



Deluxe Motion Upgrade Kit Instructions

040-0206-01 Rev. A

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



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Introduction

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Introduction

This document describes the steps for upgrading a *Need for Speed™ Underground Deluxe Motion Cabinet* to *Need for Speed™ Carbon*. The Upgrade Kit includes a new computer, Software, Game Dongle, Artwork, and an external mounting bracket for the Nytric USB I/O PCB.

Need for Speed™ Carbon software requires a new computer. You will need to remove the Digital-Analog Converter (DAC) card and Nytric USB I/O PCB from your existing computer.

Be sure to keep your *Need for Speed™ Underground Operation and Service Manual* for cabinet setup, service, troubleshooting, parts, and general hardware reference information. Refer to the *Need for Speed™ Carbon Operation Manual* from the kit for operation and game play information, including detailed information on using the Operator Menu.

Technical Support

Need Help? Need a Part? Contact Technical Support:

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

Phone: 408.597.3435

Fax: 408.597.3437

E-mail: techsupport@globalvr.com

Website: <http://service.globalvr.com>

Extended Service Hours: Monday–Friday 5pm—Midnight Pacific Time
Saturday & Sunday 7:00am—Midnight Pacific Time

Upgrade Kit Contents

- New System Computer, Pre-Installed with Need for Speed™ Carbon Motion Software
- System Recovery Disk (1 CD)
- Motion Install Disk (1 CD)
- Game Install Disk (1 DVD)
- Game Dongle
- Dongle Return Envelope
- External Mounting Bracket for Nytric PCB, with two (2) 4-40 screws and four (4) wood screws
- Documents:
 - This Instruction Document
 - Operation Manual
 - Software Restore Guide
 - Checklist for Optimal Cabinet Operation
- Cabinet Artwork (see page 10)
- New Game Sign
- Serial Number Label

Note: Be sure to keep your *Need for Speed™ Underground Operation and Service Manual* for cabinet setup, service, troubleshooting, parts, and general hardware reference information.

Tools Required

- ESD-Protective Wristband or similar
- Screwdriver with assorted Phillips & Torx® security bits (typically T-9, T-15, T-20, & T-25)
- Squeegee for smoothing graphics
- Exacto® Knife (or similar) and sharp blades

Test and Clean Before Upgrade

Installing new software will not fix existing hardware problems. Refer to the checklist included in the kit, and perform the checks to make sure your cabinet is in optimal operating condition before the upgrade. Refer to Chapter 5 of your *Need for Speed™ Underground Operation and Service Manual* for detailed information and repair instructions.

Open Display Cabinet and Remove Computer

1. Turn off the game and disconnect both AC power cords from the back of the display cabinet.
2. Remove the rear panels and front access panel from the display cabinet.
3. Disconnect all of the cables from the back of the computer. Make sure they are labeled for easy reconnection.
4. The computer is secured in place with a U-bracket. Remove the two (2) screws at each end of the U-bracket and remove the bracket and the computer. Take the computer to a workbench.

Remove Components from Old Computer

The new computer in the kit is pre-loaded with Need for Speed™ Carbon Motion Software. You will need to remove the Digital to Analog Converter (DAC) Card and Nytric USB/I/O Card from your existing computer. You will be installing the DAC Card in the new computer, and the Nytric Card in the external mounting bracket from the kit.

Note: Keep all posts and retaining screws for re-installing the components.

1. Remove the case screw and press the button on the side panel, as shown below, to remove the side panel from the computer. (Remove the side with the ventilation holes.)



Figure 1. Opening a Computer

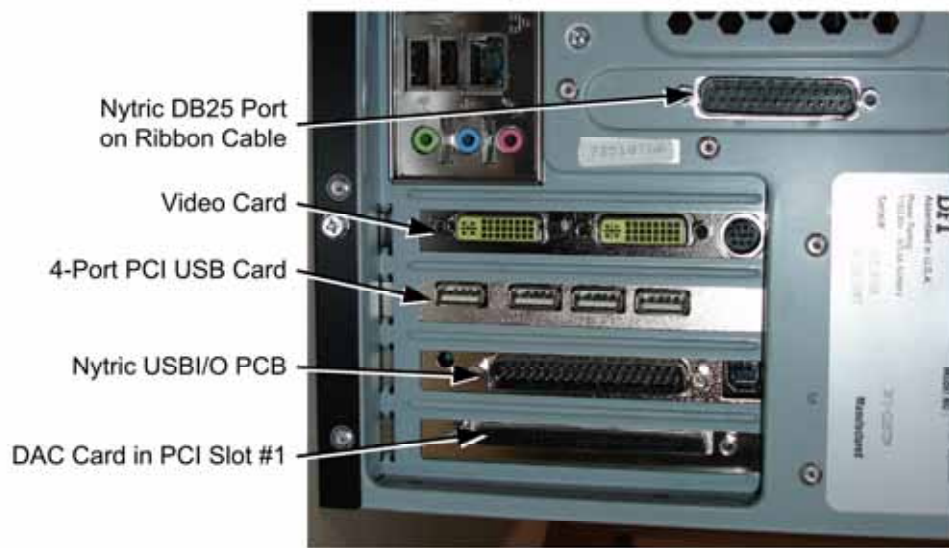
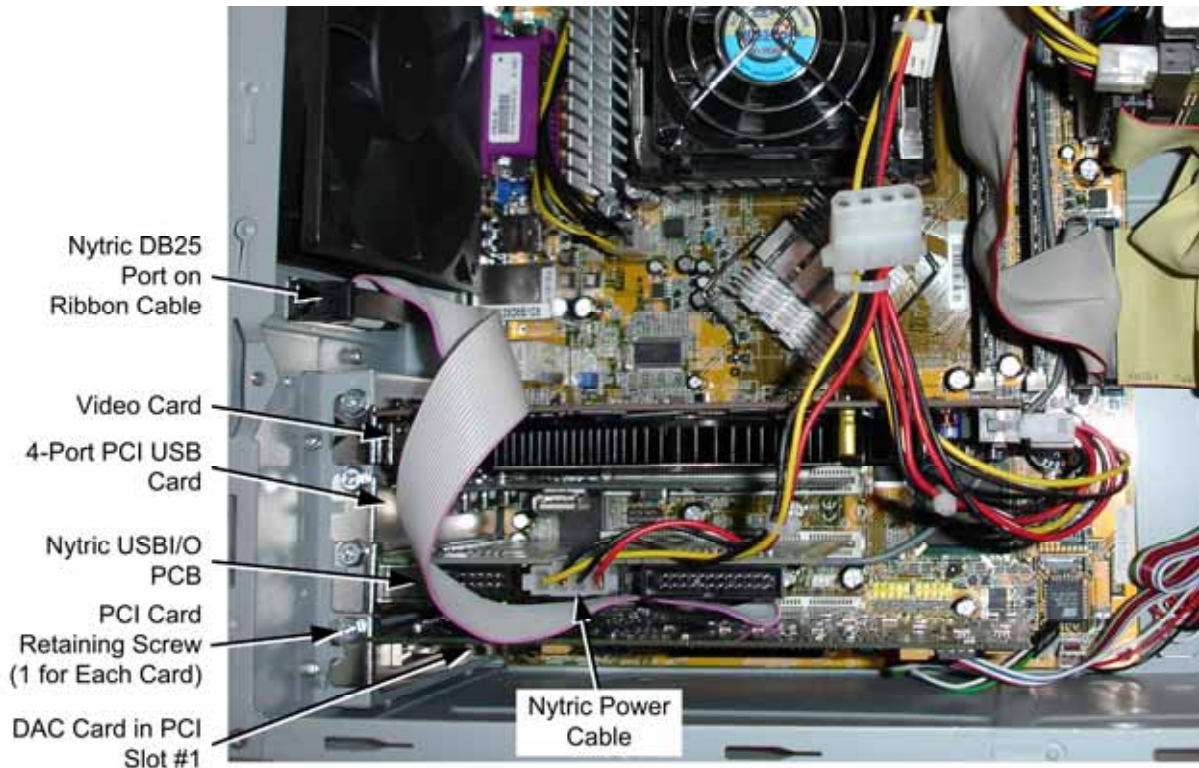


CAUTION

Be very careful to avoid damaging the PCBs during handling!

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

2. Refer to Figure 2 and perform the following steps to remove components from the old computer:
 - a. Remove the retaining screw that secures the Digital-Analog Converter (DAC) card in the computer. Carefully remove the card by pulling it straight out.
 - b. Remove the two posts that secure the Nytric DB25 connector (on the Ribbon Cable) to the back of the case.
 - c. Disconnect the Power Cable from the Nytric USB I/O PCB inside the computer.
 - d. Remove the retaining screw that secures the Nytric PCB in the computer. Carefully remove the PCB by pulling it straight out.



Computer Rear Panel

Figure 2. *Need for Speed™ Underground Computer*

Install DAC Card & Game Dongle in New Computer

Note: There is a 4-pin PC Power Harness routed out of the computer to power the Nytric PCB.

1. Remove the side panel from the new computer the same way as the old computer.
2. Refer to Figure 3 and carefully install the DAC card in PCI Slot 1, next to the 4-Port PCI-Express USB Card, by pressing it straight down into the slot. Secure it with a Card Retaining Screw.

Important: The PCI slot right next to the video card must be empty.

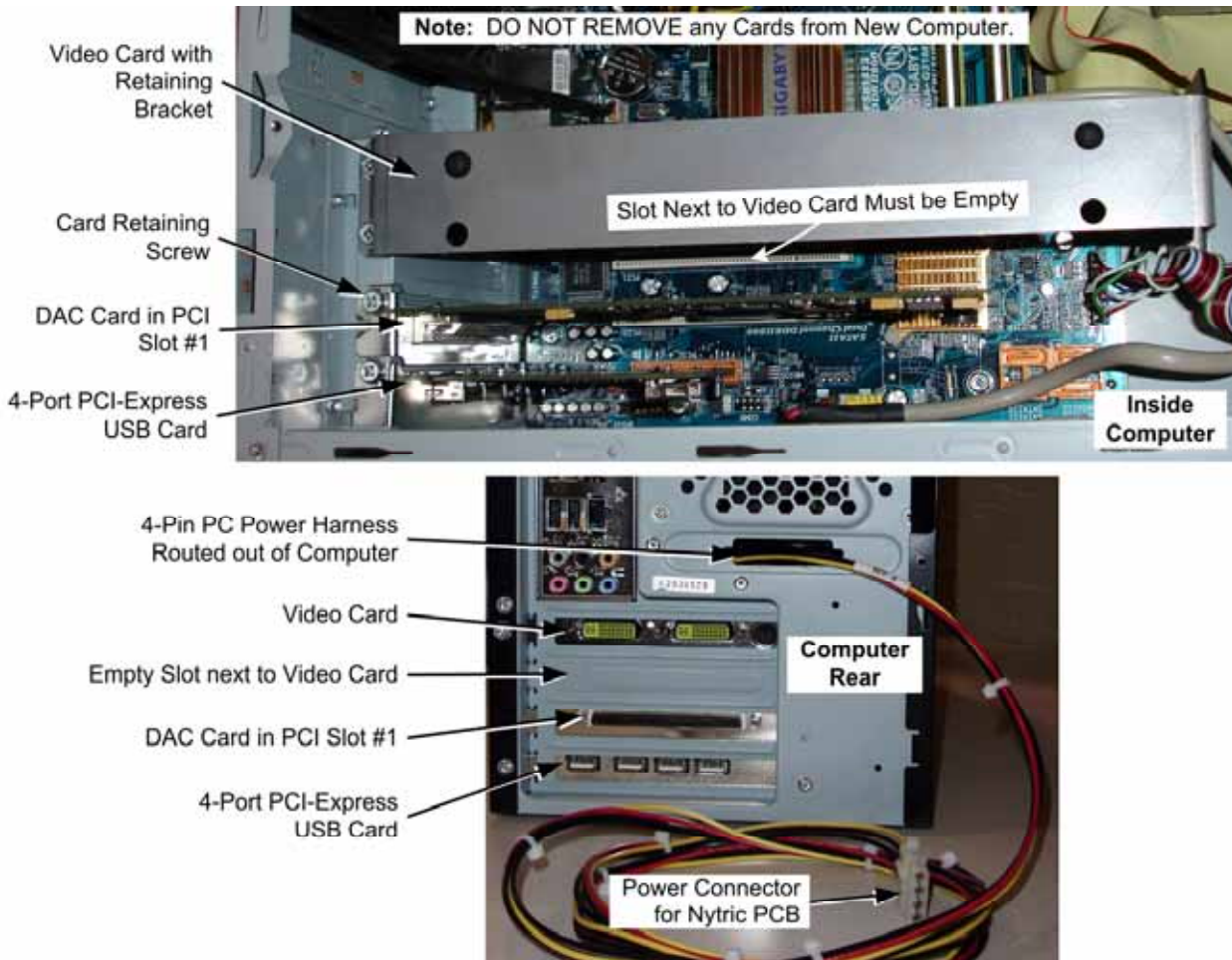


Figure 3. New PC with DAC Card Installed

3. Connect the new Need™ for Speed Carbon Game Dongle from the kit to any USB Port.
4. At this point, it is a good idea to test the computer on the bench.



WARNING

Do not touch any internal components while the computer is connected to power.

To test the computer, connect a computer power cord and power on the computer. Confirm that all fans work (power supply, video card, and case fans) and no cables are hitting the fans. If a monitor is available, connect it and confirm it displays an image. (The monitor should display an I/O Card Error screen since the Nytric PCB is not connected.)

5. Replace the side panel on the computer and secure it with the case screw.
6. Make sure the 4-pin PC Power Connector is routed out of the computer to power the Nytric PCB.

Note: You may wish to keep your old computer for spare parts. The parts are compatible with any Need™ for Speed Underground computer.

Install Nytric PCB in External Bracket

Perform the following steps to install the Nytric PCB in the external bracket. See Figure 6 to identify parts of the Nytric PCB.

1. Remove the two posts from the faceplate that was used to secure the Nytric PCB in the computer. The housing around the DB37 port will be loose once the posts are removed. Make sure you keep the housing in the correct orientation, with the wider part facing up as shown in Figure 4, or you will not be able to connect the cable later.

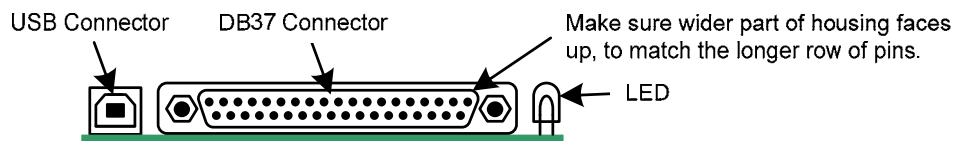


Figure 4. DB37 Connector on Nytric PCB

2. Place the PCB in the bracket as shown in Figure 5, and secure it on the two legs with the two (2) 4-40 screws from the kit.
3. Use the two posts removed previously to secure the DB37 port to the bracket
4. Install the DB25 port on the ribbon cable to the bracket as shown, and secure with the two posts removed previously.

Note: You will be mounting the bracket and PCB in the cabinet near the computer.

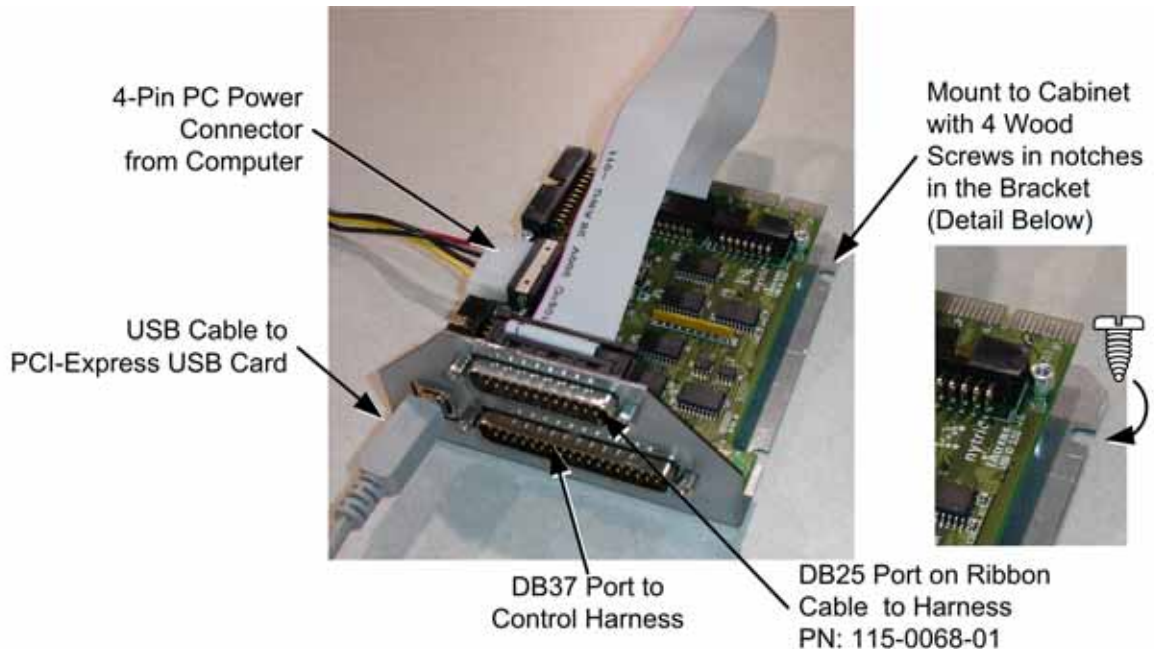


Figure 5. Nytric PCB in Bracket

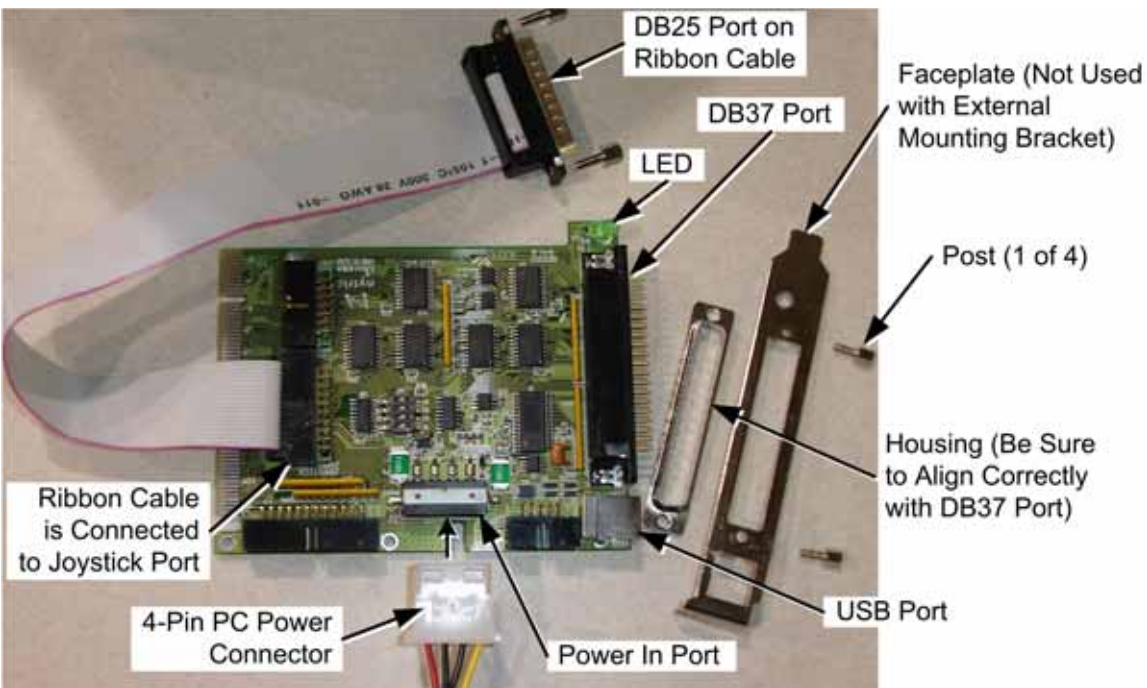


Figure 6. Parts of the Nytric PCB Assembly

Install the Computer in the Cabinet

1. Place the computer in the cabinet in the same orientation as the old computer removed previously.
2. Secure the computer in the cabinet with the U-bracket removed previously.

Install the Nytric Card in the Cabinet

1. Place the Nytric PCB in the external bracket on the shelf near the computer. Make sure the cables will reach the PCB (see Figure 8 for connection details). Also make sure that there will be adequate clearance for the DB37 connector once you replace the door on the cabinet.
2. Mark the locations for the four (4) mounting screws, and then remove the Nytric PCB and bracket while you drill pilot holes for the wood screws. Figure 5
3. Secure the bracket with the wood screws.
4. Refer to Figure 7 and Figure 8 and connect the cables to the computer and Nytric PCB.

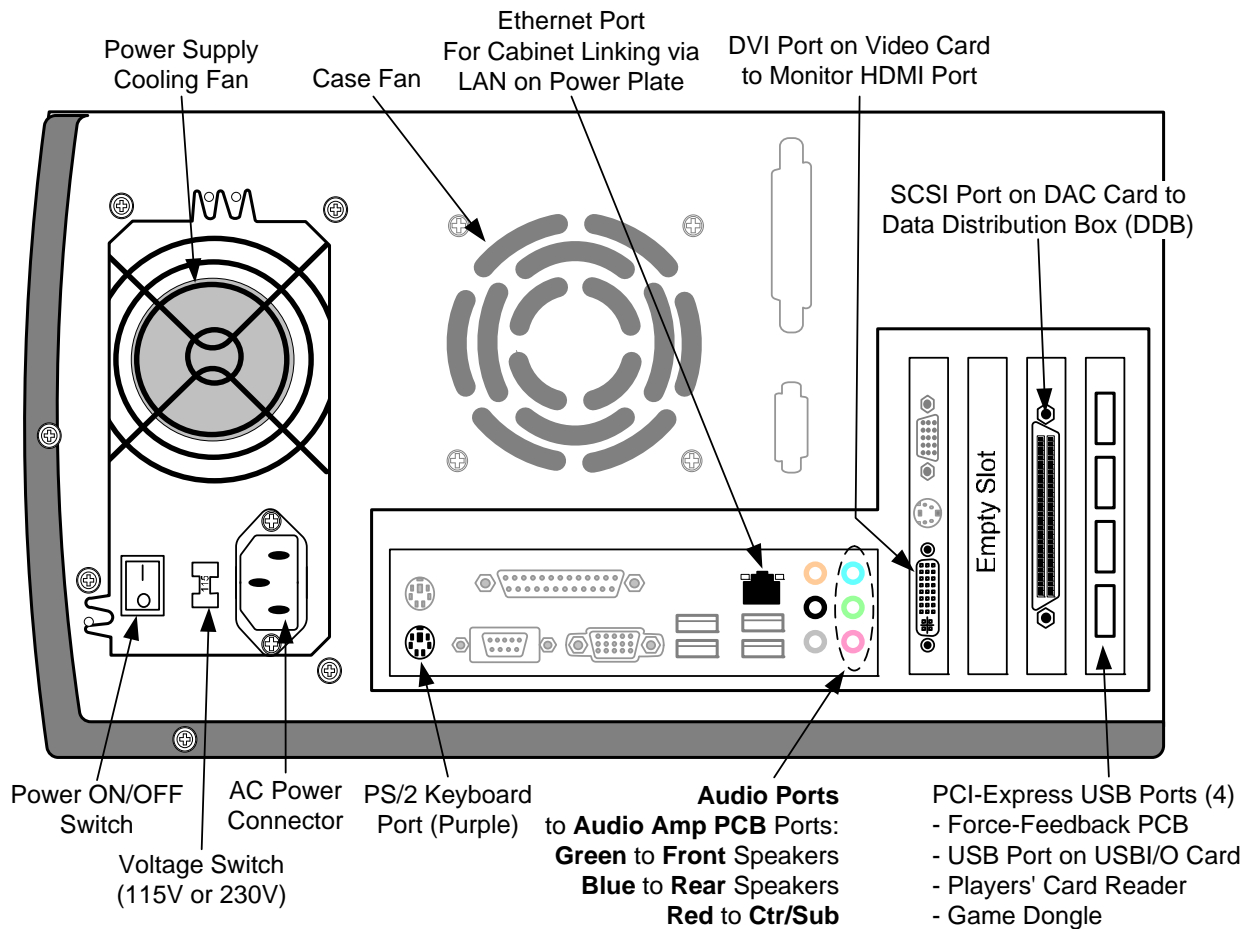


Figure 7. Computer Rear Panel Connectors

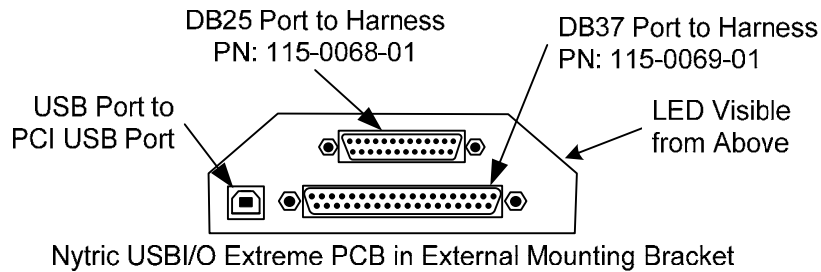


Figure 8. Nytrix PCB Connectors

Test and Set Up the Game

See your new *Need for Speed™ Carbon Operation Manual* for details on using the Operator Menus to set up your game, and instructions for setting up linked play if your cabinets were not previously linked.

1. The steering will auto-calibrate when the game boots. Once the game is finished booting, press the Operator button and set the sound volume levels, cabinet Link ID Numbers, and any other desired cabinet settings.
2. Be sure to calibrate the pedals since you replaced the computer.
3. Play a game and verify that everything is working properly.

Artwork Installation

Refer to Figure 9 for artwork locations, and Figure 10 for side panel decal placement.

If the old decals are in good shape, clean and dry them well and apply the new decals over the old ones. If you need to remove the old decals, a heat gun can be useful for softening the adhesive. Be sure to clean off all of the old adhesive or you will have bumps in the new decals.

Check the orientation of each decal first, then remove the backing paper and apply the decal. Carefully smooth out any air bubbles with a squeegee or a folded piece of cardboard. You will need to trim the edges of the side panel decals.

Important: Leave all safety labels in place.

1. Remove the five (5) screws that secure the retaining bracket above the marquee. Remove the bracket and the marquee clear plastic. Clean the clear plastic.
2. Reinstall the clear plastic with the new marquee artwork.
3. Remove the four (4) screws that secure the seat-back artwork in place and install the new seat back artwork.
4. Apply the Sub-Monitor Decal below the monitor.
5. Apply the new **EA** logo decal over the old EA logo on the Front Access Panel. (EA Games™ has changed their logo; applying the new logo complies with EA's requirements and also helps your customers see that you have a *new* EA game.)
6. Apply the Left and Right Side Fender Decals.
7. Refer to Figure 10 for placement of the Left and Right Side Panel Decals. Line up each decal with the bottom and back edges of the cabinet, and apply starting at the bottom.
8. Once the decal is applied, use a sharp Exacto® knife to cut off the excess graphic material along the front and top edges, using the edge of the cabinet as a guide.
9. If it is used on your cabinet, apply the Pedestal Rear Decal. This decal is only used on one style of pedestal.
10. Write the Upgrade Date in the space provided on the Serial Number Label in the kit, and place it next to the old serial number label on the back of the cabinet (leave the old label in place).



Figure 9. Graphics Placement

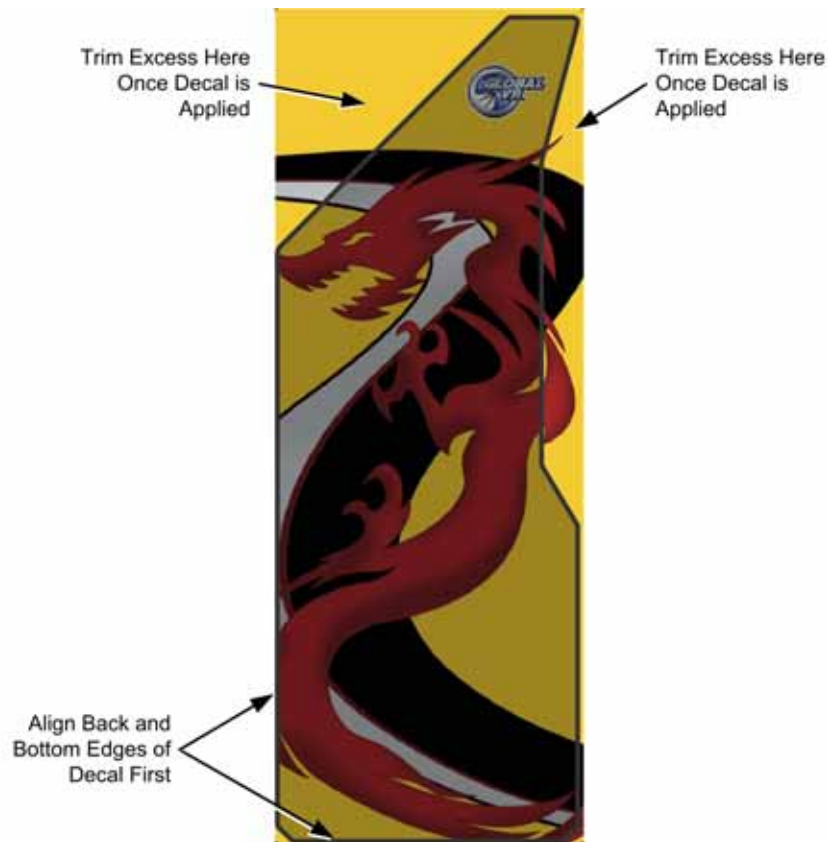


Figure 10. Applying Side Panel Graphics

Install the *New Game* Sign

The NEW GAME sign has adhesive strips to adhere it to the top of the cabinet. Peel the protective backing and place the sign so that it can be seen above the marquee.

Return old Game Dongle

Please return the old Need™ for Speed Underground Game Dongle to GLOBAL VR for recycling: Mail to: Dongle Returns, GLOBAL VR, 2350 Zanker Road, San Jose CA 95131.

For your convenience, a pre-addressed envelope is included in the kit. (You can also use the envelope to return any other old dongles you may have.)