



## EA SPORTS™ MADDEN NFL SEASON 2

System Manual  
040-0042-01 Rev. C

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



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## Preface

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### 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. The AC power 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.

### Precautions for Game Operation

GLOBAL VR assumes no liability for injuries incurred while playing our games.

Operators should be aware that certain health and physical conditions may make people susceptible to injury when playing video games, particularly when the game moves or creates a sense of motion.

### Warnings

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

### Environmental Conditions

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

## 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 radio navigation or other safety service, or that 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 (including 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:

- Re-orient the receiving antenna.
- Relocate the cabinet relative to the receiver.
- Plug the game into a different outlet so that the computer and the receiver are on different branch circuits.

If necessary, consult an experienced radio/television technician for additional suggestions. You may find the FCC Interference Handbook, to be helpful. It is available from the U.S. Government Print Office, Washington, DC 20402.

This device has been tested and complies 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. If not installed and used in accordance with the instruction manual, it may cause harmful interference with radio communications. Operation of this equipment in a 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.

## Chapter 1 — Introduction

---



### Tuned to perfection

EA SPORTS™ MADDEN NFL SEASON 2 takes players from novice to advanced by adding not only features, but FUN! GLOBAL VR has added more trademark MADDEN features like ***QB Vision***, ***Hit Stick*** and ***Truck Stick***, plus unique play modes that set it apart from any other version of MADDEN.

**It's easy, it's fast, it's fun!** All the stadiums, players, and commentary that make football fun are in this game.

### Game Features

- **STEP UP AND PLAY**—Completely new game design makes playing the game as easy as moving a joystick. EVERYONE can play like a pro.
- **ALL NEW SEASON MODE**—Pick any team and power up to play your team's real '06 – '07 schedule. If you do well enough, you get a chance to go to the play-offs, then on to the Super Bowl, and finish up at the PRO Bowl.
- **ALL MADDEN MODE**—Hardcore players can test their skill in fierce competition.
- **TRAINING CAMP**—Players can gain power ups and earn the right to play historic teams like the '78 Steelers and '85 Bears.
- **2006 – 2007 TEAM ROSTERS**

### Free Online Tournament Support

Connect your cabinet with **NO MONTHLY OR PER-PLAY FEES** through February 2007!

- **Tournament Play**—With national events and Local Operator Tournaments to bring players into your locations.
- **Career Mode**—Challenges players to compete against all 32 teams of the NFL with online stat tracking and nationwide leaderboards.

## Cabinet Specifications



*Figure 1. Cabinet Dimensions and Weight*

## Power Requirements

- Inrush AC Current: 5.5 Amps
- Operating AC Current: 3.4 Amps
- Voltage: 115 VAC

## Hardware Features

- Pentium 4 Computer
- NVIDIA GeForce Video Card
- Stereo Audio with Subwoofer
- 512 Megabytes RAM
- 32-bit color
- 800x600 Super VGA Monitor
- Dollar Bill Validator
- SmartCard Format Players' Card Reader

## Chapter 2 — Installing a New Cabinet

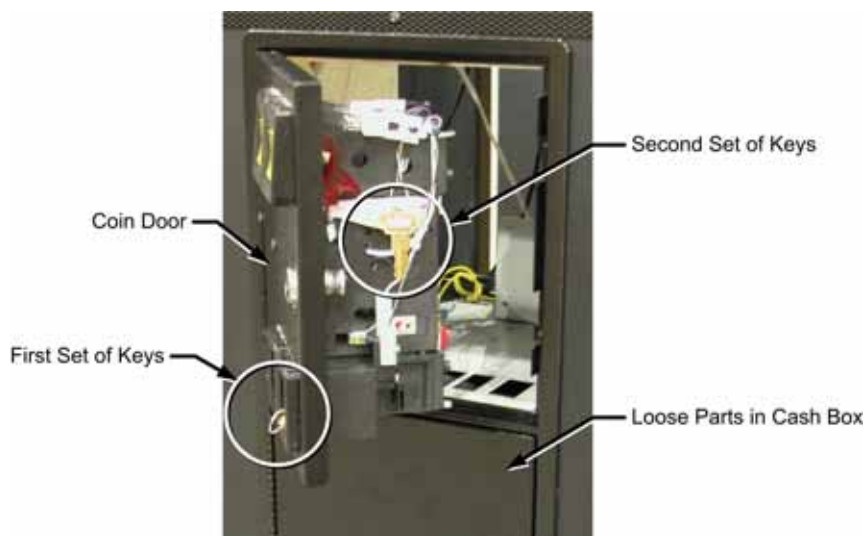
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Use the steps that follow to setup your game.

### Set Up the Cabinet

**Note:** If you have purchased a special configuration, such as a Pro Console system or Deluxe system with a 39" monitor, refer to the setup instructions packaged with your system.

1. Carefully remove the cabinet from the shipping container. Give yourself plenty of space around the cabinet as you unpack it. Inspect the exterior of the cabinet for any damage.
2. Remove the keys from the coin return slot. Open the coin door to locate the second set of keys (see Figure 2).



*Figure 2. Coin Door with Key Location*

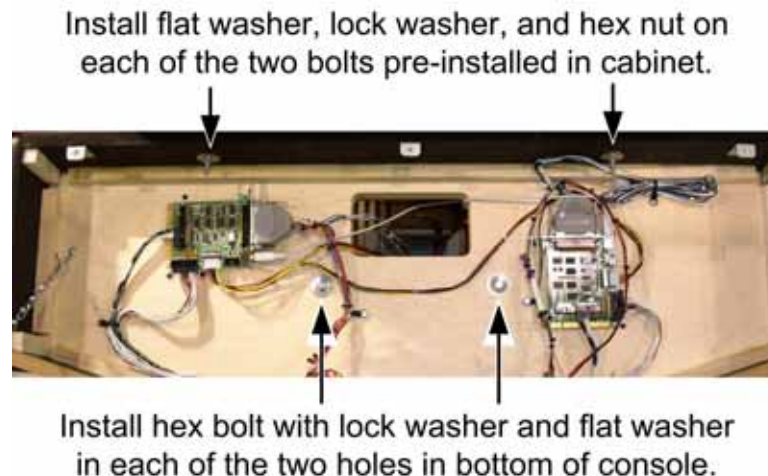
3. Open the cash-box door and remove the loose parts inside the coin box. You will find the following items (may vary with cabinet style):
  - AC power cord
  - Hardware for mounting Control Console
4. Remove the back door from the cabinet and inspect the wiring and components. Verify that all cables and wires are securely connected to the computer and other components. Refer to Chapter 10 — Diagrams and Schematics, beginning on page 56, for wiring diagrams and interconnect information.
5. Locate the clear plastic pouch mounted inside of the cabinet. It contains the following items:
  - System Manual (this document)
  - System Recovery CD
  - Game Install CDs (2)
  - Software Restore Guide
6. If the control panel is already mounted on the cabinet, proceed to *Power on and Test*, on page 10. Otherwise, continue with the next section to install the control panel.



## Install the Control Panel

**Note:** Refer to Chapter 10 — Diagrams and Schematics, beginning on page 61, for wiring diagrams and interconnect information.

1. Place the control console on the shelf above the coin mech so that the two bolts pre-installed on the cabinet fit through the holes at the rear of the console.
2. Remove the two (2) Torx bolts that hold the console closed, reach up through the coin door to open the latch at the center rear of the console, and open the console. Be careful to support the console so that it does not fall off the shelf. (**Note:** Four-player consoles are held closed by four bolts.)
3. Refer to Figure 3 and secure the control console to the cabinet using the hardware located in the coin box.
  - a. Install a flat washer first, then a lock washer and hex nut on each of the two bolts pre-installed in the cabinet.
  - b. Install a hex bolt with a lock washer and flat washer in each of the two holes in the bottom of the console and secure to the T-nuts in the cabinet.



**Note:** Four-Player Assembly Shown.  
Two-Player Cabinets have only one USB I/O Extreme PCB.

*Figure 3. Mounting the Control Console*

**Important:** Route all cables through the plastic cable clips in the console to prevent them from being pulled loose from the USB I/O Extreme PCB.

4. Refer to Figure 41 on page 63 for a diagram of control panel connections. Locate the 3x3 Molex female connector from the USB I/O Extreme PCB and pass it through the opening in the bottom of the console.
5. Open the coin door and connect the Molex connector from the console to the 3x3 Molex male connector from the coin mech.
6. Locate the following connectors from the cabinet and pass them into the control console through the opening in the bottom of the console.
  - USB cable from the computer
  - Power harness from the DC power supply

7. Connect the USB cable to the **J10 USB** port on the USB I/O Extreme PCB in the console.
8. Connect the power connector to the **J2 PWR** port on the USB I/O Extreme PCB.
9. Close the control console and secure it with the Torx bolts. Reach up through the coin door and secure the latch at the center. You are now ready to power on the game.

### Power on and Test

1. Depending on the type of tournament header shipped with your game, either place it on top of the cabinet and connect the DC power cable to the harness in the cabinet, or fold the tournament header up on its hinge. Secure the header with three wood screws.
2. Connect the power cord to the AC power plate on the back of the game and a grounded (3-terminal) AC outlet.

**Important:** The cabinet must be properly grounded to function correctly.

3. Power ON the cabinet using the On/Off switch located on the AC power plate on the lower rear of the cabinet (see Figure 35 on page 46).
4. Verify that the cabinet powers up and operates properly.
5. Play a game to verify proper operation.
6. Refer to Diagnostics Menu on page 29 to test the cabinet hardware from the Operator Menu.
7. Refer to *Chapter 5 — Operator Menus and Game Setup*, beginning on page 24, for information on setting up your pricing and other options.
8. Refer to *Chapter 4 — Setting up Online Features & Tournament Play*, beginning on page 13, to register your cabinet for Tournaments and online play modes.

### Checking the Game Dongle



*Figure 4. Parallel Game Dongle*

The cabinet uses a game dongle to activate the game software. The game dongle connects to the parallel port on the back of the computer.

For a dongle to be recognized correctly, it must be connected to the parallel port **before** the cabinet is powered ON. If the dongle is not recognized, power the cabinet OFF, make sure that the dongle is connected properly, and then power ON to see if this resolves the problem.

If the dongle should come off while the game is running, a NO DONGLE screen will appear. If this happens, the dongle can be re-installed without rebooting the game.

**Note:** The dongle supplied with the cabinet is specific to the game and software version. Future software upgrades may require you to also upgrade the dongle.

**Important:** Some of your cabinet information is stored in the dongle, so if you replace your computer, remove the dongle and keep it with the cabinet.

## Chapter 3 — Playing a Game

This section provides general information for starting and playing a game. Onscreen hints help you learn the game as you play.

1. Insert coins and press the **white** START button. The Mode Select screen, shown below, will appear. For Online Cabinets, select Advanced Modes to see all available play modes. Offline Cabinets have only one Mode Select screen.



Figure 5. Mode Select Screens for Online Cabinets

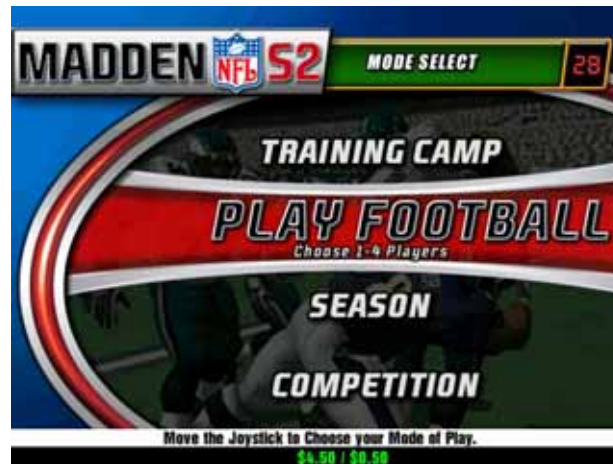


Figure 6. Mode Select Screen for Offline Cabinets

2. Use the joystick to select from the Play Modes described below, and then press any button.

**Training Camp:** Select from a list of game skills to practice. Get a gold medal in any event and win an Ability Bonus for the position you are training. Train more to unlock Historic Teams. Save your progress on your Players' Card.

**Play Football:** Play a single Exhibition Mode game against friends or the computer. Insert your Players' Card to use your Power Players from Training Camp.

**Season:** Play your team against their actual schedule, and try to make it to the Super Bowl!

**Career:** (Enabled only on Registered Tournament Systems) Play against every team and save your statistics. Unlock Historic Teams as you play.

**Tournament:** Compete for prizes in Local and/or National Tournaments. (Enabled only on Registered Tournament Systems.)

**Competition:** Play ready-made Tournament Brackets to compete with 5—8 players.

3. To play an Exhibition game, select **Play Football** from the Mode Select screen and press any button.
4. Use the joystick to select the home team, and then press any button. Repeat for the visiting team. If you have unlocked Historic Teams, insert your Players' Card and they will appear in the Team Selection screen, as shown below.



5. Select the difficulty level: ROOKIE (this default level is tuned for casual players), ALL PRO, or ALL MADDEN (for the most challenging play).
6. Select **Play** and press any button to start the game. You can select plays and change player positions, or let the computer make the selections. Use the joystick and buttons to control your players. Look at the labels on the player control panel for more information on the functions of each button.

Watch for onscreen hints as you play.

If you use Power Players, handy onscreen labels help you keep track of them, as shown below.



## Chapter 4 — Setting up Online Features & Tournament Play

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### Go Online With GLOBAL VR and Get More From Your Equipment Investment

**More Players** – Top players find your games through our online Game Locator.

**More Free Time** – Online equipment management lets you adjust and account without leaving your desk.

**More Play Modes** – Players at all levels have more ways to enjoy their favorite games, including Career and Tournament Play.

**More Cash** – Increased earnings with Tournament Play and other online-only features.

### Getting Started

Register with the GLOBAL VR Tournament System to connect your game cabinets to our online servers. Being online opens Tournament Play and other new play modes for your players, and time-saving services for you. Getting started is easy:

1. If you do not have an existing account with GLOBAL VR, fax in the Operator Agreement form located in the Registration Pack of the Welcome Kit, included with your cabinet or upgrade kit.
2. Connect your cabinet to a phone line or broadband network. Refer to Figure 44 on page 66 for diagrams of typical dial-up and broadband game network setup.
3. Register your cabinet as described below.

### Register your Cabinet

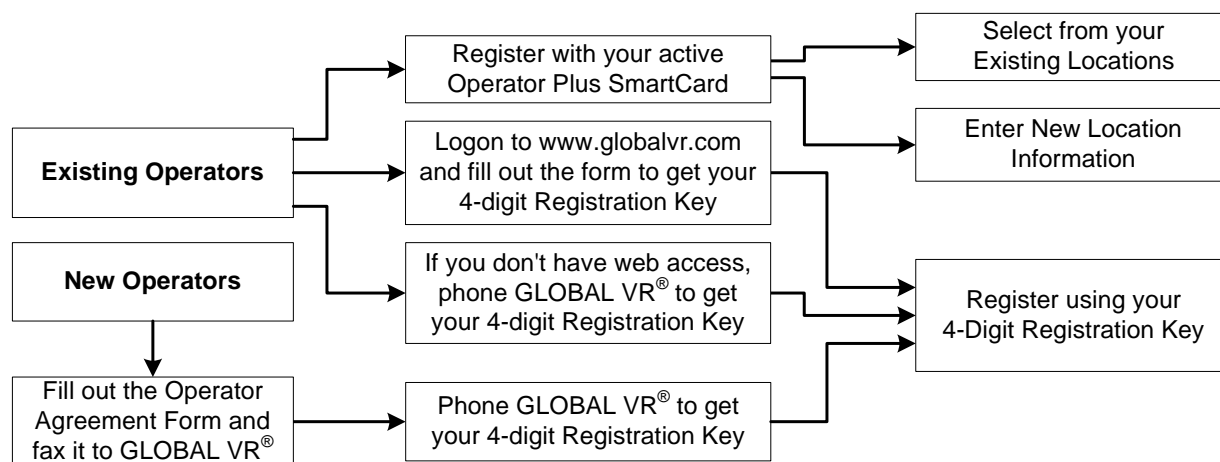
You have four options for registering your cabinet:

- **New Operators:** Go to page 15
- **Existing Operators:**
  - Register through our website: Go to page 14
  - Obtain a 4-digit registration key if you do not have web access: Go to page 14
  - Register with your Active **Operator Plus™ SmartCard**: Go to page 19

**Note:** For existing operators setting up a cabinet in a new location, it may be easiest to register through the website.

Refer to the flowchart on the following page for an overview of the registration options.





## Web Registration for Existing Operators

Perform the following steps to register online if you have an account with GLOBAL VR.

**Note:** You will need to provide the cabinet serial number, found on a label on the back of the cabinet, for each cabinet you wish to register.

1. Go to the GLOBAL VR website, [www.globalvr.com](http://www.globalvr.com).
2. Click the **Operator** tab and login using your Operator ID and password.
3. Click the **MY CABINETS** tab near the top of the page.
4. From the menu on the left side of the Cabinets screen, under **Football**, select **Registration**.
5. Fill out the Registration Form. In the **Select Existing Location** field, you can select New Location, or one of your existing locations. When you finish the form, click the **Create** button.
6. A Cabinet Registration Confirmation screen will appear. Find your 4-digit **Registration Key** near the top of the page, and write it down. Use this number at the cabinet to complete the registration process and activate your Operator card. (The Registration Key expires after one week and can be used on one cabinet only.)
7. Repeat the steps above for each cabinet that you wish to register.
8. Proceed to the section titled *Register with your 4-Digit Registration Key*, on page 15.

## Registration for Existing Operators without Web Access

Perform the following steps if you have an account with GLOBAL VR but no web access.

**Note:** You will need to provide the cabinet serial number, found on a label on the back of the cabinet, for each cabinet you wish to register.

1. Phone GLOBAL VR Tournament Support, at 408.597.3429, to receive a 4-digit cabinet registration key for each cabinet that you wish to register. You will need the cabinet serial number.
2. Proceed to the section titled *Register with your 4-Digit Registration Key*, on page 15.

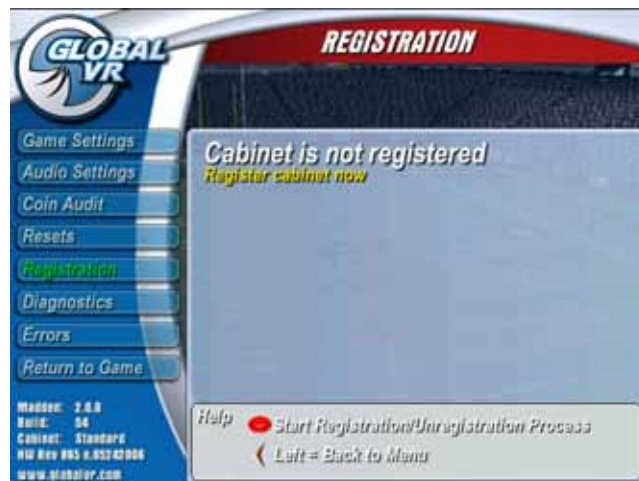
## Registration for New Operators

If you are a new operator and do not have a GLOBAL VR Operator Account, perform the following steps to get your cabinet registered and online the day it arrives:

1. Fill out Operator Agreement form, located in the Registration Pack of the Welcome Kit included with your cabinet. Fax the form to GLOBAL VR, at 408.597.3439.  
**Note:** When you phone Tournament Support, you will need to provide the cabinet serial number, found on a label on the back of the cabinet, for each cabinet you wish to register.
2. Phone GLOBAL VR Tournament Support, at 408.597.3429, to complete the registration process and create your Operator Account. You will receive the following:
  - A 4-digit registration key for each cabinet you are registering. You will use the registration key at the cabinet to complete the registration process and activate your Operator card. (The 4-digit registration key expires after one week.)
  - An Operator ID and password. Use these in the future to logon to our website to get your 4-digit registration key for cabinet registration. Your ID also gives you access to the **Global Impact Operator's Online Store**.
3. Proceed to the section titled *Register with your 4-Digit Registration Key*, that follows.

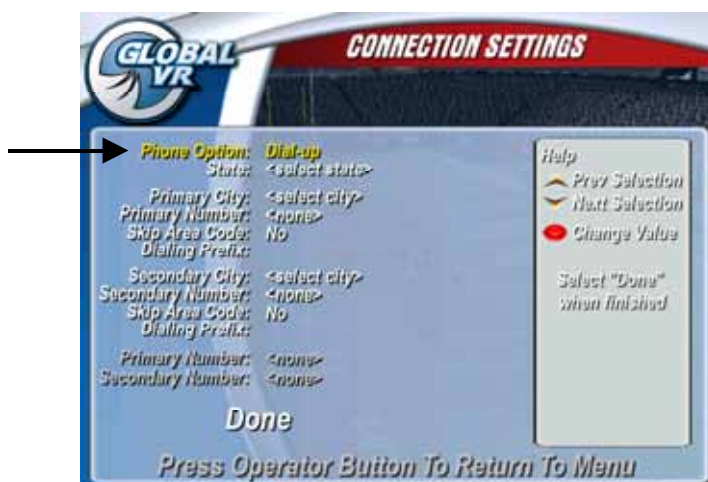
## Register with your 4-Digit Registration Key

1. Press the Operator Button inside the coin door and select **Registration** from the Operator Main Menu. The Registration screen will appear. (Once a cabinet is setup, the Operator Menu will open whenever you insert your Operator card.)



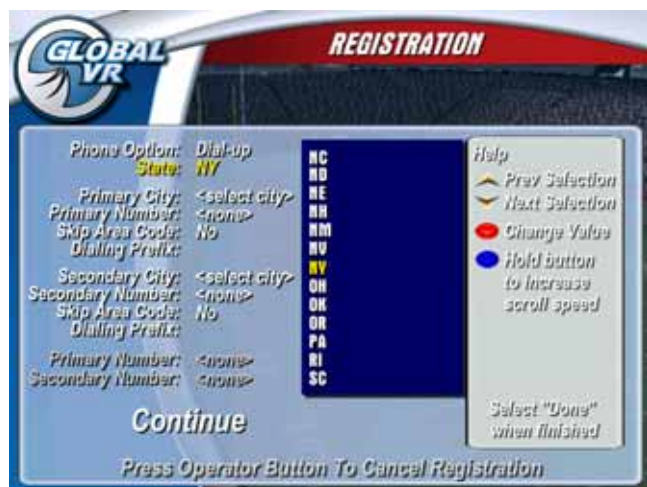
2. From the Registration screen, select **Register cabinet now** and press the **red** button to begin the registration process.
3. Read the Agreement screen, select **Agree**, and press the **red** button to continue. You must select **Agree** to continue with registration.

4. The Dial-up Phone settings screen will appear next. With **Phone Option:** selected, press the **red** button to toggle between **Broadband** and **Dial-up**.



5. To use a broadband network connection, select **Broadband** from the Phone Option screen and press the **red** button. Skip to step 7.
6. To use a dial-up phone line, select **Dial-up** as the Phone Option, and use the joystick and **red** button to set the dial-up properties described below:
  - a. Select **State**, and select your state from the list that appears.
  - b. Select **Primary City**, and select your city, or the city closest to the cabinet location. The phone number, with area code, that the dial-up modem will use for that city will be displayed. Look for a local phone number.

**Hint:** To speed-search the list, release the joystick, hold down the **blue** button, and then move the joystick in the appropriate direction.



- c. Select **Yes** for **Skip Area Code** unless you need to dial an area code to reach the selected number. (If the cabinet needs to dial an area code, you will need to enter a “1” as a dialing prefix in the next step.)



- d. Enter the **Dialing Prefix** if you need to dial a number (such as “9”) to call outside of your location, or if your modem will be dialing an area code and needs to dial a “1” first. Use the joystick to select each number and press the **red** button to enter it. To make a correction, select **Backspace** on the onscreen number pad and press the **red** button. When you are finished, select **Enter** and press the **red** button.



- e. Repeat Steps b—d for the **Secondary City**. The computer will use this dial-up number as a backup if it cannot reach the primary number.
  - f. The Primary and Secondary numbers will be displayed at the bottom of the screen, with the dialing prefix and area code, if selected. Check the entries, and use the joystick to return to any entry that you wish to change. When you are finished, select **Done** and press the **red** button.
7. The Select Time Zone screen will appear next. Use the joystick to select your time zone and press any button.
  8. From the Select Registration Method screen, select **Register with 4-digit code** and press the **red** button.



9. The next screen will allow you to enter your code (Registration Key). Use the joystick to select each number and then press the **red** button to enter the selection. If you make a mistake, select **BACKSPACE** and press the **red** button to delete the last number entered. When you finish, select **ENTER** and press the **red** button. You will see onscreen prompts indicating that the cabinet is connecting with GLOBAL VR.

10. When you are prompted, insert your blank OPERATOR+PLUS™ SmartCard in the Card Reader. The reader will read the card automatically. (Press any button to skip this step if you do not wish to activate a card at this time.)
11. When the **Registration Successful OK** screen appears, press the **red** button to exit. Remove your Operator Card. It is now active and can be used to register other cabinets.

**Important:** If you never see the Registration Successful screen, this can indicate a problem with registration, possibly an interrupted modem connection. Select Force Call from the Registration Options screen to make sure that your cabinet is able to sync with GLOBAL VR, and to finalize registration.

12. Refer to the *Tournament Operator Guide* in your Welcome Kit for detailed information on running and promoting your Tournaments.
13. Once a cabinet is registered, the registration screen shows useful information about the system, and allows you to change the settings the cabinet uses for syncing with GLOBAL VR. Set the sync time so that your cabinets do not all try to call in at the same time. Refer to the figure below.



Figure 7. Cabinet Registration Screen

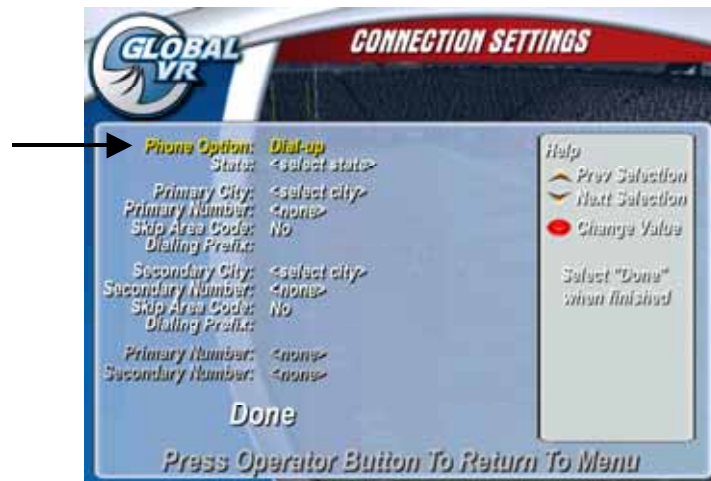
## Register with an Active Operator Plus™ SmartCard

If you already have an account with GLOBAL VR, you can use your Operator Card to register immediately.

1. Press the Operator Button inside the coin door and select **Registration** from the Operator Main Menu. The Registration screen will appear.



2. From the Registration screen, select **Register cabinet now** and press the **red** button to begin the registration process.
3. Read the Agreement screen, select **Agree**, and press the **red** button to continue. You must select **Agree** to continue with registration.
4. The Dial-up Phone settings screen will appear next. With **Phone Option:** selected, press the **red** button to toggle between **Broadband** and **Dial-up**.

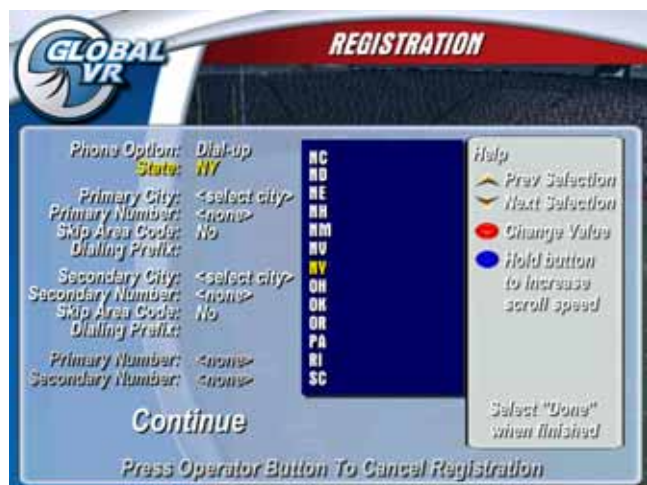


5. To use a broadband network connection, select **Broadband** from the Phone Option screen and press the **red** button. Skip to step 7.
6. To use a dial-up phone line, select **Dial-up** as the Phone Option, and use the joystick and **red** button to set the dial-up properties described below:
  - a. Select State, and select your state from the list that appears.



- b. Select Primary City, and select your city, or the city closest to the cabinet location. The phone number, with area code, that the dial-up modem will use for that city will be displayed. Look for a local phone number.

**Hint:** To speed-search the list, release the joystick, hold down the **blue** button, and then move the joystick in the appropriate direction.



- c. Select **Yes** for **Skip Area Code** unless you need to dial an area code to reach the selected number. (If the cabinet needs to dial an area code, you will need to enter a “1” as a dialing prefix in the next step.)
- d. Enter the Dialing Prefix if you need to dial a number (such as “9”) to call outside of your location, or if your modem will be dialing an area code and needs to dial a “1” first. Use the joystick to select each number and press the **red** button to enter it. To make a correction, select **Backspace** on the onscreen number pad and press the **red** button. When you are finished, select **Enter** and press the **red** button.



- e. Repeat Steps b—d for the Secondary City. The computer will use this dial-up number as a backup if it cannot reach the primary number.
- f. The Primary and Secondary numbers will be displayed at the bottom of the screen, with the dialing prefix and area code, if selected. Check the entries, and use the joystick to return to any entry that you wish to change. When you finish, select **Done** and press the **red** button.

7. The Select Time Zone screen will appear next. Use the joystick to select your time zone and press any button.
8. From the Select Registration Method screen, select **Register with Operator Card** and press the **red** button.



9. When you are prompted, insert your active OPERATOR+PLUS™ SmartCard in the Card Reader. The reader will read the card automatically. You will see onscreen prompts indicating that the cabinet is connecting with GLOBAL VR.
10. When prompted to choose a location, select either **New Location** or **Existing Location** and press the **red** button.
  - If you select **Existing Location**, you will see a list of your locations. Use the joystick to select the location from the list and press the **red** button.
  - If you select **New Location**, you will be prompted to enter information about the location. Use the joystick to enter the requested information and press the **red** button.
11. When you are prompted to enter the cabinet serial number, use the joystick and **red** button to enter the numbers.
12. You will see onscreen prompts indicating that the cabinet is connecting with GLOBAL VR. When the **Registration Successful** screen appears, press the **red** button to exit.

**Important:** If you never see the Registration Successful screen, this can indicate a problem with registration, possibly an interrupted modem connection. Select Force Call from the Registration Options screen to make sure that your cabinet is able to sync with GLOBAL VR, and to finalize registration.
13. Refer to the *Tournament Operator Guide* in your Welcome Kit for detailed information on running and promoting your Tournaments.

14. Once a cabinet is registered, the registration screen shows useful information about the system, and allows you to change the settings the cabinet uses for syncing with GLOBAL VR. Set the sync time so that your cabinets do not all try to call in at the same time. Refer to the figure below.



Figure 8. Cabinet Registration Screen

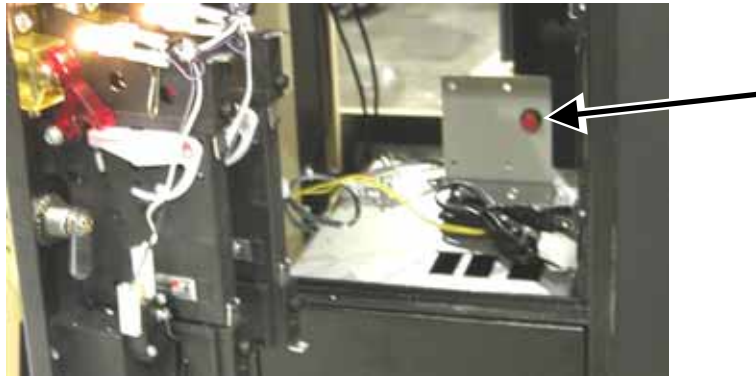
## Chapter 5 — Operator Menus and Game Setup

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This chapter describes how to use the Game Operator Menus. These menus allow you to perform cabinet setup and adjustments, test the equipment, view coin audit information, and register the cabinet to participate in Tournaments and online features.

To access the Game Operator Menu, press the **red** operator button behind the coin door as shown in Figure 9, below.

Once you have registered your cabinet and activated your Operator card (see Chapter 4 for detailed instructions), you can access the Operator Menus by simply inserting your Operator card in the Players' Card reader.



*Figure 9. Operator Button Location*

The lower left corner of the Game Operator Menu screens displays the version and build of the installed software, and other important information about the cabinet that you may need if you contact Technical Support for a cabinet issue (see Figure 11).

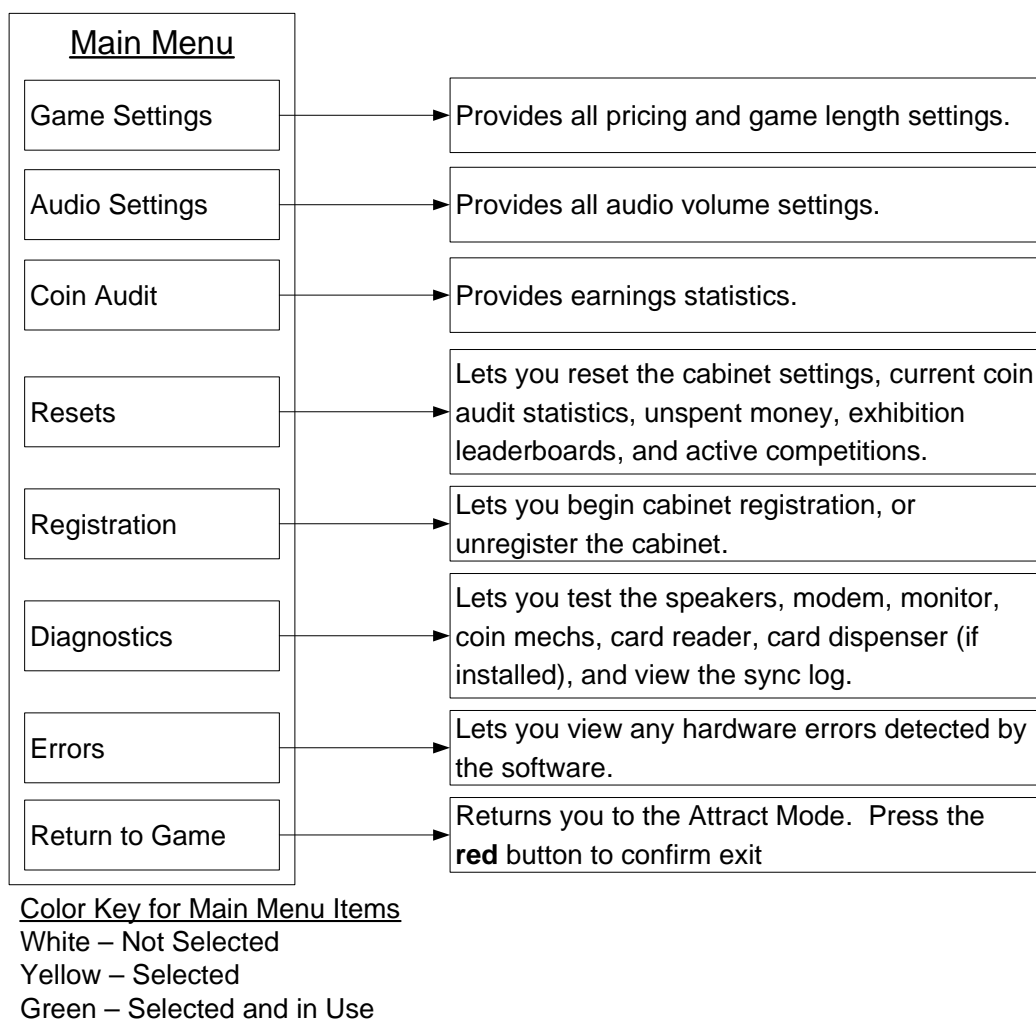
Refer to *Figure 10, Operator Menu Flowchart*, on the following page, for a list of the Operator Menus and available settings.

Use the player controls to navigate the Operator Menus as described below:

1. Use the joystick to navigate the menu list on the left side of the screen and highlight a selection.
2. Move the joystick to the right to enter a menu and change settings.
3. Press the **red** and **green** player buttons to change settings. Refer to the bottom of each menu screen for instructions.
4. When you finish making changes, move the joystick to the left to return to the menu list.
5. When you finish using the Game Operator Menu, use the joystick to select **Return to Game**, press the **red** button, and then press the **red** button again when prompted to **Confirm Exit**.

## Operator Menus

The flowchart that follows shows the Operator Menu choices and available settings.



*Figure 10. Operator Menu Flowchart*

The lower left corner of the menu screens displays the information shown below:



*Figure 11. Game Information on Operator Menus*



## Game Settings Menu

The Game Settings menu allows you to set the number of credits for each type of games. Use the joystick to select each setting, and the **red** and **green** buttons to change the value.



Figure 12. Game Settings Menu

The settings available from the Game Settings menu are as follows:

- **Credits / Free play:** Sets play to *Credit* or *Free play* (default: *Credit*).
- **Attract Credit Display:** Sets whether the Attract Credit Display shows *Money* or *Credits* (default: *Money*).
- **Coin Audit Credit Display:** Sets Coin Audit to *Credits* or *Money* (default: *Money*).
- **Credits per Money:** Sets how many coin drops it takes to reach the unit of money used (01-20) (In the USA this is usually 4 (4 quarters per dollar) (default: 4).
- **Credits per Exhibition Quarter:** Sets credits per exhibition game quarter (01–25) (default: 2).
- **Credits per Training Game:** Sets credits for a Training Game (default: 2).
- **Credits per Tournament Game:** Sets credits for a Tournament Game (default: 16).
- **Credits per Career Game:** Sets credits for a Career Game (default: 12).
- **Credits per Season Game:** Sets credits for a Season Game (default: 8).
- **Credits per Competition Player:** Sets credits each player in Competition mode (default: 12).
- **Credits per Online Smart Card:** Sets credits to purchase a Players' Card to be mailed (default: 12).
- **Credits per Dispensed Smart Card:** Sets credits to purchase a dispensed SmartCard (default: 12).
- **Players' Card Registration:** Enables or disables player registration at the cabinet (default: *All Enabled*).
- **1 Player Quarter Length (game minutes):** Sets the length of time per game quarter when one player is playing (default: 2:30).
- **2 Player Quarter Length (game minutes):** Sets the length of time per game quarter when two players are playing (default: 3:00).
- **3 Player Quarter Length (game minutes):** Sets the length of time per game quarter when three players are playing (default: 3:30).
- **4 Player Quarter Length (game minutes):** Sets the length of time per game quarter when four players are playing (default: 4:00).

## Audio Settings Menu

The Audio Settings Menu allows you to set the volume for the cabinet.

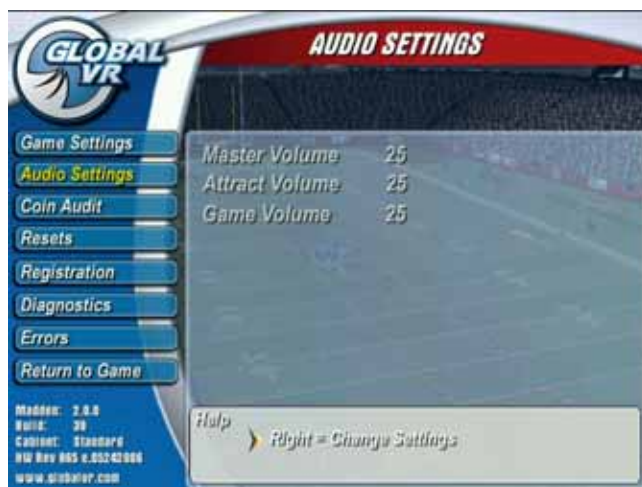


Figure 13. Audio Settings Menu

- **Master Volume:** Sets Master Volume (00-99) (*default: 25*)
- **Attract Volume:** Sets Attract Volume (00-99) relative to master volume (*default: 25*)
- **Game Volume:** Sets Game Play Volume (00-99) relative to master volume (*default: 25*)

## Coin Audit Menu

The Coin Audit Menu allows you to view the **Summary Since** (date of last reset) and **Lifetime Summary** Coin Audit screens shown below. Use the joystick to move between screens. These screens show the total number of games, credits collected, and upcharges for the cabinet in each mode of game play—Exhibition, Training, Career, Tournament, Season, and Competition, plus Players' Card purchases.



Figure 14. Coin Audit Menu Screens

## Resets Menu

The Resets Menu allows you to restore the game to the factory default settings or reset coin and credit data or leaderboards.

To reset an item, select it and press the **red** button. The "Press to Reset" text will change to "Press to Confirm." Press the **red** button to confirm, or move the joystick left to cancel.



Figure 15. Resets Menu

- **Reset Cabinet Settings.** Resets the game to the default settings shown in the table below:

Table 1. Game Default Settings

Item	Range	Default
Credits / Free play	Credit / Free play	Credit
Attract Credit Display	Money/Credits	Money
Coin Audit Credit Display	Money/Credits	Money
Credits per Money	1-50	04
Credits per Exhibition Quarter	1-50	02 (\$0.5)
Credits per Training Game	1-50	02 (\$0.5)
Credits per Tournament Game	8-50	16 (\$4)
Credits per Career Game	4-50	12 (\$3)
Credits per Season Game	1-50	08 (\$2)
Credits per Competition Player	4-50	12 (\$3)
Credits per Online Smart Card	12-20	12 (\$3)
Credits per Dispensed Smart Card	4-20	12 (\$3)
Players' Card Registration	All Enabled, All Disabled, Dispenser Only	All Enabled
1 Player Quarter Length	2:00-5:00	2:30
2 Player Quarter Length	2:00-5:00	3:00
3 Player Quarter Length	2:00-5:00	3:30
4 Player Quarter Length	2:00-5:00	4:00
Master Volume	0-99	25
Attract Volume	0-99	25
Game Volume	0-99	25

- **Reset Coin Audit:** Resets all coin collection data
- **Unspent Money:** Resets the credits in the system to **none**. The previous credit value will be recorded under *Other* in the Coin Audit page as *Misc* (as shown in Figure 14).
- **Exhibition Leaderboards:** Removes all names from exhibition (*Play Football*) leaderboards. Does not affect Tournament leaderboards.
- **Active Competition:** Ends any competition currently in progress.

## Registration Menu

The Registration Menu allows the operator to register and unregister the cabinet for Tournaments and online features. For details on registering your cabinet, refer to Chapter 4.

Once a cabinet is registered, the Registration screen displays useful system information and allows you to change sync settings, or select Force call to sync immediately. A *sync* means the cabinet calls in to GLOBAL VR to upload Tournament scores and other data, and download leaderboards.



Figure 16. Cabinet Registration Screen

**Cabinet is not registered** screen:

- **Register cabinet now:** Connect the cabinet to a phone line or broadband network and select this to begin the registration process. Refer to Chapter 4 for detailed instructions.

**Cabinet is registered** screen:

- **Unregister cabinet:** Unregisters the cabinet and disables Tournaments and online features.
- **Force call:** Forces a Sync Call to GLOBAL VR.
- **Change connection settings:** Allows you to change the settings used to connect to the Internet to sync with GLOBAL VR.
- **Change sync time:** Displays the time the cabinet calls in to sync with GLOBAL VR and allows you to change it.
- **Change time zone:** Displays the time zone set for the cabinet and allows you to change it.
- **Cabinet ID:** Displays the ID the cabinet uses when it syncs with GLOBAL VR.
- **Serial #:** Displays the cabinet serial number.
- **Status:** Displays the registration status.
- **Version:** Displays the software version installed.
- **Country Code:** Displays the country where the cabinet is registered.
- **Last Call Status:** Displays the status of the last sync attempt. *Success* or *Failure*.
- **Last Error Code:** If the cabinet received an error on a sync attempt, it is displayed here.
- **Last Attempt:** Displays the date and time of the last attempt to sync with GLOBAL VR.
- **Last Sync Time:** Displays the date and time of the last successful sync with GLOBAL VR.



## Diagnostics Menu

The Diagnostics Menu allows you to test the cabinet hardware components.



Figure 17. Diagnostics Screens

### Test Controls

Select Test Controls and press the **red** button to start the controls test.

1. Press each player button and verify that the correct button becomes highlighted on the screen.
2. Move each joystick up, down, left, and right, and verify that the correct direction arrow becomes highlighted on the screen.
3. Press the Operator Button to exit from this test and return to the Main Menu.

### Test Speakers

Select Test Speakers and press the **red** button to start the speakers test. Each speaker will emit a sound as follows:

- **Left Speaker:** Says “Front left channel.”
- **Right Speaker:** Says “Front right channel.”
- **Subwoofer:** Emits deep thumping sound.

Confirm that each sound comes from the correct speaker. The Speaker Test will rotate through each speaker until you exit from the test. Press any player button to exit from this test.

### Test Modem

Select Test Modem and press the **red** button to bring up the connection settings screen and to test modem function by calling the server.

**Note:** No data is exchanged and scores are not synced during a modem test.

## Test Monitor

Select Test Monitor and press the **red** button to begin the monitor test. Press the **red** button to scroll through the monitor calibration screens shown in the figure below. Use the monitor calibration screens to evaluate monitor performance. Various screens are designed to help you adjust the color hue, white balance, horizontal and vertical sync, and screen size as it appears on the monitor.

Use the monitor remote control board, shown in Figure 19, to adjust the monitor. The monitor remote control board is mounted inside the cabinet to the right of the coin door.

Press the **yellow** button to exit from the monitor test.

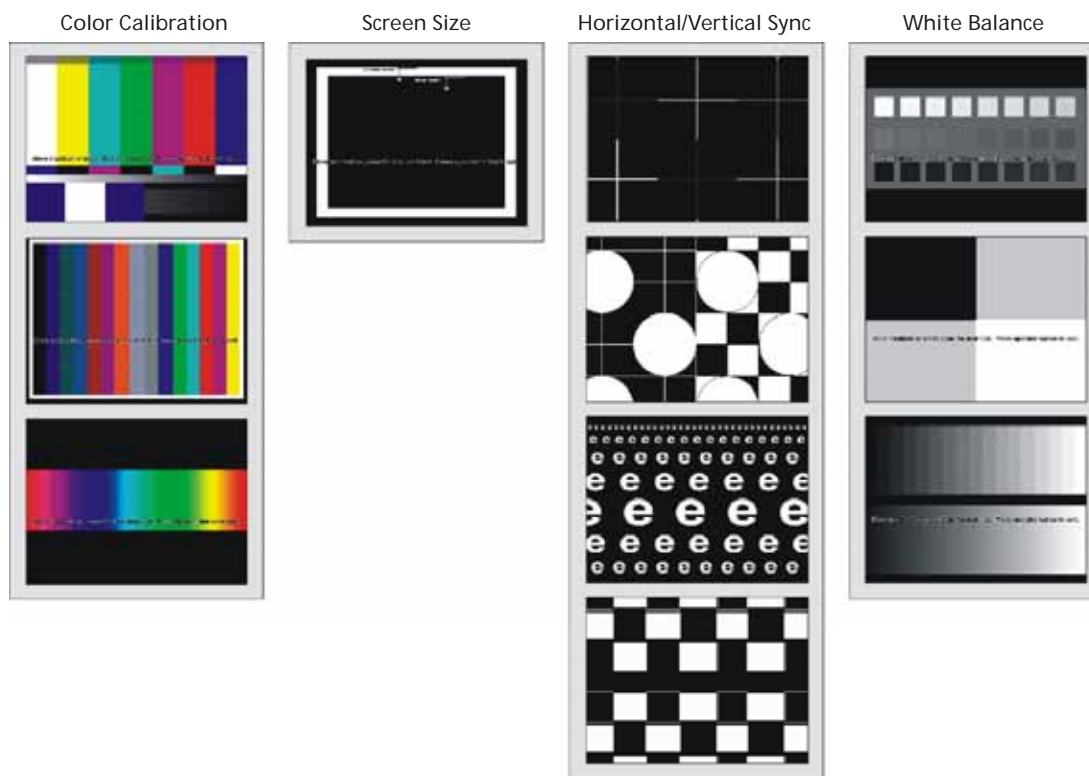


Figure 18. Monitor Calibration Test Screens

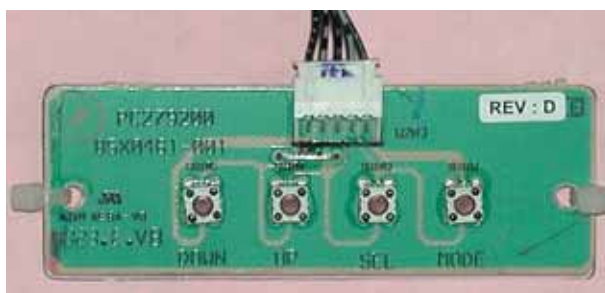


Figure 19. Monitor Remote Control Board

## Test Coin In

Select Coin Test and insert some coins and/or bills. Make sure that the screen shows the correct number of credits.

### **Test Card Reader**

Select Test Card Reader and insert an Operator or Players' SmartCard. Make sure that the system recognizes the type of card inserted.

### **Test Dispenser**

Select Test Dispenser. The screen will display the dispenser status, *Ready*, *Busy*, or *Empty*. Press the **red** button to dispense a card. The status will change to *Busy* as the card is dispensed.

### **View Sync Log**

Select View Sync Log and press the **red** button to view a log of all sync call attempts made by the cabinet to GLOBAL VR, and whether or not each call was successful. The game must sync successfully to report Tournament scores.

## Errors Menu

This screen displays any hardware errors detected by the system. If a hardware error has been detected, you will see a red square in the lower left corner of the Attract screen. Certain hardware errors will cause an error screen to be displayed when the system boots. The table below describes error messages that may be displayed on this screen.



Figure 20. Errors Screen

Hardware Error Messages	Information
No nytric detected	Check all connections to the USB I/O card. Make sure the LED is on.
A nytric card is missing	On a four-player cabinet, one of the USB I/O cards is not detected.
An old nytric card is installed	A Nytric USB I/O version 2.0 (USB I/O Extreme) is required. Older cards will not work.
No card reader detected	Check the card reader and the USB cable to the computer.
Nytric memory failure	The USB I/O card has a memory failure that can cause the unspent money count to be incorrect after a reboot. Replace the card if you wish to avoid possible coin count errors.
Card dispenser is busy, may be jammed	Check the Players' Card dispenser.
Card dispenser is empty	Fill the Players' Card dispenser.



## Chapter 6 — Software Restoration



Follow the instructions below if you need to re-install the EA SPORTS™ MADDEN NFL SEASON 2 software on your cabinet. **Total installation time is about 30 minutes.**

**Important:** When you use the System Recovery Disk, you will erase all game settings, exhibition leaderboards, and coin and game audits. It is advisable to contact Technical Support before using the System Recovery Disk to resolve a problem.

### System Recovery Disk

Restoring the operating system with the System Recovery Disk takes about 10-15 minutes.

1. With the cabinet powered ON, open the CD drive and insert the CD labeled **System Recovery Disk**. Power the cabinet OFF and then ON. The computer will reboot from the CD. You will see a series of screens on the monitor.
2. After about 5 minutes, you will be prompted to remove the CD and turn the cabinet OFF and then ON. (**Do not** insert the Game Install CD yet!)
3. When the computer reboots, you may see a blank screen for 10-15 seconds, followed by a series of processing screens. After a few minutes the system will reboot, and you will be prompted to insert Game Disk 1. Proceed to install the Game Install CDs as described below.

### Game Install CDs

Game software installation takes about 15-25 minutes.

1. Open the CD drive and insert the CD labeled **Game Install Disk 1 of 2**. The computer will read the CD automatically (do not reboot). You will see a series of screens.  
**Note:** If nothing happens, make sure that you inserted the correct disk.
2. After about 10 minutes you will be prompted to insert Disk 2. Open the CD drive and insert the CD labeled **Game Install Disk 2 of 2**. The computer will read the CD automatically (do not reboot). You will see another series of screens and then the system will reboot.
3. After the system reboots and the game starts, remove the disk from the CD drive.
4. Press the Operator button to start the Operator Menus and set up your game.
5. Play a game to verify proper operation.
6. Register your cabinet, or select **Restore** from the Operator Menu Registration screen to restore your previous cabinet registration.

## Chapter 7 — Service and Repair

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**GLOBAL VR assumes no liability for any damage or injuries incurred while servicing the cabinet. Only qualified service personnel should perform service and installation of cabinet hardware. Read the service instructions before working on the cabinet.**



**Always turn the cabinet OFF and disconnect the AC power cord before performing any repairs.**

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

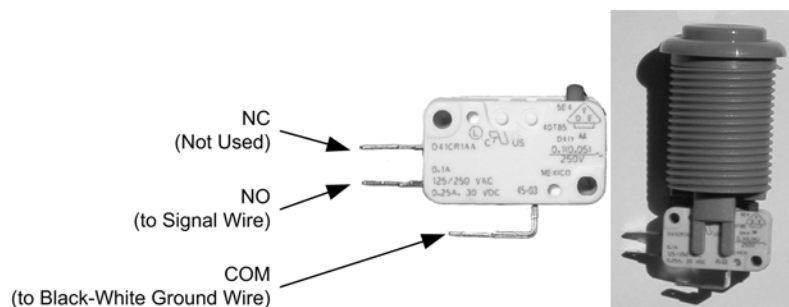
### Opening the Player Control Panel

1. Remove the two (2) Torx bolts that secure the console closed. (**Note:** Four-player consoles are held closed by four bolts.)
2. Reach up through the coin door and the opening in the bottom of the control console to release the latch at the center rear of the control panel.
3. Lift the control panel. It will open on a hinge at the front.
4. To close the panel, replace the Torx bolts and reach through the opening above the coin mech to secure the latch.

### Player Control Panel Button Repair

The player buttons activate micro switches. Perform the following steps to replace the micro switches or the buttons:

1. Open the Control Panel as described in the previous section.
2. Gently press the plastic micro switch to the side to release it from the button housing.
3. Disconnect the two wires from the micro switch.
4. To remove the button, unscrew the retaining ring.
5. Reverse these steps to install the replacement button and micro switch. Connect the **black-white** ground wire to the COM connector on the bottom of the switch housing, and the signal wire to the NO connector, as shown in the figure below:



*Figure 21. Player Button and Micro Switch*

6. After servicing any buttons, run the Controls Test from the Operator Menu Diagnostics screen to verify proper operation (see Test Controls on page 29).

## Joystick Handle Replacement

Refer to Figure 22 on page 36 for an exploded-view drawing of joystick components.

1. Open the Control Panel as described on page 34.
2. Remove the E-clip from the bottom of the joystick assembly and pull the joystick handle out through the top of the control console. The lower shaft spacer will be loose under the joystick assembly, and the small upper spacer will remain on the joystick handle.
3. Place the small upper spacer on the new joystick handle and insert the handle into the control panel and through the lower shaft spacer.
4. Re-install the E-clip on the bottom of the joystick assembly.
5. After servicing a joystick, run the Controls Test from the Operator Menu Diagnostics screen to verify proper operation (see Test Controls on page 29).

## Joystick Carriage, PCB, and Grommet Replacement

Refer to Figure 22 on page 36 for an exploded-view drawing of joystick components.



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

1. Disconnect the game from AC power and open the Player Control Console.
2. Disconnect the cable from the joystick.
3. Remove the four Phillips screws from the joystick carriage.  
**Note:** Do **not** loosen the four hex nuts that secure the hub to the control panel.
4. Remove the joystick carriage, PCB, and L-stop. Note the orientation of the PCB and re-install it the same way.
5. To remove the grommet, first remove the joystick handle as described in the previous section, and then remove the four Phillips screws that secure the grommet to the hub.  
**Note:** If you need to replace the hub, you will have to remove all buttons and screws from the top of the control panel, and then remove the plastic overlay to access the screws that secure the hub to the console.
6. Reverse these steps to re-install the components.
7. After servicing a joystick, run the Controls Test from the Operator Menu Diagnostics screen to verify proper operation (see *Test Controls* on page 29).

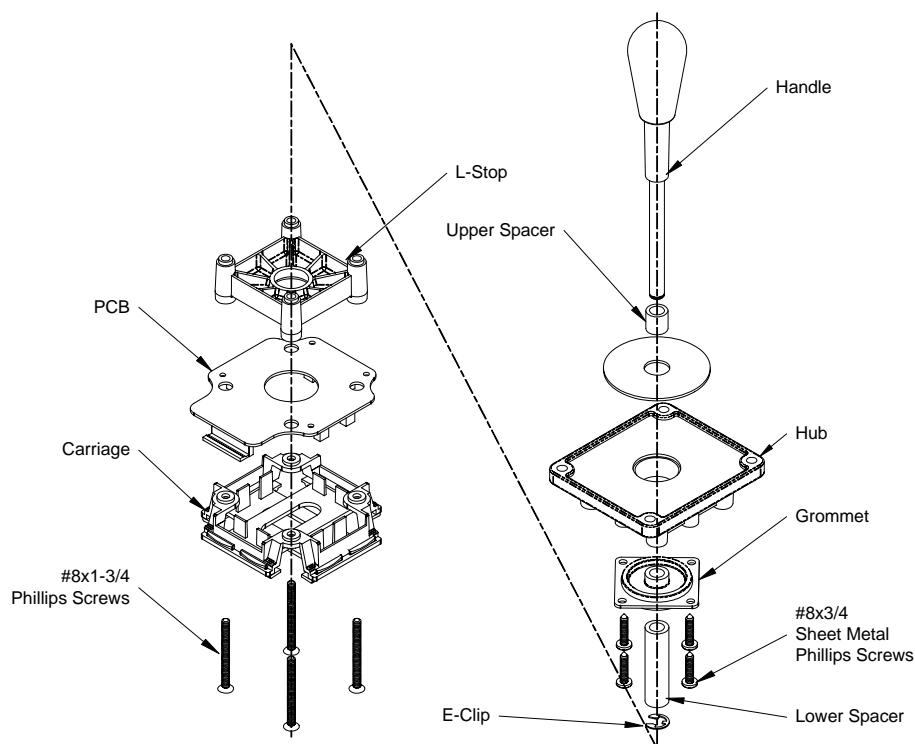


Figure 22. Joystick Exploded View

## USB I/O Extreme PCB Replacement



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

Perform the following steps to replace the USB I/O Extreme PCB:

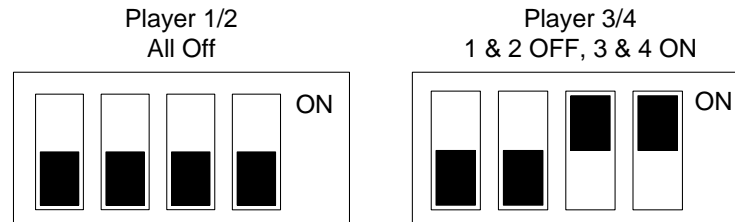
1. Disconnect the game from AC power and open the player control panel as described in *Opening the Player Control Panel*, on page 34.

Disconnect all connectors from the USB I/O Extreme PCB. Refer to Figure 41 on page 63 for a wiring diagram.

2. The PCB is mounted on four standoffs that are secured to the cabinet by Phillips screws. Each standoff has a clip on the tip that protrudes above the PCB. The clip secures the PCB to the standoff. A bit of hot glue is applied to each clip for extra security.

To release the clip, break off the hot glue and squeeze the tip of the standoff with small needle-nose pliers, or use a small tool such as a screwdriver to press the clip inward, and then remove the PCB from the standoff. (If you prefer, you can remove the screw securing each standoff to the cabinet, and then remove the standoffs from the PCB.)

- Set the DIP switches on the replacement PCB as shown below:



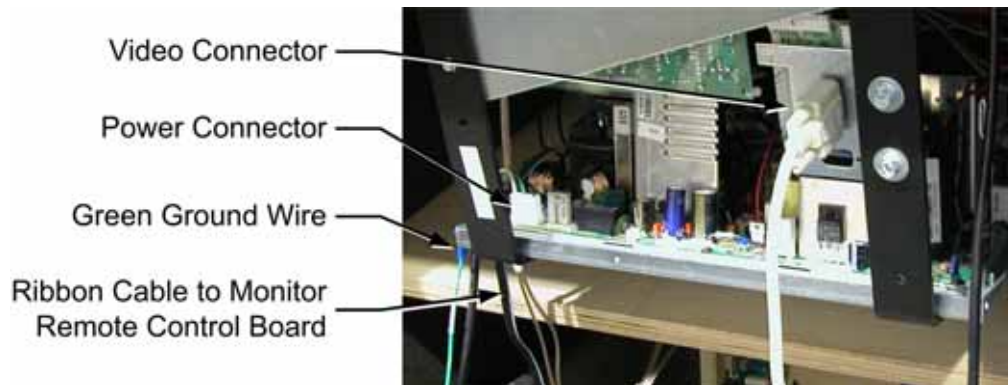
*Figure 23. USB I/O PCB DIP Switch Settings*

- Reverse these steps to install the replacement USB I/O PCB.

## Monitor Replacement

Perform the steps that follow to remove the monitor from the cabinet for service or replacement. Be sure to follow all safety precautions while working with a monitor.

**Tip:** When removing the monitor from the cabinet, it is always best to have two people support the weight of the monitor.



*Figure 24. Cable Connections to the Monitor Chassis*

- Turn the cabinet OFF and disconnect the AC power cord.
- Refer to Figure 24 and disconnect the following cables:
  - VGA Video cable from the back of the Monitor.
  - Monitor remote control board cable from the Control Panel mounted near the coin mech. Coil this cable and tie it to the monitor to prevent it catching while the monitor is being removed.
  - Power cable that connects to the monitor chassis PCB, located on your left as you face the monitor rear.
  - Green** ground wire from the monitor frame near the power connection.
- Inspect the disconnected cables and monitor frame to make sure that there are no wire ties holding the monitor to the cabinet.
- Open the Player Control panel (see page 34) and remove the four Torx screws that hold the display shield retainer in place (as shown in Figure 25). Remove the retainer.
- Remove the clear display shield.

6. Remove the Bezel.
7. Remove the four 1/4-20 nuts that hold the monitor in place.
8. Carefully remove the monitor through the front of the cabinet and set it in a safe place. Most of the weight of the monitor is in the CRT at the front of the monitor.
9. Reverse these steps to re-install the monitor. Always clean the front of the CRT and the clear display shield before re-installing.
10. After replacing a monitor, select **Test Monitor** from the Operator Menu *Diagnostics* screen to verify proper operation (see *Test Monitor* on page 30).

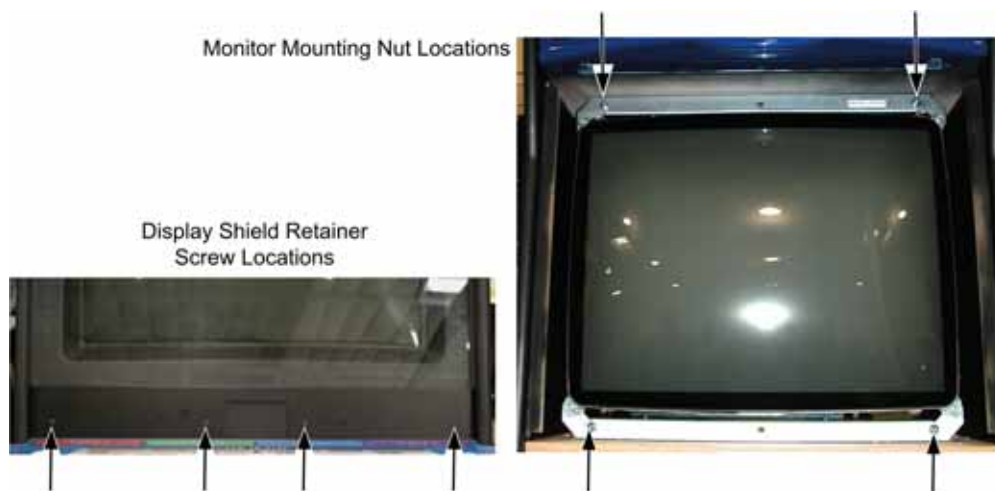


Figure 25. Display Shield Retainer and Monitor Mounting Screw Locations

### Wells-Gardner® Monitor Chassis PCB Removal

You can replace the monitor chassis PCB if you have problems with just the PCB.

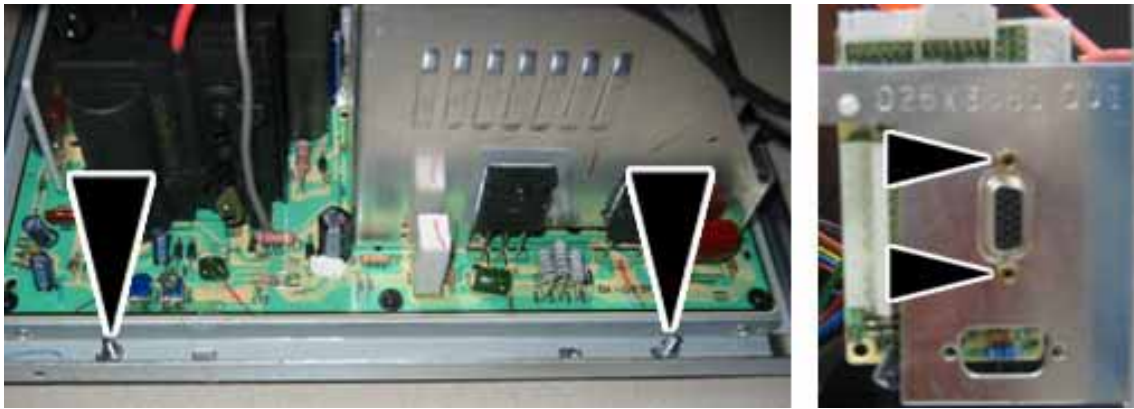


**Only a certified technician should attempt to remove or service the Monitor PCB. GLOBAL VR assumes no responsibility for damage while removing the PCB.**



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

1. Turn the cabinet OFF and disconnect the AC power cord.
2. Remove the four nuts that hold the monitor chassis to the monitor frame.
3. Remove the two 4/40 Jack nuts that hold the video signal PCB to the monitor frame, as shown in Figure 26.



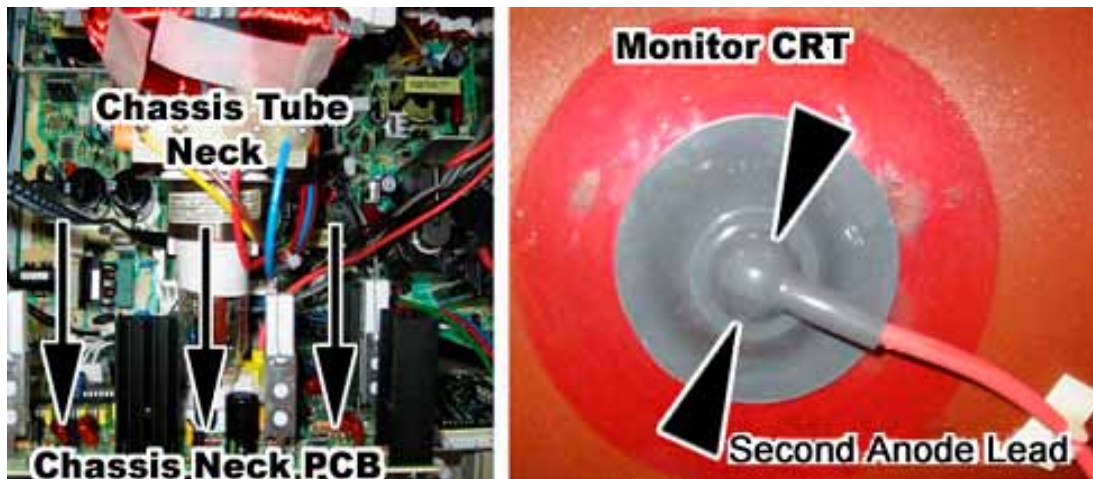
*Figure 26. Removing the Monitor PCB Mounting Hardware*

4. Disconnect the Chassis Neck PCB from Chassis Tube Neck of the CRT by pulling back on the Chassis Neck PCB. You will need to slide the Chassis Neck PCB to the side to clear the Chassis Tube Neck.



**DANGER:** The Second Anode Lead (H.V. CRT Feed) can be charged with a VERY HIGH VOLTAGE even when powered OFF.

5. Disconnect the second anode lead that connects to the CRT just above the Chassis Tube. Be very careful as the second anode lead can be charged with a VERY HIGH VOLTAGE even when powered OFF. Pinch the gray rubber flange and slightly push in to un-hook the metal prongs that hold the second anode lead to the CRT, shown by the arrows in Figure 27.



*Figure 27. Disconnecting the Chassis Neck PCB and Second Anode Lead*

6. Refer to Figure 28 to disconnect the next three cables:
  - a. Disconnect the CRT 2-wire ground cable that connects to the Chassis Monitor PCB (Item 1 below).
  - b. Disconnect the CRT 2-wire ground cable that connects to the Chassis Neck PCB (Item 2 below).
  - c. Disconnect the Color and Sync 4-wire cable that connects from the Chassis Tube Neck to the Monitor chassis PCB (Item 3 below). Note the color alignment of this connector for installing the new monitor chassis PCB.





Figure 28. Monitor PCB Cables

7. You can now slide the monitor chassis PCB and other PCBs out the side of the monitor chassis as one unit.

### 3.1 Audio Amp PCB and Speakers Service



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

The 3.1 Audio Amp PCB provides audio for the game. Figure 29, below, shows the Audio Amp PCB, wiring connections, and audio adjustment pots.

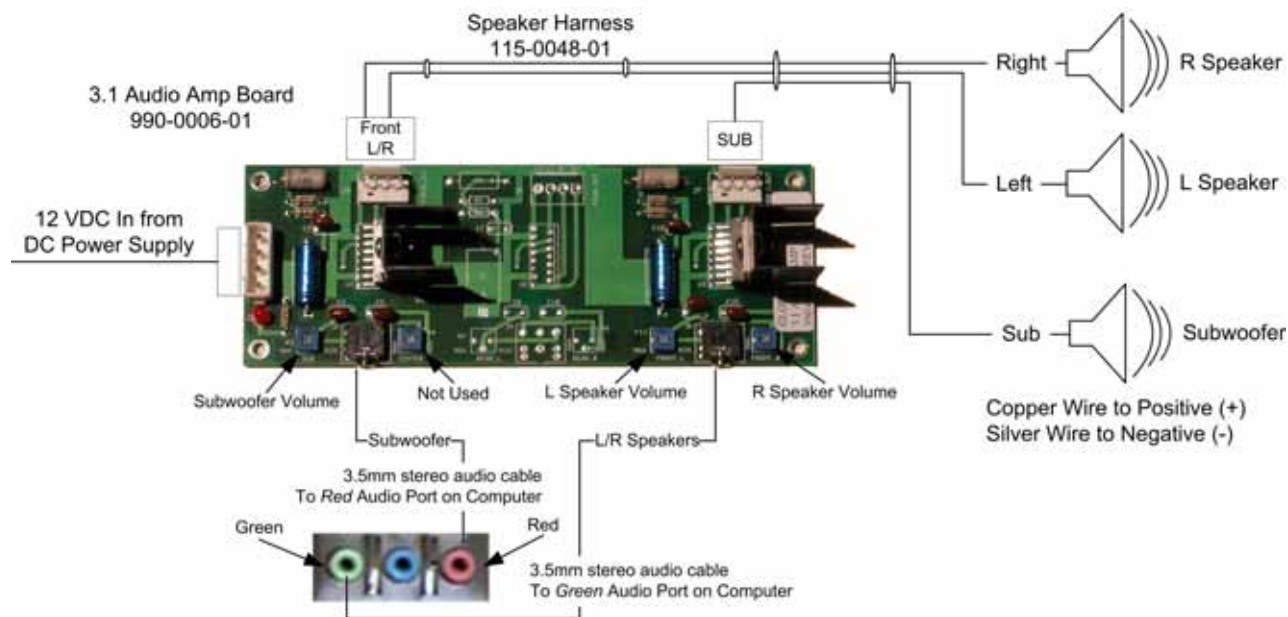


Figure 29. Audio Amp PCB and Speaker Wiring

The Audio Amp PCB is powered by +12 VDC from the DC power supply, connected using a standard 4-pin DC power connector.

Refer to Figure 29 for the location of the volume controls on the PCB. These controls should be used only for fine-tuning speaker volume. Most volume adjustments should be made from the Audio Settings screen in the Operator Menu, as described on page 26. To adjust the volume level on the Audio Amp PCB, use a small screwdriver to turn the pots.



The Audio Amp PCB is connected to the computer audio ports by two 3.5 mm stereo audio cables. Each computer audio port is color coded as follows:

- **Green:** Left and right speakers
- **Blue:** Not used
- **Red:** Subwoofer

The speakers are connected to the Front L/R speaker port, and the subwoofer to the SUB port on the Audio Amp PCB, as shown in Figure 29.

### Audio Amp PCB Replacement



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

1. Disconnect the game from AC power, and disconnect the speaker wires and the 3.5 mm audio cables from the Audio Amp PCB.
2. The PCB is mounted on four standoffs that are secured to the cabinet by Phillips screws. Each standoff has a clip on the tip that protrudes above the PCB. The clip secures the PCB to the standoff. A bit of hot glue is applied to each clip for extra security.

To release the clip, break off the hot glue and squeeze the tip of the standoff with small needle-nose pliers, or use a small tool such as a screwdriver to press the clip inward, and then remove the PCB from the standoff.

To prevent electrical damage, always keep the Audio Amp PCB in an ESD antistatic bag when not installed in the cabinet.

3. Reverse these steps to install the new Audio Amp PCB.
4. After replacing the Audio Amp PCB, run the Speaker Test from the Operator Menu Diagnostics screen to verify proper operation (see Test Speakers on page 29).

### Speaker Replacement

The left and right speakers are located behind the marquee. The subwoofer is mounted inside the cabinet above the coin box.

Perform the following steps to replace the left or right speaker:

1. If your tournament header is the type with red LEDs, remove the three screws from the back of the header and fold it down on its hinge. The header with blue LEDs can stay in place.
2. Remove the five Torx bolts that secure the marquee to the cabinet, and remove the marquee.
3. Remove the four wood screws that secure the speaker in place, and remove the speaker.
4. Remove the two wires from the speaker terminals and connect them to the new speaker. Be careful to connect the wires to the same terminals on the replacement speakers. The copper wire connects to the positive (+) and the silver to the negative (-) terminal.
5. Reverse the steps to install the new speaker.
6. After replacing a speaker, run the Speaker Test from the Operator Menu Diagnostics screen to verify proper operation (see *Test Speakers* on page 29).




Figure 30. Marquee Mounting Screw Locations

## Subwoofer Replacement

The subwoofer is located in the front of the cabinet under the control panel.

1. Remove the back door of the cabinet and remove the four wood screws that secure the subwoofer in place.
2. Remove the two wires from the speaker terminals and connect them to the new speaker. Be careful to connect the wires to the same terminals on the replacement speakers. The copper wire connects to the positive (+) and the silver to the negative (-) terminal.
3. Reverse the steps to install the new subwoofer.
4. After replacing a subwoofer, run the Speaker Test from the Operator Menu Diagnostics screen to verify proper operation (see *Test Speakers* on page 29).

## Computer Replacement

 <p><b>CAUTION</b></p>	<p><b>The computer is serviced as one unit. YOU WILL VOID YOUR WARRANTY if you open the computer without direct authorization from the GLOBAL VR technical support staff.</b></p> <p><b>Shipping the computer without enough padding can VOID THE WARRANTY if the computer is visibly damaged from shipping.</b></p>
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Perform the following steps to remove the computer from the cabinet:

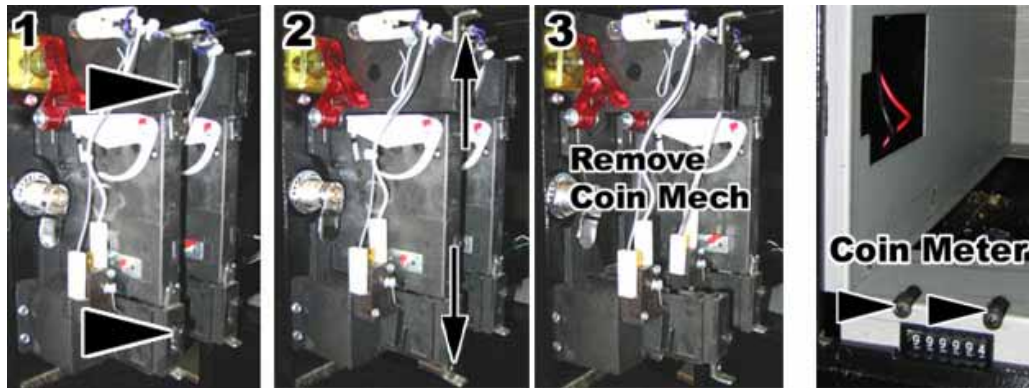
1. Disconnect all of the cables from the computer.
2. Remove the Game Dongle and keep it with your cabinet. **Do not** ship the dongle with the computer.
3. Unbuckle the strap that secures the computer in place.
4. Carefully remove the computer from the cabinet.
5. Reverse these steps to replace the computer. Make sure that the computer air vents are not blocked. The air vent under the bottom front panel of the computer is easily blocked by padding or debris.

When shipping the computer, always use plenty of padding and protection. GLOBAL VR recommends shipping the computer in a box with three inches of foam padding on all sides.

## Coin Mech Replacement

Perform the following steps to remove the coin mech. You can replace the coin mech with any standard arcade coin mech.

1. Unscrew the thumbscrews on the latches as shown by the arrows in step 1 of the figure below.
2. Slide the latches apart from each other and remove the Coin Mech as shown in steps 2 and 3.
3. Reverse these steps to re-install a coin mech. It is important to verify the operation of the newly installed coin mech with both good and bad coins.



*Figure 31. Servicing the Coin Mech and Coin Meter*

## Coin Meter Replacement

The coin meter is located in the bottom left-hand corner of the coin box. Perform the following steps to remove the coin meter:

1. Turn the cabinet OFF and disconnect the AC power cord.
2. Remove the two Phillips screws holding the coin meter to the cabinet and remove the coin meter.
3. Cut the two wires from the coin meter and strip the ends of the wires to attach the new meter.
4. Use two butt splices to connect the wires to the new coin meter.
5. Use the two screws to install the new coin meter.

## Dollar Bill Validator DIP Switch Settings

**Important:** If the dollar bill validator has a green ground wire, make sure that the ground is securely connected to the ground lug in the coin vault. If the ground on the bill validator, or the cabinet ground is not secure, the bill validator will reject excessively.

If you replace the dollar bill validator, set the DIP Switches as follows:

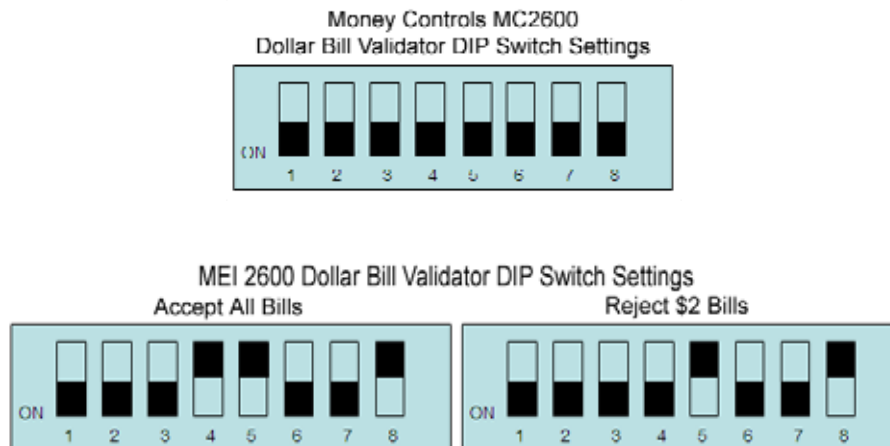


Figure 32. Dollar Bill Validator DIP Switch Settings

## Players' Card Reader Replacement

The Players' SmartCard reader is located below the monitor. It is mounted to a special faceplate designed to minimize ESD interference. Perform the following steps to replace the card reader:

1. Disconnect the Players' Card Reader cable from the computer.
2. Remove the four (4) screws that secure the display shield retainer in place below the monitor (see Figure 25).
3. Remove the four (4) screws that secure the card reader faceplate to the mounting bracket, and remove the card reader assembly. (If you prefer, you can remove the two screws that secure the mounting bracket to the cabinet and remove the entire assembly.)
4. Refer to the figure below and use a small Phillips screwdriver to remove the four (4) screws that secure the card reader to the faceplate. Slide the card reader out of the faceplate.
5. Reverse these steps to install the new card reader.
6. After servicing the card reader, always test it from System Test in the Operator Menu.

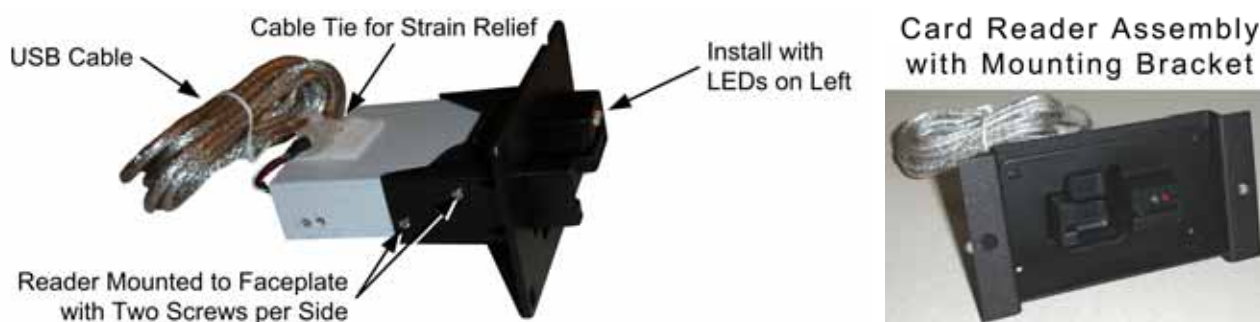


Figure 33. Players' Card Reader Assembly

## Filling the Optional Players' Card Dispenser

The Players' SmartCard Dispenser can be installed on the cabinet to let players buy Players' Cards to save their game data or participate in Tournaments. To order a dispenser kit, contact your distributor and ask for GLOBAL VR part #: 90560-00.

**Important:** The dispenser will not work unless it is fully closed and in a vertical position (no more than a 5-degree angle), with the back cover in place.

1. Open the dispenser door with the key; it will rotate downward on a hinge.
2. Slide and lift the back panel as shown below.
3. Insert Players' Cards as shown, with the magnetic stripe down. The dispenser will hold up to 185 cards. Make sure the cards are stacked evenly and the bottom plate is firmly against the cards.
4. After filling, it is a good practice to test the dispenser from the Diagnostics screen in the Operator Menu.

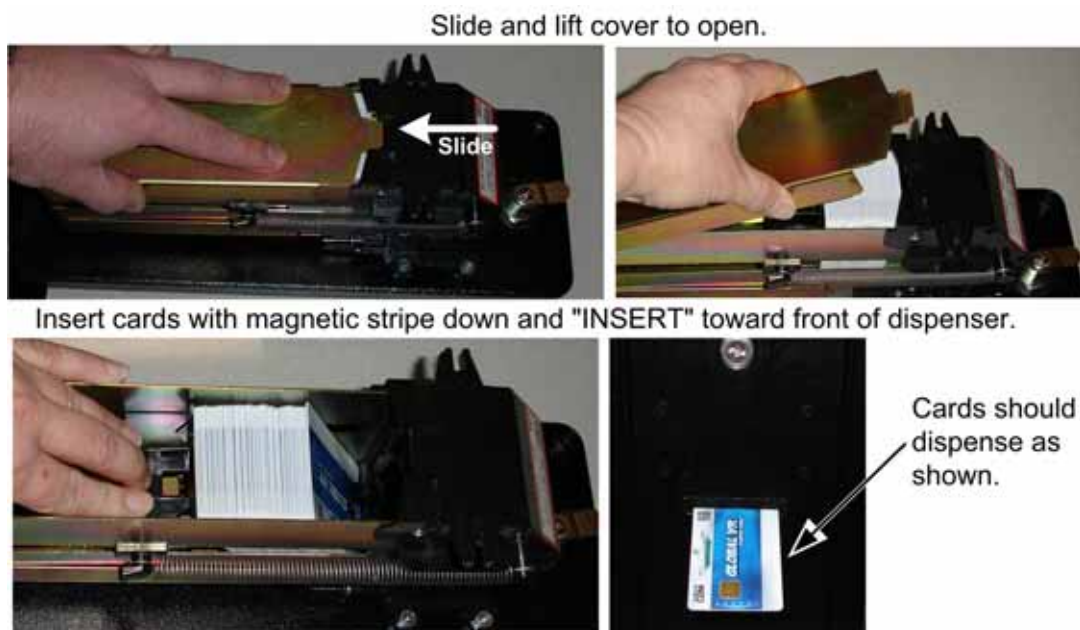


Figure 34. Filling the Players' Card Dispenser

## DC Power Supply (+12/+5) Replacement

The DC power supply provides +12 VDC and +5 VDC power to the PCBs and cold-cathode lighting. If the player controls, sound, and tournament header stop working at the same time, the DC power supply may be faulty.

Perform the following steps to replace the DC power supply:



**WARNING:** Disconnect the AC power cord before servicing the DC power supply.

1. Turn the cabinet OFF and disconnect the AC power cord.
2. Disconnect the cables from the DC power supply.



3. Remove the two Phillips screws holding the power supply to the cabinet. Be careful not to remove the screw that secures the terminal plate to the DC power supply.
4. Reverse these steps to install the new power supply. Check the labels on each wire and be sure to connect them to the correct terminals (See Figure 40 on page 62).

### AC Power Plate

The AC power plate provides the external AC power, modem (phone), and Ethernet connections.

AC power from the power plate is connected to a 6-outlet AC power strip in the cabinet. An AC EMI Filter in the AC power plate removes the electrical noise that can cause interference with the hardware inside the cabinet.



**For proper operation, the cabinet must be connected to a secure ground, and the green ground wire must be connected to the power plate Ground Lug as shown below.**

The **Ethernet** and **Phone** ports are connected to the appropriate ports on the system computer (see Figure 39 on page 61).



*Figure 35. AC Power Plate*

### AC Power Strip Replacement

Perform the following steps to replace the power strip:

1. Turn the cabinet OFF and disconnect the AC power cord.
2. Disconnect all components from the power strip.
3. Disconnect the power strip from the AC power plate terminals.
4. Remove the power strip. It is held in place with Velcro<sup>®</sup>.
5. Replace the power strip with an appropriate unit from GLOBAL VR. Do not attempt to use a different power strip. Be sure to connect each wire to the correct terminal (See Figure 40 on page 62).



**Caution: Be sure to connect each wire to the correct terminal. The ground wire must be securely connected to the ground lug on the power plate (see Figure 35) or the game may not function properly.**

## Marquee Florescent Light Service

Perform the following steps to replace the tube or florescent light fixture behind the marquee:

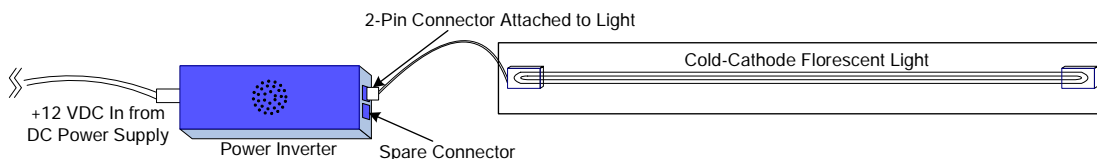
1. Remove the four (4) Torx screws that secure the clear plastic and artwork to the front of the marquee. The light fixture is located behind the artwork. Replace the florescent tube with an 18" florescent tube.
2. To replace the light fixture, disconnect the fixture AC power cord from the power strip and remove any cable ties that secure the cord to the cabinet. Remove the two Phillips screws that secure the fixture to the cabinet. Replace the fixture with part # 49-1001-00 only.
3. Reverse these steps to replace the light fixture, clear plastic, and artwork.

## Cold-Cathode Florescent Light Service

Cold-cathode florescent lights are used to add dramatic lighting to the front of the cabinet and the tournament header. Perform the following steps to replace the light below the control panel:

1. Open the Control Panel as described on page 34.
2. Snip the cable ties that secure the cold-cathode tube in place and remove the tube.
3. Disconnect the tube from the power inverter.
4. If you need to replace the power inverter, disconnect the DC power connector and remove the inverter. It is held in place with Velcro.

Reverse these steps to install the new tube and/or power inverter.



*Figure 36. Cold-Cathode Light Wiring*

## Setting the Computer BIOS (CMOS)

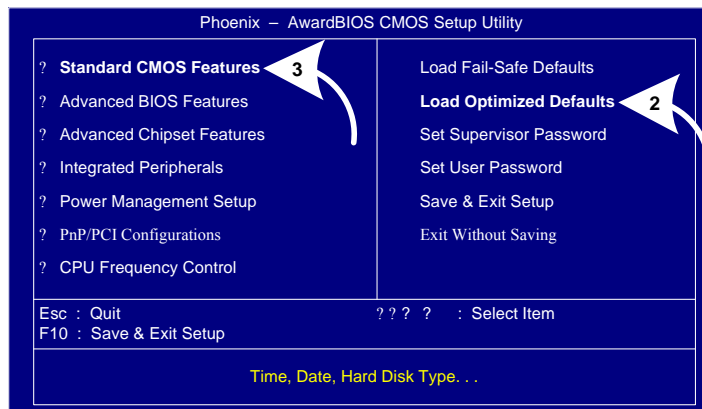
BIOS settings affect how the system computer performs. It is important to make sure that key settings are correct or the game may not function properly. Depending on the motherboard in your system computer, follow the procedure on page 48 or page 50.

If you don't know which motherboard your system computer has, first try pressing the **DEL** key during boot. If this doesn't open the BIOS (CMOS) Setup Utility, power cycle the cabinet and press **F2** during boot. See whether the BIOS (CMOS) Setup Utility screen that appears looks like the screen on page 48, or the screen on page 50. Follow the procedure that matches what you see.

## BIOS Settings for PS35-BL Motherboard

**Important:** Your screens may not look exactly like the screens in the pictures that follow, and some settings in the pictures may be different from your system. **Do not change any settings that are not specifically described in this document.**

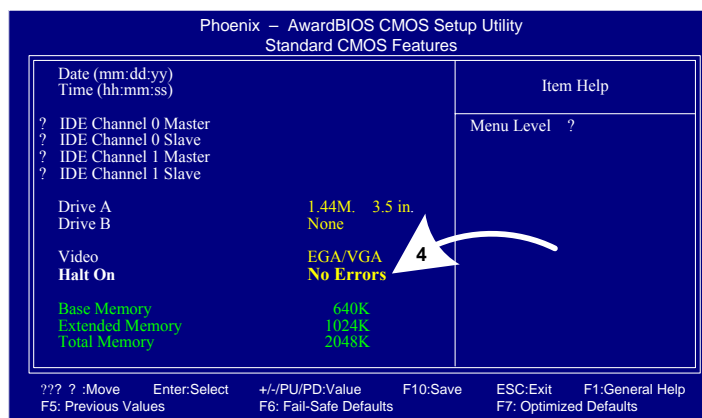
1. Press the **DEL** key during boot. The CMOS Setup Utility Main Menu will appear:
2. Use the Arrow keys (**↑↓→←**) to select **Load Optimized Defaults**, and press **Enter**. Press **Y** and **Enter** when prompted to confirm the change.
3. Use the Arrow keys to highlight **Standard CMOS Features**, and then press **Enter**.



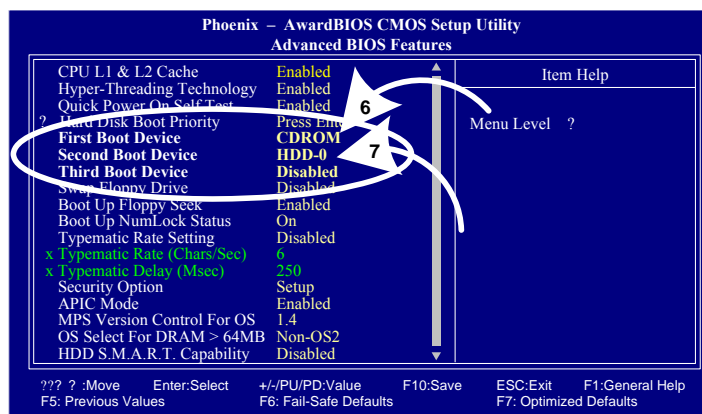
A screen similar to the following will appear:

4. Use the Arrow keys to highlight the setting for **Halt On** and press **Enter**. Use the **Page Up** and **Page Down** keys to change the setting to **No Errors**.

Press **ESC** to go back to the Main Menu.

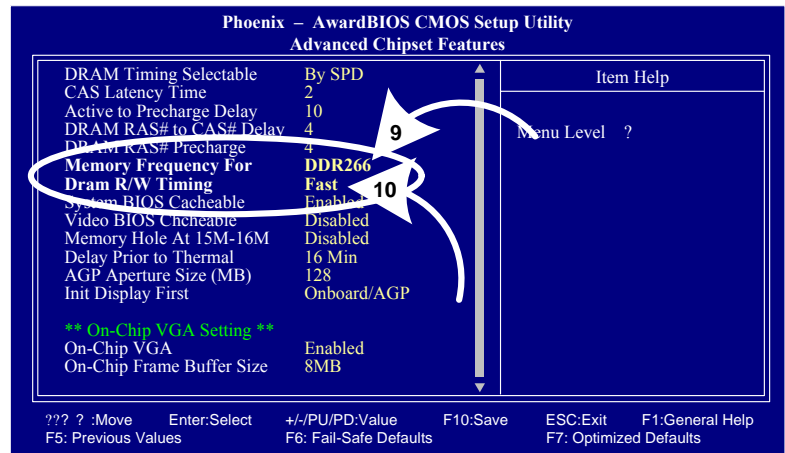


5. Now use the Arrow keys to highlight **Advanced BIOS Features** and press **Enter**. A screen similar to the following will appear:
6. Use the Arrow keys to highlight the setting for **First Boot Device** and press **Enter**. Use the **Page Up** and **Page Down** keys to change the setting to **CDROM**.
7. Set **Second Boot Device** to **HDD-0** and **Third Boot Device** to **Disabled** the same way.



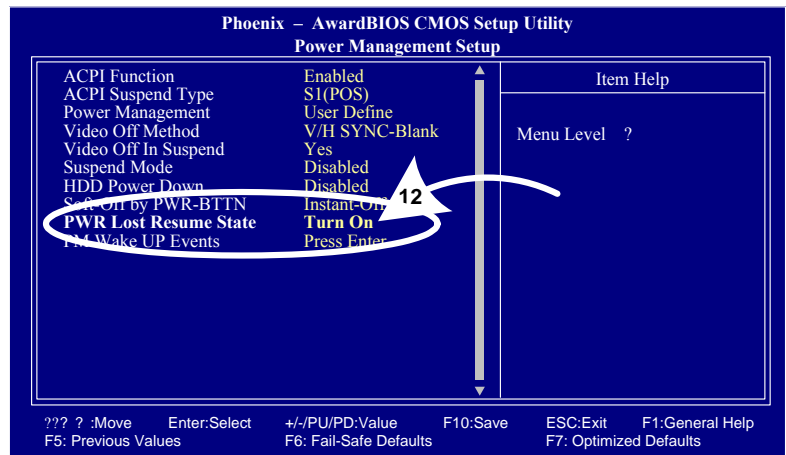
Press **ESC** to go back to the Main Menu.

8. Now use the Arrow keys to highlight **Advanced Chipset Features** and press **Enter**. A screen similar to the following will appear:
9. Use the Arrow keys to highlight the setting for **Memory Frequency For** and press **Enter**. Use the **Page Up** and **Page Down** keys to change the setting to **DDR266**.
10. Use the Arrow keys to highlight the setting for **Dram R/W Timing** (if listed) and press **Enter**. Use the **Page Up** and **Page Down** keys to change the setting to **Fast**.



Press **ESC** to go back to the Main Menu.

11. Now use the Arrow keys to highlight **Power Management Setup** and press **Enter**. A screen similar to the following will appear:
12. Use the Arrow keys to highlight the setting for **PWR Lost Resume State** and press **Enter**. Use the **Page Up** and **Page Down** keys to change the setting to **Turn On**.



13. Now that all settings are correct, press **F10**. The following prompt will appear:

Save to CMOS and EXIT (Y/N) Y

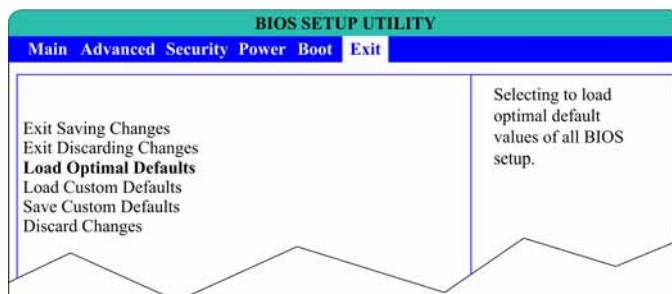
14. Make sure "Y" shows at the end of the prompt (use the arrow keys to select, if necessary), and press **Enter** to save the settings and exit.

## BIOS Settings for Intel 915GAG Motherboard

1. Press the **F2** key during boot. The BIOS Setup Utility Main Menu will appear.

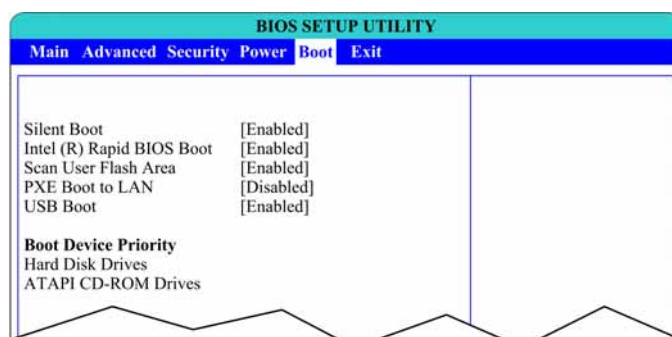
In the BIOS screens, use the left and right arrow keys (→←) to move between the menus listed at the top of the screen, and the up and down arrow keys (↑↓) to move up and down between menu items, and to change settings for selected items.

2. Use the left and right arrow keys (→←) to select the **Exit** menu.
3. Use the up and down arrow keys (↑↓) to select **Load Optimal Defaults**, and press **Enter**. A confirmation box will appear. With **Ok** selected, press **Enter**.

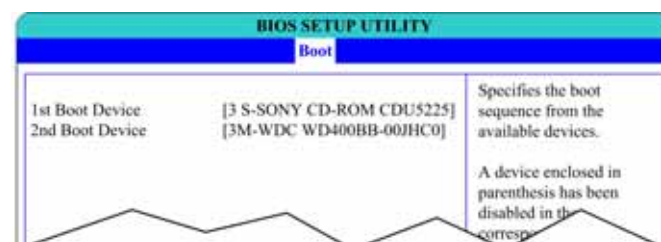


4. Use the left and right arrow keys (→←) to select the **Boot** menu.

5. Use the up and down arrow keys (↑↓) to select **Boot Device Priority**, and press **Enter**. A device list will appear.

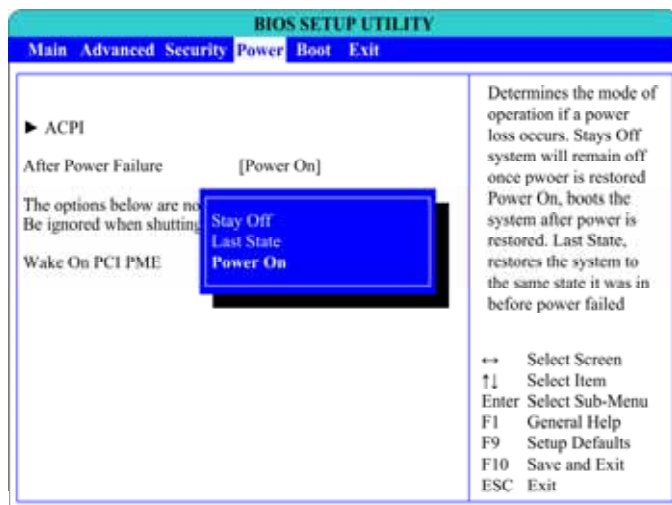


6. Use the up and down arrow keys (↑↓) to select **1<sup>st</sup> Boot Device**, and press **Enter**. A pop-up window will appear. Use the up and down arrow keys (↑↓) to select the **CD-ROM** drive, and press **Enter**. The hard drive will automatically be set as the 2<sup>nd</sup> Boot Device. Press the **Esc** key to exit from the submenu.



7. Use the left and right arrow keys (→←) to select the **Power** menu.

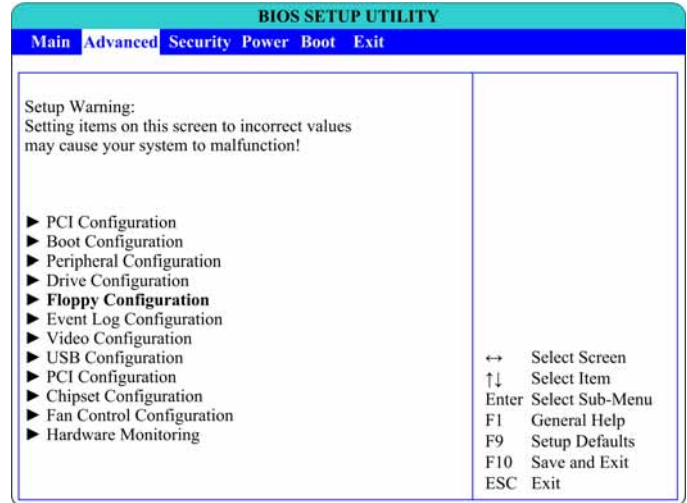
8. Use the up and down arrow keys (↑↓) to select **After Power Failure**, and press **Enter**. A pop-up window will appear. Use the up and down arrow keys (↑↓) to select **Power On**, and press **Enter**.





9. Use the left and right arrow keys (→←) to select the **Advanced** menu.

10. Use the up and down arrow keys (↑↓) to select **Floppy Configuration**, and press **Enter**. The **Floppy Configuration** menu will appear. Use the up and down arrow keys (↑↓) to select **Diskette Controller**, and press **Enter**. Use the up and down arrow keys (↑↓) set the Diskette Controller to **Disabled**, and press **Enter**. Press the **Esc** key to exit from the submenu.



11. Now that all settings are correct, press **F10**. The following prompt will appear:

Save configuration changes and exit now?	
[Ok]	[Cancel]

12. Make sure **OK** is selected (use the arrow keys to select if necessary) and press **Enter**.

## Chapter 8 – Replacement Parts

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If you need replacement parts, refer to the part numbers listed below when you contact GLOBAL VR or your distributor.

**Table 2. Documents and Software**

Part Number	Description	QTY
040-0042-01	System Manual (This Document)	1
040-0004-01*	Tournament Operator Guide	1
040-0043-01	Software Restore Guide	1
050-0094-01*	Software, System Recovery Disk	1
050-0095-01*	Software, Game Install Disks (2 CDs)	1

\*Part Numbers may change due to software revisions.

**Table 3. Cables and Harnesses**

Part Number	Description	QTY
115-0008-01	Cable, 110VAC to DC Power Supply	1
115-0025-01	Cable, 110VAC Fan, Grill, and Cord Assembly	1
115-0030-01	Cable, 8', 110 VAC to Fluorescent Light	1
115-0041-01	Cable, USB I/O DB37 to Coin/Bill/Test	2
115-0044-01	Cable, USB I/O J7 to Joysticks	2
115-0045-01	Cable, USB I/O J1 to Player Buttons	2
115-0046-01	Cable, DC (12V/5V) to Audio Amp & USB I/O	1
115-0047-01	Cable, Ground to Coin Mech & Monitor	1
115-0048-01	Cable, Audio Amp to Speakers	1
80-0213-00	Power Cord, 6'	1
96-0539-00	Cable 3.5 mm, 6 ft Audio Cable, PC to Audio Amp	2
TDC053-7	RJ45 Modular Cable (8X8), 7 foot straight	1
ECF504-8SK	RJ 45 coupler (8X8), straight, 30u	1
TDC207	Modular Cable, RJ-11, Plug-to-Plug, Crossed Wiring	1
ECF504-4C	RJ11 coupler (6X4), crossed, 30u	2
USB-AB06MM	Cable, USB Cable 6', PC to USB I/O	2
115-0057-01	12/5V DC 2' Extension	1
115-0058-01	12/5V DC 5' Extension	1
115-0059-01	Tournament Header LED to DB25 Harness	1

**Table 4. Player Controls**

Part Number	Description	QTY
47-9150-00	Player Button, Red, with micro-switch	4
47-9150-01	Player Button, Blue, with micro-switch	4
47-9150-02	Player Button, White, with micro-switch	4
47-9150-03	Player Button, Yellow, with micro-switch	4
47-9150-05	Player Button, Green, with micro-switch	4
50-3100-00	Digital Joystick, 49-Way Optical	4

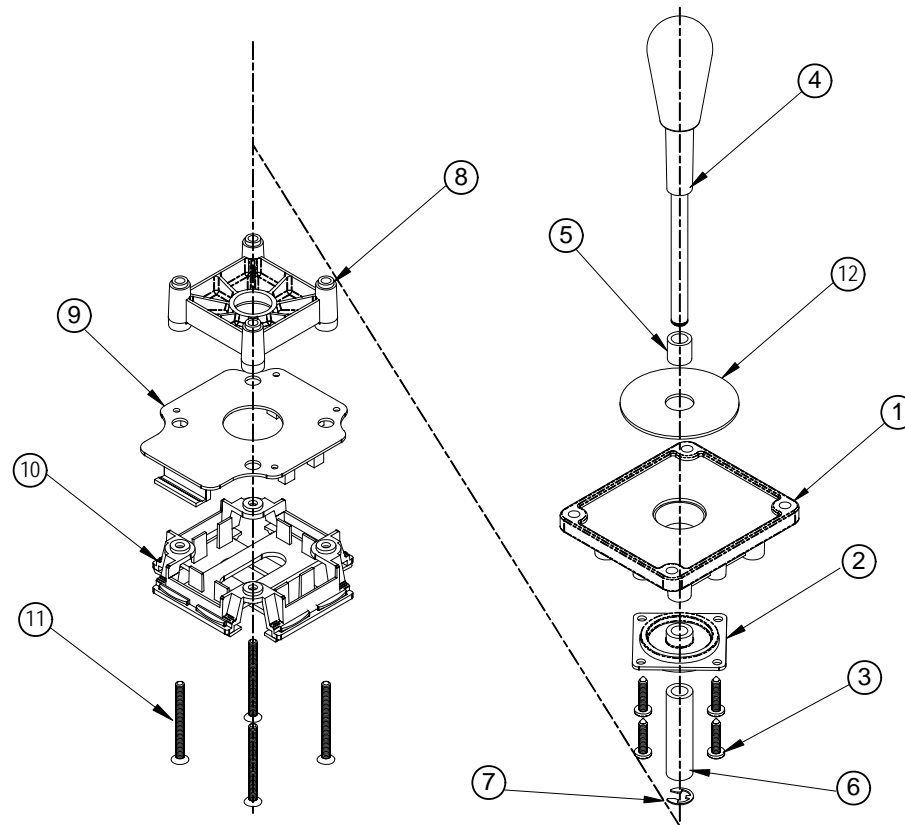


Figure 37. Digital Joystick Parts

Table 5. Digital Joystick Parts

Ref #	Part Number	Description	Qty
1	50-3106-00	Hub F/49 Way Joystick WMS #03-8409.1-1	1
2	50-3107-313	Grommet .313 Bore F/49 Way J/S	1
3	43-0139-00	Screw PH PN HD #8x3/4" Sheet Metal Screw Type AB	4
4	95-0974-16	Knob & Shaft F/49 Way Joystick Black .313 Diameter Shaft	1
5	95-0975-00	Spacer Upper F/49 Way Joystick	1
6	95-0973-00	Spacer, Lower Shaft	1
7	95-0574-00	E-Ring F/Joystick 1000X31	1
8	50-3105-00	L-Stop F/49 Way Joystick WMS #03-8411-2-1	1
9	50-3110-00	PCB, 49-Way Joystick	1
10	50-3101-00	Carriage Assembly, O.B. Slide	1
11	43-1160-00	Screw 8x1-3/4 Phil Flat Head T-A Clear Zinc or Black Oxide	4
12	95-1284-00	Guide Washer, 2.23 OD, .54 ID, .06 THK	1

**Table 6. Cabinet Functional Components**

<b>Part Number</b>	<b>Description</b>	<b>QTY</b>
49-1001-00	Fluorescent Light, 18"	1
50-9005-00	Speaker, 5", 8 Ohm, 12 Watt, Shielded	2
5555-15142-00	Speaker, Subwoofer, 8", 4 Ohm, 50 Watt	1
000083N	Dollar Bill Validator MARS - AE2651U5E	1
990-0006-01	3.1 Audio Amp PCB	1
CCM1600-ND	EMI Filter, Panel Mount, Un-Shielded	1
DFI-PS35-BL-MAD	PS35 Madden Computer	1
283-2025-ND	Fuse, Slo Blow, 250 V, 6 Amp	1
44-1100-01	DC Power Supply 5V/12V 115W	1
H4-MEMOHASP	Dongle, H4-Memohasp, Parallel	1
MC2611U5	MC 2600 Bill Acceptor w/500 Stacker	1
PER7	Power Strip, 7 Outlets, Surge Protect, Filter, 110V	1
SCR28I-S033U	Smart Card & Magnetic Stripe Reader	1
USBIOEXT	USB I/O Extreme PCB	1
WGM2794-UOTS40E	Monitor, 27" SVGA	1
49-1001-00	Marquee Florescent Light Fixture	1
CCFL2BU	Cold-Cathode Florescent Light Assembly	1

**Table 7. Computer Internal Components**

**Caution: YOU WILL VOID YOUR WARRANTY if you open the computer without direct authorization from the GLOBAL VR technical support staff.**

<b>Part Number</b>	<b>Description</b>	<b>QTY</b>
PSATX11YOH	Power Supply, Computer	1
HD-WD200BB	IDE Hard Drive, 7200 RPM, ATA100	1
SH-152AEBUW	CD-ROM Drive	1
FM-MB56PCI	PCI Modem	1
PCI USB-GVR	PCI USB Expansion Card	1
FX5700LE-128	8X AGP Video Card	1

**Table 8. Accessories**

<b>Part Number</b>	<b>Description</b>
90560-00	External Players' Card Dispenser Kit



Figure 38. Artwork and Exterior Components



## Chapter 9 — Troubleshooting

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This chapter provides troubleshooting information for problems that may occur with the system.

### 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.
	Loose or faulty video cable	Verify that the video cable is firmly connected from the monitor to the video card on the computer. While the monitor is powered ON, disconnect the video cable. You should see a message on screen saying <i>No Signal</i> if the monitor is working. Check the video cable and make sure it is not pinched or frayed.
	Loose or faulty video card	When the computer boots up, it performs a PC self-diagnostic test. If you hear 3 beeps from the computer, this indicates a problem with the video card. Open the computer and make sure the video card is firmly seated in the slot and the fan is spinning fast. If the video card is faulty, contact technical support.
	Faulty monitor chassis PCB	Verify that the fuses on the monitor chassis PCB are good and that all connections are firm.
Picture color is poor	Color needs adjustment	Use the monitor remote control board to adjust the red, green, and blue color settings. Use the Test Monitor screens in the Operator Menu Diagnostics screen to aid with adjustments.
Picture geometry is misaligned	Geometry needs adjustment	Use the monitor remote control board to adjust the picture height and width as well as other geometric adjustments. Use the Test Monitor screens in the Operator Menu Diagnostics screen to aid with adjustments.
No video and no audio  (Note: It may take nearly 1 1/2 minutes to boot and start the game)	No power to computer	Verify the computer is ON by the green LED on the front of the computer, visible through the coin door. Verify the line voltage switch on the back of the computer is set to the correct voltage for your area: 115V or 230V. Make sure the AC power cord is firmly connected to the computer and the power strip. Turn off the power strip, wait 20 seconds, and then turn it back on to reboot the computer.  Press the power button on the front of the computer. If the computer boots, check the power settings in the BIOS. (See Setting the Computer BIOS (CMOS) on page 47.)
	Corrupted software	Reload the software from the System Restore CDs. If you continue to have problems after you reload the software, you may have a faulty hard drive.
	Faulty hard drive	If you continue to have problems after you reload the software, you may have a faulty hard drive. Contact Technical Support.
Poor picture	Monitor connected to wrong port	The monitor must be connected to the VGA Video port on the video card, <b>not</b> to the video port in the computer motherboard. Make sure that the monitor video cable is connected to the VGA Video port located below the audio connectors (see Figure 39 on page 61).

**Audio Troubleshooting**

<b>Problem</b>	<b>Cause</b>	<b>Possible Solution</b>
No audio	Volume set too low	Enter the Operator Menu and adjust Audio Settings to raise the volume. Verify that the Master Volume is set high enough. Verify the volume is not turned all the way down at the Audio Amp PCB (see Figure 29 on page 40).
	Faulty wiring	Turn off the game. Verify that all the wires are firmly connected to the speakers and Audio Amp PCB. Verify that each wire is connected to the correct port. Verify that no wires are frayed or improperly shorting to ground. (See Figure 29 on page 40 for audio wiring).
	Blown speakers	Remove the grills and inspect each speaker for visible damage. Run the Speakers Test from the Operator Menu to verify each speaker is working.
	Faulty audio amp PCB	You can verify the Audio Amp PCB is working by installing it in another working cabinet. If that is unavailable to you, connect stereo headphones to the audio ports on the computer and verify that sound is working at the computer.
Poor sound from one or more speakers	Blown speakers	Remove the grills and inspect each speaker for visible damage. Run the Speakers Test from the Operator Menu to verify each speaker is working.
	Reversed wires	A weak or low muffled sound is a sign of reversed speaker wires. Check for reversed wires on each speaker. (See Figure 29 on page 40)
	Faulty audio amp PCB	You can verify the Audio Amp PCB is working by installing it in another working cabinet. If that is unavailable to you, connect stereo headphones to the audio ports on the computer and verify that sound is working at the computer.
	Faulty wiring	Verify that all the wires are firmly connected to each speaker and the Audio Amp PCB. Verify that no wires are frayed or improperly shorting to ground.
Audio hum	Faulty power supply	A constant low hum in the speakers can be caused by a faulty power supply.

**Control Troubleshooting**

<b>Problem</b>	<b>Cause</b>	<b>Possible Solution</b>
Buttons do not work	Faulty 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.
	Faulty wiring	Disconnect the cabinet from AC power. Verify that all wires are firmly connected to each button and the USB I/O Extreme PCB. Verify that no wires are frayed or improperly shorting to ground.
	Faulty USB I/O Extreme PCB	Make sure that all connections to the PCB are firm. Replace PCB if faulty.

<b>Problem</b>	<b>Cause</b>	<b>Possible Solution</b>
Joystick does not work	Faulty joystick PCB	Replace joystick PCB. (See page 35.)
	Faulty wiring	Disconnect the cabinet from AC power. Verify that all the wires are firmly connected to the joystick. Verify that no wires are frayed or improperly shorting to ground.
	Faulty USB I/O Extreme PCB	If the USB I/O Extreme PCB is not working, some or all of the buttons and joysticks connected to it will not work. Make sure that all connections to the card are firm. Replace PCB if faulty.
No joystick or button functions	No power to the USB I/O Extreme PCB	The LED on the USB I/O Extreme PCB will light when either DC power or USB is connected. To check the power connection, disconnect the USB connector. If the LED remains lit, the PCB is receiving DC power.
	Faulty wiring	Verify that all connectors are firmly connected to the USB I/O Extreme PCB. Verify that no wires are frayed or improperly shorting to ground in the wire harness.
	Faulty USB I/O Extreme PCB	Make sure that all connections to the PCB are firm. Replace PCB if faulty.
	Faulty power supply	Verify that the DC power supply is working.
Joystick feels loose or doesn't center properly	Bad joystick grommet	Replace the joystick grommet. (See page 35.)

### Miscellaneous Troubleshooting

<b>Problem</b>	<b>Cause</b>	<b>Possible Solution</b>
No power	Power strip not plugged in or turned off	Make sure the power indicator light on the power strip is on. If it is off, make sure the connections to the AC power plate terminals are firm and the power strip ON/OFF switch is ON.
	Cabinet not connected or turned off	Make sure the AC power cord is firmly connected to the power plate and a working AC outlet, and the cabinet ON/OFF switch is ON.
Game dongle not found by system computer	Game dongle not connected	Connect the game dongle to the computer parallel port. Power the cabinet off and then on.
	Faulty game dongle	Make sure the dongle is connected properly. Contact Technical Support to order a new dongle.
	Faulty parallel port	If you try a different game dongle and reboot the game, but the dongle still is not recognized, contact Tech Support.
Cabinet gets very warm	Faulty ventilation fan	Verify that the exhaust fan is working. It is located under the vents at the top of the cabinet. Replace the fan if it is worn or spinning slowly.
	Cabinet ventilation holes are blocked	Make sure you have proper clearance between the cabinet rear and the wall. Make sure the vent holes are clear of dust and debris and that air can flow freely.
Marquee lamp does not light or is intermittent	Faulty florescent tube	Check the florescent tube for darkened or cracked end. Replace the florescent tube if it looks worn.
	Faulty florescent fixture	Verify the florescent tube pins make a good connection with the lamp fixture. Check the ballast for proper operation. Replace fixture if faulty.

Problem	Cause	Possible Solution
Improper number of credits given when coins or bills are inserted	Incorrect setting in Operator Menu	Adjust settings from the Operator Menu.
	Faulty wiring	Disconnect the cabinet from AC power. Verify that all wires are firmly connected to the coin mech and bill validator. Verify that no wires are frayed or improperly shorting to ground.
	Faulty coin mech	Repair or replace the coin mech.
	Faulty bill validator	Repair or replace the bill validator.
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.
Bill validator rejects too many bills	Poor ground	Verify the cabinet is properly grounded. If the bill validator has a green ground wire, make sure it is properly connected to ground.

## Error Screens Displayed at Boot

Under certain conditions, message screens will appear when the system boots. These screens will time out and the cabinet will finish booting. The conditions are described below.

Message	Cause
No nytric	The USB I/O card was not detected. Check all connections to the USB I/O card and make sure the LED is on.
Missing Nytric	On a four-player cabinet, one of the USB I/O cards was not detected.
Incorrect nytric version	A Nytric USB I/O version 2.0 (USB I/O Extreme) is required. Older cards will not work.
CD detected in CD drive	Eject the CD from the CD-ROM drive.
Recovery needed	If you re-install the software on a registered cabinet, select <b>Recovery</b> from the Registration screen of the Operator menu to restore your settings.
Failure to sync for 3+ days (Hibernation warning)	The registered cabinet has not called in to the GLOBAL VR servers for three days or longer. Select Force call from the Registration screen of the Operator menu. Troubleshoot connection problems as necessary.
No card reader	The card reader was not detected. Check the card reader and the USB cable to the computer.
Dispenser empty	Fill the Players' Card dispenser.

## Connection Troubleshooting

If the cabinet fails to connect with the GLOBAL VR Tournament Server due to a problem with the dial-up modem or the broadband connection, the cabinet will display an error message onscreen. The table below lists the more common errors and solutions.

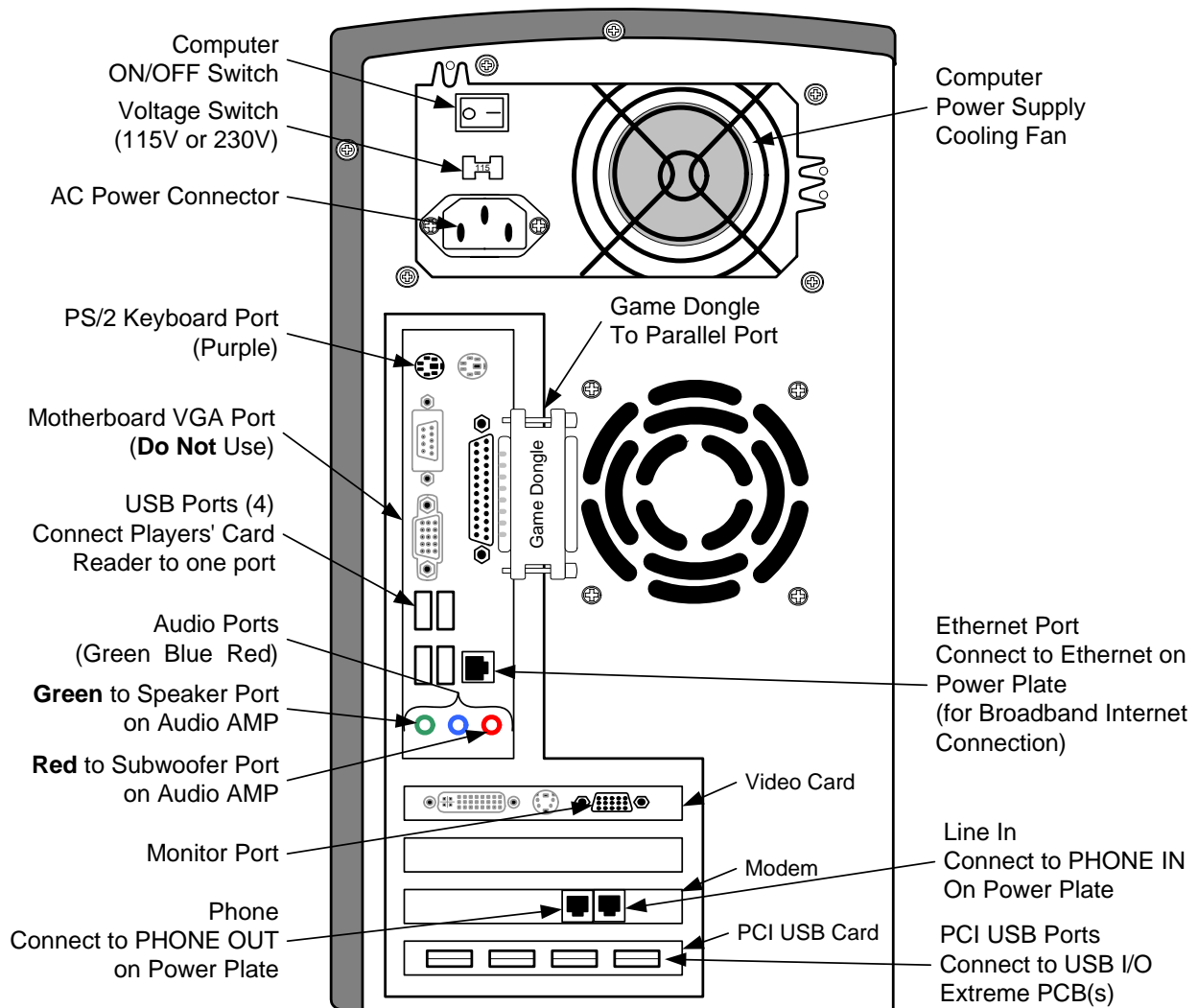
If you cannot resolve a connection problem, contact Technical Support. Please have the modem error code, dial-up phone number the computer is using, and the game serial number ready for the GLOBAL VR technical support representative.

**Important:** If you have several cabinets that share a dial-up phone line, make sure they are set to call in at different times.

Modem Error Message	Cause	Possible Solution
General RAS Failure	Modem failed to connect	Make sure you have a working analog phone line connected to the LINE port on the modem. If the problem continues, select a different phone number in the dial-up settings.
No Dial Tone – Please try again	Phone line connected to wrong modem port	If you can hear the phone go off the hook, make sure the phone line is connected to the correct port on the modem.
	Phone line not working	Connect a telephone to the line to make sure it is working.
The line is busy – Please check phone line and try again	Phone line is busy	Try again later. If the problem persists, select a different dial-up number.
Failed to deserialize – Please contact GlobalVR Support	Problem syncing with server	Contact GLOBAL VR Technical Support
<b>Broadband Error Messages</b>		
Error Communicating with Server. Please try again later (4001)	Broadband connection problem	Check all connections and make sure your network is functioning properly. If the problem persists, contact Tech Support.

## Chapter 10 — Diagrams and Schematics

The figure below shows the connectors on the rear of the computer.



*Figure 39. Computer Rear Connectors*

**Note:** The picture above shows the **PS35-BL motherboard**.

At the time this manual was printed, GLOBAL VR planned to begin shipping computers with the Intel 915GAG motherboard in the last quarter of 2006.

The 915GAG motherboard has the audio ports located **above** the USB ports. Be aware that the audio ports are arranged differently on this motherboard (the green port is in the middle). Be sure to connect the **Speakers to the green port** and the **Subwoofer to the red port**.



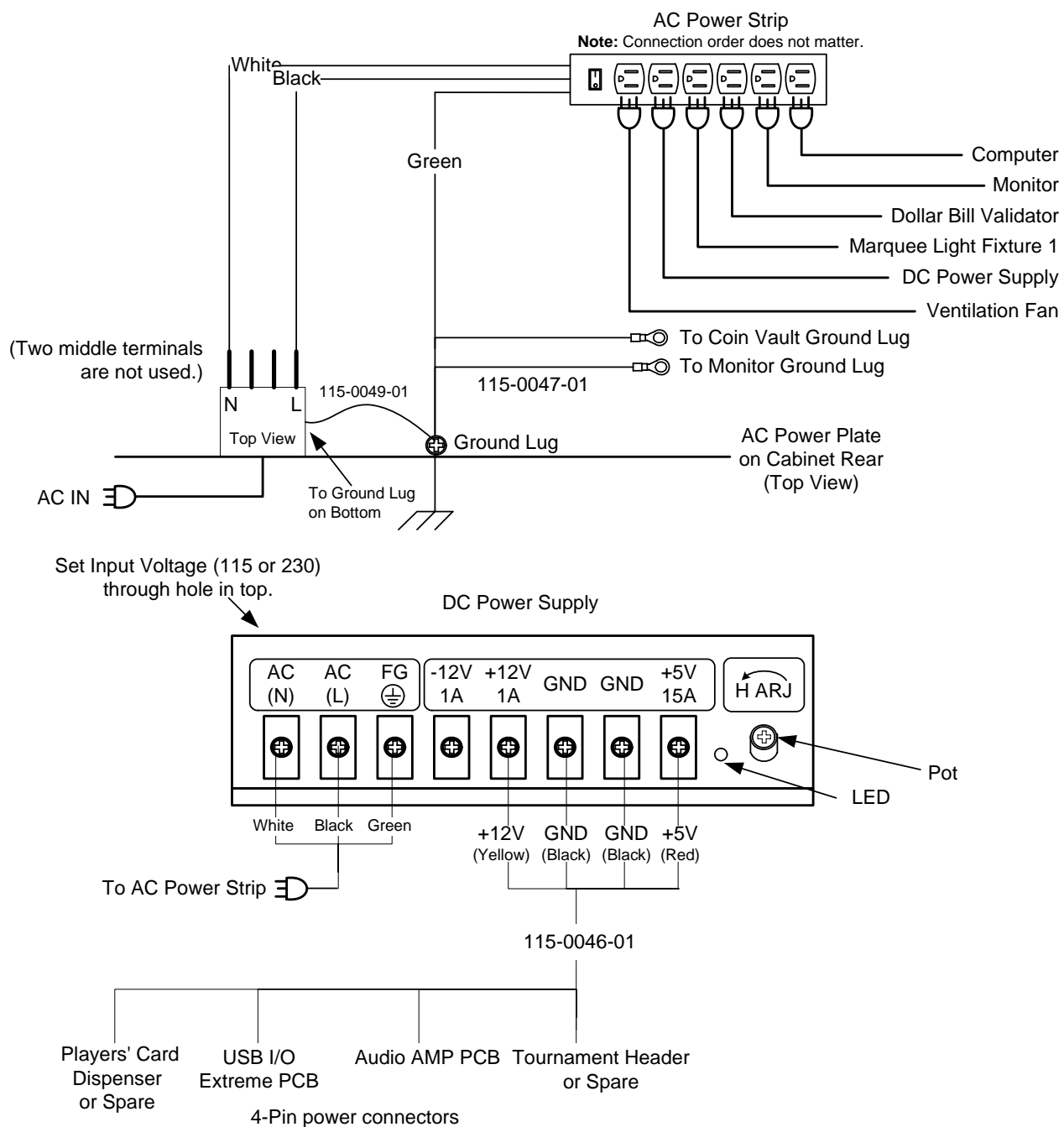
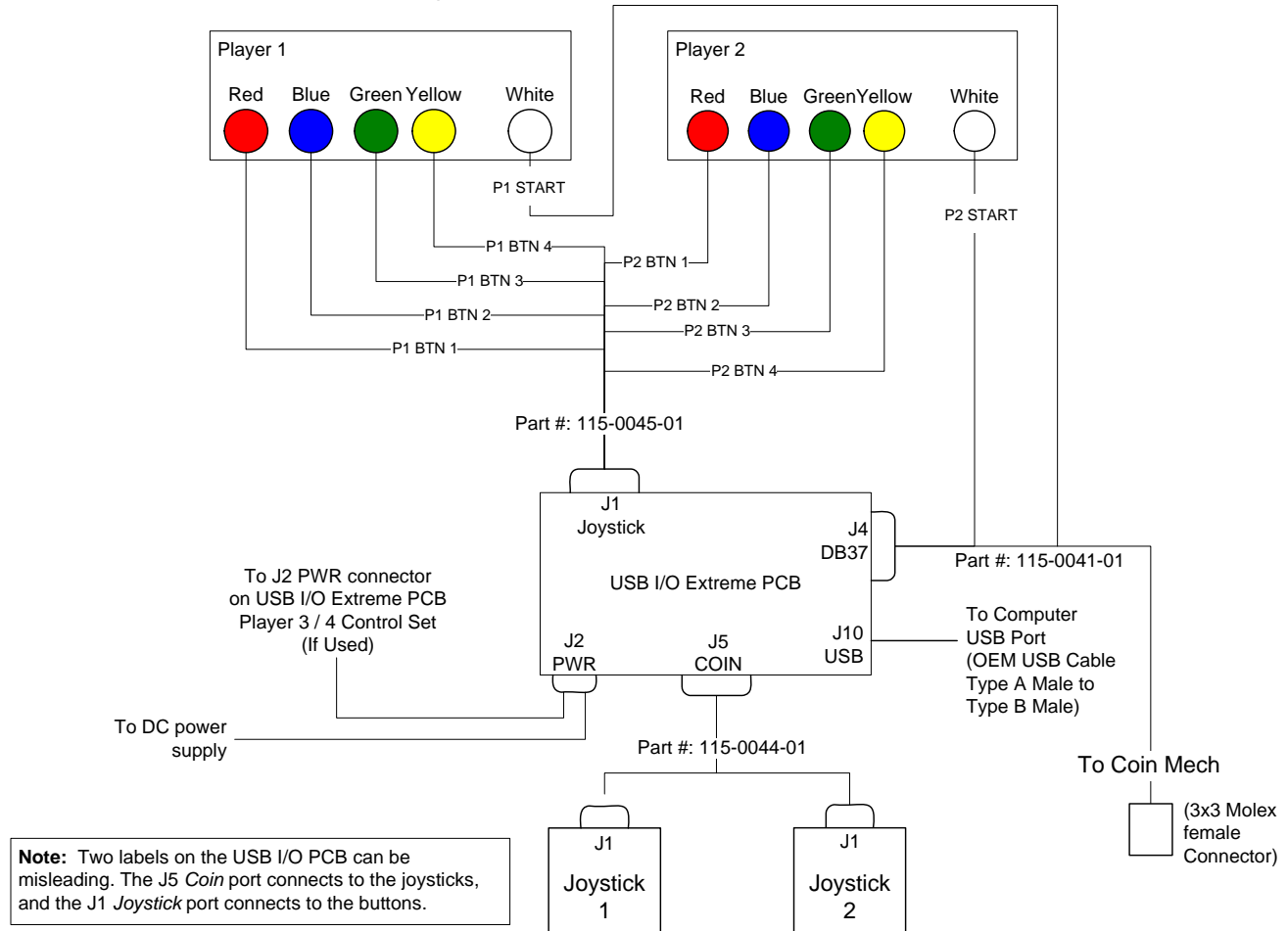


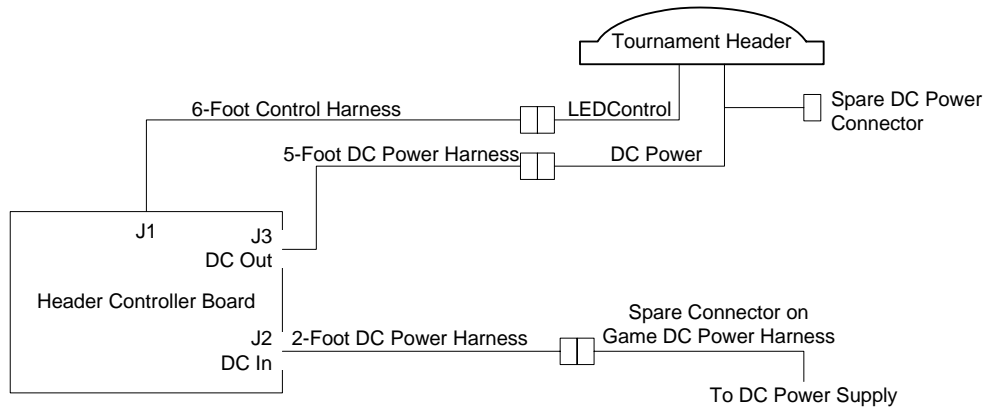
Figure 40. Cabinet Power Distribution Wiring Diagram

## Player 1 / 2 Control Set Wiring



**Note:** Refer to Figure 23 on page 37 for USB I/O Extreme PCB DIP switch settings.

*Figure 41. Player Controls Simplified Wiring Diagram*



**Notes:** The Backlit header illustrated above has red LEDs.  
The header with blue LEDs has no controller board, and only the DC power connector.

*Figure 42. Tournament Header Wiring*

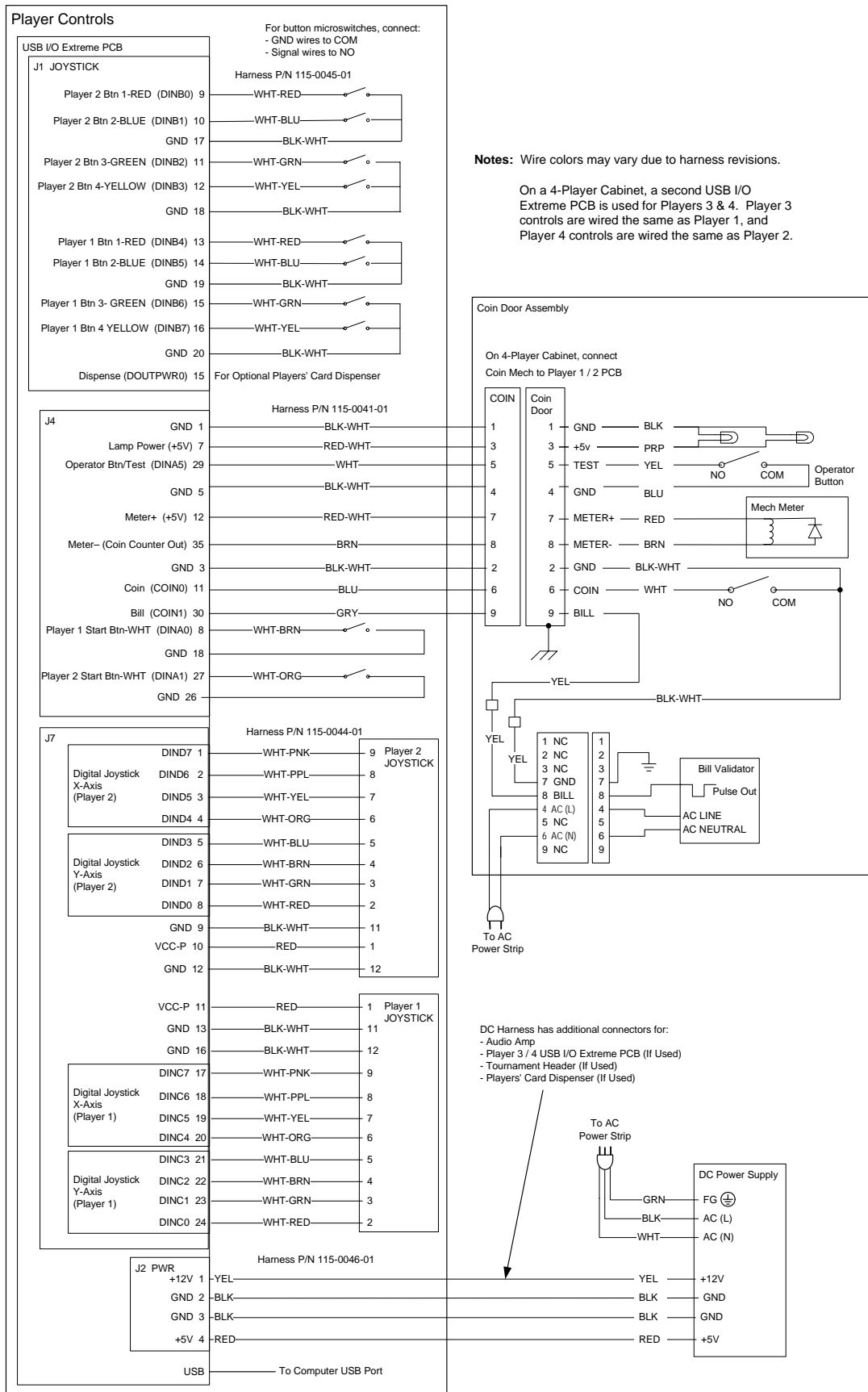


Figure 43. Player Controls Detailed Wiring Diagram

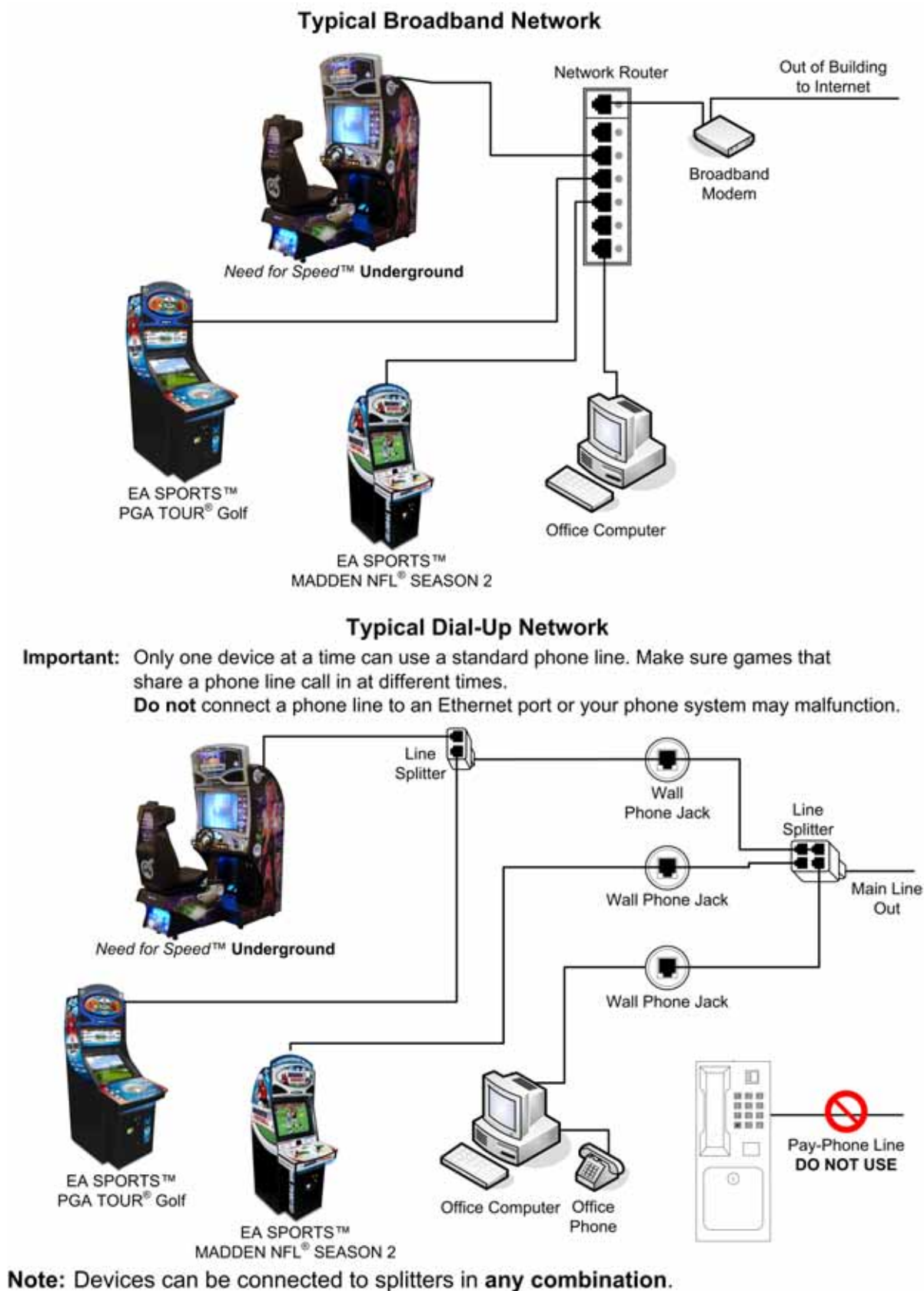


Figure 44. Game Network Setup

## Warranty Information

### Warranty Service

If at some point you require warranty service, contact your distributor. If the technical support staff determines that your game is defective, a Return Merchandise Authorization (RMA) number will be issued.

### LIMITED WARRANTY

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

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

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

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

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

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

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

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## Technical Support

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Service & Parts	Tournament Support
Hours: 7:00 AM–5:00 PM Pacific Time Monday–Friday Phone: 408.597.3435 Fax: 408.597.3437 E-mail: <a href="mailto:techsupport@globalvr.com">techsupport@globalvr.com</a> Website: <a href="http://service.globalvr.com">http://service.globalvr.com</a>	Hours: 8:30 AM–7:00 PM Pacific Time Monday–Friday Phone: 408.597.3429 Fax: 408.597.3439 E-mail: <a href="mailto:tournament@globalvr.com">tournament@globalvr.com</a>
<b>Extended Service Hours:</b> Monday–Friday 5pm—Midnight Saturday & Sunday 7:00am—Midnight Pacific Time	
<b>Tournament Billing:</b> 408.597.3400, and ask for Tournament Billing	

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 following background information to aid our technical support process:

- Cabinet Serial Number (found on the back of the cabinet). Write your serial number below for easy reference.

**Cabinet Serial Number:** \_\_\_\_\_

- 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                                       | For Online Cabinets:  |
| – Game and OS version numbers<br>(From the Operator Menu.)     | – Cabinet ID<br>(From the Registration screen.)                   |
| – Date of latest install or upgrade                            | – Date of last successful sync<br>(From the Registration screen.) |
| – Any changes made to the system                               |   |
| – For game-play issues, the game mode<br>and number of players |   |

To comment on this manual, please e-mail: [techpubs@globalvr.com](mailto:techpubs@globalvr.com)