

Matrox TripleHead2Go Digital Edition

By Nels Anderson



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lightsimmers are on a never-ending quest to turn

their computer into an ever more realistic simulation of an aircraft and the cockpit flight environment. Microsoft Flight Simulator claims to be "as real as it gets" but

there's always more that can be done. Any flightsimmer needs the basics like a [yoke and rudder pedals](#). Beyond that there are [devices](#) that will let you *feel* the sim in action as well as watch and hear it and even [hardware](#) that will let you simulate a realistic set of cockpit avionics and controls.

All of these things make the sim more fun to use. But one of the greatest weaknesses of any sim is the limited visual aspect. Human vision has a field of view close to 180 degrees and even though we're only able to see sharply in a much smaller area directly ahead that wide field of vision does play an important part in any activity. Unfortunately, a standard computer setup limits our view to that displayed on a single video or LCD monitor so flightsimming that way is kind of like flying an airplane while looking down a tube. Though what appears on the screen is quite realistic, the overall view is not.

Various means have been devised to deal with that, starting with the simple ability built right into the sim itself to zoom out and show a wider field on that single screen to virtual cockpits that allow you to look around in any direction; this can be done with top hat buttons on a yoke or joystick or much more realistically using some sort of [head tracking device](#). The head trackers help quite a bit but still your actual field of view is limited to that one narrow screen.

Which brings us to the subject of our review, the **Matrox TripleHead2Go Digital Edition** which is nothing more than a black box that lets your computer drive three monitors instead of just one, immediately tripling your visual field of view.

The Digital Edition is the latest member of the Matrox "GXM" (Graphics eXpansion Modules) family where earlier versions offered expansion from one to two monitors or operated with analog signals instead of digital. This latest version connects either a dual-link DVI or analog signal from your computer to three monitors. The monitors plug into the TripleHead2Go with a DVI connector (if your monitor has an older analog connector adapters are available). With this setup you can now have a display of up to 3840 x 1024 resolution using three monitors.

Setup

The hardware part of the setup is so easy the typical user should have no need for a manual. With your computer powered down you just run a cable from the computer's video out to the in port on the TripleHead2Go and then connect three monitors, one each to the supplied sockets on the "out" side. Other than connecting the monitors in the wrong order it's pretty hard to go wrong here. The only other connection is a single USB cable from the TripleHead2Go to any powered USB port; the only purpose this serves is to supply power.

The TripleHead2Go comes with a CD-ROM with the necessary software, which includes the PowerDesk SE utility as well as the Surround Gaming Utility (SGU) which helps setup games to use the newly available video resolution.

Once everything is plugged in all that's necessary to get started using the new wider resolution is to power up your computer and change the video settings. Once done, everything will be displayed across three screens. Note that this does mean everything, including your Windows desktop and all other software applications so the TripleHead2Go is useful for all your computer activities not just for flightsimmming.

Using The TripleHead2Go With FSX

There's little trick to getting full benefit of the wide resolution with FSX. When initially started, the sim will likely come up in windowed mode, displaying on only one monitor. To use all three monitors it's simply a matter of either using the Surround Gaming Utility (SGU) or going into the sim's setup area and choosing 3840 x 1024 as your screen resolution and then switching to full screen mode.

Once you do that...wow, what a difference! Instead of that "looking down a narrow tube" feeling you now have a wide field of view, much more in line with what your eyes are capable of. In virtual cockpit view you'll now be able to see across the entire panel instead of just a small portion in front of you--and also see quite a bit out the windows to the sides.



I spent quite a bit of time flying different planes in different situations and found that the wider view really enhanced the realism. I had recently spent some time flying with a head tracker and while that device did make it easier to look around inside and outside the cockpit, this is better. What I found was that I could leave the view centered most of the time and actually look around moving my head and eyes to see whatever I wished to look at. This is much more like the real world than anything else I've experienced while using a sim.

The only view change I found myself making very often was a slight shift up and down; down to look at the lower mounted instruments and up to look more out the window. This in a way demonstrates the value of the wider view, as now the main weakness is in the vertical resolution!

Using the tower or spot plane view was much more fun, as now you could see your plane nice and large in the center while also seeing a much larger part of your surroundings. This was fun at busy airports as you could see AI traffic bustling around.

But more than just fun, the wider view proved useful too. When flying my real plane things like taxiing, flying traffic patterns and other basic maneuvers are simple, mostly because I can easily see the references I need to know when to turn. With flight simulator's "tunnel vision" I've always found these things much more difficult; I still have a hard time flying a good traffic pattern and consistently lining up right on final as I'd like to. Yes, if you fly the same plane enough and practice enough you'll learn the visual cues you need to fly it in the sim accurately, but it's just not the same as the real world. Well, here I found the wider viewpoint a great help. Now I can see things off to the side that I never could before and having this view makes maneuvering so much easier and more accurate. As when flying for real my eyes would move from side to side--from one monitor to another--to concentrate on what I wanted, rather than having to somehow change the view in that one narrow monitor straight ahead of me. This is just so much more realistic.

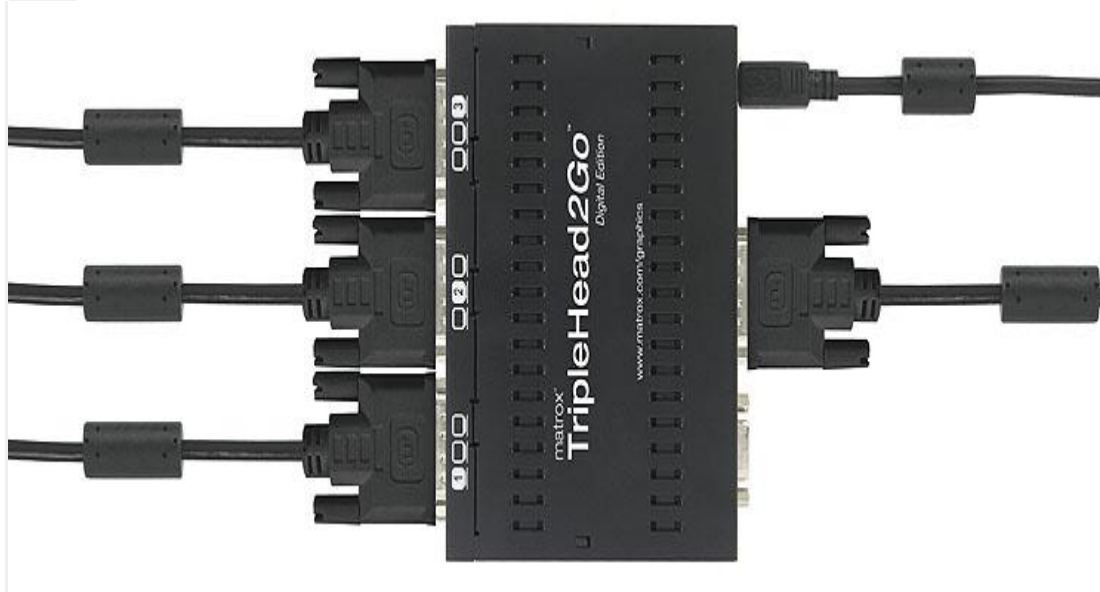
Having this super wide display does result in some weirdness though. For example, the 2D panel comes up with the instruments stretched across the whole width of the three screens. You surely would not want to fly that way, but then I suspect if you're running a three monitor setup you're going to be flying from the virtual cockpit anyway. Some pop-up windows also come up wrong initially, but in most cases you can just resize them. So, like any good flightsimmer with a new toy, you'll certainly go through a period of tweaking to get everything just the way you want it. But ultimately all that extra video real estate is a great advantage, since now you can do things like leaving the GPS popped up all the time, and larger than you've ever had it before, while still leaving it in a corner with plenty of view around it.

Before leaving the topic of flying with FSX I know there's still one important issue that everyone will want to know about--frame rates. As we all know, FSX demands a really fast computer. Even a current top of the line system like the [Jetline Systems Vertigo X10](#) that I recently reviewed, and which I also used to test the TripleHead2Go, cannot run FSX with the control sliders maxed out. No matter how you look at it, FSX needs the fastest computer you can get. Running three monitors instead of one, FSX is now pushing out three times the number of pixels for every new frame. Fortunately, this does not cut the frame rate to 1/3 of previous performance, as that would pretty much make the TripleHead2Go unusable with FSX.

As anyone who has observed has surely noticed, frame rates jump around quite a bit and simply turning your viewpoint from side to side can cause a major change. For comparison purposes, what I tried to do was test on a view that was fairly stable and switch back and forth between full screen view (3840 x 1024) and windowed view (1280 x 1024) and note the effect. In some instances, such as high altitudes with little to see but clouds and distant simple ground textures there was no observable change at all. More typically, the decrease was around 20% and sometimes as much as 40% but this is nothing near the 300% decrease you might expect simply by multiplying out the greater number of pixels. So really, this is good news as the loss in frames does not greatly effect the use of the sim.

Flying With FS2004

Since so many people still use FS2004 I wanted to at least briefly try the three monitor setup with that sim. For the most part, the experience was the same as with FSX. Unlike FSX, with FS2004 the Jetline Systems PC can run with all the control sliders maxed, giving frame rates mostly from around 20 to 30; back things off even a little bit and rates went much higher. Anyway, I wanted to run it so that the computer was working hard and would show the effects of switching between one and three monitors. As it turned out, the results were pretty much the same as with FSX, with the typical slowdown being around 20% while varying mostly between zero and 40%. So, if you're running FS2004 you can easily enjoy all that sim has to offer displayed across three monitors with good frame rates.



Plugging in five cables is all it takes to get the TripleHead2Go running.

Supplied Software

For the most part, the software supplied with the TripleHead2Go is such that you'll use it once for your initial setup and then forget about it. Ideal for such purposes, it's pretty easy to use. The PowerDesk SE utility does let you make a variety of changes, though with one exception what's available is strictly utilitarian and not very exciting.

The same is true of the Surround Gaming Utility (SGU) which simply detects any installed games or sims that are included on a long list of supported software and lets you change their settings to fully use the wide view.

Monitor Bezel Management

The one exception to the mundane software utilities is something called "Monitor Bezel Management" which is part of the PowerDesk SE utility. This is a new feature to the TripleHead2Go Digital Edition and is a pretty neat idea.

The one drawback to viewing your sim across three monitors is that there are breaks in the image, where the monitors join up. I tested this with three different monitors and it seemed that going from oldest to newest they had progressively smaller bezels. A small bezel is a good thing here, as the smaller the bezel the less gap between images. However, with current technology you will never get rid of the entire gap and that can be a problem. Depending on what you are doing, your view across the three monitors can look very wrong as things like window frames, wing struts, runways edges, etc. don't line up.

Monitor Bezel Management is a neat fix, as it lets you "hide" part of the image behind the bezel so that objects line up from screen to screen. The effect is like standing in your house and looking out a window that has multiple panes--some of your view is blocked by the edges but it looks natural.

Setting this up is easy and fully customizable for any bezel size. The utility displays some diagonal lines and you just adjust things until they look lined up to you between the monitors. The resulting offset gets saved and using a hotkey you can jump between full view and offset view whenever you want no matter what software you are running. You just do this setup once and it's good for all your sims and any other software.

The one drawback to this is that the hidden part of the image actually is lost. What happens is that the image on the outer two monitors gets slid towards the middle and you end up with black bands at the edge of the screens. So you are actually losing some resolution by doing this. However, in certain situations the effect is well worth the loss and you can always switch back to full screen view by pressing the hotkey.



OK, it's not a flight simulator, but these images are a good demonstration of exactly what Monitor Bezel Management does. Note in the picture above how the guard rails along the side of the track are out of alignment. In the image below, with Monitor Bezel Management in use, everything lines up across all three monitors.



Conclusion

Having spent a fair amount of time flightsimming with the Matrox TripleHead2Go Digital Edition I really can say nothing but good things about it. I found that having three times the viewing area significantly improved my enjoyment of the sim and made maneuvering much easier. Getting set up was trivially easy and surprisingly, even the slowdown of frame rates was less than I might have expected.

Ideally, the TripleHead2Go should be combined with a matching set of three new video monitors, chosen for having the smallest bezels possible. With that setup your view of the flightsim world will be better than you ever imagined.

The only warning I would make if you are ready to purchase is to first make sure your system and video card are compatible. Matrox has a detailed compatibility list available [here](#).

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