## Les Picker's Panorama Checklist

If you're out shooting panos, it's a good idea to have a checklist for setup and shooting. There are few things as frustrating in photography as taking 30 images in a pano and realizing that you forgot to change to manual focus or some other screwup.

My system here is pretty foolproof. Just copy the checklist to your smart phone and have it with you as you set up.

## Checklist

1.	Use a nodal slide for best results.
2.	Level tripod
3.	Level camera
4.	Check level by panning left to right
5.□	Remove polarizer and any other filters
6.□	Set manual white balance
7.	Set manual focus
8.	Set manual exposure/shutter speed
9.	Switch to vertical orientation
10.	Focus @ hyper-focal distance
11.	Practice sweep the scene leaving extra room on each end for eventual
	cropping in post
12.	Note your starting point on tripod bezel
13.	Take test shots, check histogram and adjust
14.	Take first practice shot, move camera for $1/3$ overlap, lock down tripod and
	take second shot
15.	Note bezel position and count number of gradations it moved between 1st
	and 2nd shots
16.	Return to start and begin shooting

If you are taking a multi-row pano, note end point. Go back to beginning bezel mark, tilt to next row and begin and end again. Shoot third row if needed. With each row, be sure to overlap 1/3.

## **Tips**

- Always lock down your tripod before each shot unless you are shooting at a fast shutter speed.
- It is always a good idea to use a manual or electronic shutter release to minimize shake.
- The advantage of counting the bezel gradations between the 1st and 2nd shots is that you can move faster without having to check for 1/3 overlap with each shot or even look through the viewfinder at all!
- It's sometimes helpful to use a small piece of gaffer tape to keep the focus ring from shifting.
- Shooting ETTR (Expose To The Right) is best with panos. Most modern cameras can retrieve shadows quite well.

## **Additional References**

This checklist assumes you will be using a nodal slide between the tripod and your camera and that you have determined the nodal point for your lens at various focal lengths before you set out. See my YouTube video on how to determine your nodal points.

If you intend to shoot multi-row panos, I suggest you purchase a Wimberly-type setup to allow for flawless up and down movements. Really Right Stuff makes excellent equipment for pano shooters.

I have an older but useful video of how to shoot panos using this method on YouTube.

For an example of what a post-processed pano is like take a look at my website