

TrackIR 5 Manual

Version 5.4

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1. Introduction

1.1 Forward

Information in this Users Manual is subject to change without notice and does not represent a commitment on the part of NaturalPoint. The software described in this Users Manual is furnished under a license agreement and may be used only in accordance with the terms of said license agreement.

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1.2 About NaturalPoint

NaturalPoint Inc. is pleased to provide you with premium optical tracking devices. We hope that you enjoy using your TrackIR.

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2. How to use the Manual

2.1 Quick Start

We strongly recommend reading this manual before using your TrackIR gaming and simulation controller. Of course, we know that many of you want to jump in and start experimenting as soon as possible. If that describes you, then you can get going by doing the following:

- Read the Installation section thoroughly and follow the instructions described there. Otherwise your TrackIR may not work.
- Once the software is installed, connect the TrackIR directly to one of the free USB ports of your computer.
- The TrackIR 5 should not be used with unpowered USB hubs.
- Launch the TrackIR software. There will be a shortcut for it on your desktop.
- Launch the supported game of your choice.
- Start enjoying the added dimension TrackIR brings to your gaming!

2.2 Further Reading

The TrackIR is a powerful gaming and simulation peripheral and provides a number of options to help you achieve the best experience. It is recommended that you read through the manual completely for a better understanding of how the product works.

3. Getting Started

3.1 Minimum System Requirements

- TrackIR 3 Series hardware or newer
- Windows Vista or newer
- 60 megabytes of free hard disk space

3.2 What's Included



TrackIR 5



Quickstart guide



TrackClip

3.3 Hardware Compatibility

The TrackIR version 5.x software can only be used with the TrackIR 3 (with Vector Expansion only), TrackIR 4, and TrackIR 5 hardware. Older versions of the TrackIR are not compatible, and will not work with this software. The software will present a warning if incompatible hardware is detected

3.4 Software and Hardware Installation

Note : For best results, we recommend installing the TrackIR Software before you connect the TrackIR hardware.

3.4.1 System Restore Point

It is recommended that before installing any new hardware or software program, you set a system restore point. Windows Vista and Windows 7 provide this feature to allow you to easily reset your system to a previous state. After the software is installed and everything is working fine, set another restore point. Users that get into the habit of using this feature find they have fewer problems on their computers.

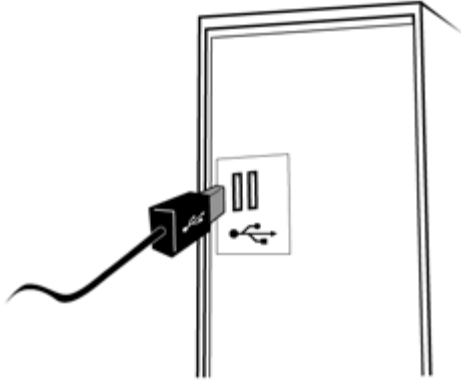
The System Restore program can be found by clicking :
Vista / Windows 7 : Start/Search "restore"/System Restore

3.4.2 Software & Drivers Installation

Note : The TrackIR version 5.x software does not support Windows XP or older.

3.4.2.1 Windows Vista and newer

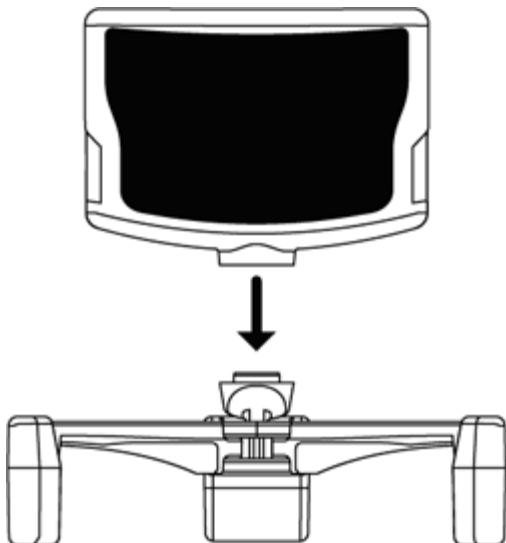
1. Visit www.trackir.com to download the latest version of the TrackIR software. Save the installer to your desktop.
2. Right click on the installer and select "Run as Administrator" then follow installation instructions.
3. (Note: Windows Security may display a warning message that it can't verify the publisher of the driver software. Click to install the driver software anyway. The drivers WILL NOT harm your system.)
4. When installation is complete, a TrackIR icon will appear on your desktop.
5. Plug the TrackIR into a USB port on your computer. For best results, directly connect the TrackIR into a USB port on your computer. We do not recommend using a USB hub of any kind.



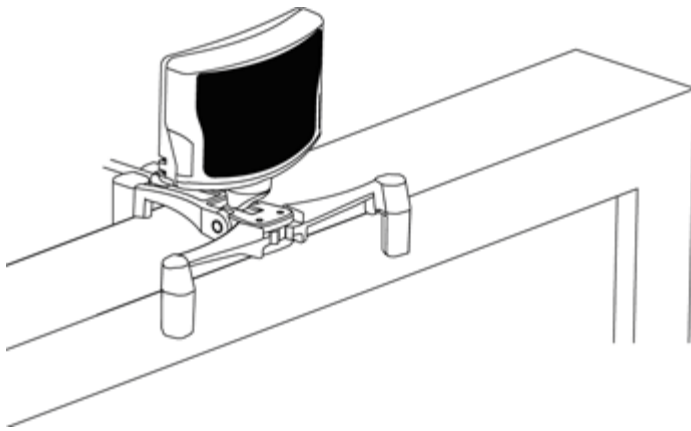
6. Place the unit on top of your monitor with the front facing the same direction as the monitor screen.
7. Double click on the newly created TrackIR icon on your desktop to open the TrackIR software program.
8. Hold the TrackClip in front of the TrackIR unit. With the reflective material facing the TrackIR unit, slowly move the vector clip back and forth in front of the TrackIR unit from about an arm's length away. If the left green indicator light comes on, you have installed the TrackIR unit and software correctly. If the light does not come on, please consult the troubleshooting guide at the back of this manual.
9. If you encounter further problems with this procedure, please consult the troubleshooting guide at the end of this manual.
10. To ensure compatibility with recently released TrackIR Enhanced games, check for software and game updates immediately after installation. If updates are installed, restart the software.

3.5 Hardware Placement

Using the mounting base, you can secure the TrackIR to any computer display, including flat panel, laptop, and CRT screens. Attach the camera to base using the magnetic connector. The base may be disconnected from the camera as needed.

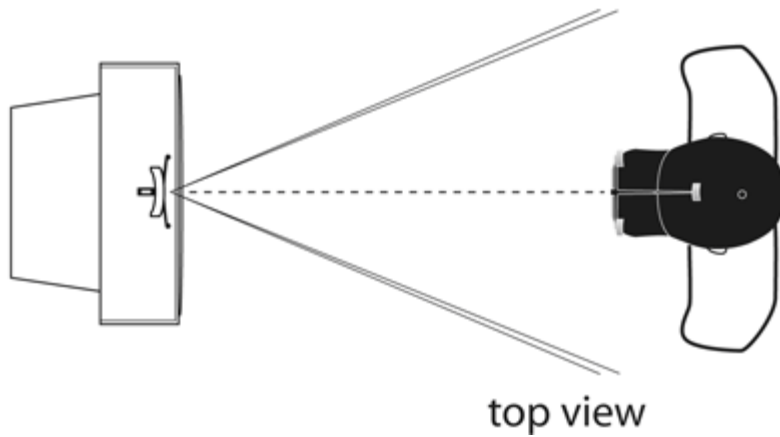
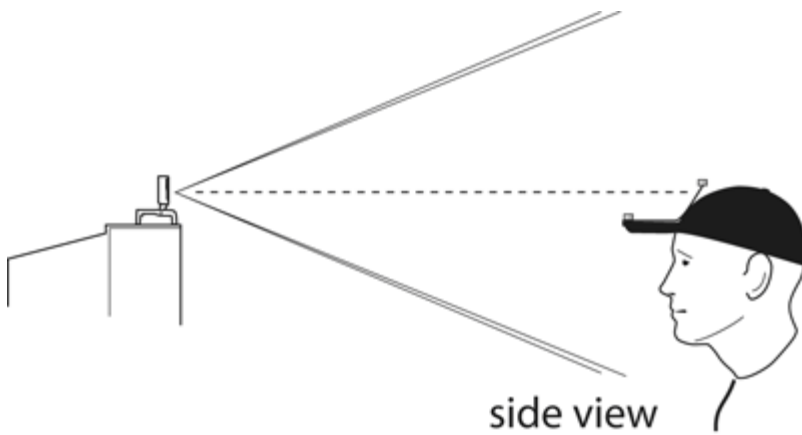


Place the unit on your monitor facing you. Adjust the legs on the base to either clip to your monitor or sit atop it.

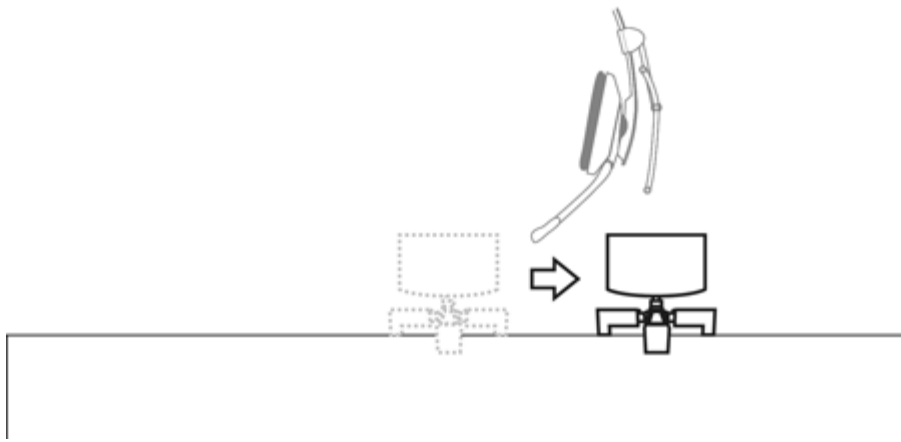


Position the camera so your head is in the center of its view.

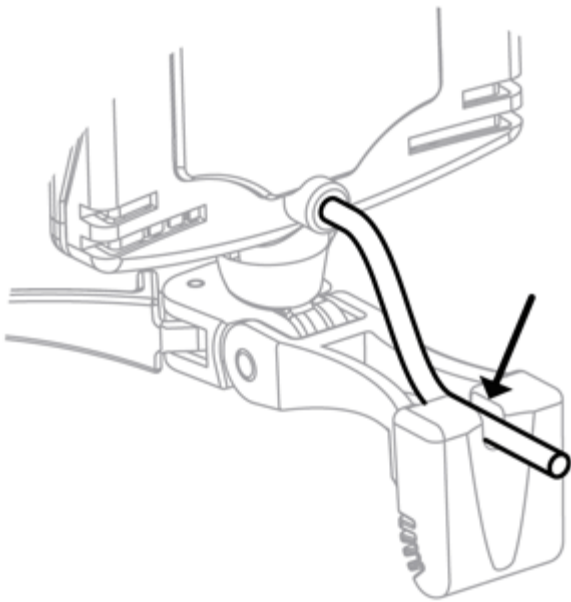
Position the device further away if you'd like more room to move around. (We recommend between 2 and 5 feet.)



When using the TrackClip PRO, position the TrackIR camera on your monitor so the TrackClip PRO's LEDs are in the center of the camera's view.



Once you have positioned the camera, secure the USB cable with the strain relief clip in the base.



4. Using the TrackIR

TrackIR is a head tracking input device designed for use with gaming and simulation PC titles. It is an infrared camera that tracks the position of your head using one of two track clips. The standard TrackClip, which attaches to the brim of a hat or visor, has three reflective markers that direct infrared light back to the camera. The TrackClip PRO, which attaches to most PC headsets, comes with active LED markers that send infrared light directly to the camera.

TrackIR can use either of these clips to find the position and orientation of your head and then send that data to any of the 100+ TrackIR Enhanced games and simulations. As a result, you can control your in-game view with your actual head movement in three-dimensional space. It is easy to use, and many users can get up and running without ever opening the manual. However, the information provided below can ensure that you get the most out of your investment in TrackIR.

4.1 Getting Started

Before using your TrackIR gaming controller you should make sure to have all software and hardware properly installed as described in chapter 3. Once the software is installed, you can begin using your TrackIR by doing the following:

- Place the TrackIR on a surface directly in front of your face, and as close to level with the top of your head as possible. This is usually best accomplished by placing the unit on top of your computer monitor. If using a laptop, the TrackIR can be clipped to the top of your screen.

- Plug the TrackIR's USB cable into any available USB port on your computer.
- Attach the TrackClip to your hat or TrackClip PRO to your headset.
- Launch the TrackIR software.

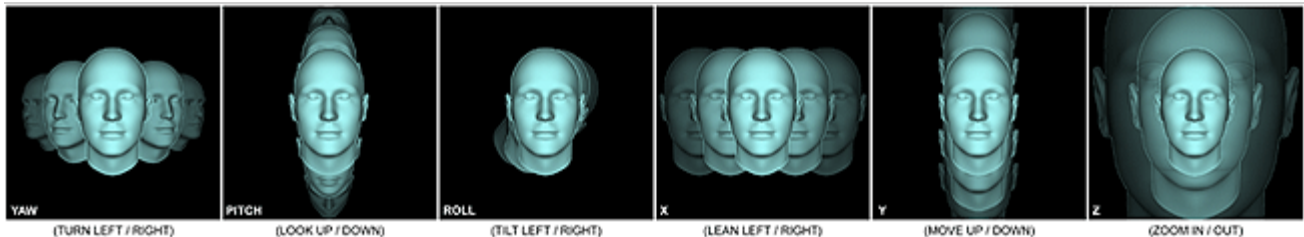
4.1.1 Introduction to TrackIR Enhanced

TrackIR is designed for use with games that are TrackIR Enhanced. TrackIR Enhanced games enable TrackIR to work alongside traditional peripherals by controlling the in-game view with your actual head movement. The TrackIR is intended for use alongside mice, keyboards and joysticks and does not replace them, though it does replace the traditional function of a joystick's POV hat switch. A list of games and simulations that are TrackIR Enhanced can be found on the "Titles" tab of the TrackIR version 5.x software.

New Titles are frequently being added, so check www.trackir.com for updates.

4.1.2 Introduction to 6 DOF

There are six axes of movement in three-dimensional space, three for rotation (yaw, pitch, and roll) and three for translation (x, y, and z). These axes are collectively termed "Six Degrees of Freedom" (6 DOF). TrackIR's three point tracking allows all 6 DOF to be tracked, resulting in a precise correlation of actual and in-game movement.



4.1.3 Third Party Utilities

There are a number of third party utilities that work with TrackIR to bring TrackIR support to non-TrackIR Enhanced games and simulations. These utilities are produced and maintained by parties which are not affiliated with NaturalPoint, and no warranty or performance level is guaranteed. Compatibility with TrackIR software version 5.x is not guaranteed. Find out more on our [Free Utilities page](#).

4.2 Tracking Types

There are two types of tracking in the TrackIR software: one for use with the standard TrackClip and one for the TrackClip PRO headset accessory. For information about how to change the "Tracking Target", please see section 5.7.

4.3 Camera Status LED indicators

The TrackIR camera has status LEDs which give you visual cues about the status of the TrackIR software. Use the following key to interpret what the state and color of the status LEDs mean:

TrackIR 5

- **Left Green** : A clip IS being tracked.
- **Right Green** : A TrackIR Enhanced Title IS running and has registered with the TrackIR software to receive tracking data.
- **Both Green** : A clip IS being tracked, and a TrackIR Enhanced Title IS running and has registered with the TrackIR software to receive tracking data.
- **Both Orange** : TrackIR is paused
- **Both Off** : A clip is NOT being tracked, and a TrackIR Enhanced Title is NOT running or registered.

Front Status LED :

- **Off** : NO clip is being tracked, and TrackIR Enhanced output is NOT paused.
- **Green** : A clip IS being tracked, and TrackIR Enhanced output is NOT paused.
- **Orange** : A clip IS being tracked, and TrackIR Enhanced output IS paused.
- **Red** : NO clip is being tracked, and TrackIR Enhanced output IS paused.
- **Flashing Blue or Green** : Low power or stand by mode.

Blue Case LED :

- **Off** : There is NO TrackIR Enhanced Title (game or simulation) running.
- **Glowing Blue** : A TrackIR Enhanced Title IS running and has registered with the TrackIR software to receive tracking data.
- **Note** : If the Case LED has been disabled in the Tracking : Settings window, it will not turn on.

5. The TrackIR software

5.1 Overview

The TrackIR software is the interface between TrackIR, TrackIR Enhanced games and simulations, and you. It must be running in order to use TrackIR. A list of games that are TrackIR Enhanced can be found in the Titles tab of the software or on the [Enhanced Games](#) page of the TrackIR website.

Once you have determined that a game is TrackIR Enhanced, you can continue to the next step. Verify that the TrackIR software is running before starting the simulation that you wish to use with TrackIR. Once the game is running, it should be possible to control the view by moving your head. Some games may require you to turn on support for the TrackIR in the game menu or activate the virtual cockpit. If the TrackIR it does not work immediately, please consult the game's manual or manufacturer support for more details. The Enhanced Games page of the TrackIR website contains hints and tips for supported title compatibility.

5.1.1 Basic Settings

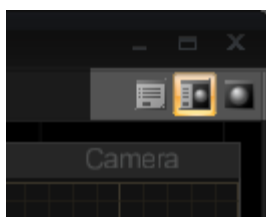
You can access a few global tracking settings in the Basic Settings section. These settings enable you to quickly and simply adjust the speed, smoothing, and tracking type for all games. Basic visual preview options are also available. For details on adjusting Basic Settings, see section 5.6.

5.1.2 Advanced Settings

Many more settings are available to further customize your TrackIR experience. The Advanced Settings section enables you to manage profiles, edit motion curves, preview tracking and view control, assign profiles to titles, and adjust camera hardware settings. For details on adjusting Advanced Settings, see section 5.6.

5.2 Size and Layout

You can choose between three layouts: Panel View, Preview Window View, and the default Panel/Preview Split View.

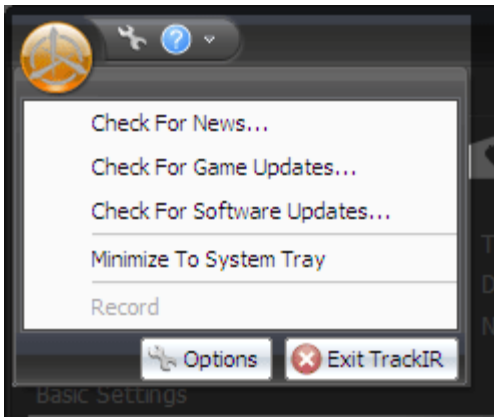


You can resize the software window by clicking and dragging the bottom right corner.



5.3 Main menu

Access the Software Options menu by clicking on the TrackIR logo in the top left corner of the software.



Check for News

When selected, the software will display the latest news.

Check for Game Updates

When selected, the software will check for game list updates immediately.

Check for Software Updates

When selected, the software will check for software updates immediately.

Minimize to System Tray

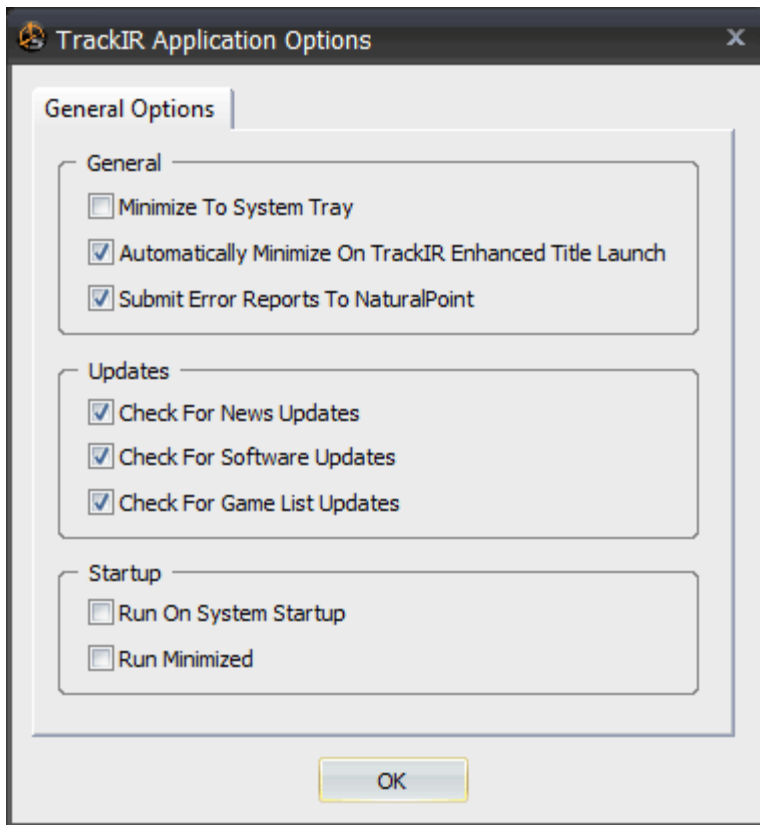
When selected, the TrackIR software will minimize into the Windows System Tray instead of the Windows Task Bar.

Exit

Clicking this menu item will close the TrackIR software.

5.4 Application Options

Access Application Options by clicking on the wrench logo at the top left corner of the software



Minimize to System Tray

When selected, minimizing the software will send it to the System Tray instead of the Taskbar at startup.

Automatically Minimize On TrackIR Enhanced Title Launch

When selected, the software will automatically minimize whenever a TrackIR Enhanced title registers itself (usually occurs when that title is initially launched).

Submit Error Reports To NaturalPoint

When selected, the software will automatically send NaturalPoint information about errors that occur.

Check for News Updates

When selected, the software will check for news updates at startup.

Check for Software Updates

When selected, the software will check for software updates at startup.

Check for Game Updates

When selected, the software will check for game list updates at startup.

Run On System Startup

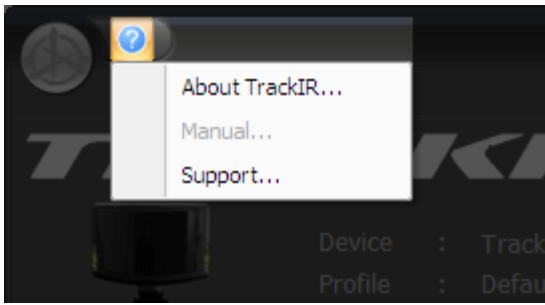
When selected, the TrackIR software will automatically start as soon as Windows loads, every time you turn on or restart your computer.

Run Minimized

When selected, the TrackIR Software will run in a minimized state when it is started. It is recommended that you minimize the software while playing games and simulations, as this will consume the fewest system resources.

5.5 Help menu

Access the Help menu by clicking on the question mark icon in the top left corner of the software.



About TrackIR

This menu item launches a window with information about the version of the software you are using, and contains a link to the NaturalPoint website.

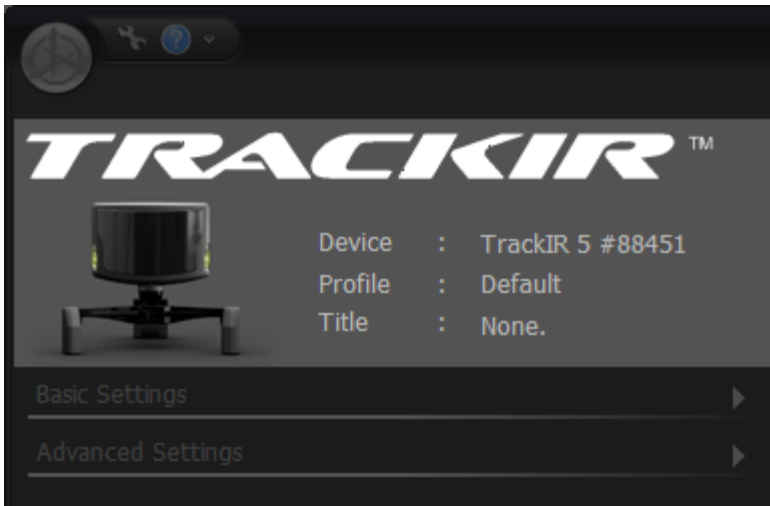
Help Manual

This menu item launches the TrackIR 5.x software manual.

Support

This menu item directs you to the NaturalPoint Customer Support web page.

5.6 Information Pane



Device

Identifies which generation of TrackIR (3, 4, or 5) is active, as well as its serial number.

Profile

Identifies which profile is currently loaded.

Title

Identifies which TrackIR Enhanced game or simulation is interfacing with the TrackIR software.

5.7 Basic Settings



Tracking Target

Select the TrackClip button for the standard hat clip or the TrackClip PRO button for the headset clip upgrade.

Speed

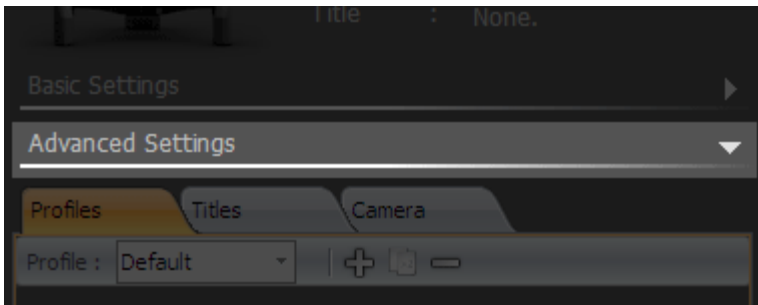
Adjust the Speed slider above 1 to multiply responsiveness on all axes. Adjust the slider below 1 to decrease responsiveness for all axes. Speed adjustments are global and will be applied to all profiles. You can see a visual representation of the multiplier on the curve graph in the Advanced Settings. The original curve will appear as a green line, and the multiplied curve will remain orange.

Note : Because this multiplier affects all profiles and all axes, it is not ideal for small, specific adjustments. Small speed adjustments for particular points or particular axes should still be managed with the curve editor's control points on a per-profile basis.

Smoothing

Smoothing is used to stabilize head movement as it is converted into in-game view control. Increasing the amount of smoothing will provide a steadier view, while decreasing the smoothing will make panning the view more responsive. Smoothing adjustments are global and will be applied to all profiles.

5.8 Advanced Settings



5.8.1 Profile management

Profiles are a collection of settings (motion curves, hotkeys, axis enabling/disabling, etc.) that enable you to optimize TrackIR according to game conditions and personal preferences. Primarily, profiles control how your actual head movement is converted into in-game view control.

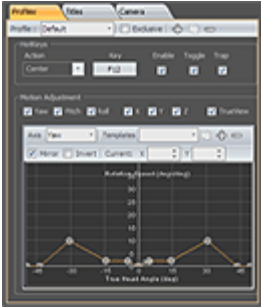
The TrackIR ships with some default profiles which have been tuned to perform well for a wide variety of games and simulations. The default profile provides a good starting point for customizing the motion to suit your needs as you become more familiar with using TrackIR.

- Default**
 Optimized for the broadest range of genres and game play styles. It has a fairly strong dead zone to prevent unintended head movements from being tracked. It is more scalable than the Smooth profile, lending itself well to broad adjustments with the Speed slider.
- Smooth**
 Similar to the Default profile, but with a very minimal dead zone and more even motion scaling across all axes. More ideal for flight and racing than first-person.

- **One:One**

All axes are unscaled, giving an exact 1:1 ratio between actual and in-game head movement. This profile is included more for testing and comparison purposes than in-game use, though it might be appropriate in some simulation or gaming situations.

Note : 4.x profiles can be imported into version 5.x. They will be overwritten in the 5.x profile format upon exit of the software.



5.8.1.1 Create, Copy, and Delete a Profile

Creating New Profiles

Press the “Add” button (plus sign) to create a new profile and add it to the list.

Copying a Profile

Press the “Copy” button to make a copy of the profile that is currently highlighted in the profile list. The new copied profile will be added to the profile list with “Copy of” added to the beginning of the profile name. You can change the name of this profile by editing the “Name” field.

Deleting a Profile

Press the “Delete” button (minus sign) to delete the profile that is currently highlighted in the profile list. Before the profile is deleted, you will be prompted to confirm deletion.

Saving a Profile

You can save changes to a profile by pressing the “Save” button. Unsaved profile changes can be kept or discarded by responding to the prompt that appears upon state change or shutdown.

Note: Profiles are stored in the directory "%AppData%\NaturalPoint\TrackIR 5\Profiles".

5.8.1.2 Profile Settings

Name

To change a profile name, type the new name and then press “enter.”

Exclusive Load

When selected, the profile is locked as the only global profile. All TrackIR Enhanced games will load the exclusively loaded profile. Note that as long as the Exclusive Load feature is active, the auto loading of other profiles will be disabled.

Hotkeys

Hotkeys allow you to map keys or buttons on other input devices to perform functions in the TrackIR software. You can select the keys to be used, turn the hotkey on or off, enable toggle mode, and trap the hotkey. Select the hotkey you wish to edit (Pause, Center, or Precision) from the dropdown menu.

Pause

The Pause hotkey allows you to control whether head tracking data is being sent to the TrackIR Enhanced title. You can pause head tracking to keep the in-game view fixed, even while your head is moving.

- **Center**

The Center hotkey allows you to re-center your in-game view. Every time the Center hotkey is pressed, it re-defines your current head position as the new center.

- **Precision**

The Precision hotkey enables precision mode, which temporarily steadies the view by increasing smoothing. When precision mode is disabled, smoothing settings return to the normal profile preset. Precision mode is commonly used in combat flight simulators when tracking an enemy in your sights to keep the view as stable as possible.

- **Key Button**

Use to map the hotkey. Clicking these buttons brings up a dialog box that allows you to change the key assigned to the function listed next to the button. You can assign keyboard keys, joystick buttons, or mouse buttons as hotkeys.

- **Enable Checkbox**

Turns the associated hotkeys on and off.

- **Toggle Checkbox**

Toggled hotkeys are enabled by a single key press and disabled by a second key press. Non-toggled hotkeys require the key to be held down for the hotkey to be enabled and released for the hotkey to be disabled.

- **Trap Checkbox**

Trapped hotkeys will not be available to any other programs. Untrapped hotkeys will still perform the hotkey function within the TrackIR software, but can also be simultaneously used in other software that is running alongside TrackIR.

- **Note** : Hotkey settings are stored on a per-profile basis.

Axis Checkboxes

Check to enable head tracking for each particular axis. Uncheck to disable.

TrueView

TrueView takes virtual rotation (yaw, pitch, roll) into account when applying physical translation (x, y, z) movements. This allows you to turn your head to one side, lean toward the monitor, and have your in-game view zoom in the direction you are virtually facing. Disabling TrueView results in physical translation superseding virtual rotation, so that moving toward the monitor physically always moves the in-game view straight ahead, making it impossible to zoom in any direction other than straight ahead.

5.8.1.3 Motion Curves

Each axis can be adjusted to have a faster or slower response to your actual head movement. The TrackIR software uses motion curves to amplify your real head movement, allowing complete control of the in-game view with varying degrees of head movement. Changing the motion curve for an axis allows you to fine-tune the amount of head movement used to control your view. It can also be used to create a dead zone, which helps negate small, unintentional head movements when the view is centered.

Select Axis for Editing

Select the desired axis for editing from the Axis dropdown. Once selected, the current motion curve will appear

in the preview window below.

Using Control Points for Curve Editing

The control points on the graph allow you to change the shape of the curve by clicking and dragging the points. You can manually enter values or fine tune with the arrow keys in the adjustment boxes above the curve.

The X value of a control point represents where your head is in actual 3D space. So, a control point with an X value of 15 would represent actual head movement of 15 degrees (rotational) or 15 cm (translational).

The Y value of a control point represents its multiplication. So, a control point with a Y value of 4 would multiply your actual head movement by 4 at that position. A control point with a Y value of 1 would result in 1:1 head/game movement at that position. A control point with a Y value of .5 would reduce your in game movement to 50% of your actual head movement. A control point with a Y value of 0 would result in no in-game movement at that position (a “dead zone”).

Combining the X and Y values into one coordinate determines how much motion scaling will occur at various points of your actual head movement. For instance, a control point coordinate of (15,3) would result in your in-game view control being 3x your actual head movement when your head is at 15 degrees. So, 15 degrees of real life movement would result in 45 degrees of in-game movement.

Note : You can zoom in on any area on the graph by hovering over it with your mouse pointer and using the scroll wheel to move in and out or left-clicking and dragging over a region. Click the scroll wheel to reset zoom. You can resize the graph by increasing the size of the entire window or the settings pane

Mirror

Deselect the mirror checkbox to manipulate control points on the graph independent of their mirrored value. This can be especially useful in optimizing the pitch and zoom axes.

Invert

Check to reverse tracking for each particular axis. Reversing the Pitch, Roll, X, and Z axes allows for placement of the TrackIR camera behind your head.

Limit

Check to enable 180 degree view limits on rotational axes.

Point

Manually enter values to precisely adjust the selected control point on the graph.

Curve

If you wish to save a curve that you have created as a template for use with other curves or profiles, click the “+” next to the Templates dropdown. This will add the curve template to the list. To change the template name, type a new name in the field and then press “enter.”

Note : Shifting the curve down to 0 will flatten it, causing it to lose shape when shifted back up.

Templates

If you wish to save a curve that you have created as a template for use with other curves or profiles, click the “+” next to the Templates dropdown. This will add the curve template to the list. To change the template name, type a new name in the field and then press “enter.” Remove a template by pressing the “Delete” button (minus sign). Stock Templates include One:One, Deadzone, Smooth, Fast, and Slow.

- **One:One**

Adapted from the One:One default profile, this template is completely unscaled, giving an exact 1:1 ratio between actual and in-game head movement.

- **Deadzone**

Inspired by the Default profile, this template has moderate speed of motion with a large dead zone. When head movement is relatively stationary, in-game view will not move. Movement will slow when crossing the mid-point of axes.

- **Smooth**
Inspired by the Smooth profile, this template has moderate speed of motion with a very slight dead zone. Actual head movement must be more stationary to keep in-game view still than with a dead zone, but movement will be smoother when moving across all axes.
- **Fast**
Adapted from the Smooth template, this template has aggressive motion with a very slight dead zone. In-game view control will require less actual head movement, but actual head movement must be very stationary to keep in-game view still. Movement will be smooth when moving across all axes.
- **Slow**
Adapted from the Smooth template, this template has gentle motion with a very slight dead zone. In-game view control will require more actual head movement, but actual head movement does not need to be as stationary to keep in-game view still. Movement will be smooth when moving across all axes.

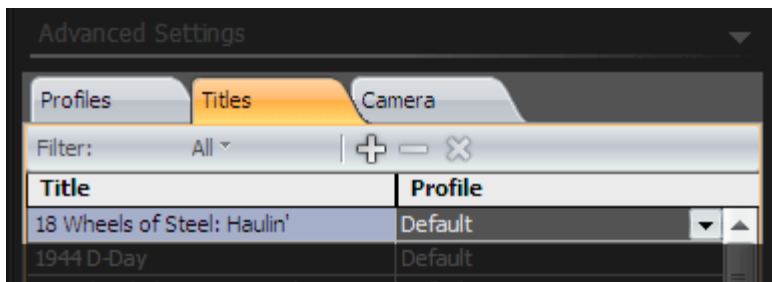
Apply Curve Template

Apply a curve template to the desired axis by selecting it from the Templates.

5.8.2 Title Management

The Titles section displays a list of all TrackIR enhanced Titles, allows sorting by genre, and enables you to assign a profile to a TrackIR Enhanced title so that the profile will be loaded automatically when the title starts.

In order to associate profiles with titles, click on the drop-down list on the right-hand side and select a new one from the list of available profiles. Keep in mind that the profile will not be loaded until the title is started.



To isolate a specific group of titles (either by genre or your favorites list), select the category from the Filter dropdown menu.

Note : You can add/remove titles on your favorites list by highlighting the title and clicking the “+” or “-” button. Click the “X” button to clear your favorites list.

5.8.3 Global Camera Settings



Status LEDs Enabled

Turns the camera status LEDs on or off.

Status LEDs Brightness

Adjusts the brightness of the camera status LEDs. Adjustments do not affect tracking. This feature works with a TrackIR 5 camera only.

Light Filter Threshold

Used to control how much light TrackIR can see. A higher setting will result in more light being filtered out. If TrackIR is used in areas with bright or harsh lighting, the slider may need to be set to a higher value to filter out unwanted reflections caused by these lights. Increasing light filtering too high may reduce tracking precision.

Note : Make sure that Camera View is activated in the preview display to monitor how much light is being filtered.

IR Brightness

Adjusts the brightness of TrackIR's infrared lights. When the light filtering threshold option is increased to filter out unwanted reflections from ambient light, you can also increase TrackIR's IR light brightness. Doing this will make the reflective markers on the TrackClip easier for the camera to track.

Camera Rotation

Choose the correct rotation of the TrackIR unit if you have clipped the unit to any part of your monitor. If TrackIR is upright, then the rotation should be set to 0. If the unit is positioned on its left or right side or is upside down, then the rotation should be set to 90, 270 or 180 degrees respectively.

Video Processing Mode

- **Standard**

Standard mode is intended for use with TrackIR 3 or 4. It should only be used with TrackIR 5 under extremely bright lighting conditions when the tracking screen is flickering and tracking is highly unstable. Please consult technical support before using this mode with TrackIR 5.

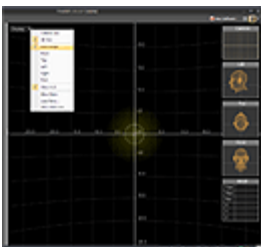
- **Precision**

Precision mode is intended for use with TrackIR 5 and cannot be used by previous generations. It offers superior resolution and tracking stability.

5.9 Visual Preview

5.9.1 3D View

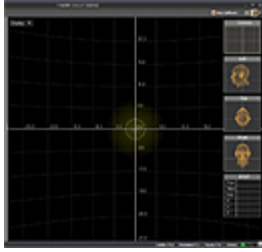
The 3D preview window provides instant feedback on what impact speed and smoothing and curve adjustments will have on your in game view control. You can customize the camera position, load panoramic backgrounds and wireframe grids, view third person head previews, and toggle the HUD on and off.



Perspective

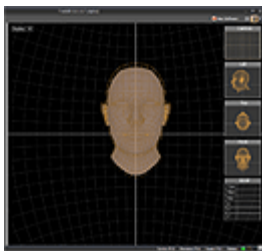
- **First Person**

First person view offers a visual representation of what your view control will look like within the first person viewpoint of a TrackIR Enhanced title.



- **Third Person**

There are many third person viewpoints available, and you can manipulate each by left-clicking and dragging to change the angle or using the mouse wheel to zoom in or out. Preset viewpoints include: Front, Top, Left, Right, and Rear. The smooth rendered head model represents your real-life head movement, and the wire-frame overlay represents the in-game view control.



Show HUD

Toggles the HUD (all windows on the 3D View Preview Window) on and off.

Show Pano

Use to display a 2D panoramic image to the wireframe sphere. These are helpful for previewing your current settings in a game-like environment.

Load Pano

Load custom panoramic images by selecting a bitmap in TrackIR 5\Data.

Show Pano Grid

Select to remove the wire frame sphere to see just the panoramic image or reapply the sphere after it has been removed.

Mirror Camera View

Select to mirror the images displayed in the Camera View (and Camera Window). This matches the behavior of most webcams, and may be more intuitive.

Camera Window

The Camera Window shows a 2D image of what the TrackIR camera is tracking, and what is in its field of view. This helps you adjust the position of yourself and the TrackIR camera to get the best range of motion and tracking results. Undesired light sources in the camera's view can also be identified using this window.

Left, Top, and Front Heads

The Left, Top and Front preview windows show a third person view of the head model. They represent in game view control, giving you instant feedback on how your current settings will translate in game.

6 DOF Data

This shows the raw head tracking data that TrackIR is detecting.

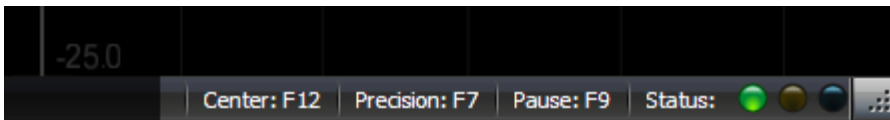
5.9.2 Camera View (2D Tracking Data)

The Camera View is a larger version of the Camera Window. It shows what the TrackIR camera is tracking, and what is in its field of view. This helps you adjust the position of yourself and the TrackIR camera to get the best range of motion and tracking results.

Undesired light sources in the camera's view will also be exposed in this window. Green objects are being tracked by the camera while red objects are not. Other important tracking data (frame rate, tracking mode, and number of tracked objects) is located at the top right corner of the window.



5.10 Status Bar



5.10.1 Hot Keys

The hot key buttons display the key that is currently assigned to each function. The buttons can also be individually clicked to achieve the function.

5.10.2 Software Status Indicators

- **Green On** : Camera connected and detected.
- **Green Off** : Camera not connected.
- **Yellow On** : Camera is tracking a marker.
- **Yellow Off** : Camera is not tracking any markers.
- **Blue On** : A TrackIR Enhanced title is running and recognized by the TrackIR software.
- **Blue Off** : No TrackIR Enhanced title is recognized by the TrackIR software.

6. Gaming Environment

Distance between the TrackIR and the user

The optimum distance between the user and the TrackIR is 24-36 inches. Using the TrackIR within this range will achieve the best balance between range of motion and tracking precision. We recommend having no more than 4 feet between the reflective target and the front of the TrackIR.

Lighting

We recommend turning off or dimming lights in the room and removing any highly reflective materials that are directly in the view of the TrackIR's camera. You can easily check what the TrackIR's camera is seeing by opening the Camera View.

7. Limited Warranty

NaturalPoint warrants to the original consumer or other end user that this product, the NaturalPoint TrackIR, is free from defects in materials and workmanship for a period of one year from the date of purchase. During the limited warranty period, and upon proof of purchase (in the form of product registration) this product will be repaired or replaced at our option, without charge.

This warranty shall be voided if the product is modified, tampered with, misused, or subjected to abnormal working conditions. This warranty does not cover physical damage to the surface of this product. This warranty does not apply when the malfunction results from the use of this product in conjunction with accessories, other products, or peripheral equipment.

Repair or replacement as provided under this warranty is the exclusive remedy of the purchaser.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF FITNESS OR SUITABILITY FOR A PARTICULAR USE OR PURPOSE, AND NATURALPOINT INC SHALL IN NO EVENT BE LIABLE TO PURCHASER FOR INDIRECT OR CONSEQUENTIAL DAMAGES OF ANY KIND OR CHARACTER.

Some states do not allow the exclusion or limitation of incidental or consequential damages or allow limitations on how long an implied warranty lasts, so the above limitations and exclusions may not apply to you.

In order for NaturalPoint to honor your return, you **MUST** receive an RMA number by calling or emailing NaturalPoint, and the return the entire TrackIR package, including all accessories and software to:

NaturalPoint
Attn: RMA #####-####
3658 SW Deschutes St.
Corvallis, OR 97333

8 Trouble Shooting

If you are still experiencing difficulty after trying the suggestions in this trouble shooting guide, call 1-541-753-6645 or visit our main website at www.naturalpoint.com or our online forums at forums.naturalpoint.com for advanced customer support.

8.1 Problem : Software loads and runs, but LED indicator light on unit does not come on; OR you receive a message saying, "The system cannot find the file specified or the software could not connect with the TrackIR device"

Possible Causes

1. Improper software/ hardware installation.
2. Improper unit alignment. (for solution, see placement instructions in section 3.5)

Solutions

If you connected the TrackIR unit before installing the software, do this:

1a. Shut down the software and wait 30 seconds. Unplug the TrackIR unit from your USB port. Then plug the TrackIR back into your USB port, wait another 30 seconds and restart the software.

1b. Right click on My Computer. Go to Properties. Go to the Device Manager. Double click on NaturalPoint Devices. If you see a device listed as TrackIR 3, 4, or 5 then this is not the problem.

1c. If you see a device listed as unknown or has a yellow and black "?" next to it, remove/uninstall that device. Disconnect the TrackIR unit and reboot. After system restarts, unplug all extraneous USB devices except the keyboard and mouse. Uninstall the NaturalPoint software.

Reboot two times. When the system restarts the second time, install the software again.

Reboot. After the system comes up, reconnect the TrackIR unit. The camera should now be recognized and the Found New Hardware Wizard should start. Install the software drivers accordingly

Additional Solutions - System Restore

If step (1c.) did not work, then you can try restoring your system to an earlier time period.

If there are no unknown USB devices in the device manager, unplug the camera and then uninstall the software; otherwise, remove the unknown USB device first, then unplug the camera and uninstall the software.

Perform a system restore to a time before you had your problems. This will clear your registry and reset your system to that day. Any installations of software or hardware since this date will need to be reinstalled again. Once the restore is done and system reboots, unplug all extraneous USB devices. Leave Mouse and Keyboard plugged in.

Reboot a second time.

Now begin the installation of the TrackIR from scratch.

Install the software first. Use the latest version from the download section of our website.

Plug in the TrackIR unit. The found new hardware wizard should start. Follow the installation instructions at the beginning of the manual.

8.2 Problem : Erratic tracking, the in-game view “jumps” instead of panning smoothly.

Possible Causes

Interference from another light source.

Solutions

1. Click “Display” then “Camera View.”

2. You should see three green dots in the window. If you see more than three objects in this window, check for highly reflective items or direct light sources in the background. Move these objects, move the camera, increase the light filtering on the Camera tab, or reposition your monitor.

8.3 Problem : All or some of my Hot Keys will not work.

Possible Causes

Conflict between selected key function and other system properties, or key already selected as a different Hot Key.

Solution

Select a different key for this function.

8.4 Problem : None of the speed settings for view control feel right.

Possible Cause

Incorrect speed settings.

Solution

See sections 5.7.2 and 5.8.1.3 for information about how to adjust the speed for a profile.

8.5 Problem : In-game view control feels jittery.

Possible Cause

Not enough smoothing.

Solution

Increase smoothing slightly. See section 5.7 for information on how to adjust the smoothing for a profile.

8.6 Problem : In-game view control feels mushy.

Possible Cause

Too much smoothing.

Solution

See section 5.7 for information on how to adjust the smoothing for a profile.