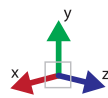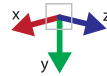# Image Basics

10,000 ft view of how to write graphics for our platform.

The basic image paradigm for using our headset in its most comfortable fasion is an upside down image. By locking the screen in landscape with Y facing down. This gives the final output of a correctly oriented image.
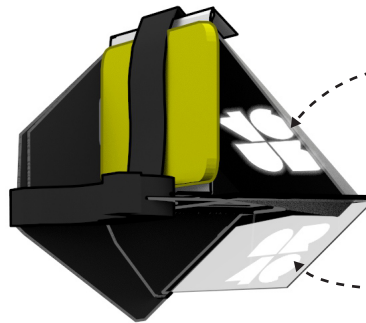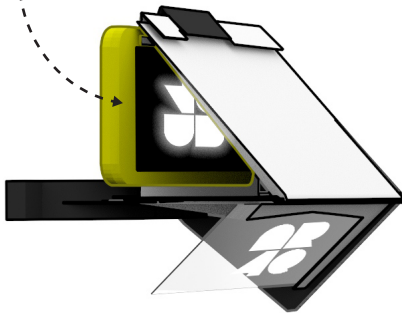
Traditionally Y faces up in most applications.

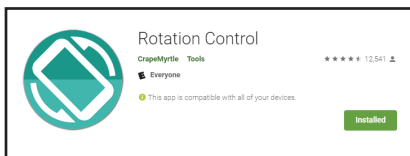For our uses we want images to recognize Y facing down 180°.

See our phone image is oriented upside-down.

The reflection retains the orientation.

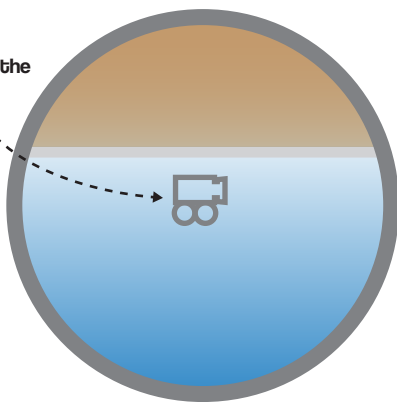Joy! Our final rays are rendered in the correct orientation

Using something like rotation control (Android) you can flip the entire orientation of your phone. This allows for access via a bluetooth periphery to your complete mobile desktop. We have not found a broad solution for iOS 11 at this time. There are ways to rotate the screen and lock it's roation pre-iOS 11.

Rotation Control
CrapeMyrtle   Tools
★★★★★ 12,541 ⬇
Everyone
This app is compatible with all of your devices.
Installed

GLOBAL TRANSFORMS

One way to create this effect is in your game engine. Rotating the camera 180°. This puts the horizon upside down and is a camera effect only. You would build the world and content as usual after this step.
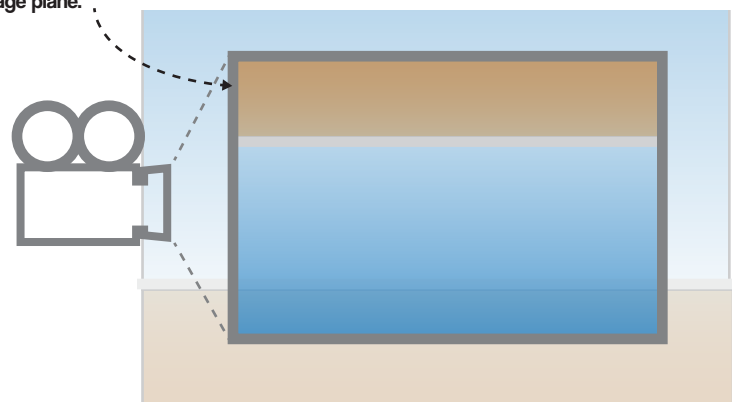
LOCAL TRANSFORMS

We have also had success with rotating just the canvas (Unity). This means independant elements like video can be rotated and will project correctly

here we flip the image plane.

Here we flip the camera.

BLACK PIXELS

One thing that can guide you in your AR development is the black pixel. Seems super obvious but do not forsake the power of redering nothing. Anything black to the camera will not render on the final lens. This is how you create great overlays on the environment. Even if you are using the camera for tracking purposes there is no need to re-render that image.

White text on black background is especially visable.

We have found even 8pt type to be legible in the headset.

The limit will be the vision of the wearer.

If you are developing AR apps for use out in the environment. Consider the economy of your designs, and their responsiveness.

Does a particular widget overwhelm the field of view?
Does it pose a saftey risk?
Can you do more with less?