

## PANORAMA

A Panorama photograph is one where a series of pictures are 'stitched' together to give a wider perspective of a subject that could not otherwise be captured in a single shot, or better, cannot be seen by the human eye.

The word is defined as "An unbroken view of the whole region surrounding an observer".  
origin: late 18<sup>th</sup> century, from [pan = all] + Greek [horama = view] (horan = see)  
– Oxford American Dictionary

### PANORAMA SHOOTING TIPS

- must be shot in full manual white balance, exposure, focal length...  
or the space and tone of the photos will not match
- overlap 25 to 33% of each frame  
shoot with a tripod with a wide angle lens  
(but not so wide as to introduce spherical distortion)
- center the horizon in the frame to avoid distortion
- give yourself extra foreground and top (sky) for editing later
- pick a meaningful subject – that you can spend a couple of days on to complete
- shoot several sets of pictures  
*if the lighting conditions are changing while you are shooting,  
then you can creatively paint the light across the series. –Vince Feldman*

### AESTHETIC GOALS

Learn to think and then shoot more conceptually.

You will be able to pre-visualize your shots based on knowing what the tools can do.

Create a compound image that shows the viewer 'how' the picture was made,  
and teaches the viewer about your sense of vision.

### HAND STITCHING

open \_\_\_\_\_ a series of pictures

expand \_\_\_\_\_ the canvas of the first picture      IMAGE> CANVAS SIZE      [CMD] [OPT] C  
usually the left-most, and expand to the right

drag \_\_\_\_\_ other pix onto the new canvas with the MOVE tool      [v]

set \_\_\_\_\_ blend mode to 'DIFFERENCE'

use \_\_\_\_\_ the MOVE tool to adjust position of each picture

use \_\_\_\_\_ the FREE TRANSFORM TOOL      EDIT> FREE TRANSFORM      [CMD] T

rotate \_\_\_\_\_ layers individually

distort \_\_\_\_\_ perspective as needed

touch up \_\_\_\_\_ with the PAINT BRUSH, or –      [B]

use \_\_\_\_\_ the BURN & DODGE tool, or –      [O]

use \_\_\_\_\_ the BLUR or SMUDGE tool

## PANORAMA, cont'd

### PHOTOMERGE Automate Tool

#### File Selection

PhotoShop: **FILE> AUTOMATE> PHOTOMERGE...  
SOURCE FILES> BROWSE**

Bridge: select all pix,  
**TOOLS> PHOTOSHOP> PHOTOMERGE...**

### Types of Photomerge Stitching Methods

#### AUTO

quickest and easiest, but often not the best

#### PERSPECTIVE

chooses the middle picture and distorts both sides to match

#### CYLINDRICAL

curves the pictures to remove any wide-angle distortion  
then blends the pictures to give a flat horizon

#### SPHERICAL

designed for 360° panoramas, but still give a unique 'look'

#### COLLAGE

rotates and rescales but does not distort perspective  
can be choppy but can be cool with the right content  
*try this with a more haphazard collection/array of photos*

#### REPOSITION

only repositions the pictures  
best when the pictures are shot very methodically

#### INTERACTIVE

switches between and 'reposition' or 'perspective' versions  
and freely allows the movement of individual frames in the series  
hitting 'okay' at the end renders all the layers  
this can also be done by manipulating the layers,  
so this is probably for people who do not understand Photoshop.

### Blending Controls

turn on **BLEND IMAGES TOGETHER**

**VIGNETTE REMOVAL** and **GEOMETRIC DISTORTION CORRECTION** are for lens error  
good if using a Holga or an extra-wide angle lens.

All methods generate compound pictures with numerous layers.

These layers can still be moved, rotated, transformed or corrected in many ways.

This will usually have to be done to get desirable results.

### Progress

There is no progress bar as the files are loading into individual layers, just a ticking watch.

the layers will appear one by one

then PS will 'align selected layers by content' and a progress bar does show up

then PS will 'generate output panorama'

by the end of this step the canvas will have been enlarged to fit all the pictures  
this will be seen in the layers palette,

but the final pictures will still not be rendered

finally another run will 'blend selected layers by content'

## PANORAMA, cont'd

### TILING

A more general collection of shots can be combined into a composite picture using the Collage method of Photomerge.

These can be shot hand-held, but keep the exposure and white balance consistent.  
Try moving the camera position to 'wrap around' a subject.

### FOCUS STACKING

This allows a series of pictures with limited amount of depth of field to be combined into a single deep-focus picture.

select \_\_\_\_\_ all pictures in Bridge  
use \_\_\_\_\_ **TOOLS> PHOTOSHOP> LOAD FILES INTO PHOTOSHOP LAYERS...**

select \_\_\_\_\_ all layers  
use \_\_\_\_\_ **EDIT> AUTO-BLEND LAYERS**  
choose \_\_\_\_\_ **STACK ALL IMAGES**  
allow \_\_\_\_\_ time for Photoshop to render the final image