



United Screens GmbH
future display technology

USER MANUAL

[Thank you for using Unity CREATOR - the United Screens multi-cam plugin for Unity.](#)

With Unity CREATOR you add auto-stereoscopy to your Unity projects.

The plugin is built for use with Unity Editor 2017 or higher on Android and 64-bit Windows systems using the STANDARD 3D render pipeline.

It supports the following graphics libraries:

- DirectX 11
- OpenGL Core (3.0 or higher)
- OpenGL ES 2
- OpenGL ES 3

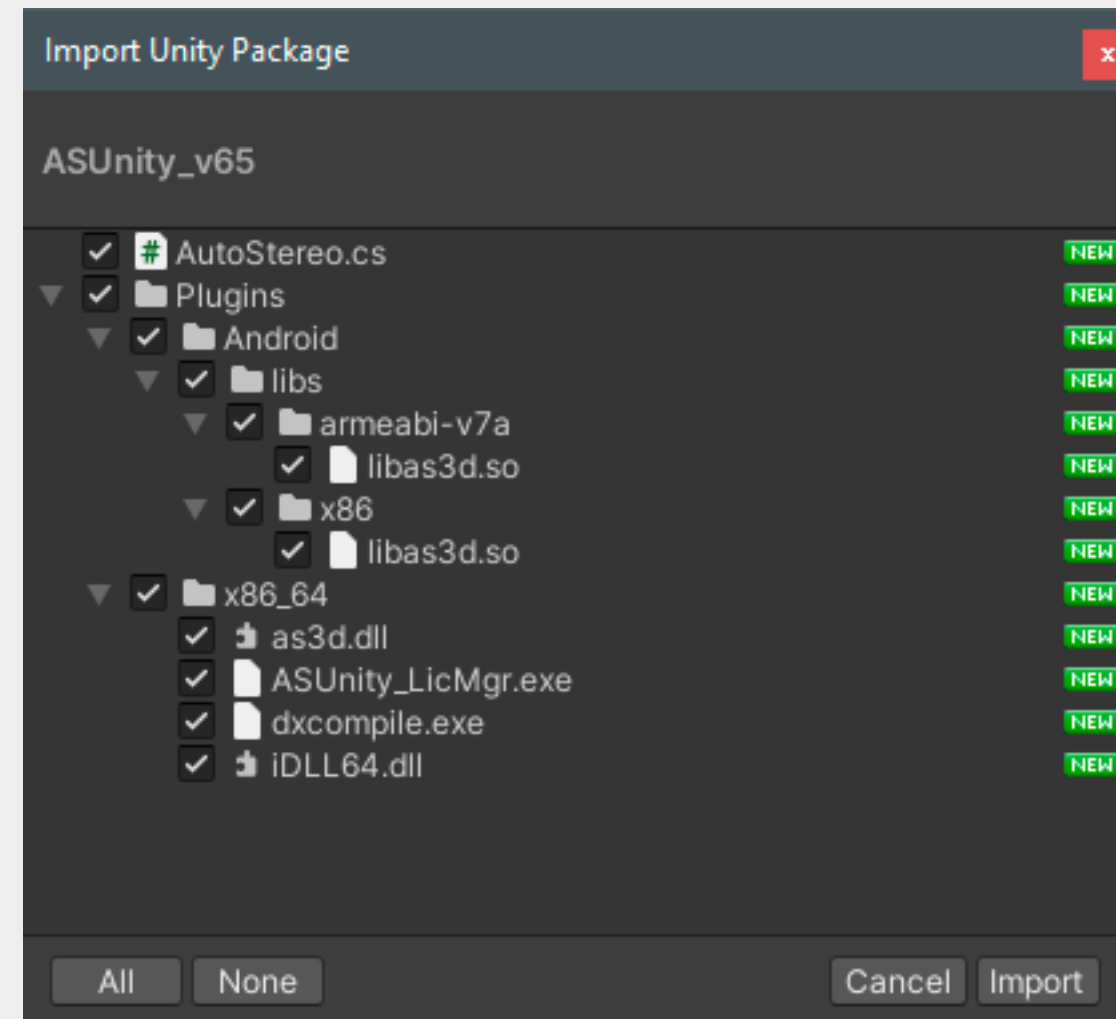
Hardware recommendation:

Component	Recommended Specs	Minimum Specs
Processor	Intel® Core™ i7-10700 (eight-core 2.90 GHz, up to 4.8 GHz)	Intel® Core i5-7300HQ (quad-core 2.5 GHz, up to 3.5 GHz)
GPU	NVIDIA Quadro P4000 / RTX 2070 / Radeon pro WX 7100 or greater	NVIDIA GTX 1070 / AMD Radeon RX 580 or greater
Memory	32GB RAM or more	16GB RAM or more
Video Output	DisplayPort 1.2 or newer	DVI-D / HDMI 1.4b
USB Port	3x USB 3.0 ports, plus 1x USB 2.0	2x USB 3.0 ports
Operating System	Windows 10	Windows 10



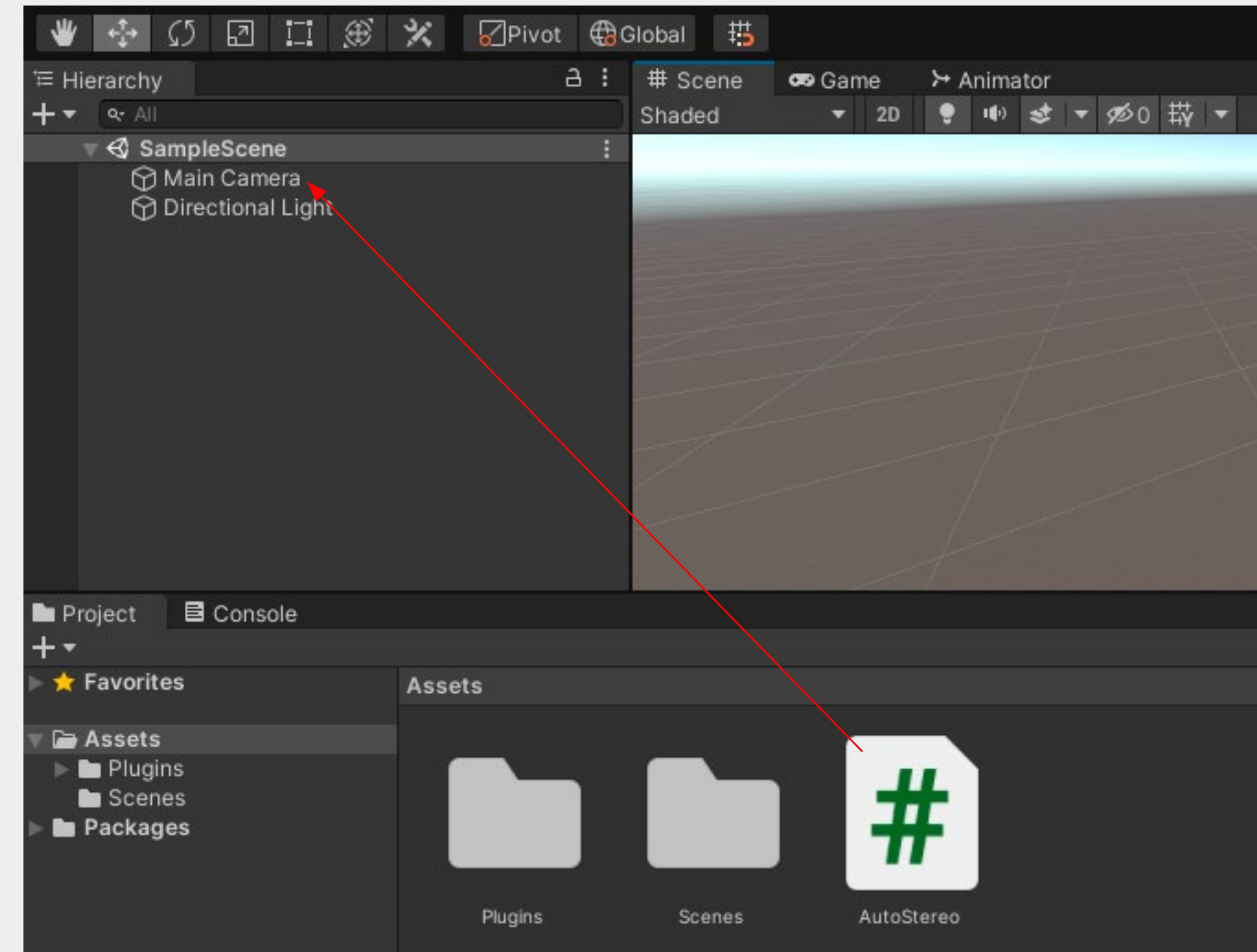
ADDING THE PLUGIN TO A PROJECT

- 1) To add the plugin, select Assets>Import Package>Custom Package... in the Unity Editor menu of your project and choose the unitypackage file.



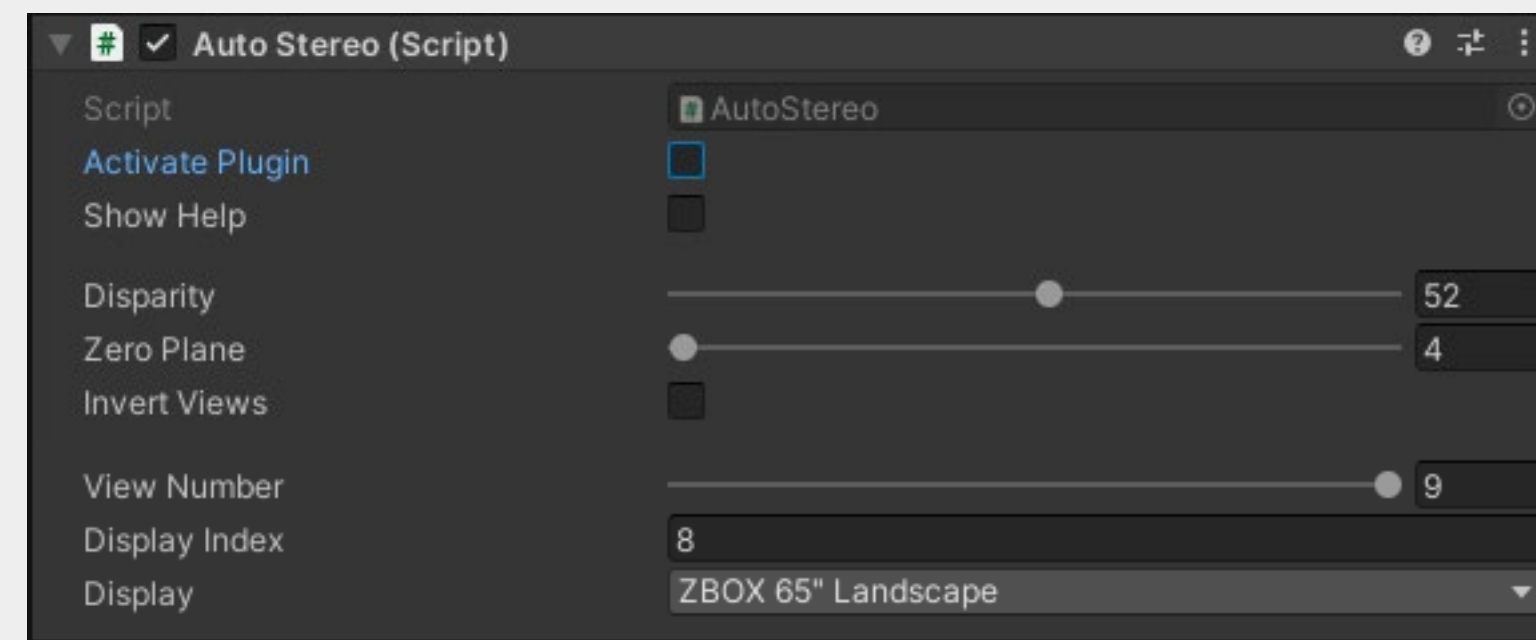
Select all files and click the Import button.

- 2) Add the AutoStereo.cs script as a component to the camera object.



Auto Stereo (Script)

Check the Auto Stereo Settings in the inspector:



Activate Plugin

Option to toggle between rasterization format and tiled format.
Keyboard shortcut M. ZBOX/US Displays use the raster format. ZVIEW uses tiled.

Show Help

When the game is active, an overlay will show information about the plugin and system. The overlay is turned on automatically if the Unity CREATOR plugin is not activated, e.g. when the license is missing or locked. Keyboard shortcut F1.

Disparity

The disparity controls the interaxial distance of the cameras, hence the strength of the 3D effect. Units are 1/100th of the Unity units, e.g. when 1 Unity unit is 1m, then a Disparity value of 50 means 0.5m.

Zero Plane

The distance from the camera that appears to be on the same depth as the 3D screen surface. Also called projection plane distance. Units are Unity units, e.g. 1 Unity unit is 1m, then a Zero Plane value of 1 means 1m as well.

Invert Views

Flips the view order (L/R -> R/L). Default: Off
Use only with screens which require R/L view arrangement (not needed for United Screens Displays)

View Number

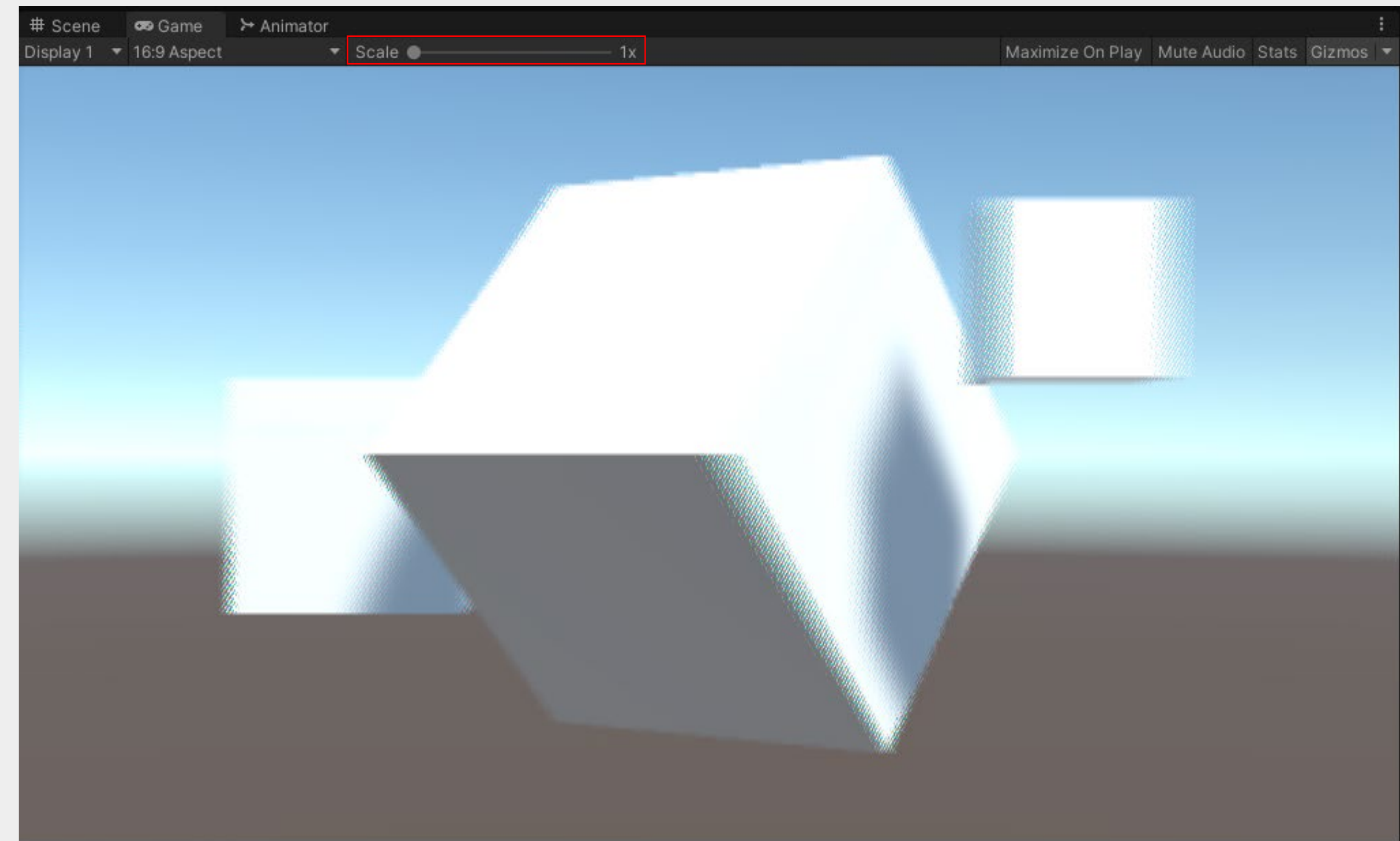
Number of views to be used. Standard for ZBOX: 9 Views. Standard for ZVIEW: 2 Views
Using less views for ZBOX can lead to a more performant experience, at the cost of spatial 3D quality.

Display Index

Can be used to set the plugin to a specific display via script.

Display

Display selection. Sets the internal 3D parameters for each screen.




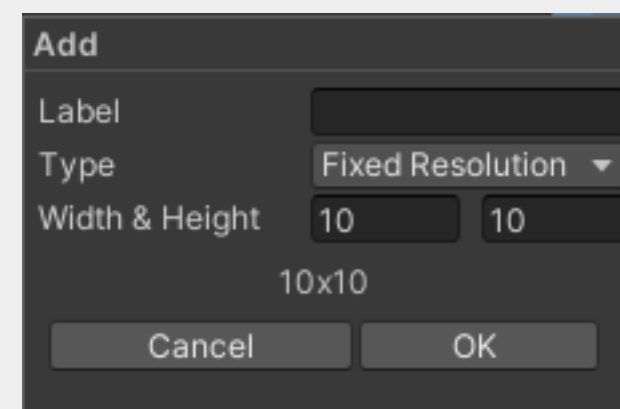
In the Game view of the Unity Editor, the Scale needs to be set to 1x for the 3D effect to work correctly on the connected 3D screen.
Applies only to ZBOX and US displays.

ZVIEW 28" settings - Auto Stereo (Script)

- Select ZVIEW 28" in the *Display* drop down.
- Set the *View Number* to 2
- Uncheck *Activate Plugin*
- Set the *Aspect* in the *Game* tab to 16:9

ZVIEW 65" settings - Auto Stereo (Script)

- Select ZVIEW 65" in the *Display* drop down
- Set the *View Number* to 2
- Uncheck *Activate Plugin*
- In the *Game* tab click on the *Aspect* dropdown and then on  to add a new resolution:



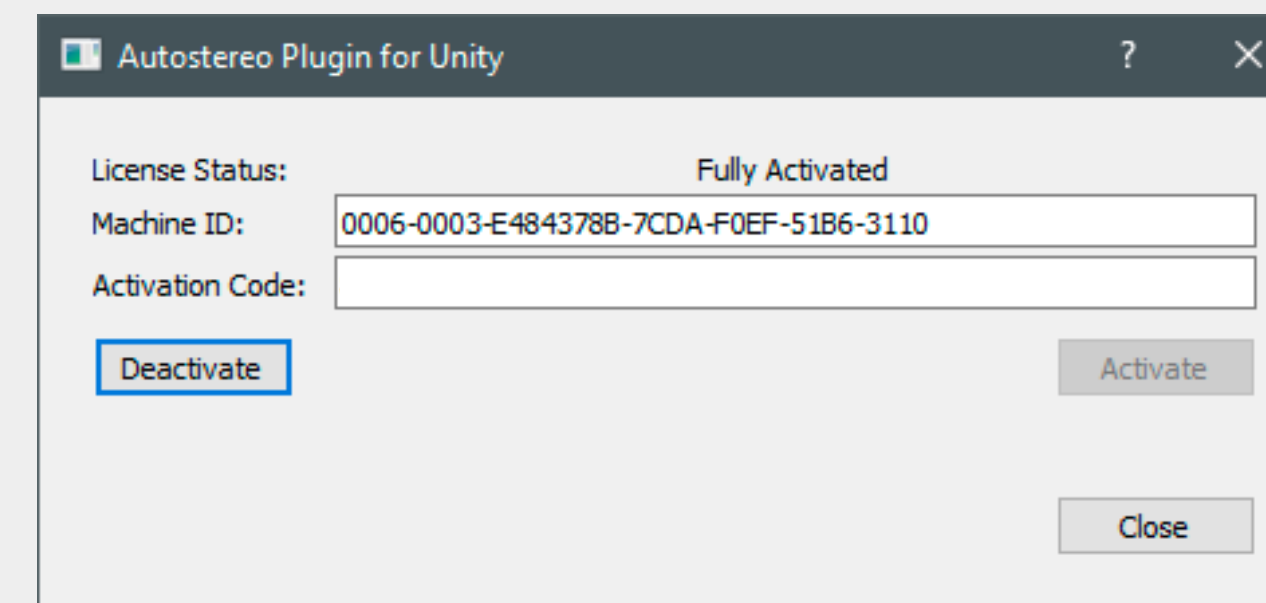
- Type ZVIEW 65" in the *Label* field, leave *Type* at *Fixed Resolution* and set *Width & Height* to 3840 x 1080, then confirm with *OK*

The plugin has to be licensed once per machine/device but can be used in any number of projects on the same system. When Show Help is on, the Device ID shows the code required to get a license.

Note that on any system the built unity game or Unity Editor must be restarted if it was running during license activation.

Licensing on Windows

Please use the ASUnity_LicMgr.exe to license the Unity CREATOR plugin. Start the executable and copy the Machine ID. Then send it to license@united-screens.tv.



The License Manager shows the current status of the license, the machine ID and current activation code, if unlocked. To activate the license, copy the provided code into the field for Activation Code and click Activate.

The license can be deactivated again. This will change the status to Locked with code [Removal Code]. The removal code is used to prove the deactivation of the license on the given machine. This will change the machine ID and a new activation code will be required to unlock the plugin on the same machine.

If required, the activation code can also be passed to the plugin via script, with `AS3DUnlockLicense("XXXXXXXX-XXXXXXXX-XXXXXXXX-XXXXXXXX");`

Licensing on Android

Plugin licenses for android are provided in file form. The script can search the file system automatically for license files, but the app therefore needs permission to read the external storage. This must be configured in the Unity Editor under Edit>Project Settings>Player, in the Android tab under Configuration, by setting the Write Permission to External(SDCard). A build of the project must be installed and launched on the target device. Show Help will be turned on automatically because the device is locked. This can be used to view the Device ID. After copying the file onto the android device's storage, any app using the plugin can find and install the license when they are started.

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