

EyeRIS Troubleshooting Guide



CYBERNETYX

Interaktive Whiteboards | Touchscreen Systeme

INDEX

1. Introduction	3
2. Resolving Ambient Light Disturbance issues	4
3. Resolving No Tracking Issues	6
4. Resolving Low Digital Ink Quality Issues	7
5. Resolving Device Connectivity Issues	8
6. Appendix	9

Section 1 : Introduction

Use these topics to resolve your issues. First try to find the most appropriate topic, by reading the issue column above. If you have recognized your problem in one of these issues, read the referenced topic. You will find a table, explaining you the symptoms, possible causes and some actions to help you to resolve your issues. Try to find the symptoms, which match your problem best and try what the actions column suggests you. Scan also other topics and symptoms for your problems.

Before you begin, make sure your environment provides all following prerequisites:

a) Hardware

- ✓ PC with at least 1 GB RAM memory and 2 GHz CPU
- ✓ EyeRIS Tracking System
- ✓ Infrared Pen(s)
- ✓ Video projector or computer screen

b) Software

- ✓ Windows XP, Vista or 7(recommended)
- ✓ The newest service packs are installed (XP: Service Pack 3, Vista: Service Pack 1)
- ✓ .Net 4.0 Framework included on your CDs

Why Windows 7 is recommended?

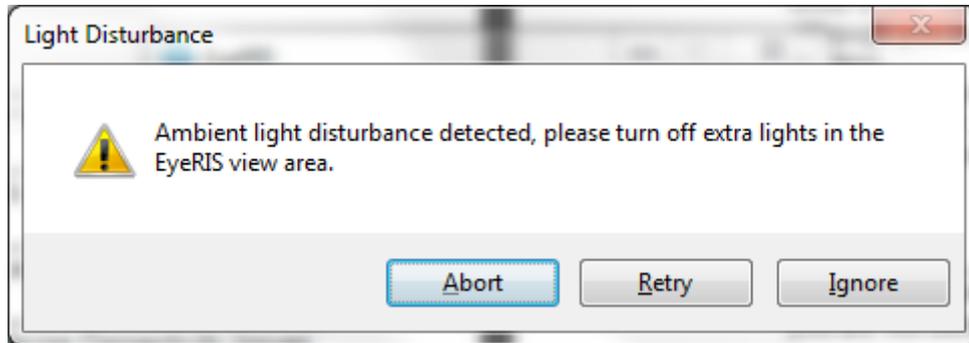
Limited one-touch capability has been available in Windows for years. But Windows 7 is the first to fully embrace *multitouch* technology supported by EyeRIS. Need to zoom in on something? Place two pens on the screen of a multitouch-compatible PC and spread them apart. To right click a file, touch it with one pen and tap the screen with a second.

Windows Touch—available only in the Home Premium, Professional, and Ultimate editions of Windows 7—is fun to learn and easy to use. All your favorite Windows 7 programs are also touch-ready. You can even multi-touch in Paint!

So, for using EyeRIS's powerful Visual Touch tracking platform to its fullest capability, Cybernetyx recommends using Windows 7 as the operating system.

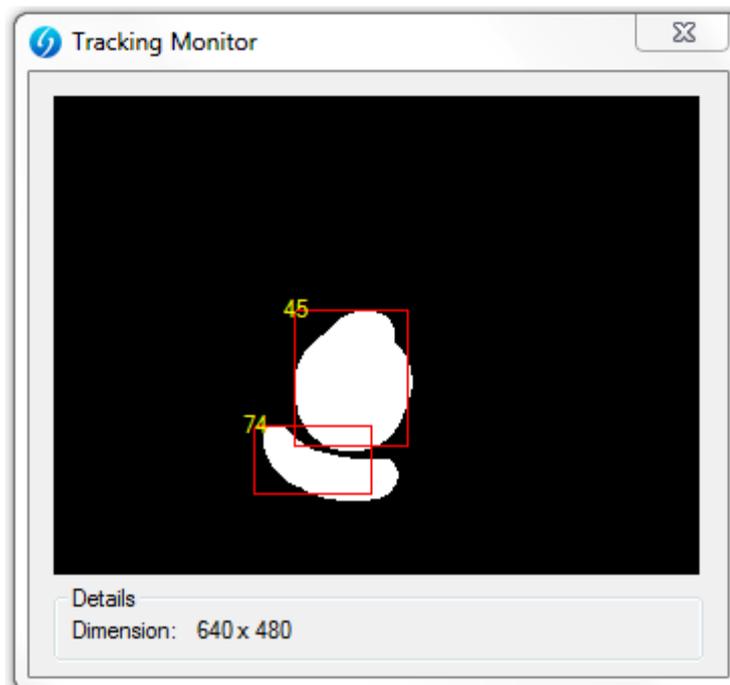
Section 2 : Resolving Ambient Light Disturbance Issues

When any ambient light (strong optical disturbance) is encountered by EyeRIS, it gives this message,

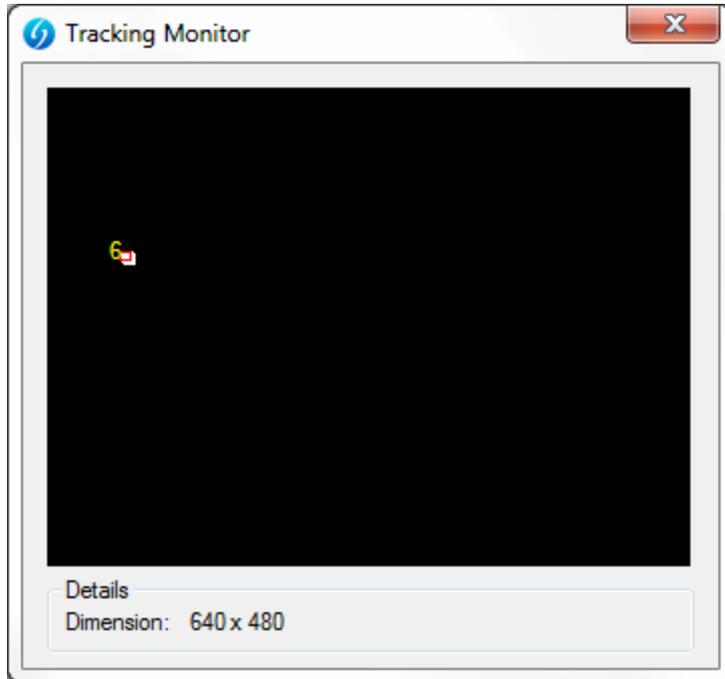


Click on “Abort” and open “Tracking Monitor” and check for following cases:

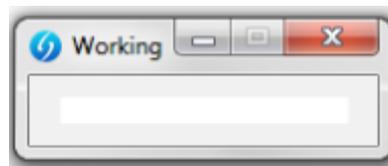
1. If there is a very large blob as shown below, reduce the infrared sensitivity in settings tab to “low”.



2. If there is smaller blob, click on Calibration key and on occurrence of the ambient light pop-up, click on "Ignore".



Now, Visual Touch will eliminate the ambient light blob completely.



Symptom	Possible Causes	Actions
Nearly the whole picture is white in the Tracking Monitor, although you are not using your IR pens.	The IR sensitivity is set high or there is too much ambient light from Sunlight or bulbs etc.	Open "Settings" and adapt the IR sensitivity Check Tracking Monitor, until it's completely black.
Some spots are white, although you are not using your IR pens.	There are other sources of infrared light like lamps, sunlight or reflections.	These spots can be ignored by clicking on the `Ignore` button once we system detects these spots before calibration or Turn off extra lights, which could disturb the EyeRIS Tracking System and protect it from sunlight shining into the view of it.

Section 3 : Resolving No Tracking Issues

If you have connected to EyeRIS, but you can't calibrate, use this table to solve the issue. Like in the topic before, start with opening the Tracking Monitor (see Appendix A and B).

Symptom	Possible Causes	Actions
The image of the Tracking Monitor is totally black, even when you use your IR pens directly in front of the EyeRIS Tracking System.	You IR pen(s) are damaged or low of battery.	Try different pens and check in Tracking Monitor, if you see white spots coming from the pen. Replace the batteries.
	Something is in front of EyeRIS Tracking System.	Make sure no obstacles are in between the Tracking System and your pens.
	EyeRIS application is frozen.	Restart EyeRIS and/or the whole computer.
	The lens of the Tracking System is damaged.	Test your IR pens with some digital cameras (like mobile phone camera). Activate them right in front of a camera and check if you see any light. Then change the sensitivity and check Tracking Monitor. If you still can't see anything in Tracking Monitor call our support.
You see white spots in the Tracking Monitor, when you use your IR pens and you could calibrate, but your mouse cursor does'nt move.	EyeRIS is not activated.	Click on the "Power" button  . The button should turn the color from blue to red  . If it doesn't do that, restart EyeRIS or/and the computer.
	You are using Windows 7 with the Multitouch driver. But the driver is not correctly installed or has problems.	Close EyeRIS. Uninstall the driver in the Device Manager of Windows (right-click on "My Computer", left-click on "Properties", then on "Device Manager"). You can find the driver in the HID devices or Imaging devices. Right-click on "Virtual Hid device" and choose "Uninstall". A new window should popup. There check the checkbox for uninstalling the driver software and click on "ok". After that reinstall the driver by executing "Install_Drivers.exe". Therefore you need administrative rights.
Your IR pens and EyeRIS Tracking System work properly, but you can't calibrate all four points.	EyeRIS Tracking System can't see the whole interactive whiteboard surface.	Start calibration and turn on the in-built laser. Then position the Tracking System until the laser points at the Bullseye() (the middle of the screen).

Section 4 : Resolving Low Digital Ink Quality Issues

If the digital ink is of low quality or inconsistent, use this table. Low quality means, when you are writing something on the interactive whiteboard and the lines are cornered, edgy or have gaps.

Start resolving this issue by opening the Tracking Monitor (see Appendix A and B).

Symptom	Possible Causes	Actions
You get gaps in your digital ink or it doesn't work at all at some spots.	The infrared blobs, caused by the infrared pens are too weak. The EyeRIS Tracking System doesn't recognize them fully.	First have a look at the Tracking Monitor if the blobs are recognized properly at every position on your interactive whiteboard surface. Then change the device properties and/or the IR sensitivity to make the blobs brighter and therefore better recognizable for the Tracking System (see Appendix).
	The EyeRIS Tracking System can't see the whole interactive whiteboard surface.	Turn on the built in laser and (re)start the calibration. Then change the position of the Tracking System, until the laser points directly into the crosshair (the middle of the screen).
Your digital ink is edgy and cornered.	Smoothing is deactivated.	Activate smoothing in the Settings window.
The cursor follows your IR pen with a big delay (offset).	EyeRIS Tracking System was moved accidentally.	Restart EyeRIS calibration and use the inbuilt laser to reposition the device.
	You have changed the resolution or the DPI. Or you have switched your main screen.	Restart EyeRIS and recalibrate it.

Section 5 : Resolving Device Connectivity Issues

If you have problems to connect EyeRIS Tracking System to your computer or EyeRIS can't find the Tracking System, use this table to resolve the issue.

Symptom	Possible Causes	Actions
Your computer doesn't recognize EyeRIS. When you start EyeRIS software, it says, that it can't find the EyeRIS device.	USB port is defected.	Try other USB ports. And restart your computer.
	Cables are defected.	Check if a cable is damaged and try other EyeRIS devices.
	EyeRIS Tracking System is defected.	Report to the Cybernetyx Support Center
	Extender USB cable is connected in reverse direction.	The 1.5m small USB cable is always connected in EyeRIS, and the extender 10m cable is always connected in the PC. Doing the reverse will result in non-recognition of device.
EyeRIS says "Error while starting to capture".	The EyeRIS Tracking System is blocked by other applications or processes.	Close all applications, which could gain access to video capture devices like webcams and restart EyeRIS. Additionally you can plug the EyeRIS device out and in again and/or restart the computer.

Section 6 : Appendix

A) How to open the Tracking Monitor

You can open the Tracking Monitor by clicking first on the Settings icon on the EyeRIS Toolbar, then on "Tracking Monitor":

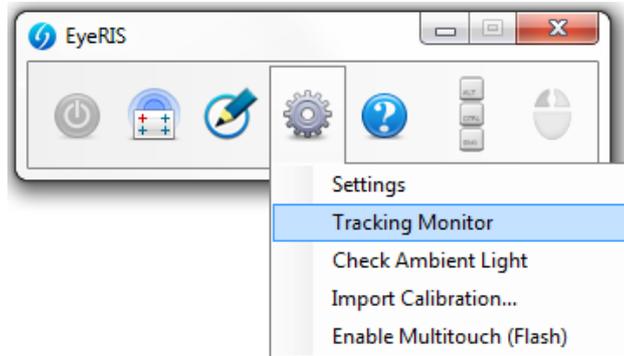


Figure 1: How to open the Tracking Monitor

B) How to use the Tracking Monitor

The Tracking Monitor shows you the filtered images from the EyeRIS Tracking System. Additionally you can see the tracked blobs indicated by a red rectangle.

The Tracking Monitor is a very useful tool to resolve most kinds of problems. So use it as often you can.

If there is any problem with ambient light, you can see it here. White spots indicate some kinds of infrared light sources. Move the EyeRIS Tracking System and point it somewhere else than windows or lamps. You see, that the image changes. This way you can detect where the disturbing light source might be.

Use the Tracking Monitor also when you have to change the sensitivity. Adapt the sensitivity until you see just a black image.

If you need to test your infrared pens, point the tip directly at the Tracking System with some distance and you see if the pens are working properly or if they are too weak, when you are using it with the interactive whiteboard surface.

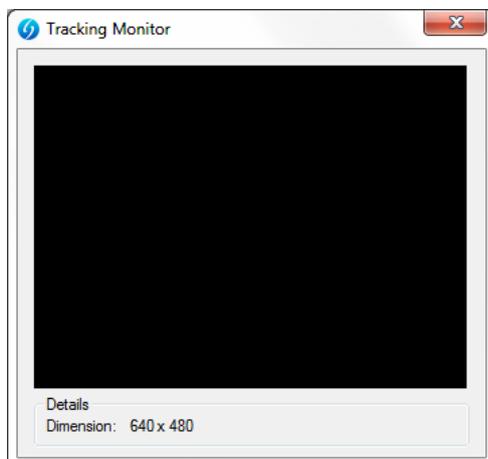


Figure 2: Perfect

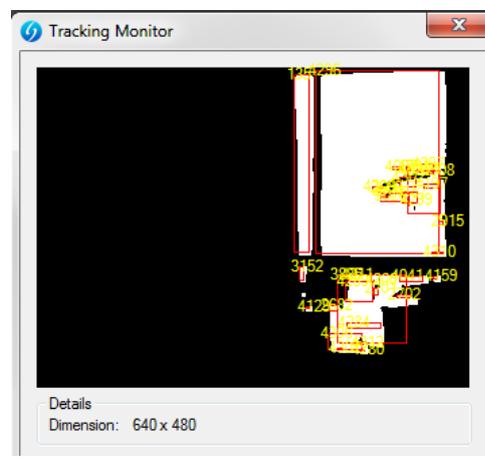


Figure 3: Disturbance

C) How to change infrared sensitivity

Change the IR sensitivity (pull the slider to the right for higher sensitivity), if the tracked blobs are too weak to be recognized properly by the EyeRIS Tracking System:

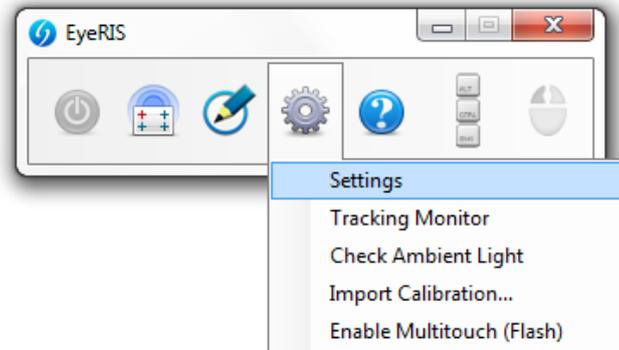


Figure 4: Open Settings: EyeRIS Toolbar - Settings Icon - Settings

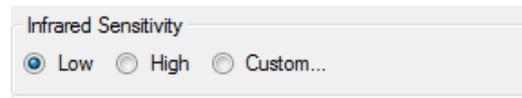


Figure 5: In settings window: Infrared Sensitivity Slider