant low hum in the speakers can be a faulty or bad power supply.
Bad sound channel	Bad UGCI-P	You can verify the UGCI-P is working by installing it into another working cabinet. If that is unavailable to you, plug a simple computer speaker into the audio ports on the computer and verify that sound is working from the computer.
	Blown Speakers	Remove the speaker grill covers, and visually inspect each speaker is in working order. Run the Sound Test from the Operator Menu to verify each speaker is working.
	Bad Wiring	Turn off the cabinet. Verify that all the wires are firmly connected to each speaker. Verify that no wires are frayed or improperly shorting to ground.

4.2.3 Computer Troubleshooting

Problem	Cause	Possible Solution
No Video	Loose or bad video cable	Verify that the video cable is firmly connected to the computer 15-pin video port and the 15-pin video port on the monitor. Check the video cable and make sure it is not pinched or frayed.
No video, no audio	Faulty hard drive	If you are getting no audio and no video, and the computer is powered on, you might have a faulty hard drive or corrupted software on the hard drive. Reload the software from the System Restore CD to see if this solves the problem. If you continue to have hard drive problems after you reload the software, you may have a faulty hard drive.
	No power to computer	Verify the line voltage is set to the correct voltage for your area: 115V or 230V. Unplug the AC power cord from the computer and re-plug it back in to power on the computer.
No control panel or button functions	No power to the UGCI-P card	If the UGCI-P card is bad, all buttons and controls on the cabinet will not work. Make sure that the UGCI-P card has power plugged into it from the computer power supply.
	Bad wiring	Verify that the DB-25 cable is firmly connected to the UGCI-P card. Verify that no wires are frayed or improperly shorting to ground in the wire harness.
	Bad power supply	Verify that the external PC power supply is working. This provides 12 volt and 5 volt DC power to the hardware connected to the wiring harness.



4.2.4 Control Troubleshooting

Problem	Cause	Possible Solution
Buttons do not work	Bad micro switch	Replace the micro switch on the button and re-test. Verify that the wires are connected to the correct spades on the micro switch.
	Bad wiring	Turn off the cabinet. Verify that all the wires are firmly connected to each button. Verify that no wires are frayed or improperly shorting to ground.
	Bad UGCI-P Card	If the UGCI-P card is bad, all buttons and controls on the cabinet will not work. Make sure that the UGCI-P card has power plugged into it from inside the computer.
Trackball does not work	Bad wiring	Verify that no wires are frayed or are improperly shorting to ground. Verify the trackball cable is plugged into the PS/2 port on the computer
Sloppy or bad trackball response	Bad TTL sensors	Go into the Operator Menu and run Test Trackball. Spin the trackball in all directions and verify that you are getting a good response. If you feel the trackball is not responding correctly the sensors on the trackball may need to be cleaned or replaced, or the bearings on the trackball are wearing out and need to be replaced.

4.2.5 Miscellaneous Troubleshooting

Problem	Cause	Possible Solution
Cabinet gets very warm	Faulty ventilation fan	Verify that the exhaust fan is working. It is located near the vents at the top of the cabinet. Replace the fan if worn or spinning slow.
	Ventilation holes on cabinet are blocked	Make sure you have proper clearance between the cabinet rear and the wall. Make sure the vent's holes are clear of dust and that air can flow freely.
Marquee lamp is bad or Intermittent	Faulty fluorescent tube	Check the fluorescent tube for darkened or cracked end. Replace the fluorescent tube if it looks worn.
	Faulty fluorescent fixture	Verify the fluorescent tube pins make a good connection with the lamp fixture. Check the ballast for proper operation.
Improper amount of credits given when coins or bills are inserted	Incorrect setting in operator menu	Go in the Operator Menu and verify the coin settings, and adjust them as necessary.
	Faulty wiring	Turn off the cabinet. Verify that all the wires are firmly connected to the coin mech and bill validator. Verify that no wires are frayed or improperly shorting to ground.
Game will not accept coins or bills	Faulty coin mech	Verify the coin mech is not jammed. Make sure the coin mech is properly aligned and latched to the coin door.
	Faulty bill validator	Verify the bill validator is powered on and working. If the bill validator is faulty it will usually blink an error code on the inside of the coin door.



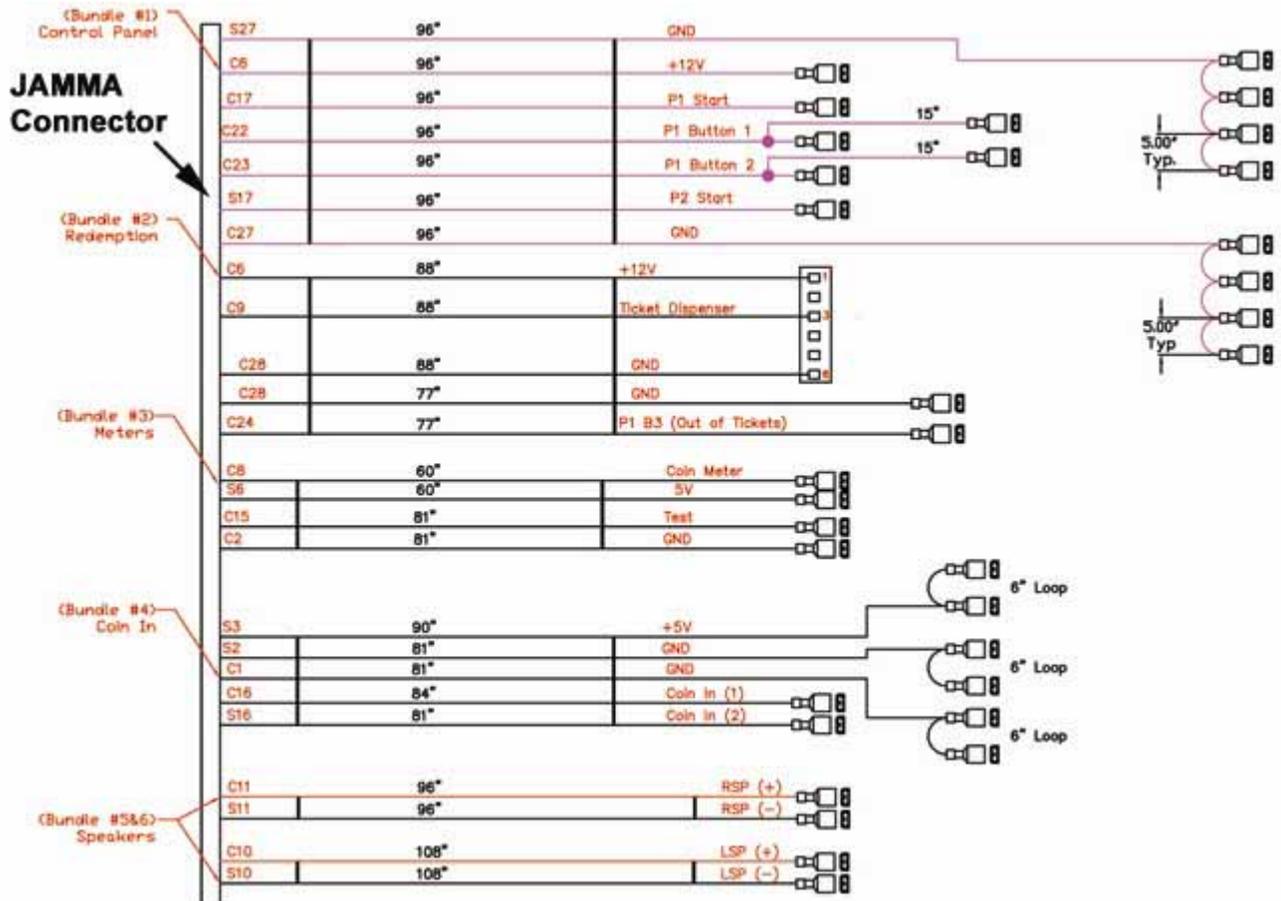
4.3 CABINET SPECIFICATIONS

If you need replacement parts, use the part numbers listed below when you contact GLOBAL VR Tech Support.

Table 1 – Cabinet Parts List

Description	Qty	Part Number
Manual, Feeding Frenzy Operator	1	040-FF_OPER-UCT
Cable, AC Power Standard	1	115-ACPOWER-CBL
Cable, Audio 3.5 Mini Stereo 3ft	1	115-AUD_MIN-CBL
Ethernet CAT 5 Blue 7 Feet	1	115-CAT5E7B-CBL
Cable, CD_ROM IDE 40 PIN ATA 33	1	115-CDIDE40-CBL
Cable, Printer 6ft Molded	1	115-PRINTER-CBL
Cable, USB A/A M to M 6ft w/ Velcro	1	115-USB6A_A-COM
Aquarium with Fish Light and Pump	1	136-FF27002-LAI
Funnel with 4 Inch Plastic Hose	1	138-FUNNEL-FAR
Computer, Power Supply ATX 250watt	1	285-ATX250W-SPA
Computer, Motherboard ASUS P4P800-MX	1	290-P4800MX-ASU
Computer, Hard Drive 3.5 Inch ATA66 40GB	1	300-40GB3.5-ATA
Computer, CD-ROM Drive 5.25 ATA 24x	1	305-24X52.5-SAM
Computer, CPU Intel 2.0Ghz Celeron 478 HS	1	310-C2.0GHZ-INT
Computer, Memory PC2100 256MB DDR266	1	315-256_266-DDR
Computer, Chassis T4 Base Only	1	850-T4_BASE-MET
Graphics, Feeding Frenzy 27 Control Panel	1	890-FF27CON-ART
Graphics, Feeding Frenzy 27Marquee	1	890-FF27MRQ-ART
Graphics, Feeding Frenzy 27 Left	1	890-FF27LS-ART
Graphics, Feeding Frenzy 27 Right	1	890-FF27RS-ART
Computer, UGCI-P JAMMA I/O Card	1	990-UGCI-P-UCT
Software, Feeding Frenzy	1	997-FF_GAME-UCT
27" VGA Flat Monitor	1	
27" VGA Flat Monitor Chassis PCB	1	
Monitor Bezel	1	
Monitor Glass	1	
Speakers	2	
Entropy Ticket Dispenser	1	
Feeding Frenzy JAMMA Harness	1	115-FFJAMMA-CBL
Leg Levelers	1	
Cabinet Wheels	1	
Trackball, 3-inch White	1	
Power Plate with Fuse and Connectors	1	
Coin Door Assembly, Meter, Service Switch	1	
Cabinet Fans ??	2	
Power Strip, 6 Outlets???	1	
Button, Green	1	
Button, Red	1	
Button, Player 1	1	
Button, Player 2	1	
Keys, Rear Door	2	
Keys, Fish Panels	2	
Keys, Coin Door	2	
Keys, Coin Vault	2	

4.4 JAMMA HARNESS WIRE DIAGRAM

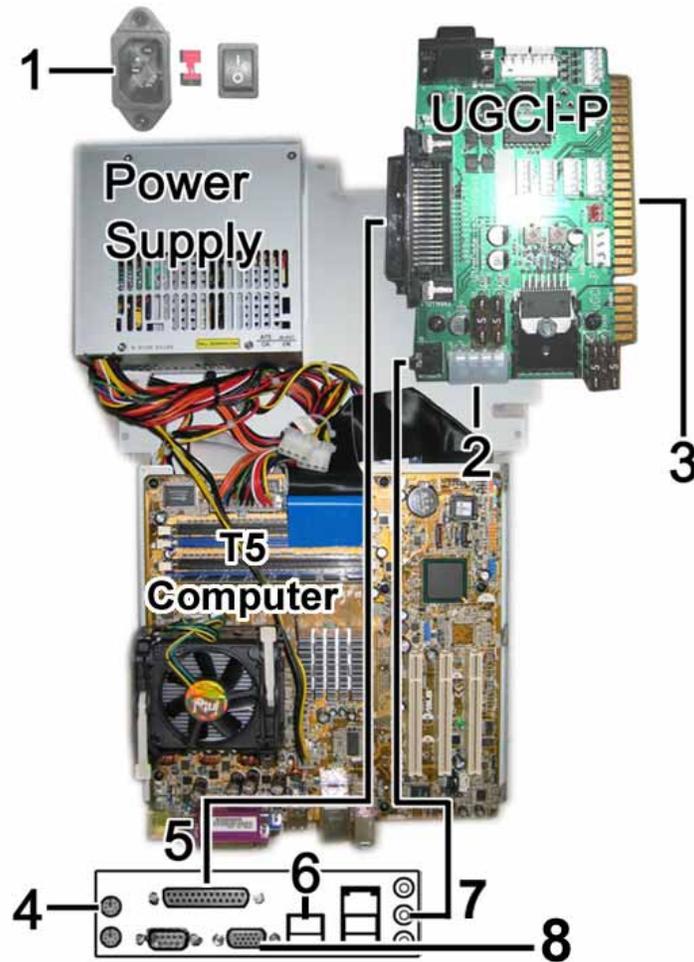


SOLDER	JAMMA PIN-OUT		COMPONENT
Ground	BLK	A	1 BLK Ground
Ground	BLK	B	2 BLK Ground
+5V	RD	C	3 RD +5V
+5V	RD	D	4 RD +5V
-5V	BL	E	5 BL -5V
+12V	OR	F	6 OR +12V
KEY		H	7 KEY
Not Used	WH/RD	J	8 WH/BLK Meter 1
Not Used	BLK/GRN	K	9 GRY Ticket Dispenser
Left Speaker -	BL/RD	L	10 RD/YL Left Speaker +
Right Speaker -	BL/GR	M	11 RD/BLK Right Speaker +
Not Used	GRN	N	12 RD Not Used
Not Used	WH	P	13 BL Not Used
Not Used	WH/OR	Q	14 BLK Not Used
Not Used	BLK/WH	S	15 WH/BRN Test Switch
Coin 2	BRN/BLK	T	16 YL/BLK Coin1
P2 Start	RD/WH	U	17 RD P1 Start
Not Used	BL/WH	V	18 BL Not Used
Not Used	GRN/WH	W	19 GRN Not Used
Not Used	OR/WH	X	20 OR Not Used
Not Used	YL/WH	Y	21 YL Not Used
Not Used	BRN/WH	Z	22 BRN P1B1 (Inhale)
Not Used	PR/WH	Aa	23 PR P1B2 (Dash)
Not Used	GRY/WH	Ab	24 WH/RED P1B3 (Out of Tickets)
Not Used	GRN/YL	Ac	25 GRN/RD Not Used
Not Used	OR/BLK	Ad	26 OR/RD Not Used
Ground	BLK	Ae	27 BLK Ground
Ground	BLK	Af	28 BLK Ground

Note: Wire colors may vary due to harness revisions.



4.5 COMPUTER DIAGRAM



Port	Computer Ports Description or Use	
1	AC Power	AC Power input must use a IEC 14 power cord connector
2	DC Power	Connect one of the power connectors from the power supply to the UGCI-P to provide 12vdc and 5vdc power in the JAMMA harness
3	JAMMA	Connect the JAMMA harness to the UGCI-P board
4	PS/2	The trackball will connect directly to the PS/2 port on the computer
5	Printer Port	The Printer Port on the computer connects to the printer port on the UGCI-P
6	USB Port	Connect the USB HASP Security Dongle to the USB ports on the motherboard
7	Audio Out	The Green Audio Out Port on the computer connect to the Audio In port on the UGCI-P
8	Video Out	Connect the Video cable from the monitor to the 15-Pin Video Port on the computer



4.6 TECHNICAL SUPPORT CONTACT INFO

Service & Parts

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>

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: _____
- Operating System Version and Games Installed: _____
- 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 document, please e-mail: techpubs@globalvr.com

Warranty Service

If at some point you require warranty service, contact your distributor. If technical support staff determines that parts on your Feeding Frenzy cabinet are defective, a Return Merchandize Authorization (RMA) number will be issued.



4.7 FEEDING FRENZY WARRANTY INFO

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®.