

Panorama



Jeff Fleisher

Why a Panorama Photograph?

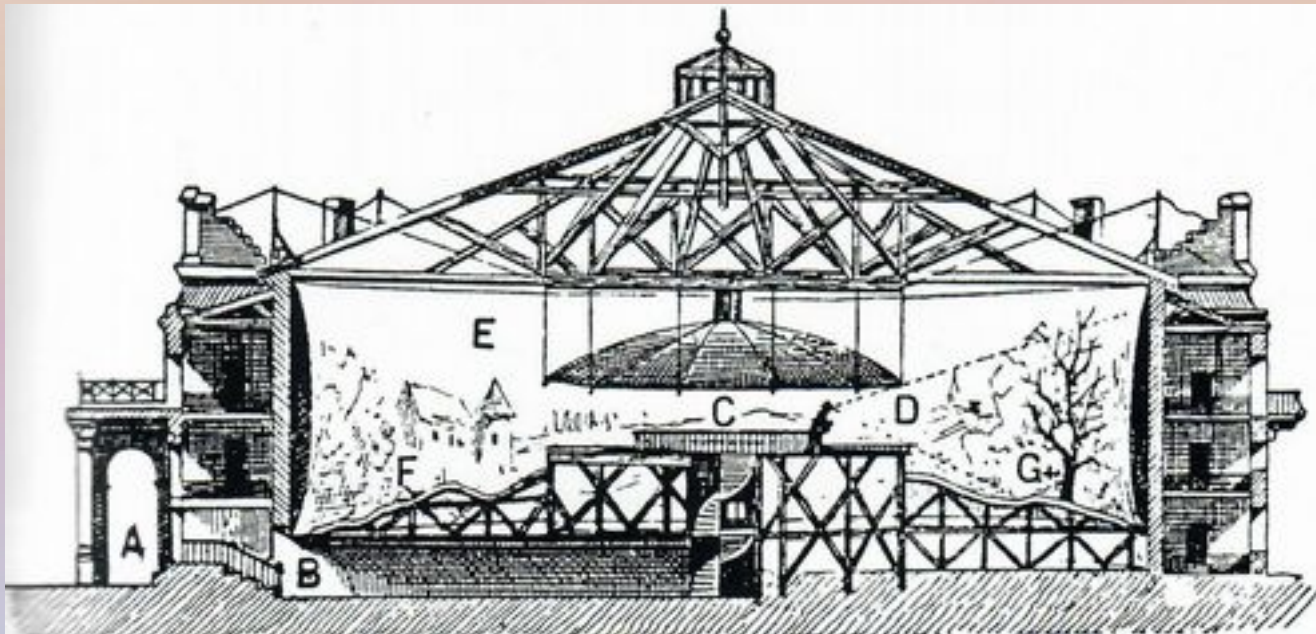
- Increased Field of View (up to 180 degrees by 360 degrees)
- Increased image pixel size

Typically 1:2 - 1:4 format or greater

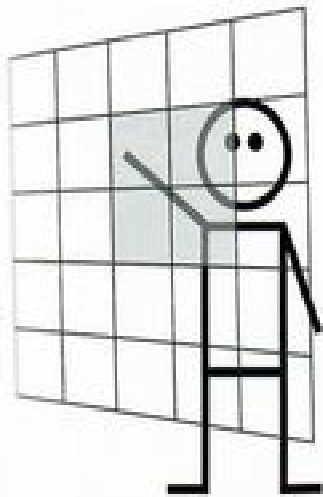


The First Panorama

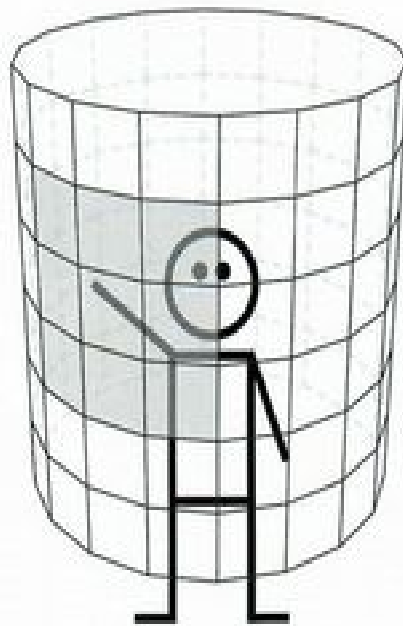
Circular panorama building (“rotunda”) built by Robert Barker in 1792 in Leicester Square, London



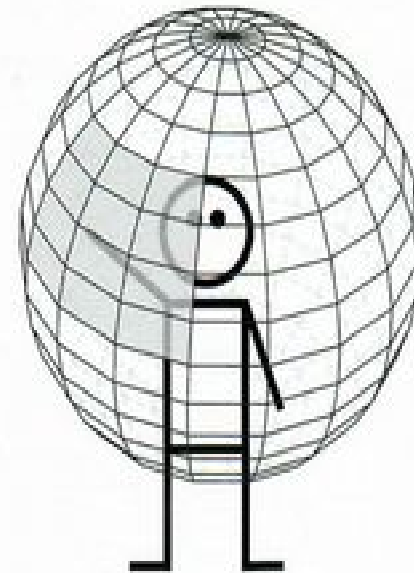
What is a Panorama?



▲ **Model 1: Sheet of Glass**
Flat (plane) image, field of view up to approx. $120^\circ \times 120^\circ$



▲ **Model 2: Glass Cylinder**
Cylindrical image, field of view up to approx. $360^\circ \times 120^\circ$



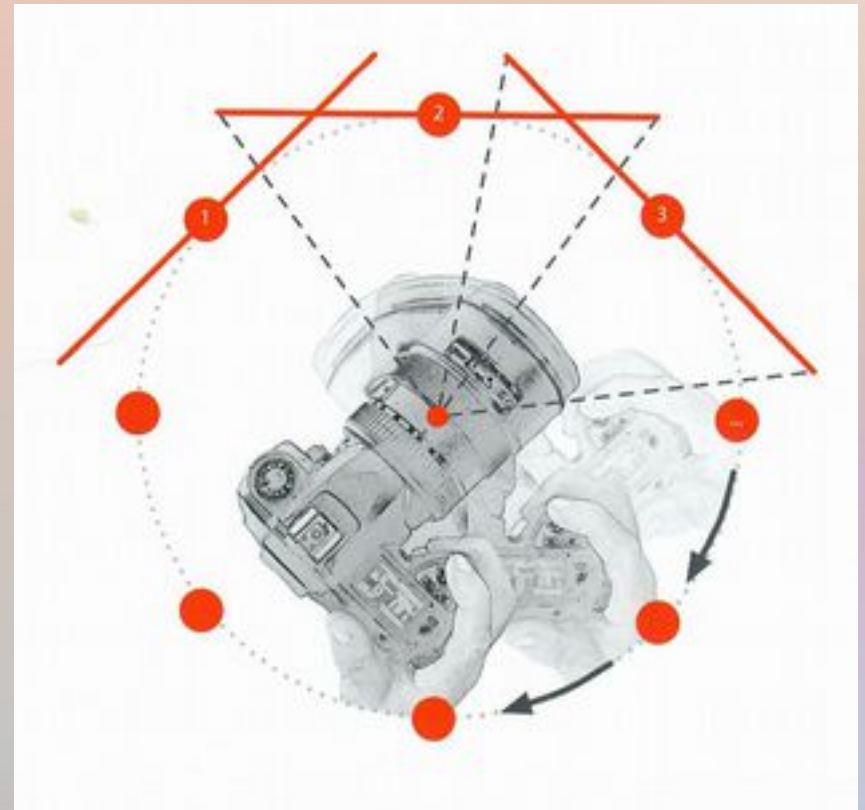
▲ **Model 3: Glass Sphere**
Spherical image, field of view up to approx. $360^\circ \times 180^\circ$

Types of Panoramas

- Simple Panorama
- Advanced Panorama

What is the difference?

Parallax



Simple Panorama

- All significant parts of the image at infinity
- No foreground objects
- Hand held or tripod
- Easily stitched together in post processing

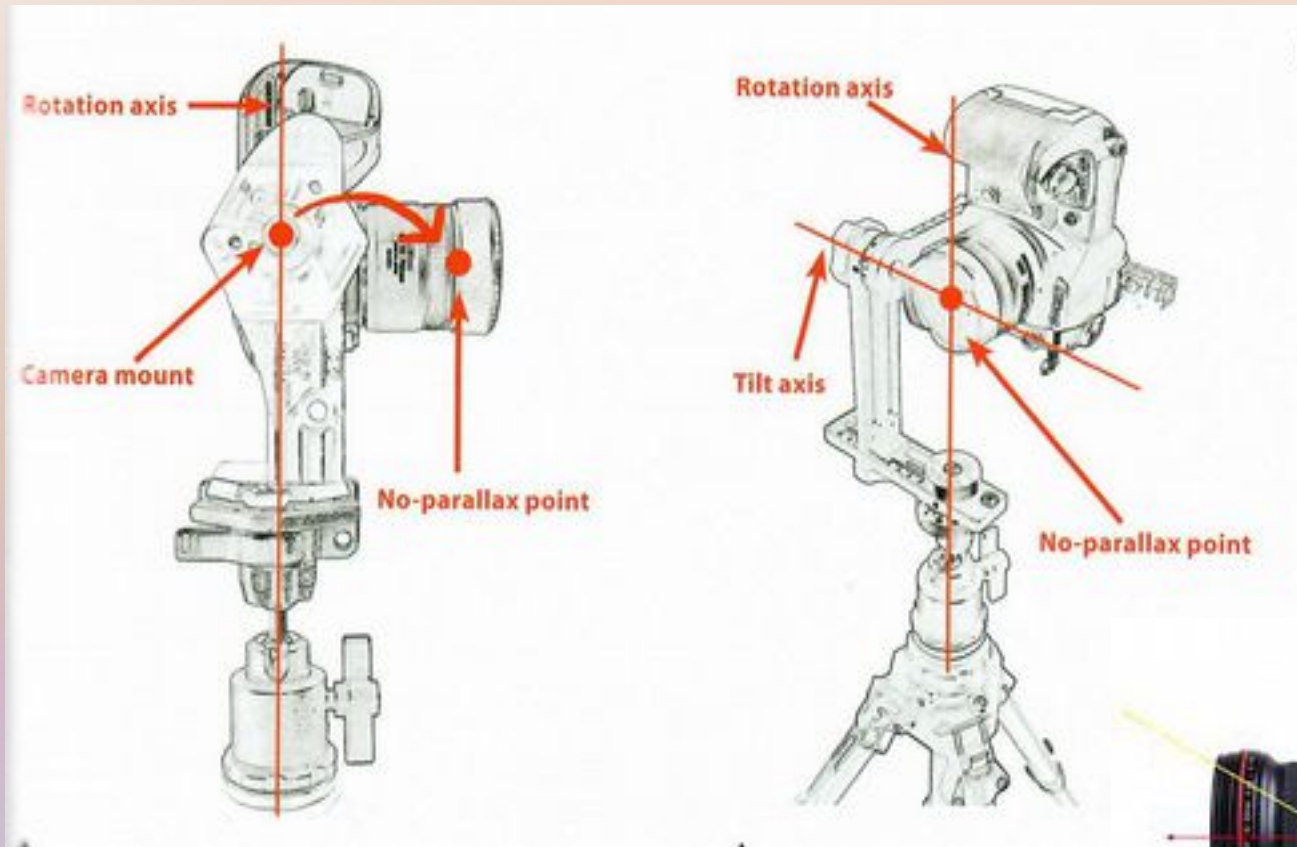


Advanced Panorama

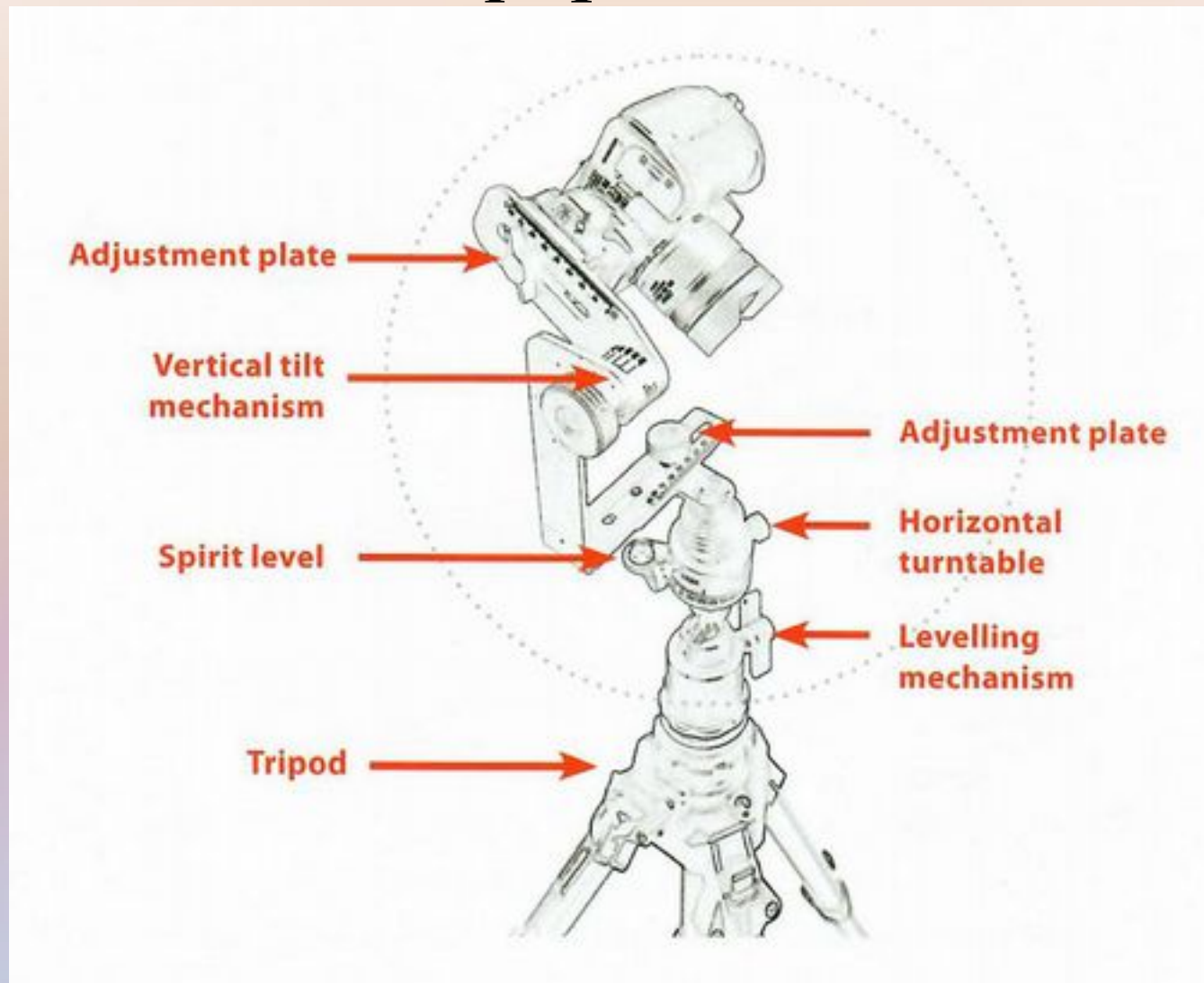
- Foreground objects not at infinity
- Multi-row collection
- Requires positioning lens at the No Parallax point
- Requires special equipment – panoramic head



Finding the No Parallax Point



Equipment



(Equipment Demonstration)

Rules of Thumb

- Set exposure, shutter speed and ISO to manual
- Estimate optimum focus point & DOF
- Take more field of view than you need
- Overlap (25 – 60 %) between images
- Portrait mode for horizontal panorama (opposite for vertical)

Post Processing

Panorama stitching included in Post Processing editing software

- Lightroom
- On1 Photo Raw 2020
- Luminar 4
- Photoshop

Stand alone software

- Hugin
- PTGui
- Kolor Autopano Pro

Demo

