VORTEK™ Multi-Game System Hardware Upgrade Kit

040-1003-01 Rev C

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

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Legal Statements

Determine your Computer Type

!! Important Information !! Please Read First

Follow the instructions below to determine which type of computer is installed in your cabinet.

DFI Computer

The DFI computer can easily be upgraded by any service technician, even one not familiar with computers. The computer parts are easy to identify and require only a Phillips screwdriver to upgrade. If your computer looks like the picture below, please continue with the rest of these instructions to upgrade the hardware on your computer.
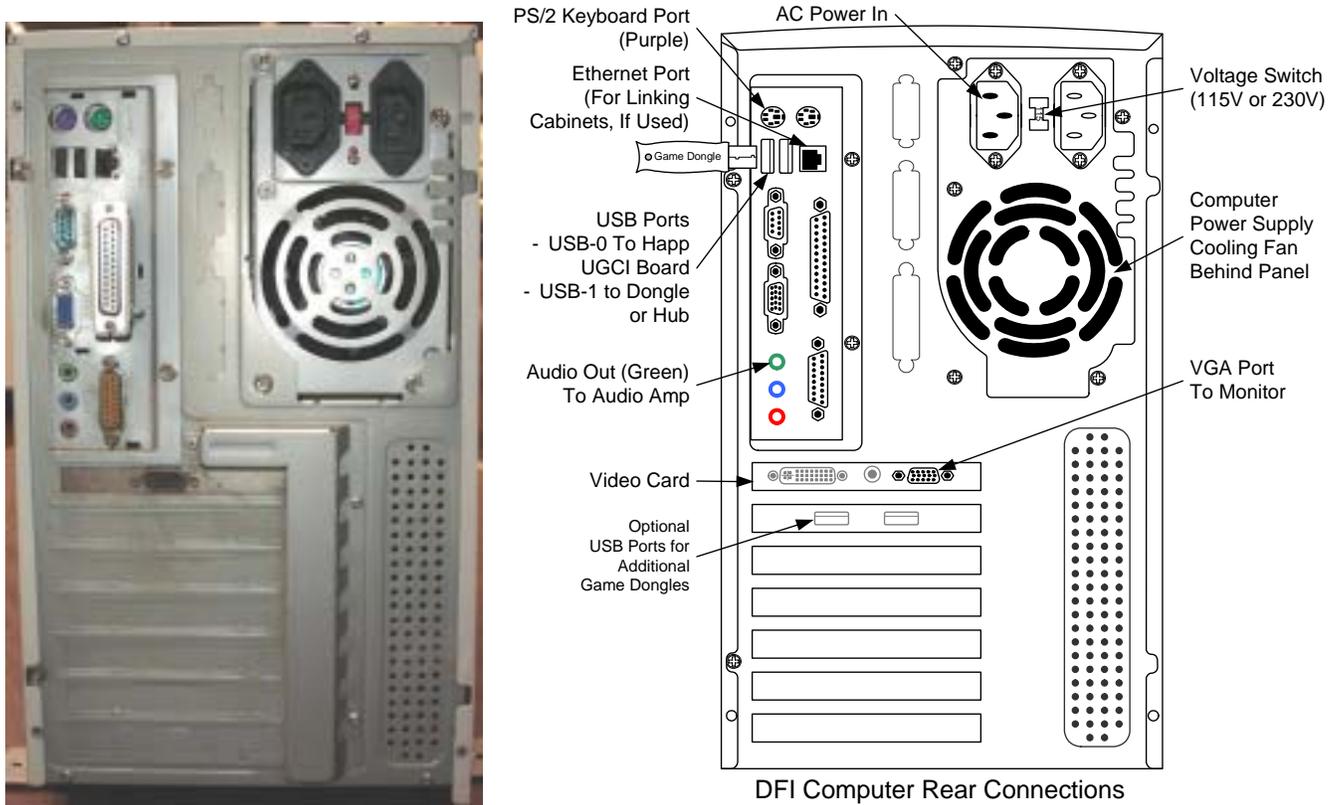

Figure 1.   DFI Computer

Graphite Computer

The Graphite computer is pictured below. These computers are more difficult to upgrade. This document shows the upgrade procedure for a DFI computer. The steps are similar for a Graphite computer, but the components are arranged differently, and you must remove the CD-ROM drive to change the memory stick.

Some graphite computers have a CPU speed of less than 850 MHz. These computers require a CPU upgrade. To determine the CPU speed of your Graphite computer, press the **F2** key during boot up to enter the BIOS screen. The CPU speed is displayed as "Processor Speed" on the default BIOS screen. Contact your distributor or GLOBAL VR® Technical Support to arrange a CPU upgrade.

GLOBAL VR recommends sending Graphite computers to GLOBAL VR to be upgraded by a certified technician. GLOBAL VR is not responsible for any damage done to your Graphite computer in the attempt to perform the hardware upgrade on your own. Please contact your distributor or GLOBAL VR Technical Support to arrange the upgrade.

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. **Do not** return the game dongles with the computer.
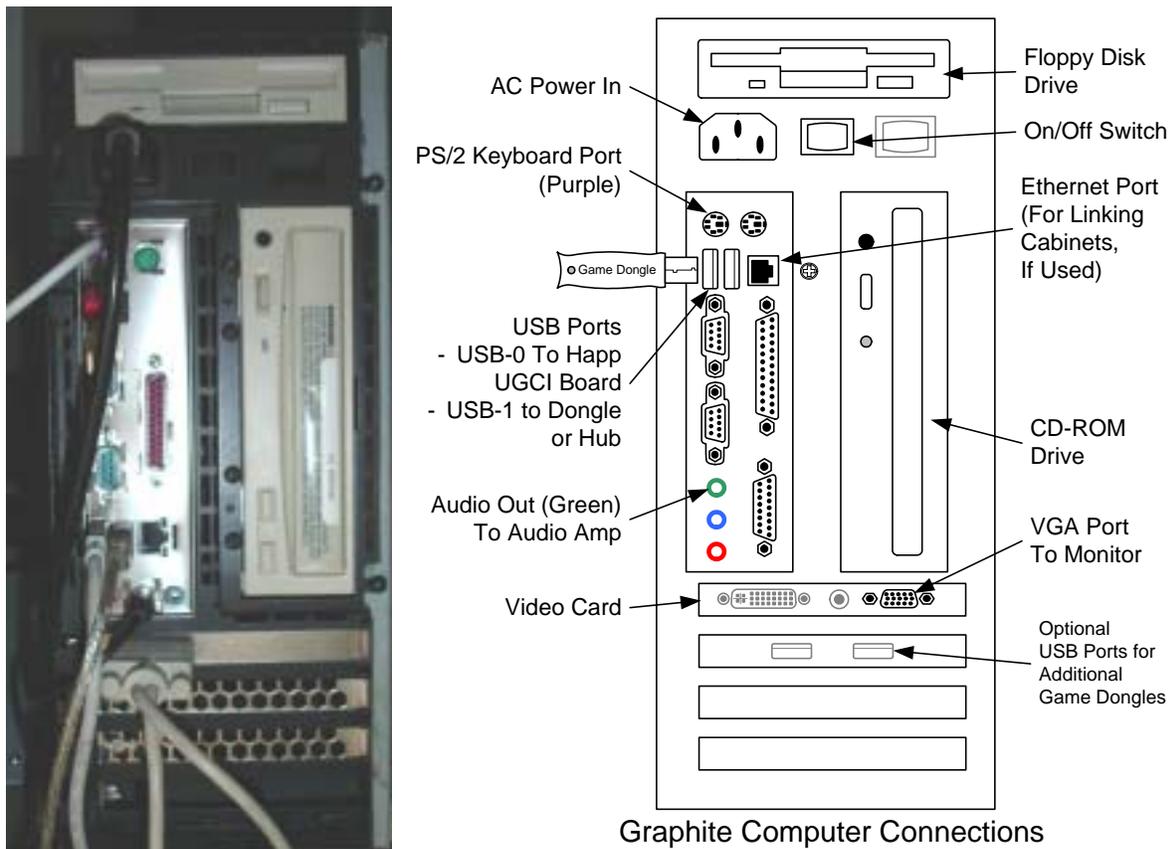
Graphite Computer Connections

Figure 2. Graphite Computer (Shown After Upgrade)

Safety

*Please read this page before beginning the service procedure.*

WARNING	To avoid electrical shock, disconnect the AC power cord before beginning any service or installation procedures.
STOP	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!
CAUTION	To prevent electrostatic discharge (ESD) damage, handle PCBs by the edges only and use a grounding wrist strap or similar precaution.

Upgrade Kit Parts List

This kit will upgrade a VORTEK computer to run the VORTEK Multi-Game Platform. This platform will run all game titles now available from GLOBAL VR.

Description	Qty	Part Number
1 Jaton 3DForce2 MX-64DDR video card	1	
2 512 MB SDRAM Memory	1	315-0512-32
System Disk	1	050-0019-01
This Instruction Document	1	040-1003-01
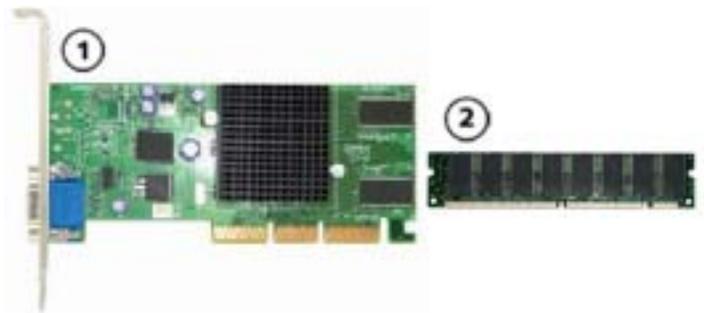
Depending on your exact upgrade requirements, you may have also received game disks and artwork. If any parts are missing from your kit, please contact GLOBAL VR.

Tools Required for the Hardware Installation

- #2 Philips Screwdriver
- Grounding Wrist Strap (for ESD Protection)

Computer Upgrade Procedures

Computer Removal

Note: The location and arrangement of the computer and hardware may vary, but the removal process is generally the same for all VORTEK cabinets.

1. Read this instruction document before beginning the procedure.

2. Turn the cabinet OFF and disconnect the AC power cord.

3. Remove the rear door from the cabinet.

4. Refer to Figure 1 or Figure 2, and disconnect all of the cables from the computer. There should be five cables:

    - AC Power Cable from Power Strip
    - USB Cable from Happ UGCI board
    - Video Cable from Monitor
    - Audio Cable from Audio Amp
    - Ethernet port from Power Plate (Used for Linking Cabinets)

5. Remove the four (4) wood screws that secure the computer-mounting brackets to the cabinet, as shown below, and carefully lift the computer out of the cabinet.

VORTEK Multi-Game Hardware Upgrade Kit
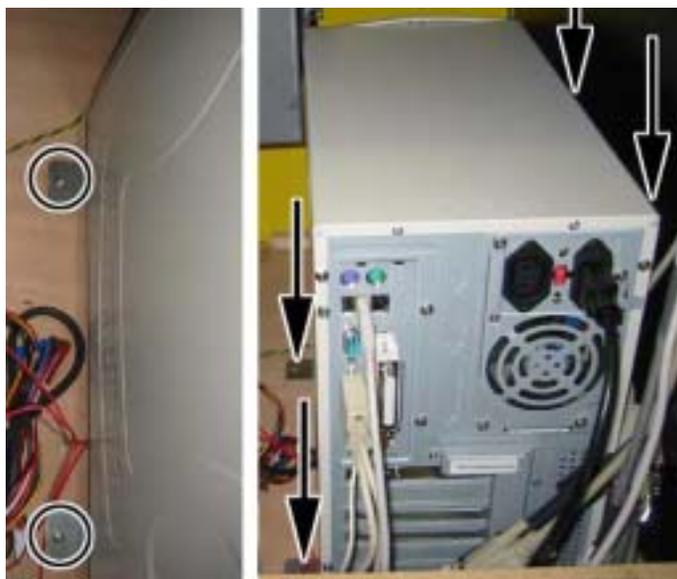
Computer Hardware Upgrade

1. Remove the two screws holding the computer cover on, as shown by the circles below. Pull the cover back 1/4 inch (1), and then pivot it outward (2), as shown in the picture below.
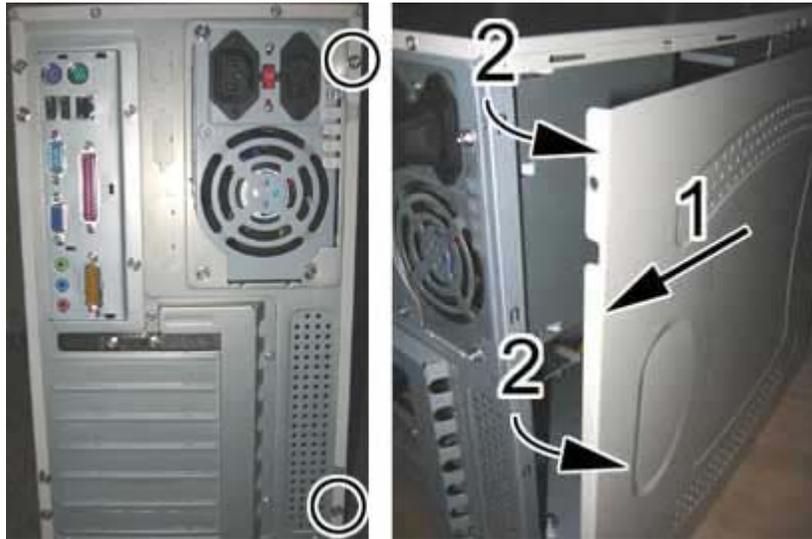
2. Remove the COM 2 serial port from the back of the computer. Use a #2 Philips screwdriver to remove the screw that holds the port in place (1), and unplug the cable from the motherboard (2).

3. Locate the 128 MB memory stick installed in the computer, as shown by the circle below. Press the tabs outward (open) to unlock the memory stick from the motherboard, as shown by the arrows in the picture below, and then gently pull the memory out.
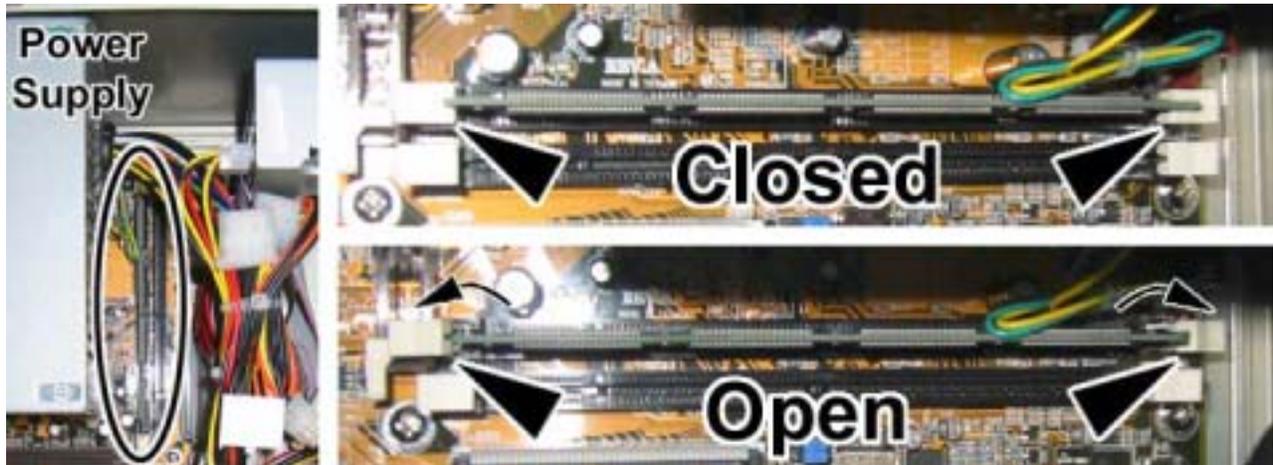
4. Line up the 512 MB memory stick with the first memory slot on the computer. Be sure the tabs are open, and align the two notches in the memory stick with the guide pins in the slot, as shown by the circles in the picture below. Gently press the memory stick in, until it is securely held by the locking tabs.
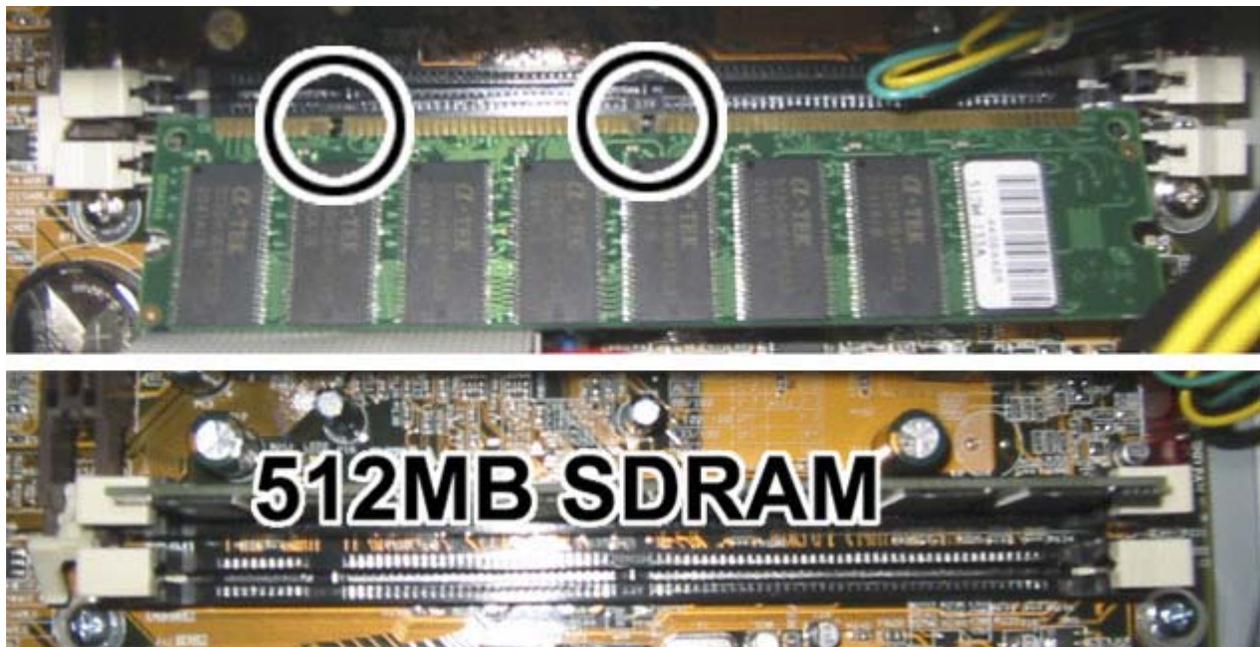
5. Locate the AGP slot in the computer. Be sure the card lock at the end of the AGP slot is open, as shown below. Insert the AGP video card into the AGP slot and use a #2 Philips screwdriver to secure the video card to the chassis, as shown in the third part of the picture below.
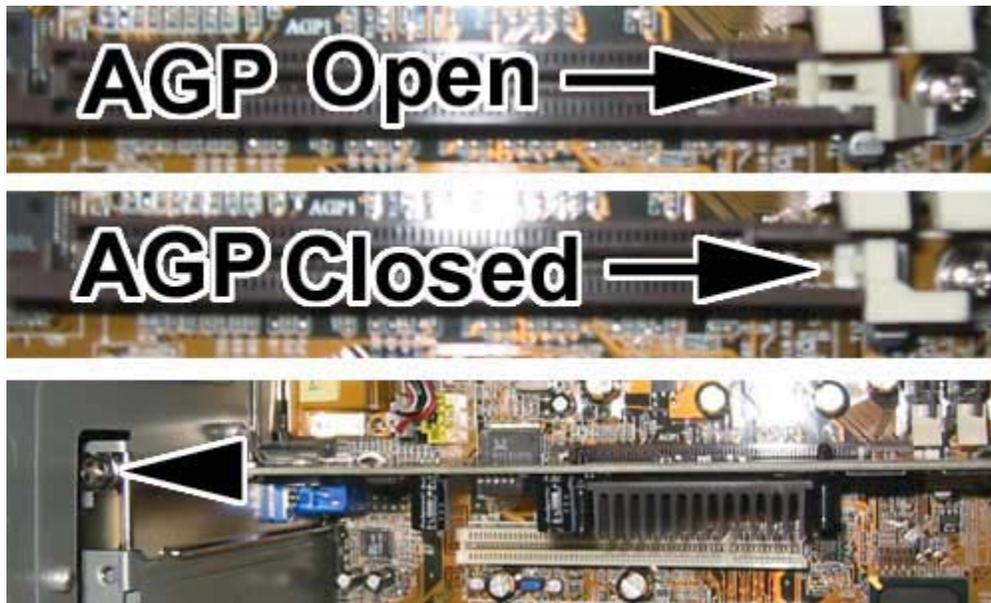
6. To confirm that the video card is installed correctly, make sure that there are no gold tabs showing just above the AGP slot.

7. Re-install the computer cover by reversing the removal process. You will need to align the teeth on the lid with the slots in the chassis to close the lid properly, as shown in the picture below.
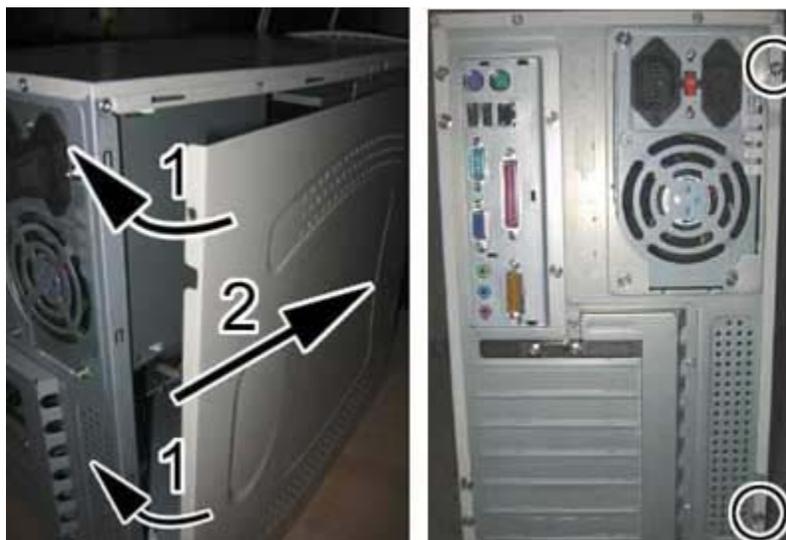
8. Re-connect the cables to the computer. **Be sure to connect the video cable to the VGA port on the new video card,** *NOT* to the port used previously (located above the audio ports).

    Hint: Leave the computer outside the cabinet while you perform the software upgrade (see page 11) so that you can easily reach the CD-ROM. All of the cables should be long enough to reach the computer.

9. When you finish installing the software and have verified that everything is working properly, turn power OFF and install the computer into the cabinet by reversing the removal steps.

Linking Cabinets for Multi-Player Games

Operation Blockade and Invasion Earth allow players to compete in real time on linked cabinets.

To link two cabinets, connect a CAT5 Ethernet cable to the Ethernet port on each cabinet, and connect the two cables to each other with a crossover coupler. VORTEK™ cabinets are shipped with a 10-foot Ethernet cable. Software kits that include linkable games also include an Ethernet cable and crossover coupler.

Operation Blockade also allows linking three or four cabinets by using an Ethernet Hub (not included). To link three or four cabinets, connect the Ethernet cable from each cabinet to the Ethernet hub (**do not** use a crossover coupler with a hub). You will also have to provide power to the Ethernet hub.

Software Installation

Important: Please be aware, when you use the System Disk you will erase all games as well as all settings and history for the coin and game audits stored in the game software.

Upgrade the Operating System with the System Disk

The System Disk will install the Multi-Game Platform software on your system.

Note: This game platform does not use a floppy disk for booting as some earlier software versions did.

1. Power ON the computer and open the CD drive.

2. Insert the CD labeled **System Disk**.

3. Turn the computer OFF and then ON. The computer should boot from the CD. You will see the Hard-Drive Image process screens on the monitor.

   If the computer does not boot from the CD (the game starts), make sure the CDROM is set as the first boot device in the BIOS settings (see page 13).

4. When the Hard-Drive image process has finished, remove the CD and reboot the computer.

5. When the computer reboots, a Found New Hardware wizard will appear. This occurs because the drivers for the Jaton 3DForce2 MX-64DDR video card are supplied on the **Invasion Earth** Game Software CD, or a separate VORTEK Video Driver CD. Install video drivers **only** from disks supplied by GLOBAL VR.

   Insert the **Invasion Earth** Game Software CD (or the separate VORTEK Video Driver CD). The wizard will install the drivers from the CD. (The game will **not** be installed at this time. To run this game, you must purchase the game kit that includes the correct game dongle.)

6. Once the drivers are installed, you will see a dialog box with a **Finish** button. Remove the CD, reboot the game, and install the game software.

Install the Game Software CDs

Important: GLOBAL VR recommends that you install **Operation Blockade** first, and **Invasion Earth** last, as this has proven to be the most successful order to ensure that the games install properly. (Disregard if not installing these games.)

The cabinet must be powered ON and running the attract mode to install new game software. If no games are installed, make sure that you see the mouse pointer for the Windows XP Operating System before inserting the game CD.

1. Connect the game dongle(s) to the USB port or USB hub. (See page 13 for more information.)

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2. Open the CD-ROM drive and insert a game software CD. Close the drive and the game install will begin automatically. Within 30–60 seconds you will see onscreen information as the game software begins to copy files from the CD-ROM

3. When the game software has finished installing, the computer will automatically reboot. Once the computer is rebooted, remove the Game software CD and keep it in a safe place.

4. Repeat the previous steps as necessary to install more games. Be sure to insert the CD only when the game is running the Attract Mode.

5. If you have installed a Multi-Player game, such as Operation Blockade or Invasion Earth, refer to *Linking Cabinets for Multi-Player Games* on page 10 for information on linking multiple cabinets.

6. After all games are loaded, synchronize the game software by coining up the machine (insert 3 credits), and then verify that the three credits are shown (i.e., $0.75) on the monitor. Power cycle the system to complete the synchronization process.

7. Once games are installed, they will appear in the game menu and be available for players. Play each game to verify that it is operating properly.

8. Enter the Operator Menu to setup your games and to enable or disable games.

Troubleshooting

Problem	Possible Solution
Computer does not boot from System Disk	Make sure that CDROM is set as the first boot device in the BIOS (see page 13).
Game Software CD does not Auto Start	Try ejecting the CD and re-Inserting it to re-activate the auto-install process. Verify the CD-ROM tray has fully closed and is not jammed.
Turn Game On and Nothing Happens	Make sure the power cord is connected to the computer and power strip, and the power strip is on. Make sure the cabinet On/Off switch is on. Confirm the power cord is plugged into a working AC outlet. If the computer boots when you press the power button, make sure that PWR Lost Resume State is set to Turn On in the BIOS (see page 13).
White Screen Displayed Game does not Start	This can sometimes occur if Invasion Earth was installed and other games were installed afterwards. Run the System Disk and then re-install all games. Be sure to install Operation Blockade first and Invasion Earth last.
No Picture or Distorted Picture	Check for a bad video cable or faulty video board or monitor. Check for a loose or disconnected video signal cable. Make sure the monitor has power.
No Response from Headset or Buttons	Check that the signal and ground wires are connected to the Headset and buttons. Confirm the HAPP UGCI card is connected to a USB port on the computer (**not** to a USB hub). Confirm the HAPP UGCI card has power by looking for the Green LED.
No Credit given when Coins are Inserted	Check the settings in the Operator Menu. Check the signal wires between the coin mech and HAPP UGCI card. Check the power wires to the coin mech.
To many Credits for Number of Coins Inserted	Check coins per $ setting in the Operator Menu.
Game Dongle not found	Check to make sure the USB Game Dongle is connected to the USB port on the back of the computer. If the USB Game Dongle is present and working correctly it should light up with a Red LED. If the dongle is not present, plug it back in and reboot the computer. If you are using a USB hub, test the hub to make sure it is working properly.
No Audio	Make sure audio amp is connected to the **green** audio port in the computer, audio amp has power, and the volume pot is not turned all the way down.

BIOS Settings for Graphite Computer

Press the **F2** key during boot to enter the BIOS settings screen. Change the settings shown below. Leave other settings at default values. When finished, press **F10** and select **YES** to confirm.

Tab	Item	Setting
Power	After Power Failure	Power On
Boot	1st Boot Device	Removable Dev
	2nd Boot Device	ATAPI CD-ROM
	3rd Boot Device	Hard Drive

BIOS Settings for DFI Computer (with CS-35TL Motherboard)

Press **Del** key during boot to enter BIOS settings screen. Change the settings shown below. Leave other settings at default values. When finished, select **Save and Exit** and press **Enter.** Select **YES** to confirm.

Menu	Item	Setting
Standard CMOS Features	Halt On	No Errors
Advanced BIOS Features	First Boot Device	CDROM*
	Second Boot Device	HDD-0*
	Third Boot Device	Disabled*
Advanced Chipset Features	Memory Frequency For	DDR266
	Dram R/W Timing	Fast
Integrated Peripherals	PWR Loss Resume State	Turn On

*If a Floppy Disk Drive is installed, set Floppy as First Boot Device, CDROM as Second Boot Device, and HDD-0 as Third Boot Device.

USB Game Dongles

Each Game installed on the VORTEK cabinet requires a USB Game Dongle to activate the game. If you purchased your cabinet with multiple games, all of the games in the kit will be activated by one multi-game dongle. If you buy game upgrades separately, you will receive additional dongles.

When the USB Dongle is installed and working properly, a Red LED will light up inside the Dongle. The dongle must be installed before the cabinet is powered ON or the software may not recognize the dongle. If you see a NO DONGLE message, power the cabinet OFF then ON to see if this resolves the problem.

Red Light Here When Active

To install multiple game dongles, use a USB hub to create more USB ports. You can daisy-chain two hubs if necessary, as shown above. You can purchase USB hubs at any computer store. The computer can also be upgraded with additional USB ports in the rear panel, as shown in the drawing on page 3.

Important: Do not connect the USB cable from the HAPP GCI Controller card to the USB Hub as this will cause the card to malfunction.

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Warranty Information

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:

1. Purchaser believes that the Product is defective in material or workmanship and promptly notifies GLOBAL VR in writing with an explanation of the claim;

2. All claims for warranty service are made within the warranty period;

3. Products are returned adequately packed and freight prepaid to GLOBAL VR's designated service center;

4. 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

Service & Parts

Hours: 7:00AM–5:00PM Pacific Time, Monday–Friday

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E-mail: techsupport@globalvr.com

Website: http://service.globalvr.com

Free telephone, e-mail, and online support are provided for systems during the warranty period. GLOBAL VR Technical Support can help you troubleshoot problems and diagnose defective parts. We can also answer questions about the operation of your game.

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

- Cabinet Serial Number: _____

- Software Version and Games Installed: _____

- Proof of Purchase information

- Your mailing address and telephone number

- A summary of the question or a detailed description of the problem

- Specific error message

- Date of latest install or upgrade

- Any changes made to the system

- For game-play issues, the game and number of players

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