EA SPORTS™ PGA TOUR® Golf
Team Challenge

Conversion Kit Instructions
040-0012-03

> ➢ **Read this manual before use.**
> ➢ **Keep this manual with the machine at all times.**

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Preface

1.1 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.

1.1.1 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.

1.1.2 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!

1.1.3 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).

1.2 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

EA SPORTS PGA TOUR® Golf Team Challenge

New Play Modes, New Courses, *More Revenue!*

The developers of EA SPORTS™ PGA TOUR® Golf have done it again. Exciting new play modes attract new players while challenging the old. New courses and new golfers update the golf setting while the addition of exciting new competitive play and training modes make **EA SPORTS™ PGA TOUR® Golf Team Challenge** fun and easy for the novice and challenging for pros.

New Game Features:

- **Team Play:** 2-player co-operative or 4-player versus, where each team hits their best ball.
- All new **Driving Range** with high-score leaderboard helps train new and old players alike.
- **24 courses** in World Tour, including the all new *Greek Isles* fantasy course.
- 14 amusement courses including the *Fantasy Tour*.
- **9-hole Training Course** helps beginners learn the game quickly.
- Insert your Players' Card in Attract Mode and get **Instant Player Stats**.
- **Button Combos** let you instantly step through leaderboards or attract video:
  - **Rotate Golfer**: Advance to the next or previous Attract Movie or Ad.
  - **Fly Over**: Advance to the next Amusement leaderboard.
  - **Shot Type + Fly Over**: Advance to the next Local Tournament leaderboard.
  - **Shot Type + Rotate Right**: Advance to the next National Tournament leaderboard.
  - **Shot Type + Rotate Left**: Advance to the next World Tour leaderboard.
  - **Press and hold Shot Type**: Holds on current leaderboard.

Get Online and Drive Earnings Up

- **Instant Online** lets Operators register their cabinets in a flash.
- **Tournament Play** with national and local competitions.
- **World Tour** challenges players to complete all 24 courses of the Tour.
- **Hidden Skill Shots in World Tour** earn players special Game Face items.
- **Bonus Course in Amusement Mode** (one course will unlock every month).
- Players earn **Plus Points** and redeem them for CDs, DVDs, electronics, and other awards.
- You always **earn more** from every online play.

Team Challenge is Available Three Ways

- **New dedicated cabinet** with Players' Card reader, card dispenser, and attractive 2nd marquee.
- **Software update** for existing EA SPORTS™ PGA TOUR® Golf games.
- **Affordable conversion kit** for older video golf games.

Note: Features, Tournaments, and Play Modes will vary according to geographical region.

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Chapter 2 – Cabinet Conversion

This document describes the steps for converting your old golf cabinet to EA SPORTS™ PGA TOUR® Golf Team Challenge.

Important: This kit should **not** be used to convert dual-monitor golf cabinets.

2.1 Conversion Kit Contents

The exact components you receive may vary depending on the conversion options you selected.

Computer and Controls

Description	Qty	Part Number
System Computer	1	45006-00
Computer Base Strap	2	01-10110
HASP Security Dongle (Parallel)	1	H4-MEMOHASP
Control Panel (Pre-Assembled)	1	45051-00

Cables and Components

Ref	Description	Qty	Part Number
1	Cable, 37-Pin M-F 6Ft Cable	1	ES1451
2	Cable, USB	2	USB-AB06MM
3	Cable, PC Y-Power	1	PGAK-FLT-3500-08
4	Cable, 3.5mm Audio, 6Ft	1	96-0539-00
5	Cable, 2 Button Harness to Jamma Conversion Board	1	115-0019-01
6	Phone Cord	1	T-1025
7	3-Way Phone Splitter	1	T-6008
8	AC Power Strip 6 Outlets	1	49-0963-10
9	AC Power Cord	1	80-0213-00
10	SmartCard Reader Assembly	1	45045-00
11	Jamma Conversion Board	1	990-0007-01

Other Hardware (Not Shown)

Description	Qty	Part Number
Fan, Grill, & Cord Assembly	1	115-0050-01
.250 Spades	2	PGAK-KTN50
Ground Ring	1	PGAK-5A890
18 Gauge Wire Butt Connectors	3	PGAK-2A0701
PCB Plastic Feet Kit	1	49-1019-00
1/4-20 x 3/8" Philips Pan Screws	2	25C37PPMZZ
1/4-20 Nylon Locking Nut	1	100-0001-01
#10 x 1/2" Course Thread Philips Wood Screws	4	10N50PPAZZ

CDs, Labels, and Manuals

Description	Qty	Part Number
System Manual	1	040-0062-02
Conversion Kit Instructions (This Document)	1	040-0012-03
Software Restore Guide		040-0063-02
System Recovery Disk (1 CD)	1	050-0097-01*
Game Install Disks (3 CDs)	1	050-0098-01*
Cabinet Certification Paperwork	1	040-0016-01
Serial Number Labels	2	L-0071 & L0071A
Welcome Kit (with Tournament & Registration Guides)	1	47013-00

   *Part Number may change due to software revisions.

Cabinet Artwork

Description	Qty	Part Number
Marquee Artwork	1	PGATC-AW-01
Sub-Marquee Artwork	1	PGATC-AW-09
Cabinet Left Side Graphic	1	PGA05CK-AW-01
Cabinet Right Side Graphic	1	PGA05CK-AW-02
SmartCard Reader Decal	1	PGA05K-AW-02
Control Panel Front Decal	1	PGATC-AW-08

Monitor Upgrade Kit (Part #: PGA-UPGRADE-MTR) Components

Description	Qty	Part Number
1/4 X 1.0 Carriage Bolt	4	4600-0013
1/4" Flat Washer SAE	4	4600-0014
Nut, 1/4-20 Kepnut	4	4600-0015
Monitor Bezel 28"	1	49-0106-01
Monitor, Wells-Gardner 27" SVGA	1	WGM2792-UOTS19C
Template, Monitor Bracket Mounting Holes	1	L-0059

2.2 Tools Required

- Screwdriver with assorted Torx® Security and Phillips bits
- Medium flat-blade screwdriver
- Assorted nutdrivers or wrenches
- Exacto® knife

- Accurate Ruler or Measuring Tape
- Drill
- 1/4" Drill Bit
- 24" Straight-Edge (if adapting cabinet for larger monitor)

2.3 Basic Upgrade Steps

Converting your cabinet consists of the primary steps listed below.

- **Check Cabinet Compliance**: Make sure your cabinet meets the required specs. Fill out the Conversion Kit Compliance Agreement, and fax or mail it to GLOBAL VR® (Section 2.4).

- **Clean and Prepare your Cabinet**: Remove all graphics and labels, and the tournament header, and clean the cabinet (Section 2.5).

- **Install the Monitor**: Modify your cabinet and install the new 27-inch monitor (Section 2.6).

- **Install the Control Panel**: (Section 2.8).

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- **Set Up the Hardware**: Install the new computer, SmartCard Reader, and Jamma Conversion Board, and make all connections (Section 2.7).

- **Apply the Cabinet Graphics**: Install the new cabinet graphics and labels (Chapter 4).

- **Register your Cabinet**: (Section 4.6).

2.4 Check Cabinet Compliance

GLOBAL VR® requires that all converted cabinets meet the strict guidelines set forth in this instruction manual and the Conversion Kit Compliance Agreement.

Before beginning the conversion, please read the Conversion Kit Compliance Agreement included with the Game Dongle in your conversion kit. Make sure that you understand the agreement, and sign, date, and fax or mail the agreement to GLOBAL VR® before installing any hardware from the conversion kit.

All previous cabinet artwork, serial numbers, and labels must be removed from the cabinet before the GLOBAL VR® PGA TOUR® Golf artwork is installed. Make sure the new cabinet artwork is setup exactly as instructed in this manual to ensure that you are in compliance with the Conversion Kit Agreement.

2.4.1 Cabinet Compliance for Tournament Play

If you wish to use a converted cabinet to participate in GLOBAL VR® Tournaments, the cabinet must meet certain standards to create a fair playing field for all participants. The exact cabinet specifications and rules and are set forth in the Conversion Kit Compliance Agreement, under Assembly Requirement. Your cabinet must match the stated dimensions to participate in GLOBAL VR® Tournaments.

Both standard and deluxe cabinets can be converted and used for GLOBAL VR® Tournament games as long as they meet the specifications detailed in the agreement. The picture below shows how to measure your cabinet to determine if your converted cabinet can participate in GLOBAL VR® Tournaments.
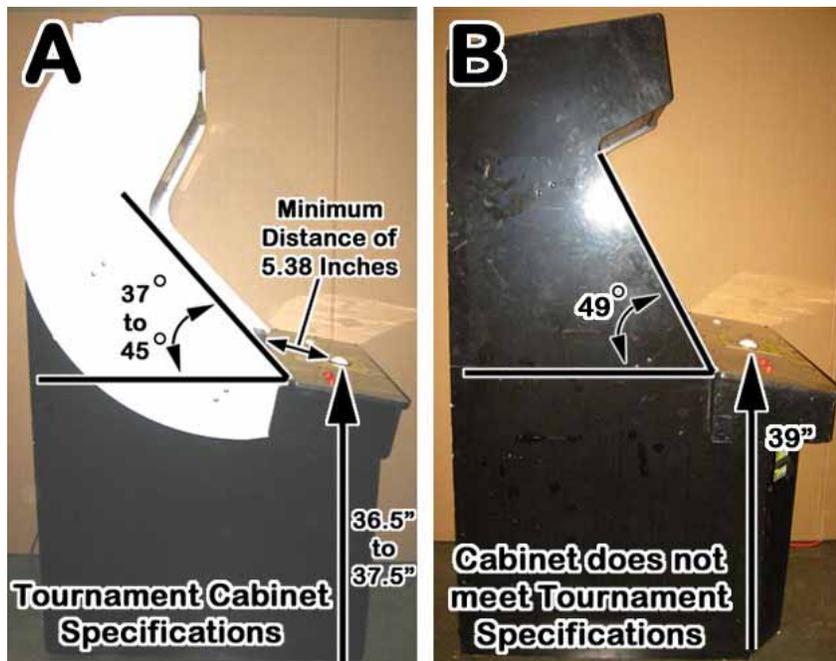
2.5 Clean and Prepare the Cabinet

Remove all pre-existing graphics, serial numbers, and any other visible artwork from your cabinet. If any old artwork is left on the cabinet, you will be in violation of the Conversion Kit Compliance Agreement.

Clean the cabinet well so that the new graphics will adhere properly.

2.5.1 Remove the Tournament Header

If your cabinet has an existing tournament header, it must be removed. If you wish to install a GLOBAL VR® LED tournament header, order the Tournament Header Upgrade Kit (part #: TH-8000-03).

1. Unplug the cables from the tournament header and remove them from the cabinet.

2. Un-bolt the tournament header and remove it from the cabinet.

2.6 Replace the Monitor

Perform the steps in this section to remove the old monitor and install the new 27-inch Wells-Gardner® monitor.

2.6.1 Remove the Old Monitor

1. Open the service tray, and remove the glass display shield and monitor bezel.

2. Disconnect ALL wiring from the back of the monitor. Make sure that no wires still connected to the monitor are tied to the cabinet.

3. Remove the four (4) monitor retaining nuts and washers and save them for reinstallation.

4. Remove the monitor from the cabinet. It is advisable to have at least two people to support the weight of the monitor.

2.6.2 Adapt the Cabinet for the Larger Monitor

If your cabinet already had a 27-inch monitor, you should be able to proceed to Section 2.6.3 and install the new monitor.

If your cabinet had a 25-inch monitor, refer to the figure that follows, and perform the following steps to adapt the cabinet hardware for the larger, 27-inch Wells-Gardner® monitor:

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1. Note the positioning of the lower monitor bracket to aid in reinstallation. Remove the nuts and bolts that secure the bracket to the cabinet. Remove the bracket and save it for reinstallation. Perform the following steps to drill new bolt holes for the bracket to relocate it for the larger monitor.

2. Refer to the figure below and mark straight lines, as shown, through the center of the two sets of bolt holes and about 2" below. Drill two ¼" diameter bolt holes 1-7/16" below the original holes, and along the same centerline. Use the template from the kit, (part #: L-0059), or cut out the template on Page 36 to aid in placing the holes.

3. The overall distance between the bolt heads on the side of the cabinet must be 20-3/4" center-to-center in the long direction, and 1-9/16" center-to-center in the short direction.
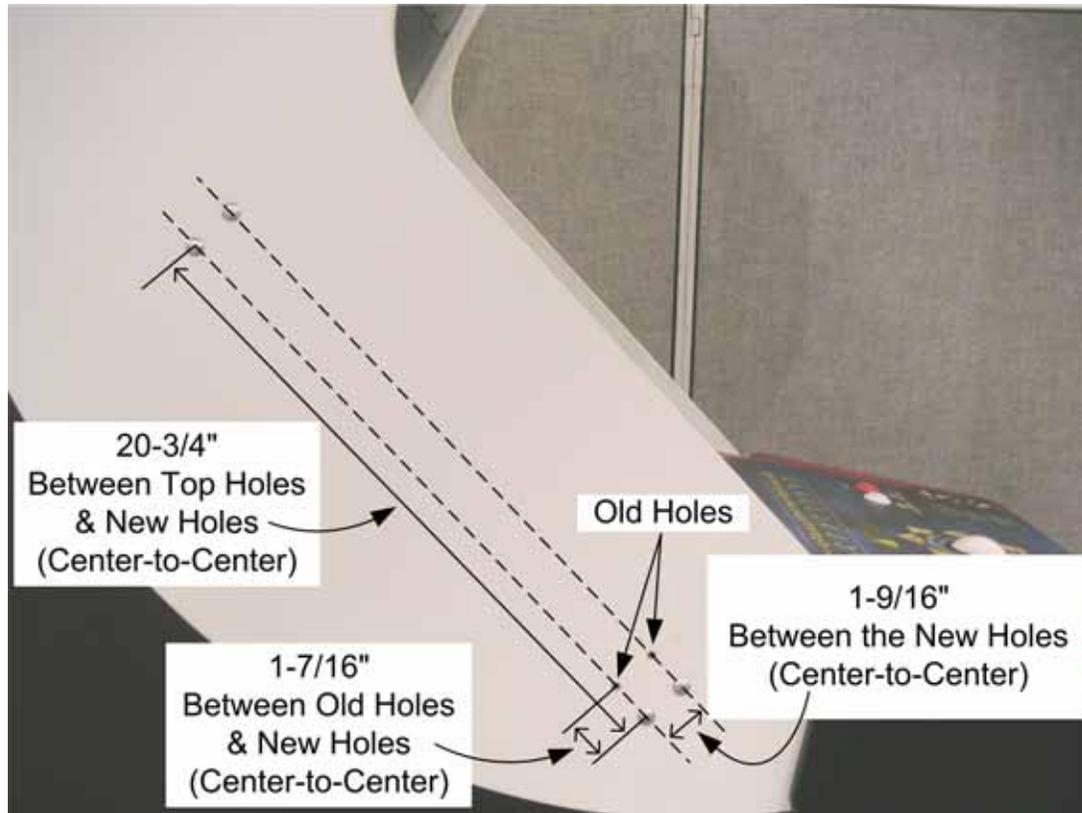
4. Repeat the previous two steps to drill bolt holes in the other side of the cabinet.

5. Align the lower monitor bracket with the new bolt holes and bolt it in place using the nuts and bolts removed previously.

6. Install the four (4) supplied carriage bolts into the original bolt holes to give them a finished appearance.

7. If the old monitor was powered with an AC isolation transformer, remove the transformer from the cabinet. The new monitor will connect directly to the AC power strip to be installed in Section 2.7.1.

2.6.3 Install the New Monitor

Hint: You may find it easier to finish upgrading the hardware before installing the monitor. This will give you more space and better light inside the cabinet. When you install the monitor, remember to connect the power cord to the power strip, and the VGA cable to the VGA port on the video card in the system computer.

1. Refer to the picture below and make sure that the **monitor frame** of the new 27-inch Wells-Gardner® Monitor has the holes required to mount it to the cabinet brackets. Both the top and bottom sections of the frame must have two pairs of holes (some monitor frames have only one pair of holes in each section). The inside pair of holes must be centered on the bracket, and measure 19-1/4" center-to-center.
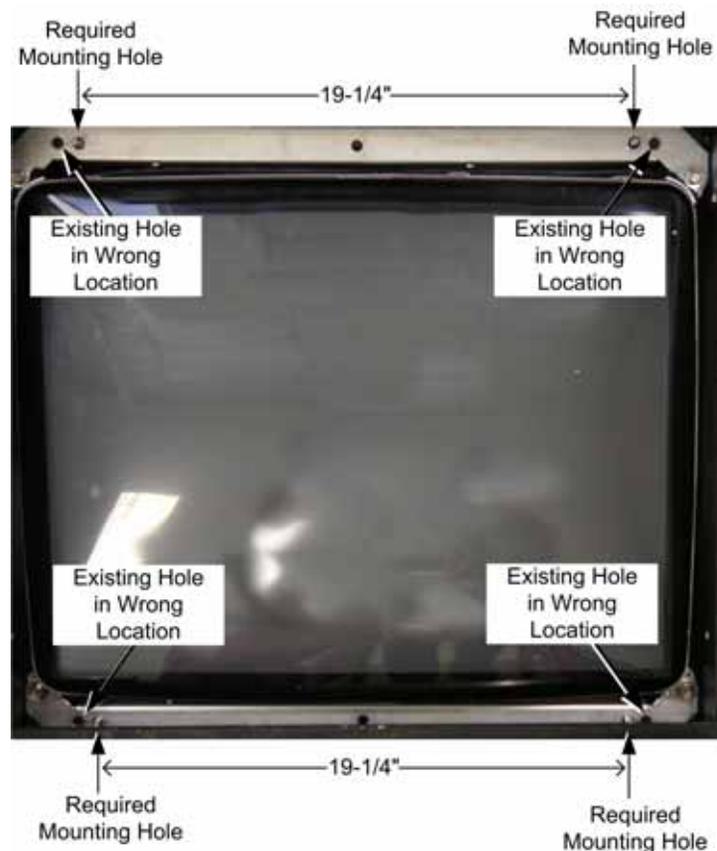
Caution: Avoid getting drill chips in the electronic components.

2. If the monitor frame does not have the required holes, drill them in both the top and bottom frame sections as follows: Drill two (2) 3/8" diameter holes, centered, 19-1/4" apart. Each of these new holes should be approximately 11/16" inboard from the existing holes, and on the same horizontal centerline.

   CAUTION: The monitor is very heavy. Monitor installation requires at least two people. It is best to have a third person handling the monitor frame from inside the cabinet back door. It is easy to catch fingers between the monitor frame and cabinet.

3. To install the monitor, first install the lower edge of the monitor onto the lower bracket studs, and then rotate the monitor downwards to catch on the upper bracket studs. This will require at least **two** people. It may be best to have a third person handling the monitor frame from inside the back door. Watch your fingers; this monitor is very heavy.

4. Use the old hardware to re-attach the monitor to the cabinet bracket (four places).

5. Install the new monitor bezel.

6. Clean and replace the glass display shield.

7. Replace the small retainer tab that secures the display shield in place.

8. Mount the monitor remote control board in a convenient location in the service tray.

9. Connect the monitor ground wire to a ground lug on the cabinet.

2.7 Set Up the Hardware

2.7.1 Set Up AC Power Distribution

You must install the AC power strip/surge suppressor from the kit to provide power to the computer, new monitor (if installed), and other Hardware.

The actual wiring will vary depending on which cabinet you are converting. Use the instructions that follow as a general guideline for setting up AC power distribution.
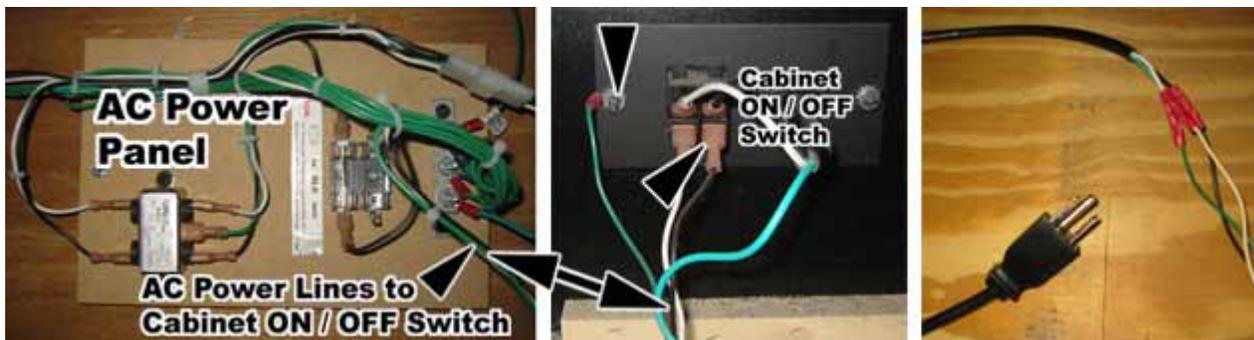
1. Locate the AC power panel inside the cabinet. The panel is usually the distributing point for all of the AC power lines inside the cabinet. If the panel is on the floor of the cabinet, you will need to move it to one of the side walls to make enough room to secure the computer to the bottom of the cabinet (see Section 2.7.5 on page 16).

2. Disconnect the two AC power lines and the ground wire that connect to the ON/OFF switch on the AC power panel, as shown by the arrows in the picture above.

3. Strip these three wires and connect them to the AC power cord from the kit, using the wire crimps provided. (You will be plugging this power cord into the power strip.)
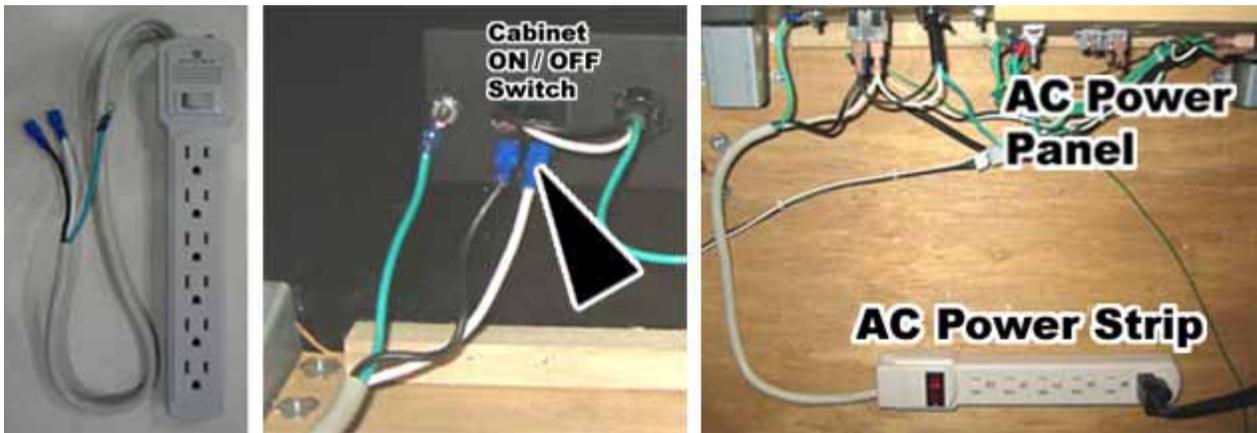
4. Connect the power and ground wires from AC power strip to the three connectors on the ON/OFF switch where you removed the wires in step 2, as shown by the arrow in the picture above.

5. Plug the AC power cord you spliced in step 3 into the AC power strip. All cabinet AC power should now be routed through the power strip.

2.7.2   Remove the Game PCB and Install New Hardware

Caution: Power must be off when connecting boards. To prevent damage from electrostatic discharge (ESD), handle PCBs by the edges only and use a grounding wrist strap or similar precaution.

1. The Conversion Kit hardware uses the existing Jamma harness wiring for the speakers and coin inputs. Remove the Game PCB and any other hardware from the old game, but keep the existing DC power supply and Jamma harness wiring in place.

2. Install four small plastic feet from the kit on the Jamma conversion board.

3. Set jumper J8 on the Jamma conversion board to pins 1 and 2 for stereo, or pins 1 and 3 for mono audio, depending on how your cabinet audio is set up.

4. Place the Jamma conversion board in the service tray where you removed the old boards. Make sure that the Jamma connector on the Jamma wire harness can reach the Jamma Conversion Board before securing the board to the cabinet.

5. Secure the boards with wood screws in the plastic feet.

2.7.3 Connect the Jamma Conversion Board
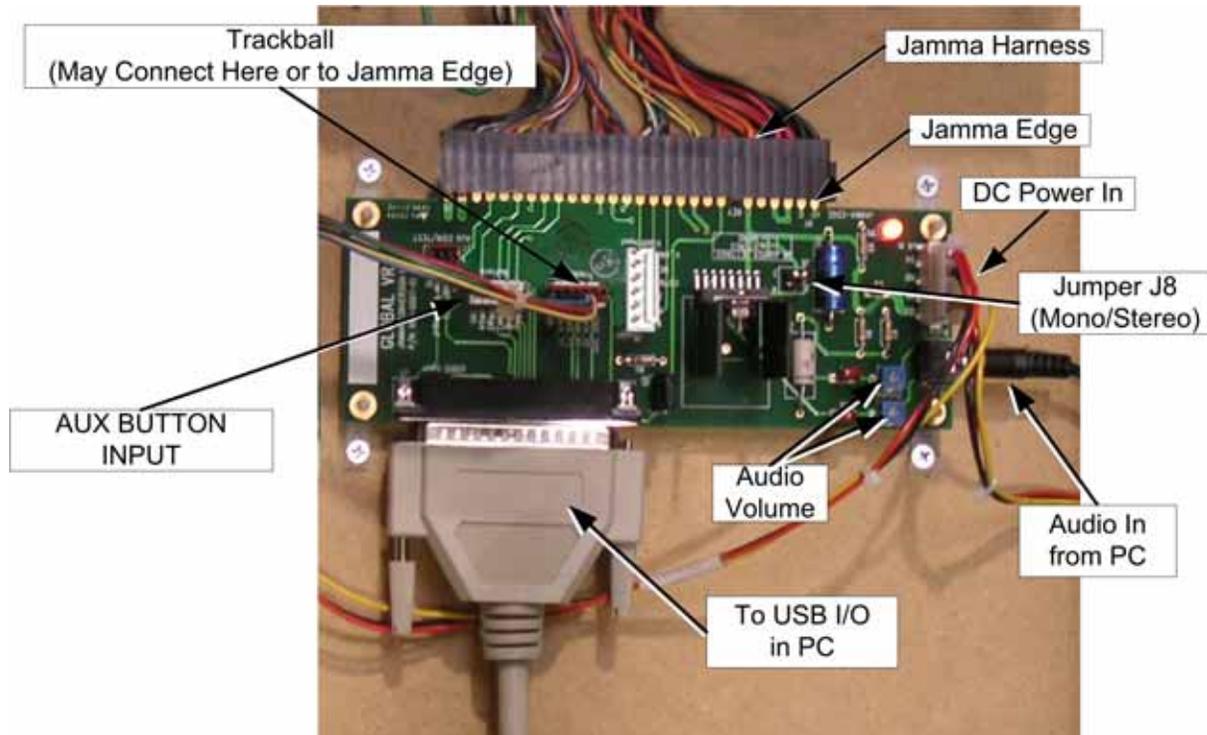
Figure 1. Jamma Conversion Board (JCB) Connections

Refer to the figure above, and Figure 6, Simplified Wiring Diagram, on page 30, and perform the following steps to connect the Jamma harness and other cables to the Jamma Conversion Board:

1. Connect the Jamma connector from the Jamma harness to the Jamma edge on the Jamma Conversion Board.

2. Connect the Trackball 6-pin connector to Trackball In, J5 on the Jamma Conversion Board.

3. Connect the existing PC power supply in the cabinet to the Jamma Conversion Board PWR IN port using the PC Y-power cable from the kit.

   Note: The PC Y-power cable uses a standard PC power supply connection found on most DC power supplies used in arcade cabinets. If your existing power supply does not have this type of connector, you will need to splice the Y-Power cable into the power supply on the cabinet. Here are the specifications for the PC Y-power cable:

   Red Wire   +5 VDC
   Yellow Wire   +12 VDC
   Black Wire   Ground

2.7.4 Set Up the Computer

The computer comes pre-loaded with EA SPORTS™ PGA TOUR® Golf Team Challenge game software. There is no need to reload the software with the CDs in the kit. The Software recovery CDs are included in case you need to restore the software in the future.

The computer can be damaged very easily. Please use caution when installing the computer.

CAUTION: Avoid touching internal components. These components are susceptible to Electrostatic Discharge (ESD) damage.

1. Remove the right side panel from the computer by removing the two screws that hold the panel in place, as shown by the arrows in the picture below. Slide the panel back and then out to remove it from the computer chassis.

2. Remove the plastic feet from the computer case by using pliers to squeeze the tops of the feet inside the case, while pulling the feet off from the outside.

3. Place the computer on its side so you can clearly see the inside of the computer. Place the metal computer bracket so that the tab is pointed down, and hook the tab into the bottom mounting hole on the computer, as shown in the picture below.

4. Use the flat-head screw with nylon locking nut to secure the bracket to the top hole of the computer chassis.

5. Repeat steps 2 and 3 for the second mounting bracket.

6. When finished, the two screws with nuts should be closest to the outside edge of the computer chassis, with the bracket tabs hooked into the holes closest to the motherboard, as shown in the last part of the picture above. Re-install the side panel on the computer.

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2.7.5 Secure the Computer and Make Connections

1. In the cabinet, remove the two screws that secure the service panel to the coin door assembly and move it to the vault assembly, as shown below. Secure it with the two screws. Moving this panel will give you easy access to the computer CD drive when you place the computer in the cabinet.
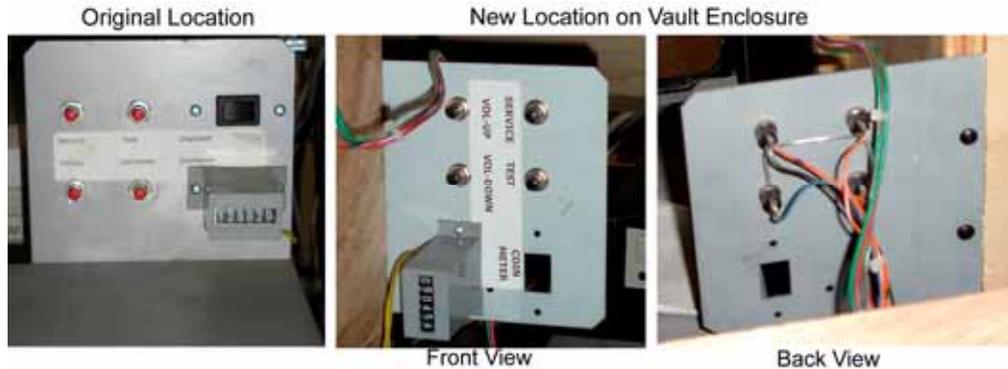
2. Place the computer as shown below. Make sure there is at least a 6-inch clearance in front of the computer for the CD drive to open. You will be able to easily reach the connectors on the back of the computer, and to access the CD drive through the coin door.

3. Secure the computer to the bottom of the cabinet using four (4) #10 x ½" Phillips wood screws.

4. Refer to Figure 8, Computer Rear Panel Diagram, on page 32, and Figure 6, Simplified Wiring Diagram, on page 30, to make connections to the computer.

5. Connect the game dongle to the parallel port.

6. Using the USB cable, connect the computer USB port to the USB port on the USBI/O card.

7. Connect the power cord to the computer and the power strip.

8. Connect the USB I/O DB-37 port to **J3** on the Jamma Conversion Board.

9. Connect the video port on the video card to the monitor.

10. Connect the audio cable to **J2** on the Jamma Conversion Board.

11. Tie cables to the cabinet so that they are secure and out of the way. Bundle and tie wrap old harnesses that are no longer used. Make sure that no cables will be caught or pulled when the service tray is opened.

12. Use screw-mounted tie wraps to secure the power strip on the floor of the cabinet near the computer, as shown below. You can also use adhesive-backed Velcro® to secure the power strip.

2.7.6 Install the Players' Card Reader

The SmartCard format Players' Card Reader is required to run Team Challenge. If your cabinet has an existing card reader, it must be removed from the cabinet.

Depending on the style of your cabinet, the card reader or card reader blank plate may be located next to the coin door, or just above it, as shown in Figure 2 that follows.

1. Using a 3/8" wrench, unbolt the card reader or blank plate from inside the control panel.

2. Unplug the card reader cables and remove them from the cabinet.
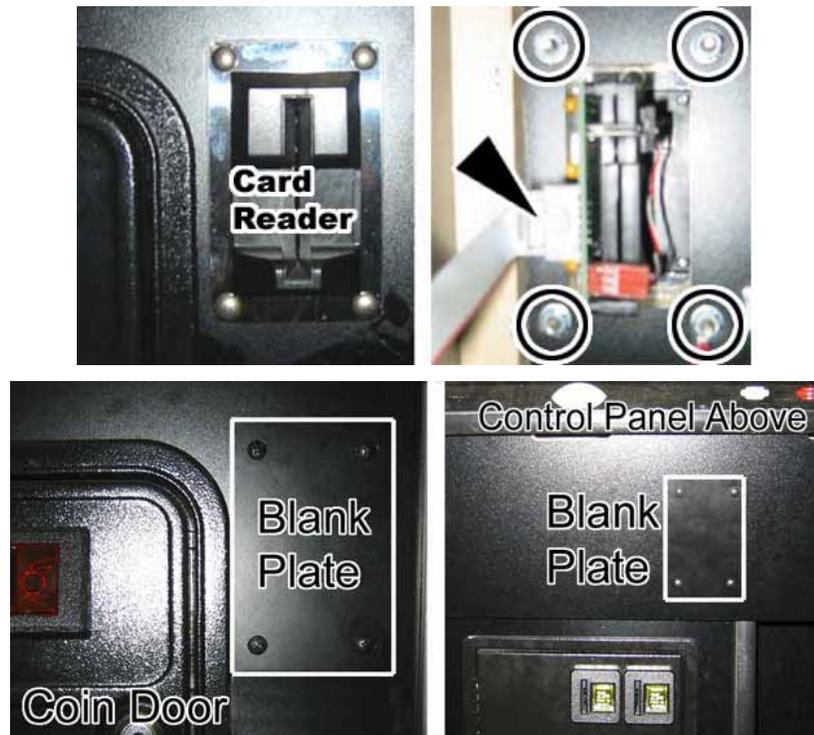
Figure 2.   Card Reader or Blank Plate Removal

3. If your cabinet does not have a hole for a card reader, do the following steps to cut one:

    a. Refer to the picture above for SmartCard reader placement.

    b. Use the SmartCard Reader Template on Page 36 as a guide for cutting a hole for the SmartCard reader.

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

    c. Cut the holes for the card reader and carriage bolts. Check the measurements on the template with a ruler to make sure that the image has not been scaled during printing.

4. Insert the new SmartCard reader in the card reader location and secure it with the four (4) carriage bolts and Kep nuts from the kit. Make sure the LEDs are on the **left** (see Figure 4).
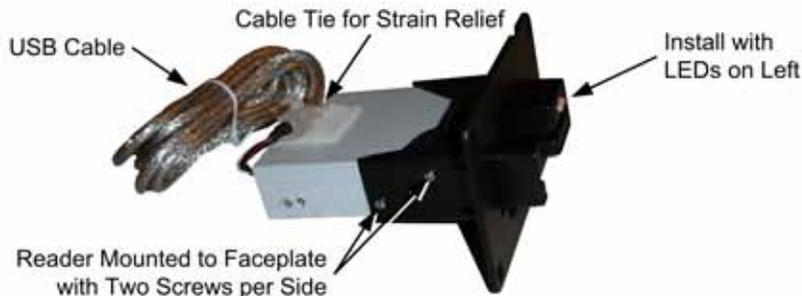
Figure 3.   SmartCard Reader Assembly

5. Peel the backing paper from the new SmartCard Reader Decal, and install it either to the side or below the SmartCard reader.

Install with LEDs on Left

Figure 4.   SmartCard Reader and Artwork Installed

6. Connect the SmartCard reader cable to one of the USB ports on the PCI USB card in the computer. **Do not use** the motherboard USB ports.

2.7.7 Connect the Telephone or Ethernet Cable

1. Refer to Figure 8 on page 32 for computer connections. Connect the telephone cable to the LINE connector on the modem. Or, if you will be using a broadband connection rather than an analog phone line, connect a CAT-5 Ethernet cable (not provided) to the Ethernet port on the computer.

2. Refer to the picture below, and use one of the three options for getting the telephone or Ethernet cable outside of the cabinet.

   Option 1: If your cabinet has a slot in the back door, run the cable out through the slot.

   Option 2: Drill a hole in the back door, and pass the cable through the hole.

   Option 3: Bend two air slots and pass the cable through the opening.
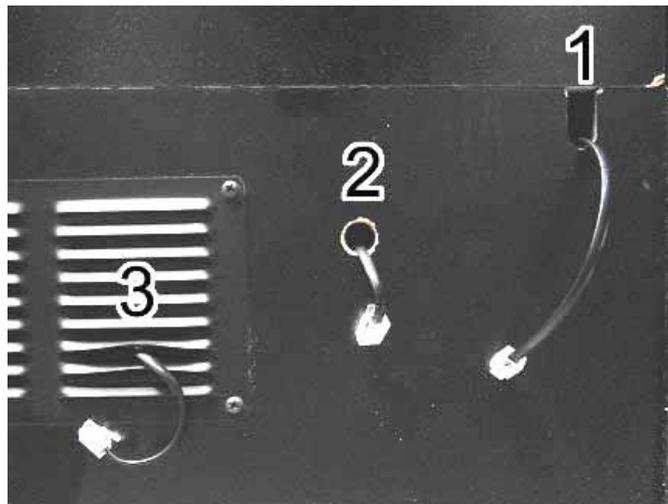
3. Connect the telephone cable to an existing, working analog phone line. Use the 3-way phone splitter if you need to connect more than one device to the same phone line. For broadband, connect the Ethernet cable to your network.

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2.7.8 Install the Cabinet Exhaust Fan

An exhaust fan is generally required to keep the temperature inside the cabinet cool enough for the computer to operate properly.

If you experience blank screens or rebooting issues, this could be due to excessively high temperatures inside the cabinet. Drilling more air holes in the lower rear of the cabinet, as described in step 1 below, should improve airflow and reduce cabinet temperatures.

Perform the following steps to install the exhaust fan and drill air holes:

1. Using a 1/2" drill bit, drill six to eight air holes in the lower rear of the cabinet, as shown in Figure 5. Be careful not to damage any wires or components while drilling.
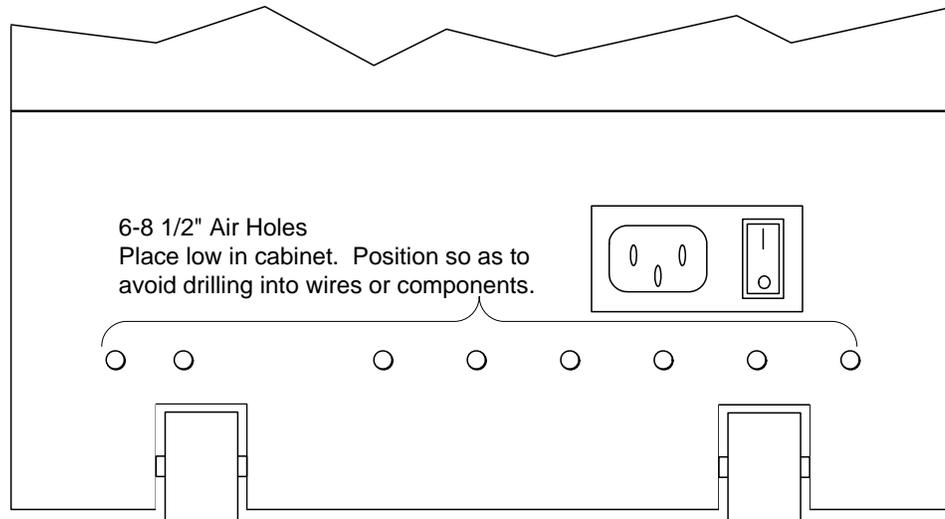
Figure 5.   Drilling Cabinet Air Holes

2. Using a screwdriver, remove the metal or plastic grill covers that cover the ventilation slots on the back of your cabinet. Push in on each corner of the metal grill and they will pop out and fall to the bottom of the cabinet.

3. Install the Exhaust fan behind the ventilation slot, just above the rear cabinet door, as shown by the arrow in the picture below.
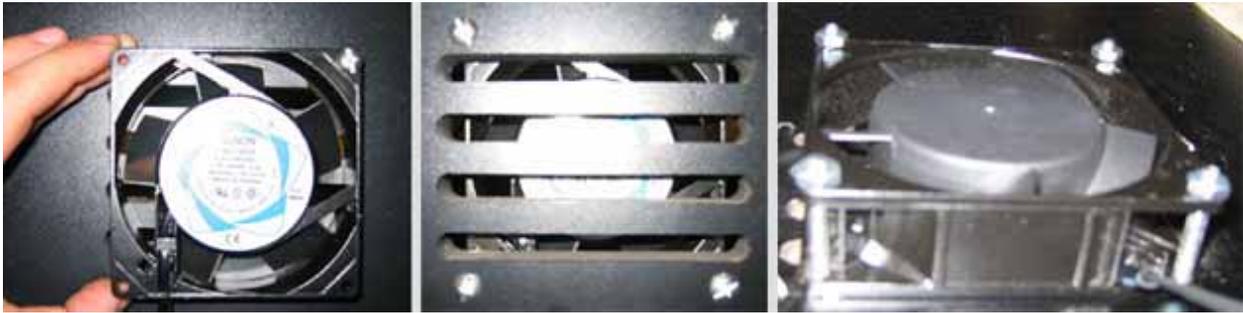
4. Place the Exhaust fan on the outside of the ventilation slots and use the mounting holes in the fan as a template to drill the mounting holes. Use an 11/64" drill bit to drill the four mounting holes for the exhaust fan.

5. Place the fan on the inside of the cabinet so that it will blow air out of the cabinet. Use the 8-32 x 2 inch screws with nuts to secure the fan to the cabinet, as shown in the picture above.

6. Connect the Fan to the AC power strip and verify the fan blows air out of the cabinet.

2.8 Install the New Control Panel

Perform the steps in this section to install the pre-assembled control panel, part #: 45005-00.

1. Open your control panel and disconnect the wires from the buttons. Be sure to label each pair of wires with which button they connected to.

2. Disconnect all wires and harnesses from the control panel. Remove any wire ties that secure the wires to the control panel. Disconnect any ground wires that connect from the control panel to the cabinet.

3. Disconnect the stop chain from the cabinet.

4. Remove the four (4) nuts and carriage bolts that secure the control panel hinge to the cabinet, and remove the control panel.

5. Install the new control panel using the carriage bolts and nuts removed in the previous step.

6. Connect the stop chain to the cabinet.

7. Connect the trackball Molex® connector to the trackball harness that you previously connected to Trackball In, **J5** on the Jamma Conversion Board.

8. Connect the two ground wires from the trackball to the ground lug on the cabinet.

9. Refer to the labels you put on the button wires earlier and connect them to the appropriate buttons. If your cabinet had five buttons on the control panel before the conversion, you can use the old wires to connect all of the new buttons to the Jamma harness.

10. If your cabinet **did not** have five buttons on the control panel before the conversion, connect the 2-Button wire harness (part number 115-0019-01) from the **J6** Button Input on the Jamma Conversion board to the **Fly Over** and **Shot Type** buttons on the Control Panel. Each connector on the harness is labeled with which button it connects to.

11. Use wire ties to secure the wires so that they won't get pulled or pinched when the control panel and service tray are opened or closed.

12. Once the buttons are connected, close the control panel and the service tray, and proceed to Chapter 3 on page 22 to verify proper operation.

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Chapter 3 – Power ON and Test the Cabinet

Before powering the cabinet ON for the first time, please verify the following:

- AC power is correctly set up inside the cabinet.

- The DC power supply is correctly set up to provide power to the Jamma Conversion Board.

- All connections are correct and secure.

Once you have verified that all hardware is installed correctly, power ON the cabinet and verify that the game starts and runs properly, and that all controls function properly.

Press the **Operator** or **Service** button on your cabinet to access the Operator Menus, and then select the menus described below to test cabinet functions.

3.1 Player Control Test

Select **Play Control Test** from the Operator Menu to verify that the trackball, buttons, and coin inputs are working properly.

Press each button and verify that a red arrow appears on the test screen, indicating the correct button. Spin the trackball in any direction, and verify that a yellow arrow indicates the correct direction of spin. If the arrows do not appear, or show the wrong button or trackball direction, the controls are set up incorrectly. Double-check the wiring to correct any problems.

Insert coins and verify that they register on the screen.

Refer to the System Manual for more information about the Player Control Test screen.

3.2 System Test

Select **System Test** and verify that the sound, modem, LED header (if installed), and SmartCard reader are working properly.

From this screen you can also select **Set Monitor Gamma** to adjust the overall brightness of your monitor. This may be useful if you are using an old monitor.

Refer to the System Manual for more information about the System Test screen.

3.3 Cabinet Setup

Refer to the System Manual for information about using the Operator Menus to setup and register your cabinet. The Operator Menus also allow you to obtain important information about your cabinet, including hardware and software information, and game-play statistics.

3.3.1 Volume Adjustment

To adjust your cabinet volume, select the **Machine** Menu from the Operator Menu. If you cannot get desired results, you can adjust the volume using the Audio Volume potentiometers, **R3** and **R4** on the Jamma Conversion Board (see Figure 1 on page 14).

3.4 Monitor Calibration Test
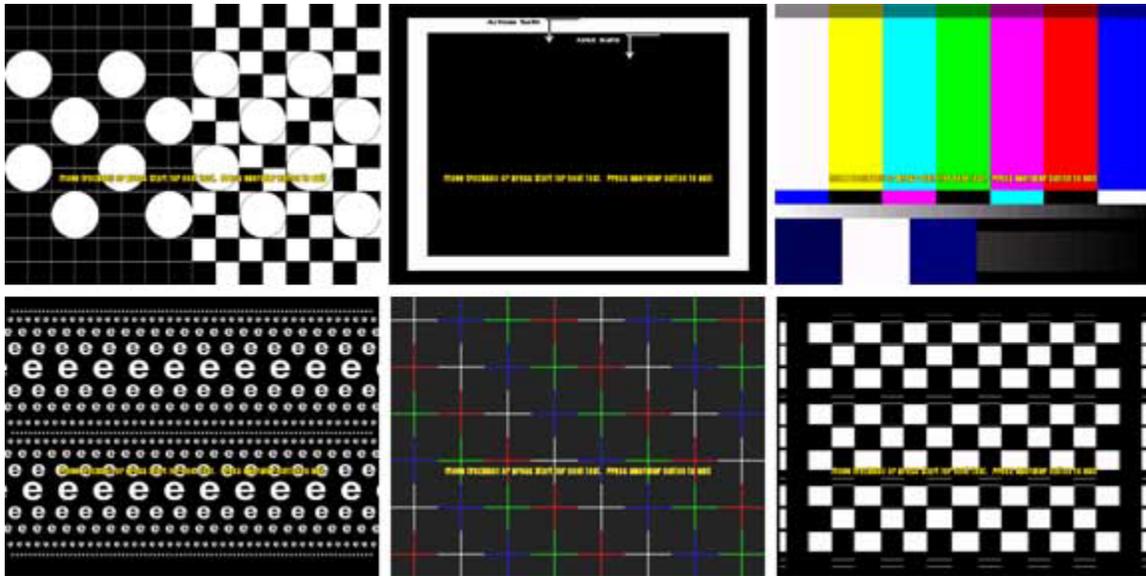
The Monitor Calibration Test shows a series of screens that allow you to adjust the monitor using the monitor remote control panel. Use the trackball or Start Button to scroll through each monitor test screen. To exit the Monitor Calibration Test, press the **operator** button again.

Use the monitor calibration screens to adjust and fine-tune the picture on your monitor. Each screen is designed to help you to either align the horizontal and vertical sync, or adjust the white balance and color hues. If you notice a color distortion on the monitor, pressing the degausser button on the monitor remote control panel may fix the color distortion.

Use the monitor remote control panel to adjust and fine-tune the picture on your monitor. When you press a button on the panel, the Monitor Adjustment Options display on screen. Use the buttons on the monitor remote control panel to select, adjust, and set the available options. The monitor remote control panel is located under the Control Panel on the cabinet.

Chapter 4 — Apply Artwork and Register Cabinet

You must follow the Graphics setup exactly as described in this manual to comply with the Conversion Kit Agreement. You will fail to comply with the Conversion Kit Agreement if you place the EA SPORTS™ logos, GLOBAL VR® logos, or any other cabinet graphics in any position on the cabinet that is not described in the steps of this manual. All pre-existing graphics, serial numbers, and any other visible artwork that is not part of the Conversion Kit must be removed.

4.1 Install the Marquee Artwork

Replace the old marquee artwork with the new EA SPORTS™ PGA TOUR® Golf Team Challenge marquee graphic from the kit.

1. Remove the screws for the top bracket that holds the marquee glass and artwork to the cabinet, as shown by the arrows in the picture above.

2. Clean both sides of the marquee glass.

3. Use the glass as a guide to trim the graphic to fit the marquee.

4. Insert the marquee graphics, and re-install the bracket.

4.2 Apply the Cabinet Side Panel Graphics

The graphics are printed on adhesive material with a backing paper. Perform the steps that follow to align and apply the graphics on each side of the cabinet.

Right Side Graphic   Left Side Graphic

1. Identify the Right and Left side panel graphics for the cabinet. The artwork is printed so that it will align with the curve of the cabinet, as shown in the picture above.

2. Align the side panel graphics on the cabinet. Make sure the graphics extend all the way to each edge of the cabinet, that the text and logos are centered, and that no logos will be cut when you

trim the excess material from the graphics. If the cabinet has carriage bolts on the sides, place the graphic so that it is above the carriage bolts.

3. Once the graphics are aligned correctly, peel off the backing paper and apply the graphics.

4. Using a new Exacto knife, trim the excess material from the graphic, using the outside edge of the cabinet as a guide.

4.3 Apply the Sub-Marquee Artwork
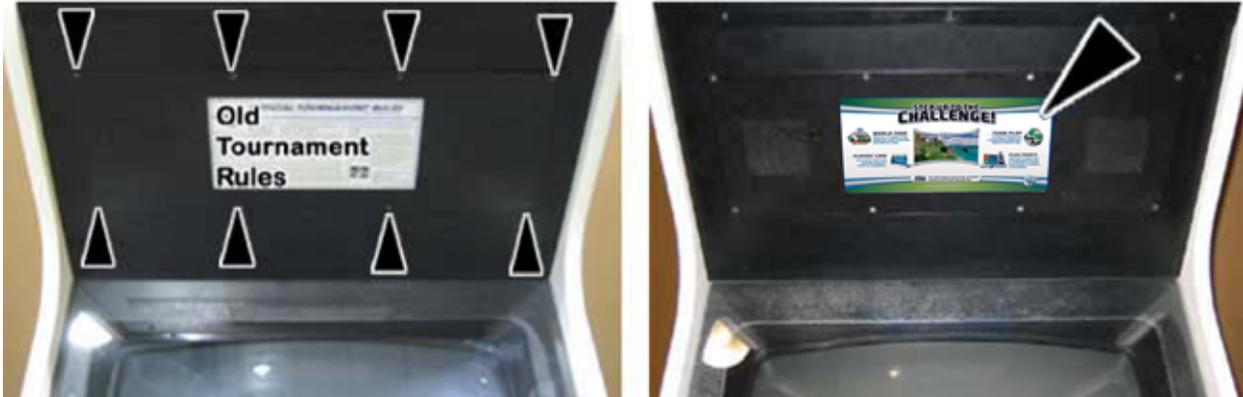
1. Remove the screws that secure the metal plate holding both the sub-marquee artwork and speakers to the cabinet, as shown by the arrows in the picture above.

2. Remove the metal plate and remove the old artwork.

3. Trim the black areas from the top and bottom of the new sub-marquee graphic from the kit. This will make the graphic fit the sub-marquee.

4. Install the graphic and replace the metal plate and screws.

4.4 Apply the Control Panel Front Graphic

Apply the Control Panel Front decal to the front of the control panel. Trim the ends if necessary to make it fit.

4.5 Install the Serial Number Stickers

There are two serial number stickers in the Conversion Kit. Both stickers must be placed as described in this section to comply with the Conversion Kit Agreement.

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

2. Place the Computer Serial Number sticker in a clearly visible location on the system computer, as shown by the arrow in the picture above.

4.6 Register your Cabinet

The Cabinet Conversion is now complete. Refer to your Welcome Kit or System Manual for complete information about registering your cabinet to participate in Tournaments and take advantage of online features.

Chapter 5 – Troubleshooting

Table 1.   Troubleshooting Video Problems

Problem	Possible Cause	Possible Solution
No Picture on Monitor	Power Problem	Verify the AC power connection to the monitor. You can verify the monitor has power by looking for a small glow in the Neck of the CRT.
	Faulty Video Cable	Verify the cable is firmly connected from the computer Video port to the monitor.
	Faulty Monitor Chassis PCB	Verify that the fuses on the chassis PCB are good.
	Picture is Dim or Faded	Use the monitor remote control panel to adjust the brightness and contrast settings to see if this corrects the problem.
	Colors are poor	Use the monitor remote control panel to adjust the red, green, and blue color settings.
Picture is Misaligned or Color is Poor	Picture Geometry is Misaligned	Use the monitor remote control panel to adjust the height and width as well as other geometric adjustments to see if this corrects the problem.
	Distorted Colors on Screen	Use a degaussing coil on the monitor to see if this corrects the color problem.

Table 2.   Troubleshooting Audio Problems

Problem	Possible Cause	Possible Solution
No Audio	Volume Setting	Enter the Operator Menu and adjust the volume setting for the cabinet. Verify that the attract volume is ON.
	Faulty Wiring	Turn off the cabinet. Verify that all the wires are firmly connected to each speaker. Verify that no wires are frayed or improperly shorting to ground.
	Blown Speakers	Remove the speaker grill covers, and visually inspect each speaker. Run the Sound Test from the Operator Menu to verify each speaker is working.
	Faulty Audio AMP	You can verify the Audio AMP on the Jamma Conversion Board is working by installing it into another working cabinet. If that is unavailable to you, plug a simple computer speaker into the audio ports on the computer and verify that sound is working from the computer.
	Volume Set too Low on Board	Adjust volume pots (**R3** and **R4**) on Jamma Conversion Board.
Audio is Distorted or Muffled	Blown Speakers	Remove the speaker grill covers, and visually inspect each speaker. Run the Sound Test from the Operator Menu to verify each speaker is working.
	Faulty Wiring	A weak or low muffled sound is a sign of reversed speaker wires. Check for reversed wires on each speaker.
	Faulty Power Supply	A constant low hum in the speakers can be caused by a faulty power supply that contains a ripple or noise in the power that is being passed through to the speakers.
No Sound from One Speaker (Faulty Sound Channel)	Faulty Audio AMP	You can verify the Audio AMP on the Jamma Conversion Board is working by installing it into another working cabinet. If that is unavailable to you, plug a simple computer speaker into the audio ports on the computer and verify that sound is working from the computer.

Problem	Possible Cause	Possible Solution
	Blown Speakers	Remove the speaker grill covers and visually inspect each speaker. Run the Sound Test from the Operator Menu to verify each speaker is working.
	Faulty Wiring	Turn off the cabinet. Verify that all the wires are firmly connected to each speaker. Verify that no wires are frayed or improperly shorting to ground.
	Volume Set too Low on Board	Adjust volume pots (**R3** and **R4**) on Jamma Conversion Board.

Table 3.   Troubleshooting Computer Problems

Problem	Possible Cause	Possible Solution
No Video	Loose or Faulty Video Card	Verify the video card is firmly plugged into the AGP slot on the computer. When the computer is ON, verify the fan on the video card is spinning and working properly. When the computer boots up, it performs a PC self-diagnostic test. If there is a problem with the video card, you will hear three beeps from the computer.
	Loose or Faulty Video Cable	Verify that the video cable is firmly connected to the computer 15-pin video port and the 15-pin video port on the Video Converter board. Check the video cable and make sure it is not pinched or frayed.
No Video, No Audio	Faulty Hard Drive	If you are getting no audio and no video, and the computer is powered on, you might have a faulty hard drive or corrupted software on the hard drive. Reload the software from the System Restore CDs to see if this solves the problem. If you continue to have hard drive problems while you reload the software you have a faulty hard-drive.
	No Power to Computer	Verify the line voltage is set to the correct voltage for your area (115V or 230V). Disconnect the AC power cord from the computer and then reconnect it to power ON the computer.
No Control Panel or Button Functions	No Power to the USB I/O card	If the USB I/O card is faulty, the buttons and controls on the cabinet will not work. Make sure that the USB I/O card LED is lit.
	Faulty Wiring	Verify that the DB-37 connector is firmly connected to the USB I/O card. Verify that no wires are frayed or improperly shorting to ground in the wire harness.
	Faulty Power Supply	Verify that the External PC Power Supply is working. This provides 12 volt and 5 volt DC power to the hardware connected to the wiring harness.

Table 4.   Troubleshooting Control Problems

Problem	Possible Cause	Possible Solution
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	Turn off the cabinet. Verify that all the wires are firmly connected to each button. Verify that no wires are frayed or improperly shorting to ground.
	Faulty USB I/O Card	If the USB I/O card is faulty, the buttons and controls on the cabinet will not work. Make sure that the USB I/O card LED is lit.

Problem	Possible Cause	Possible Solution
Trackball Does Not Work	Faulty Jamma Conversion Board	Verify that the Jamma Conversion Board is getting power. Test the Jamma Conversion Board on a working cabinet.
	Faulty Wiring	Verify the trackball in a working cabinet. Verify that no wires are frayed or improperly shorting to ground.
Sloppy or Poor Trackball Response	Faulty TTL Sensors	Go into the Operator Menu and run the Player Control test. Spin the trackball in all directions and verify that you are getting a good response. Check the RPM speed on the trackball. When you spin the trackball as fast as you can, you should get a reading of over 9000 RPM if your trackball is in good condition.
	Faulty Jamma Conversion Board	Verify that the Jamma Conversion Board is getting power. Test the Board on a working cabinet.

Table 5.   Troubleshooting Miscellaneous Problems

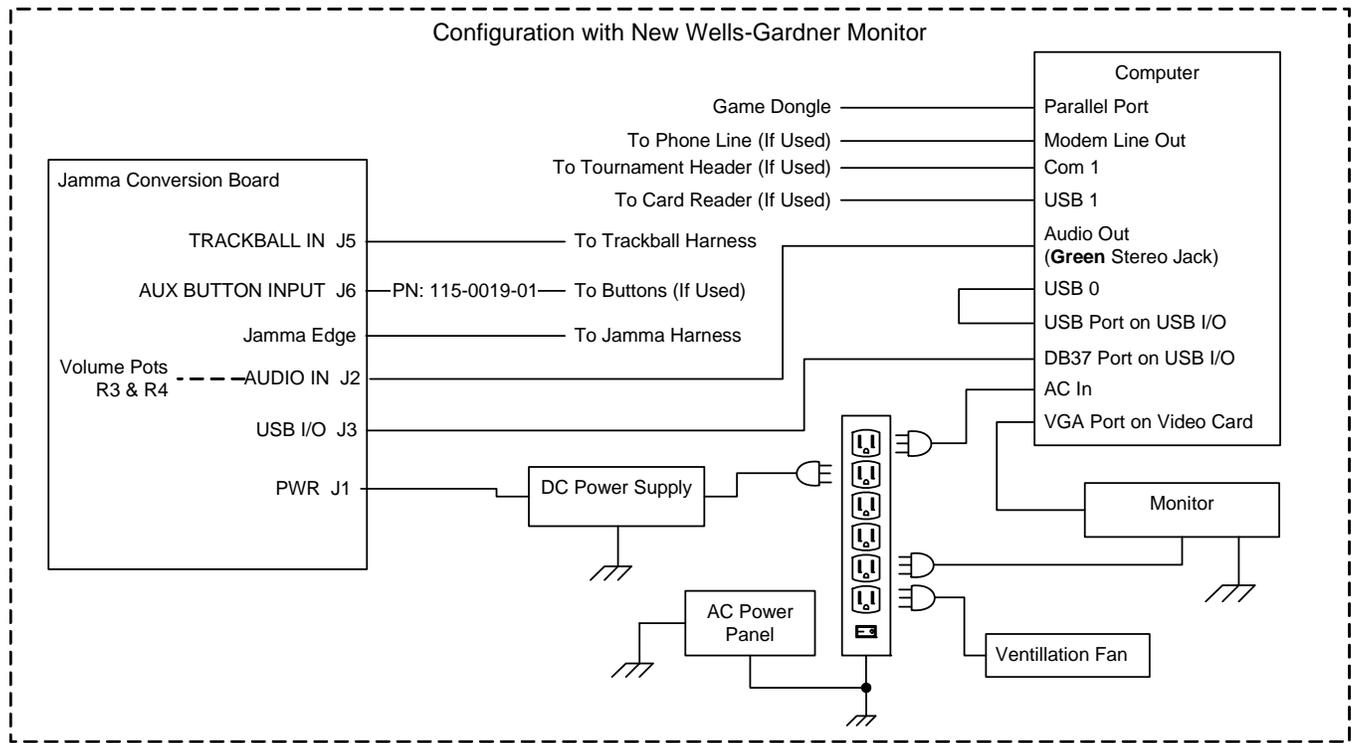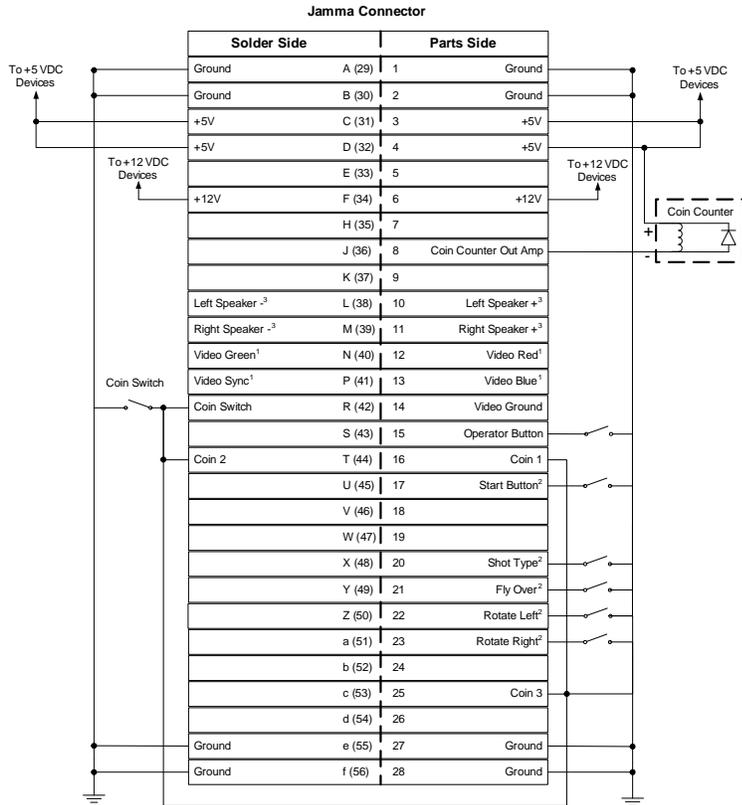| Problem	Possible Cause	Possible Solution
USB Game Dongle Not Found	Game Dongle Not Connected	Connect the Game Dongle to the computer and power the cabinet Off and ON.
	Faulty Game Dongle	If the USB Game Dongle does not illuminate it is not recognized by the computer. Replace the Game Dongle with a working one.
Cabinet Gets Very Warm	Faulty Ventilation Fan	Verify that the exhaust fan is working. It is located near the vents at the top of the cabinet. Replace the fan if worn or spinning slowly.
	Ventilation Holes on Cabinet are Blocked	Make sure you have proper clearance around the ventilation fan at the rear of the cabinet. Make sure the ventilation holes are clear of dust and debris and that air can flow freely.
Marquee Lamp is Faulty or Intermittent	Faulty Fluorescent Tube	Check the fluorescent tube for darkened or cracked end. Replace the fluorescent tube if it looks worn.
	Faulty Fluorescent Fixture	Verify the fluorescent tube pins make a good connection with the lamp fixture. Check the ballast for proper operation.
Improper Amount of Credits Given When Coins or Bills are Inserted	Incorrect Setting in Operator Menu	Verify the Coin settings from the Operator Menu, and adjust them as necessary.
	Faulty Wiring	Turn off the cabinet. Verify that all the wires are firmly connected to each coin mech or Bill Validator. Verify that no wires are frayed or improperly shorting to ground.
Game Will Not Accept Coins or Bills	Faulty Coin Mech	Verify the coin mech is not jammed. Make sure the coin mech is properly aligned and latched to the coin door.
	Faulty Bill Validator	Verify the bill validator is powered ON and working. If the bill validator is faulty, it will usually blink an error code on the inside of the coin door.
Game Does Not Boot. Screen Says USBIO (Nytric) Card is Missing.	Cable from USBI/O Card to Computer USB Port Disconnected or Faulty	Connect the USB cable from the USB port on the USBI/O Extreme card to the computer USB port and reboot the system. If the game still does not boot, replace the USB cable.

Chapter 6 – Diagrams and Schematics

Figure 6.   Simplified Wiring Diagram

Jamma Connector

Solder Side			Parts Side
Ground	A (29)	1	Ground
Ground	B (30)	2	Ground
+5V	C (31)	3	+5V
+5V	D (32)	4	+5V
	E (33)	5	
+12V	F (34)	6	+12V
	H (35)	7	
	J (36)	8	Coin Counter Out Amp
	K (37)	9	
Left Speaker -[3]	L (38)	10	Left Speaker +[3]
Right Speaker -[3]	M (39)	11	Right Speaker +[3]
Video Green[1]	N (40)	12	Video Red[1]
Video Sync[1]	P (41)	13	Video Blue[1]
Coin Switch	R (42)	14	Video Ground
	S (43)	15	Operator Button
Coin 2	T (44)	16	Coin 1
	U (45)	17	Start Button[2]
	V (46)	18	
	W (47)	19	
	X (48)	20	Shot Type[2]
	Y (49)	21	Fly Over[2]
	Z (50)	22	Rotate Left[2]
	a (51)	23	Rotate Right[2]
	b (52)	24	
	c (53)	25	Coin 3
	d (54)	26	
Ground	e (55)	27	Ground
Ground	f (56)	28	Ground

To +5 VDC Devices

To +12 VDC Devices

Coin Switch

Coin 2

To +5 VDC Devices

To +12 VDC Devices

Coin Counter
+
−

Notes:

[1] Jamma video connections are not used with the Wells-Gardner® monitor upgrade.

[2] Jamma button connectors are not used if the buttons are connected directly to **J6** on the Jamma Conversion Board.

[3] For mono audio, only the **Left Speaker+** and **Left Speaker-** speaker connections are used.

Power is supplied to the Jamma Harness through **JI** on the Jamma Conversion Board.

Jamma Conversion Board

J3

GND 1	1
Trackball X2 2	2
GND 3	3
Trackball Y1 4	4
GND 5	5
+5 VDC 7	7
Shot Type Button 8	8
Fly Over Button 9	9
Right Turn Button 10	10
Coin Line 0 11	11
+5 VDC 12	12
+5 VDC 17	17
GND 18	18
Trackball X1 20	20
+5 VDC 21	21
Trackball Y2 22	22
GND 26	26
Left Turn Button 27	27
Start Button 28	28
Operator Button 29	29
GND 31	31
Coin Counter 35	35
GND 36	36
GND 38	
GND 39	

DB37 Port on USBI/O Card

Computer

Computer USB Port — To Smart Card Reader (If Used)

Computer USB Port

USBI/O USB Port

Parallel Port — Game Dongle

Modem Line Out — To Phone Line (If Used)

Com 1 — To Tournament Header (If Used)

VGA Port on Video Card — To Monitor or UVC

J2 (Audio In)

R Audio 2	
L Audio 5	
GND 1	

Speakers Out — AC In — To Power Strip

J5

Trackball X2 2 — YEL	3	3		1	1
+5 VDC 1 — RED	2	2		2	2
GND 6 — BLK	1	1		3	3
Trackball X1 3 — GRN	4	4		4	4
Trackball Y2 4 — VIO	6	6		1	1
				2	2
				3	3
Trackball Y1 5 — BLU	5	5		4	4

Trackball

J4 (Video In)

Video Red 1	
Video Green 2	
Video Blue 3	
NC 5	
Video Sync 4	
Video GND 6	

J7

1	Video Red
2	Video Green
3	Video Blue
5	Video Sync
4	Video GND
6	Hsync/Composite

UVC

J1 VGA In — To VGA Out on Computer

J8 Power In — To DC Power Supply

J1 (PWR)

+12 VDC 1	
GND 2	
GND 3	
+5 VDC 4	

To DC Power Supply

J6 (Button Input)

Rotate Left 1	
Shot Type 2	
Fly Over 3	
Start 4	
Rotate Right 5	
GND 6	

J7

Coin Line 0 1	
Operator Button 2	
Coin Counter 3	
GND 4	

Figure 7.   Detailed Wiring Diagram

Computer Rear Connections – PS35-BL Motherboard

Computer
ON/OFF Switch

Voltage Switch
(115V or 230V)

AC Power In

PS/2 Keyboard Port
(Purple)

Com 1
To Tournament Header
(If Used)

Computer VGA Port
Not Used

Motherboard USB Ports
DO NOT USE

Audio Out (Green)
To Audio Amp

USBI/O DB37 Port
To Player Controls

PCI USB Port
To SmartCard Reader

Phone
(Not Used)

Computer
Power Supply
Cooling Fan

Game Dongle to
Parallel Port

Game Dongle

Ethernet Port
For Broadband
(If Used)

Video Port
To Monitor

Video Card

USB Port on USBI/O Card
To PCI USB Port

USBI/O Card

PCI USB Port
To USBI/O Card

PCI USB Card

Line
to Modem Line Out

Modem

Note: Port and card positions may vary.

Figure 8.   Computer Rear Panel Diagram

LIMITED WARRANTY

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

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

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

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

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

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

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

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

Warranty Service

If at some point you require warranty service, contact your distributor. If technical support staff determines that parts on your EA SPORTS™ PGA TOUR® Golf Conversion Kit are defective, a Return Merchandise Authorization (RMA) number will be issued.

Technical Support

Service & Parts	Tournament Support
Hours: 7:00 AM–5:00 PM Pacific Time Monday–Friday	Hours: 8:30 AM–7:00 PM Pacific Time Monday–Friday
Phone: 408.597.3435	Phone: 408.597.3429
Fax: 408.597.3437	Fax: 408.597.3439
E-mail: techsupport@globalvr.com	E-mail: tournament@globalvr.com
Website: http://service.globalvr.com	**Tournament Billing**
Extended Service Hours (Pacific Time): Monday–Friday: 5pm—Midnight Saturday & Sunday: 7:00am—Midnight	Phone: 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
- Game and Shell version numbers (From the Machine Info screen.)
- Date of latest install or upgrade
- Any changes made to the system
- For game-play issues, the game mode and number of players

For Online Cabinets:

- Cabinet ID (From the Machine Info screen.)
- Date of last successful connection (From the Machine Info screen.)

Find technical documents and service bulletins online at: http://service.globalvr.com

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

Templates for Cabinet Modification

The templates below are provided to cut a hole for a SmartCard reader (Section 2.7.6 on page 17), or modify your cabinet for a 27-inch monitor (Section 2.6.2 on page 9).

Important: Document printing and copying can change the size of templates. Please use accurate measurements. Compare the scale at the left with an accurate ruler to verify the drawing size. All measurements are in inches.

Template for SmartCard Reader

2"

1/4" Holes
2" Center-to-Center

3-3/8"

Opening: 3-3/8" x 2"

1/4" Holes
3-5/8" Center-to-Center

0

1

2
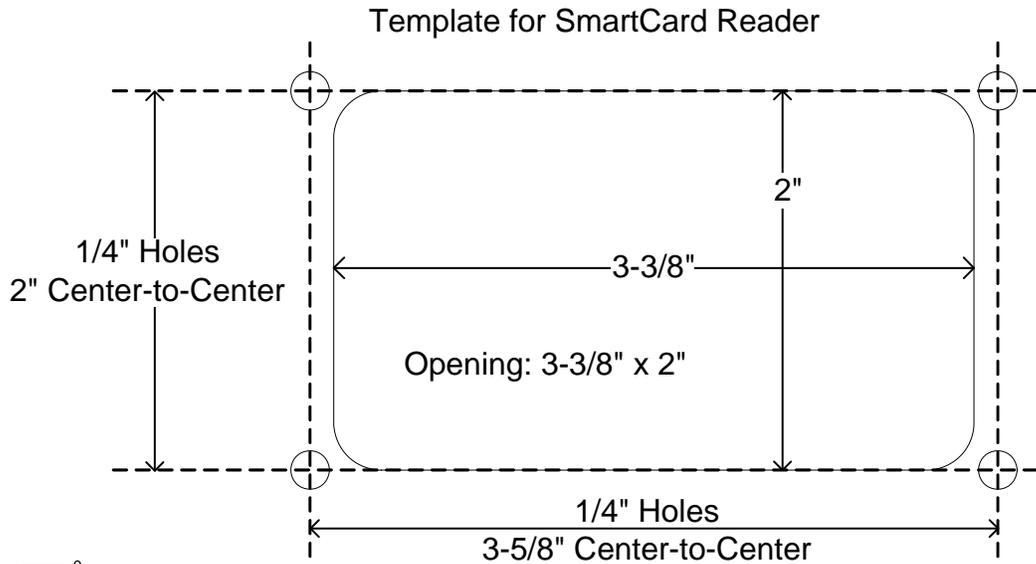
Template for Drilling Monitor Bracket Mounting Holes

To Top Holes

1-9/16"

Existing Holes

1-7/16"

New Holes