UltraForce Simulations LLC

GS-3 G-Seat User Guide

Congratulations on your purchase of the UltraForce GS-3 G-Seat.

The GS-3 provides the missing link between you and your favorite flight and racing simulations. This G-Seat provides three dimensional motion feedback giving you "seat of the pants" feedback. The motion of the GS-3 is derived directly from the G-Forces calculated in the simulation software. No longer will you have to simply imagine the forces present in a virtual racecar or aircraft – now you will be able to *feel* the forces!

Box Contents

When opening the GS-3 box, make sure all the components listed below are present. Carefully inspect all components for shipping damage prior to assembly.

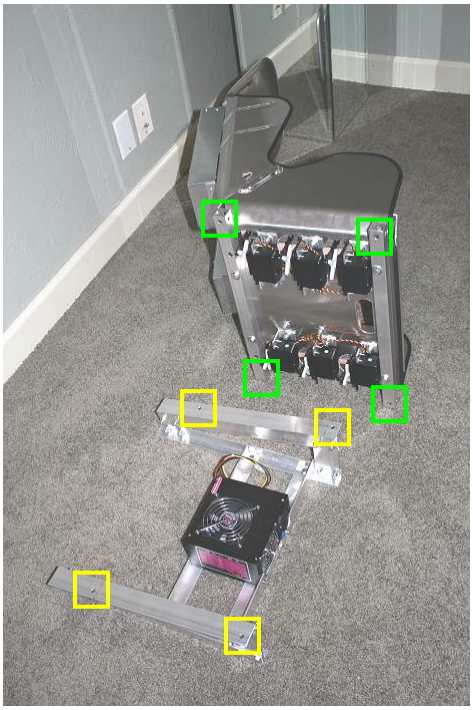
Included in the shipping container for the GS-3 are:

1 – GS-3 G-Seat
1 – Seat Mounting Frame w/Integrated Power Supply
1 – Kirkey Seat Cover
1 – Power Supply Cord
1 – USB Cable

Optional
1 – Vibration Transducer

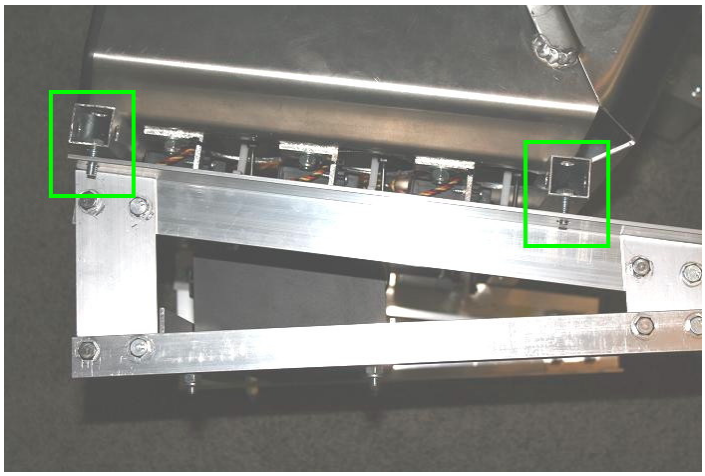
Assembly

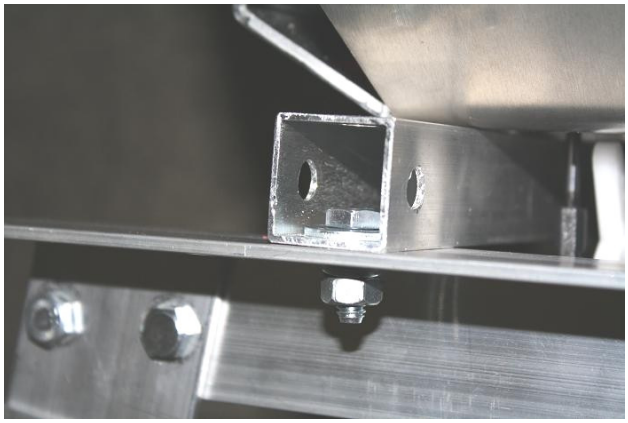
The Mounting Frame must be bolted to the G-Seat. There are four mounting holes located on the mounting bars on the bottom of the G-Seat. These holes will mate with four holes on the top rails of the Mounting Frame.



CAUTION: Avoid contact between the Mounting Frame and seat components and during assembly. Contact could damage the power supply or seat servos.

Attach the G-Seat to the Mounting Frame using the four included bolts. The bolts are attached to the mounting frame during shipping. Remove the bolts from the Mounting Frame and use them to secure the Frame to the Seat.





Mounting your GS-3

The GS-3 G-Seat Mounting Frame provides a seat mounting angle of 10 degrees. The additional 10 degrees helps keep the user's upper body pressed against the seat back. Pressure between the user's body and the seat back assures proper application of G-force sensations.

The lower Mounting Frame rails must be attached to a cockpit or some other solid horizontal surface. Holes may be drilled in the lower frame rails to aid in mounting the seat.

CAUTION: Be sure to keep any metal chips created while drilling the lower frame rails from getting into the power supply. Serious electrical damage could result.

Power and PC Connections

Route the peripheral power cable from the Power Supply up through the seat belt opening at the front edge of the G-Seat. (Fig. 1)

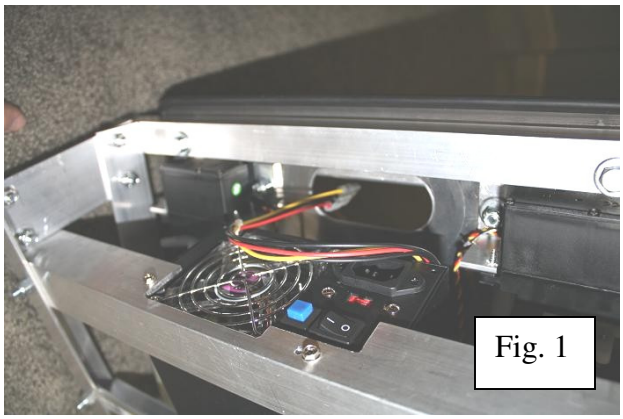


Fig. 1

Pull the Power Supply Cable up through the hole. (Fig. 2)

Plug the connector from the Power Supply into the electronics power cable. (Fig. 3)

After connecting the cables route them along the aluminum surface of the seat beneath the motion panels.

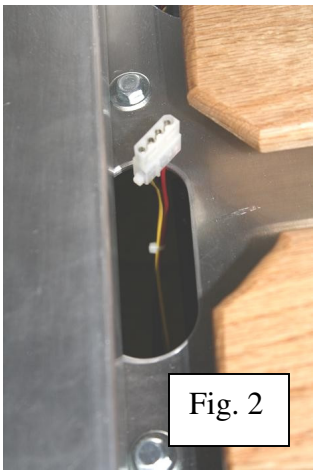


Fig. 2

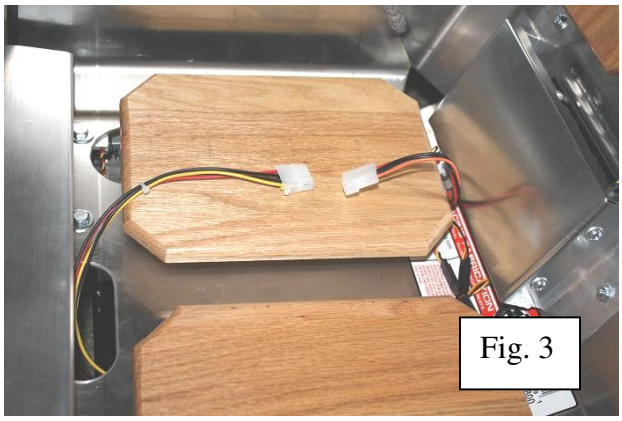
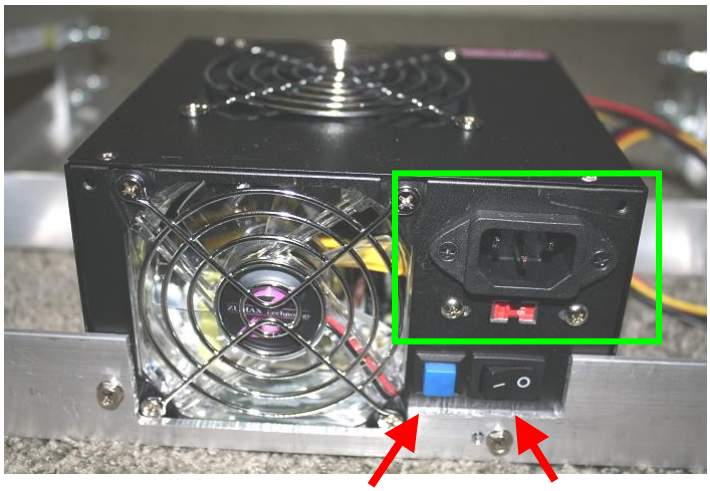


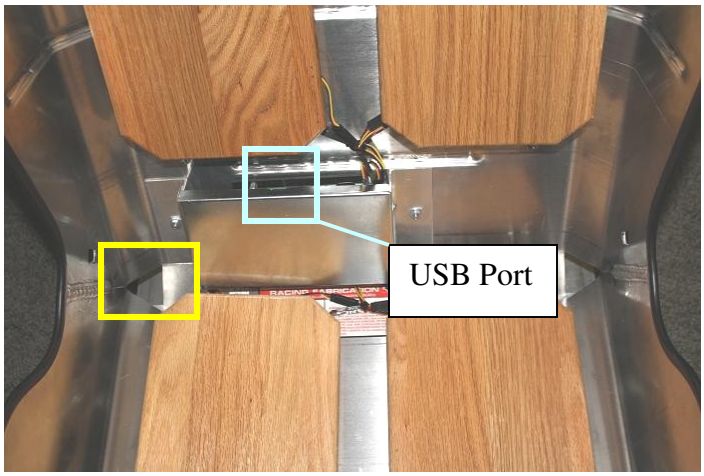
Fig. 3

Plug the included power cord into the socket on the front of the Power Supply.

The power switch on the front of the power supply will turn the seat on and off. The blue button on the front of the power supply engages "Turbo Fan" mode. If you experience power supply shutdowns, try engaging this button.



Attach the included USB cable to the GS-3 Electronics Board. The board is located under the metal cover at the base of the seat back.



The USB port on the electronics board is located as shown in Fig. 1. It is accessible through the side of the cover. <u>The cover does not have to be removed to attach the USB cable.</u>

Route the USB cable out of the seat through the triangular hole in the bottom corner of the seat.

Attaching the GS-3 to a PC

With assembly of the GS-3 complete, plug the power supply cord into a 110V wall socket. Make sure the GS-3 power switch is turned off.

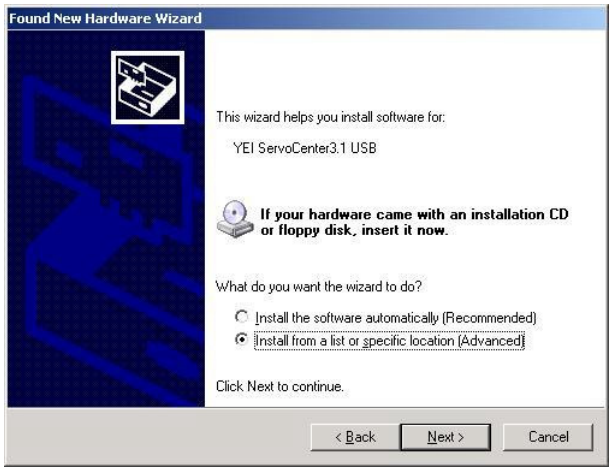
<u>Prior to beginning the installation process, copy the file "yeisrvo.dll" from the "GS-3 Drivers" directory to your "C:/Windows/System" directory.</u>

With the PC running and the Windows desktop visible, plug the USB cable into a port on the PC. Turn on the GS-3 power switch. Windows will recognize connection of the Plug-&-Play GS-3 Electronics and prompt for driver installation.

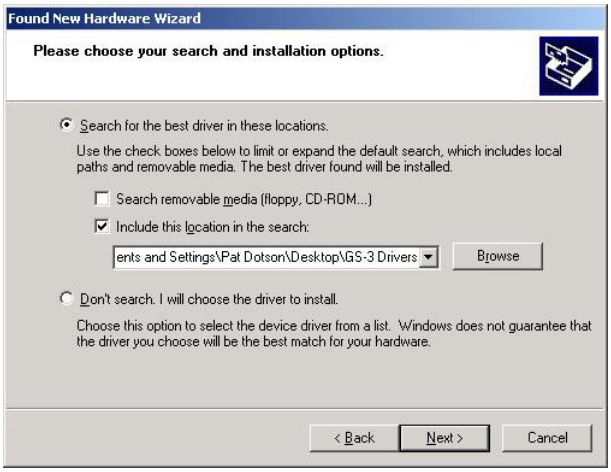
IMPORTANT!
Windows will go through the installation process <u>twice</u>. The first time will install the USB to Serial interface. The second installation will install the electronics drivers. DO NOT CANCEL OR INTERUPT THE TWO INSTALLATION PROCESSES!

When the Hardware Wizard asks to search for drivers, select "No, not this time."

Next, select “Install from a specific location” so that you can specify that the drivers will be loaded from the “GS-3 Drivers” directory.

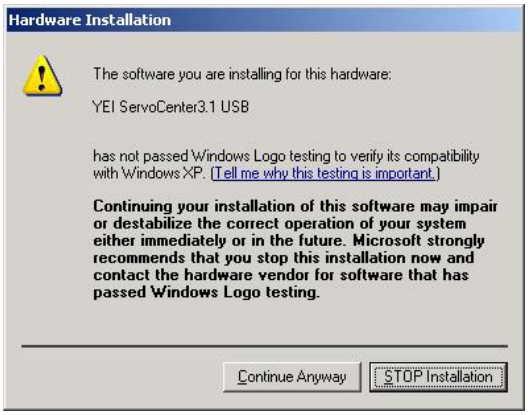


Windows will first install a USB/Serial Port interface drivers. When Windows is ready to install the drivers, use the browse option.



Navigate to the GS-3 Drivers folder and click OK.

When the drivers start to load, you may see a notification messages like this:



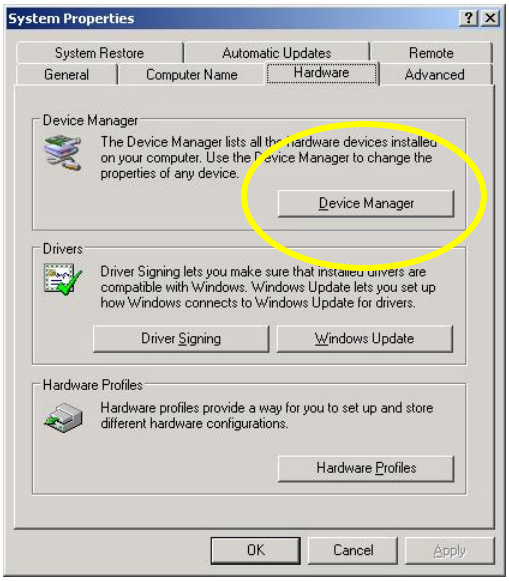
Click on “Continue Anyway”.

Once the Hardware Wizard has successfully installed the hardware, click “Finish”.

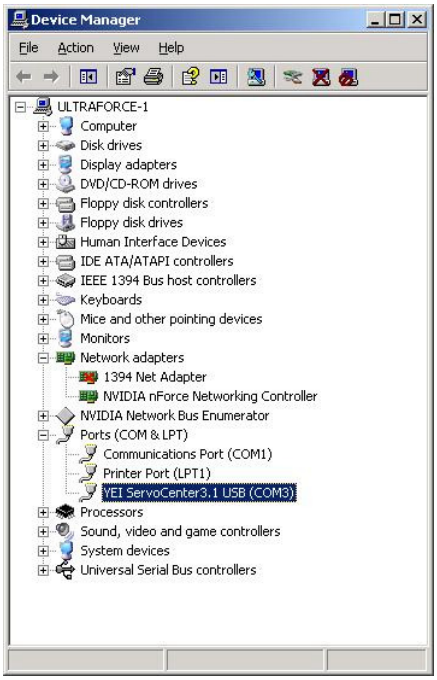
Repeat the installation process when prompted!

Once the USB/Serial interface drivers are installed, Windows will prompt to install the GS-3 electronics drivers. The GS-3 electronics device is called “ServoCenter”. Again, navigate to the GS-3 Drivers folder to install the ServoCenter drivers.

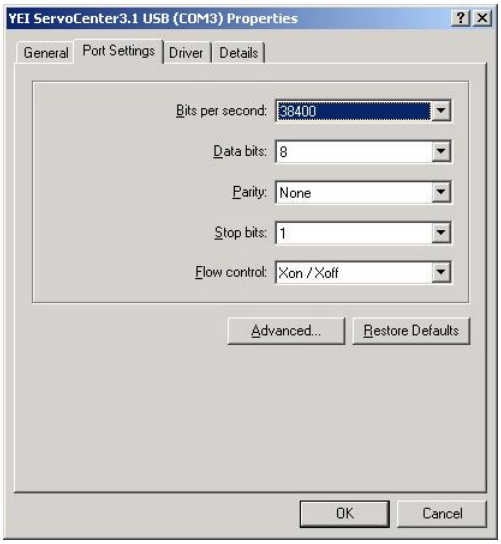
With the GS-3 drivers fully installed, open the Windows Device Manager. The device manager can be opened by clicking: Start Menu => Settings => Control Panel => System. The device manager button is found in System Properties under the “Hardware” tab.



Find the “YEI ServoCenter” entry Inside the Device Manager under “Ports (COM & LPT)”. Right click on the entry and select “Properties”.



In the Properties window set “Bits per second” to 38,400.

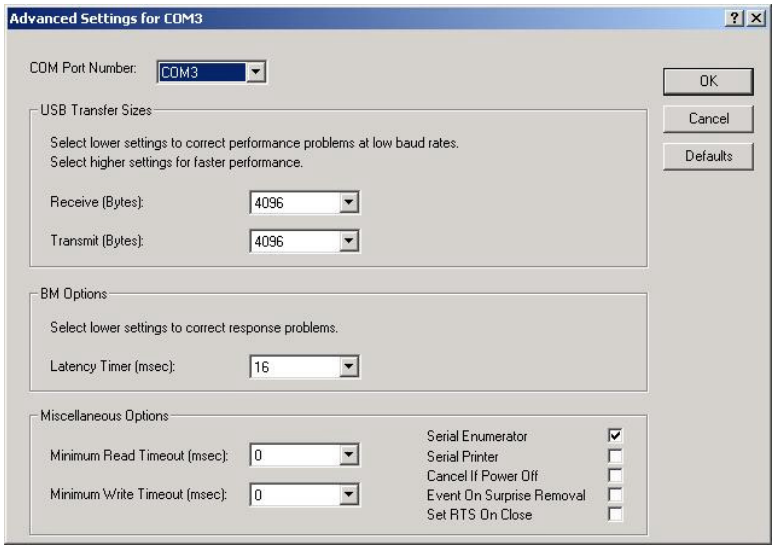


Under the “Advanced” button, make sure the properties are set for COM 3.

* <u>Ignore any notifications that COM3 is already in use by clicking “OK”.</u>

Click OK to close each window until you have exited the ServoCenter properties.

The GS-3 drivers are now installed and ready for action.



Sim Interface Software

There are four separate software interface programs for the GS-3. One interface program is for use with iRacing. Another program is for use with ISI-based simulations such as rFactor, ARCA Sim Racing. A third program is for use with FS2004 and FSX. A forth program called "gConsole.exe" is used with Simbin programs such as GTL, GTR2, and Race07. These programs are located in the "GS-3 Drivers" folder that should be present on your computer.

The appropriate software interface program must be installed and operational in order for the GS-3 to respond to simulation events. Each program operates a bit differently from the others.

ISI

rFactor and Arca Sim Racing can use an interface program provided in the form of a plugin file called "rFactorUltraforcePlugin.dll". This file must be placed in the "\Plugins" directory of rFactor or ASR – for example "C:\rFactor\Plugins". The ISI simulations will automatically load the plugin when the simulation starts.

See below for information on the INI files used to adjust response of the GS-3 to simulation forces. Any changes to the .INI file must be completed and saved before starting the simulation. Changes made while the simulation is running will not take effect until the next time the simulation is started.

iRacing

The iRacing interface program is provided in the form of a stand alone executable file called "iRacingTelemetry.exe". You must manually launch this program to activate the GS-3 with iRacing. NOTE: iRacing will only recognize one active telemetry app at a time. The GS-3 software may not work if any other 3rd-party telemetry apps are active.

The iRacing interface program can be started at any time – before, during, or after the simulation has started. If the iRacing interface program is started after the iRacing simulation is running, it will take approximately five seconds of driving time for the seat to begin to respond.

Changes can be made to the iRacing .INI file on-the-fly without exiting the simulation. Once any changes to the response parameters are saved, it will take approximately five seconds of driving time in the simulation for the changes to take affect.

INI Files

When the interface programs are executed for the first time, an editable settings file will be created *in the directory where the interface program file resides*. The settings file will have the same name as the interface program, but with the file extension ".INI". You can

edit these files with a text editor to change the strength of the seat motion in response to G-Forces in the simulation. Consult the contents of the .INI file for details on the effect of changing each response parameter.

Optional Vibration Transducer Installation.

Before installing the vibration transducer, please consult the transducer documentation included in the GS-3 packaging.

The optional vibration transducer threads onto a mounting bracket attached to the back of the GS-3. The bracket is a small round metal piece bolted to the seat. The transducer attaches to a threaded post. The post and some locking nut hardware will be found in a plastic bag in the transducer package.

Install the post onto the bracket with the included nuts and washers.

Consult the included transducer documentation for information on connecting the transducer to a power amplifier.