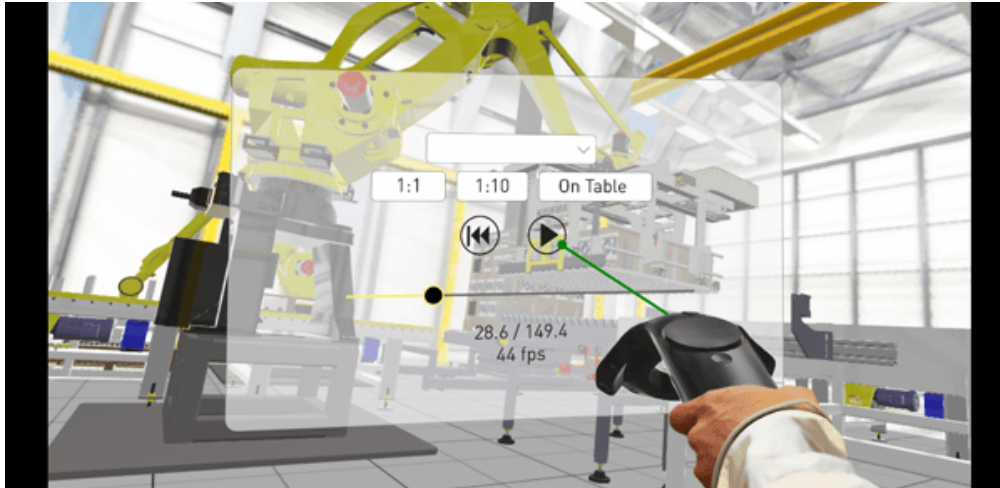


Visual Components Experience Guide

Visual Components Experience 1.5 | Version: November 29, 2019



Visual Components Experience is a standalone application that allows you to view 3D simulations and experience them in virtual reality. Simulations can be recorded as animations using any Visual Components 4.1.X or higher product.

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Support
support@visualcomponents.com

Community
community.visualcomponents.net

Supported Devices

Windows OS

- Any device running Windows 7, 8.1 or 10 can be used for 3D viewing
- Refer to the minimum requirements for a Visual Components 4.x product
<https://www.visualcomponents.com/system-requirements>
- An alternative for 3D viewing is the mobile version of Visual Components Experience

HTC Vive* and Vive Pro

- Requires Steam and SteamVR for virtual reality
- Test your computer and check the specifications
<https://www.vive.com/eu/product>
<https://www.vive.com/eu/product/vive-pro-full-kit>
- If your computer has a Mini DisplayPort, use a Mini DisplayPort cable. Based on field tests and feedback, adapters do not work.

*Visual Components Experience is developed and tested using HTC Vive

Samsung HMD Odyssey

- Uses Microsoft Windows Mixed Reality
- Test your computer or use a Windows Mixed Reality-ready PC
<https://www.microsoft.com/en-us/windows/windows-mixed-reality>

Setup

For 3D viewing, install Visual Components Experience on your device.

<https://www.visualcomponents.com/products/downloads>

For virtual reality, this guide assumes you are using HTC Vive. For all other devices, refer to the manufacturer on how to install new apps, set up the device, and interact with VR objects.

1. Set up HTC Vive

<https://www.vive.com/eu/setup>

2. Install Steam

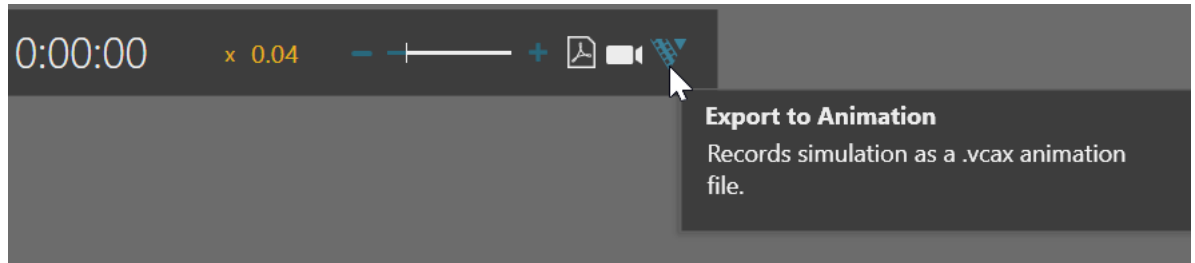
<http://store.steampowered.com/about>

3. Install SteamVR

1. Run Steam.
2. In Steam, go to **Library > Tools** and then search for SteamVR.
3. Right-click **SteamVR** and then click **Install Game**.

Supported File Types

Visual Components Experience allows you to open and play VCAX files. A **VCAX** file is a container for a 3D simulation recorded as an animation using a Visual Components 4.x product.



To create a VCAX file, see "Record a Simulation as Animation" tutorial.

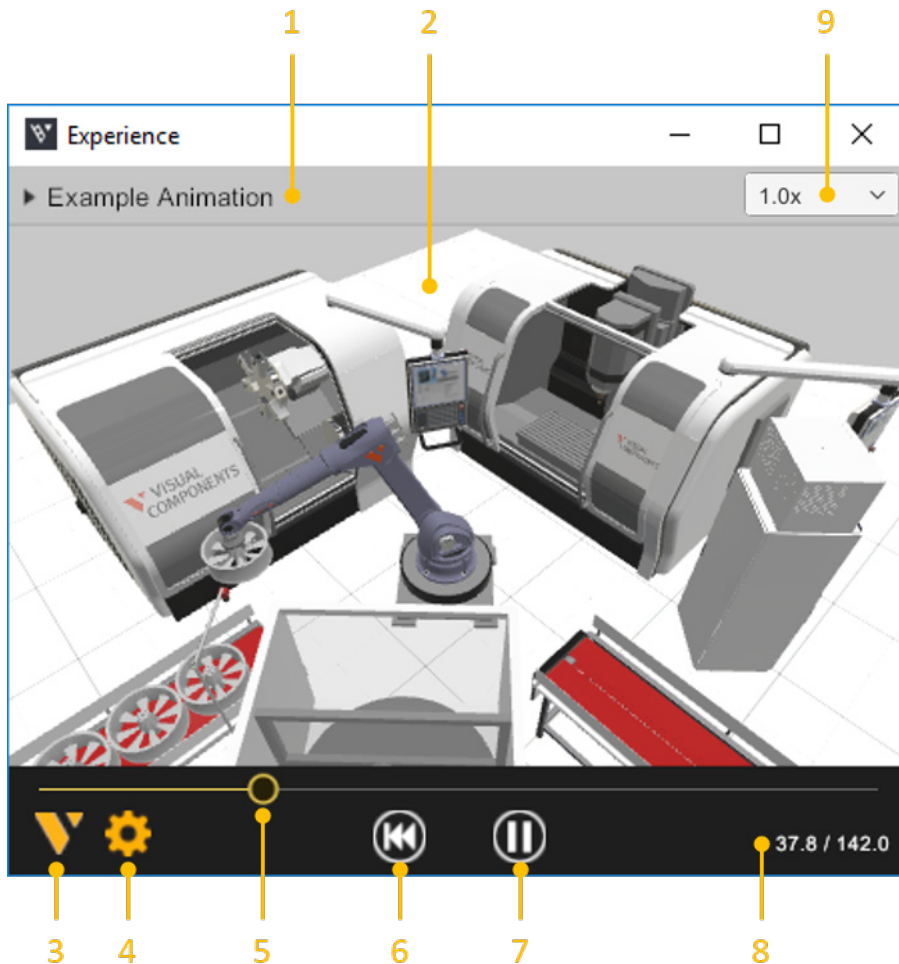
- **Academy**
<https://bit.ly/2NsE3tr>
- **Other** (download video)
<http://bit.ly/2AezIWC>

You can double-click a VCAX file to automatically open it in Visual Components Experience. Otherwise, you need to add VCAX files to your My Animations folder to list them in the app.

C:\Users\%username%\Documents\Visual Components\4.2\My Animations

Controls

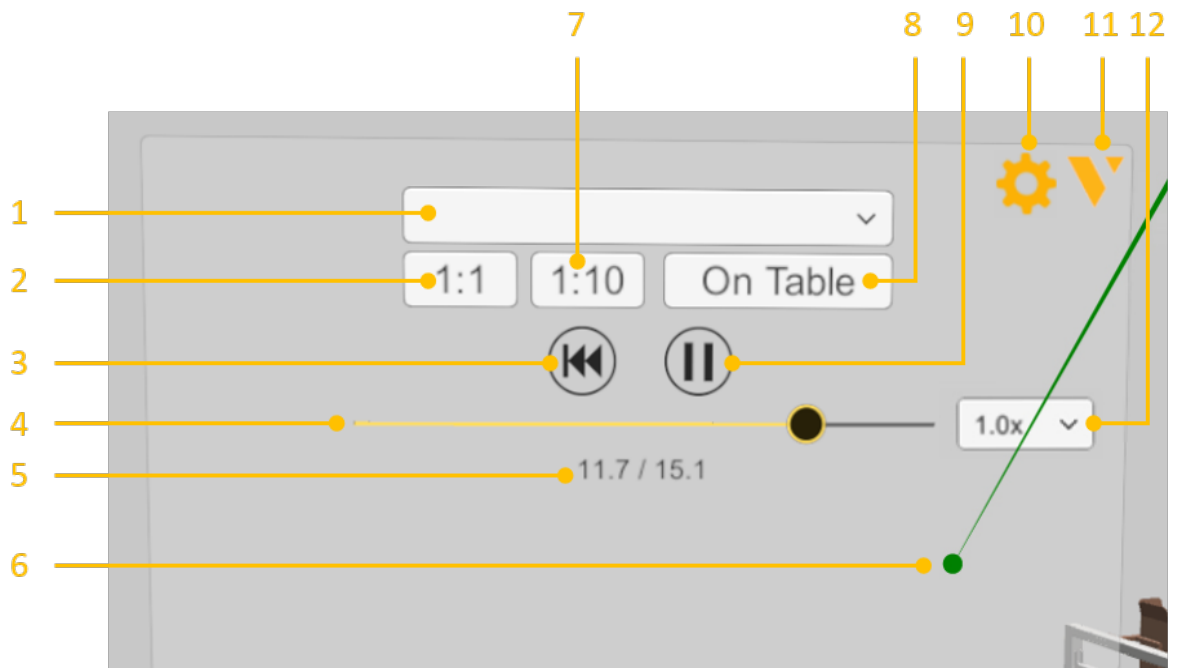
3D Viewing



1. **Select animation** allows you to select and open a VCAX file in the My Animations folder of your Visual Components documents.
2. **Viewport** displays the 3D scene and animation.
3. **About** displays app information.
4. **Quality Settings** displays a dialog for controlling the level of detail (LOD) and quality level of the viewport. The frame rate (FPS) of the scene is also indicated based on the current settings.
5. **Slider and Thumb** show the position of animation and allow you to jump forward or backward in time.
6. **Reset** returns animation to its initial state and time of zero.
7. **Play** allows you to start or stop animation.
8. **Time** shows the position (in seconds) of animation followed by its duration.
9. **Playback speed** can be changed to play the animation slower or faster.

Virtual Reality

Main Menu

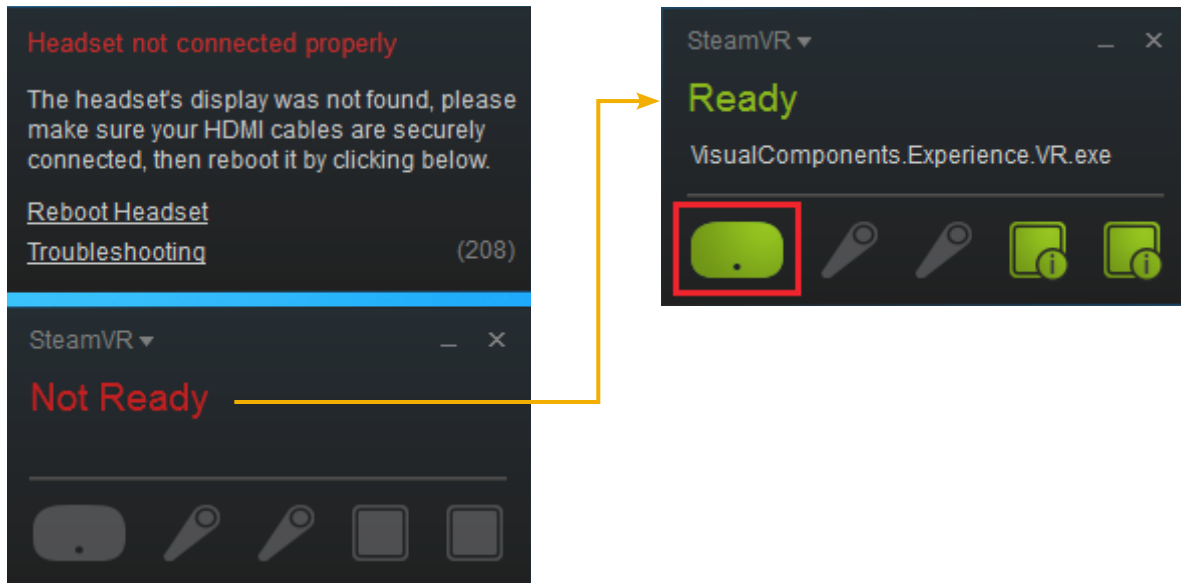


1. **Select animation** allows you to select and open a VCAX file in the My Animations folder of your Visual Components documents.
2. **1:1** scales components to their original size.
3. **Reset** returns animation to its initial state and time of zero.
4. **Slider** and **Thumb** show the position of animation and allow you to jump forward or backward in time.
5. **Time** shows the position (in seconds) of animation followed by its duration..
6. **Ray** is the pointer of a connected joystick that can be used for selecting objects and menu items.
7. **1:10** scales components to 1/10th of their original size.
8. **On Table** scales components to HTC Vive play area.
9. **Play** allows you to start or stop animation.
10. **Quality Settings** displays a dialog for controlling the level of detail (LOD) and quality level of the viewport. The frame rate (FPS) of the scene is also indicated based on the current settings.
11. **About** displays app information.
12. **Playback speed** can be changed to play the animation slower or faster.

Headset

https://www.vive.com/eu/support/vive/category_howto/about-the-headset.html

An HTC Vive headset allows you to look around in the scene. You must connect the headset to SteamVR before using Visual Components Experience in Virtual Reality mode.



Joystick

https://www.vive.com/eu/support/vive/category_howto/about-the-controllers.html

An HTC Vive joystick allows you to select and interact with objects in the scene.

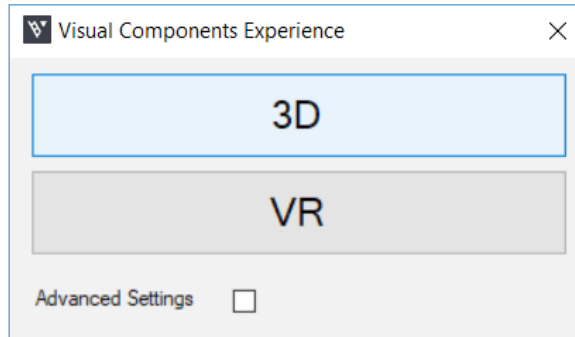
- **Connect joystick** - Press and hold Menu and System buttons
- **Show main menu** - Press the Menu button
- **Raise camera** - Press top face of trackpad
- **Lower camera** - Press bottom face of trackpad
- **Cast ray to display pointer** - Lightly press trigger
- **Select menu item** - Point at item and pull trigger
- **Teleport to new location** - Point at location and pull trigger

You must connect at least one joystick to SteamVR to support these actions.

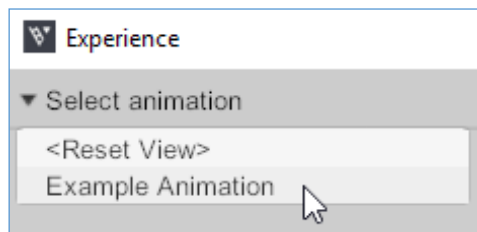


Experience 3D Viewing

1. Run Visual Components Experience.
2. Click **3D**.



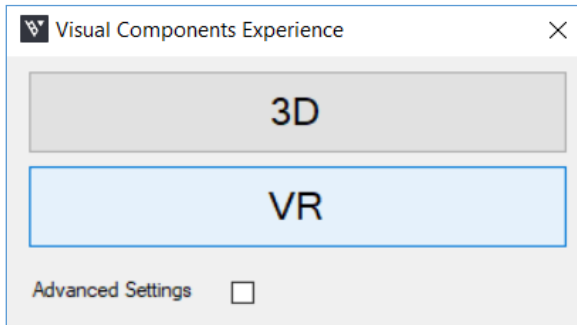
3. Click **Select animation**, and then select an animation to load it in the scene.



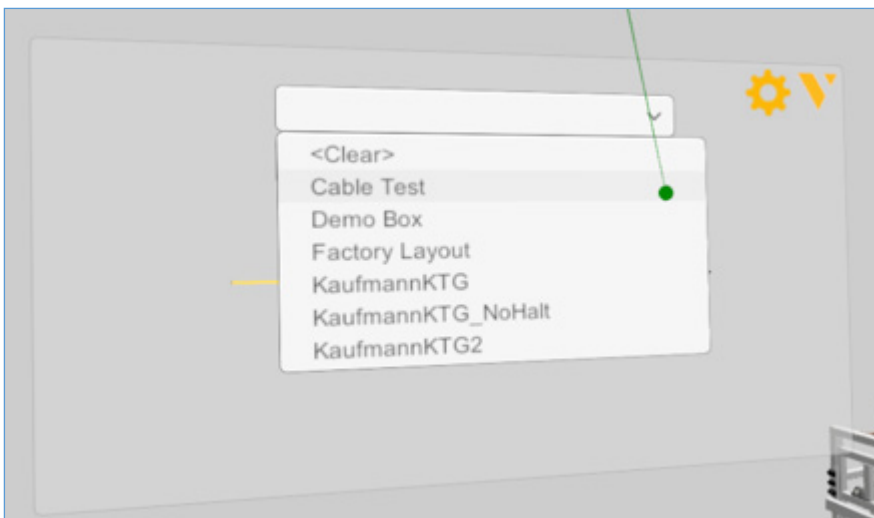
4. Do any of the following as needed:
 - To remove the animation, in **Select animation**, click **<Clear>**.
 - To return to the default view, in **Select animation**, click **<Reset View>**.
 - To orbit the camera in the scene, press and hold the right mouse button.
 - To pan the camera in the scene, press and hold the left and right mouse buttons.
 - To zoom the camera in the scene, rotate the mouse wheel.

Experience Virtual Reality

1. Run SteamVR, and then connect your headset and joystick(s).
2. Run Visual Components Experience.
3. Click **VR**.



4. With the joystick, press the **Menu** button, cast a ray, and then use **Select animation** to load an animation in the scene.



5. Do any of the following as needed:
 - To scale components, use the main menu. Generally, you would use 1:10 to view a large scene or On Table to walk around and view a scene.
 - To remove the animation, in **Select animation**, click **<Clear>**.
 - To return to the default view, in **Select animation**, click **<Reset View>**.

Interactive VR

Interactive VR requires Visual Components **Premium** 4.2 or higher product. Animation streaming is required to interact with components in VR. See the Academy lesson Streaming Simulation to VR on how to enable animation streaming.

For details on using interactive VR, check out the Academy tutorials. Components that enable interactive VR are found in eCatalog directory VR Interaction.

Advanced users should see the Python API documentation for vcVREvents.

Advanced Settings

On the launcher, you have the option to specify Advanced Settings related to animation streaming and Anti-Aliasing.

Streaming Host is the IP-address of the computer where the VC Premium application is running. If VC Premium and VC Experience are running on the same machine, then IP-address 127.0.0.1. Streaming Port must match the port defined in VC Premium.

Anti-aliasing settings can be changed by modifying the Antialiasing mode and Antialiasing FXAA (Fast Approximate Anti-Aliasing) options.

