

Getting started with Unreal Live-Action Cinematics

This guide is a work in progress.

About

This guide provides an OVERVIEW of Unreal live-action cinematic video. Covered in this guide include tutorials to get familiar with Unreal, tools and hardware required, the checklist of operations, and an overview of the template project. To avoid confusion, this guide does not cover the capturing and exporting video from Unreal. Another guide will be posted.

This guide makes use of OpenXR systems but no one will be wearing the headset in a traditional sense.

Prerequisites

New to Unreal?

- [Getting started with Unreal](#)
- [How I Quickly Create 3D Environments in Unreal Engine 5 | FULL WORKFLOW](#)

Checklist of items:

- **Meta VR headset** with **Meta Link**. *Other headsets in theory could be used, but I found Meta Link behaves better when the headset goes to sleep. We will use an HMD because SteamVR requires one. **Note:** SteamVR will use the OpenXR runtime.*
- **SteamVR**. *This will be the default OpenXR runtime and will be what we used to capture the Canon DSLR movement.*
- **Vive Ultimate Trackers** with the **Vive HUB**. *A vive tracker will be mounted to the Canon DSLR to track its movement to Unreal.*
- **Canon DSLR Camera** with a connection from **mini HDMI to USB**. *For recording the live-action elements in front of a green screen.*

- **Unreal and the target set on the desktop shortcut** (see below)
- **Microphone for Unreal PC.** *To to help with scene slating*
- **Any additional equipment.** *Such as lighting, props, mics, etc.*

Order to activate equipment

OpenXR equipment is still early technology and can sometimes lose tracking, freeze, and other challenges. Keep in mind you may need to restart devices, re calibrate, and more. The good news is every year bugs, software, and hardware improves.

At the time of this writing, the following should be turned on and checked for calibration in this order:

- Start **Vive HUB**. Verify tracker is working.
- Start **Meta Link**
- Start **SteamVR**. Verify the app sees the headset, 2 controllers, and a Vive tracker. SteamVR should be the default OpenXR runtime.
- Set the **Vive tracker in SteamVR** to anything BUT a controller, hand, etc. I usually use **Left Foot**.
- Put on VR headset. Make sure you are in the SteamVR home environment. Use the menu button on the left controller to bring up the SteamVR menu. Select the button to calibrate the Vive tracker. Follow the in headset instructions.
- Verify the **Unreal Desktop icon** has the **target flag set to -XRtrackingonly**. Right click on the desktop icon, select **Properties**, select **Shortcut**, and verify the the **Target** says **-XRtrackingonly**.
- Open your project by launching from the **Unreal Desktop icon**. **DO NOT USE** the Epic Games Launcher, the app icon for your project, or some other way as the flag above won't get called and Live Link may not cooperate.

Verify plugins are enabled in your project

- OpenXR
- OpenXRViveTracker
- Vive OpenXR - This is a local plugin enabled in the Plugins directory of your project. It can be downloaded [here](#) if it is not included in the template project.
- LiveLink
- LiveLinkXR

Overview of template project

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Where to go from here?

The next steps would be to prepare both the studio and the Unreal world for cinematic capture. This takes time and planning, particularly with lighting, perspective, and positioning of both real-life and CGI objects. Consider recording a few tests and making a composite before officially recording your takes. Another guide will be posted on an overview on capturing within the Unreal environment and exporting the footage.

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