The Blue “15 minutes”

Presented to Charlottesville Camera Club

September 24, 2019

It's All about "When"

- That gorgeous blue sky lasts only about 15 minutes.
- Cannot be seen by the naked eye – only camera captures it.
- You must take photos repetitively and check LCD until you hit the right moment.

- Note: Dawn is Dusk in reverse.

What constitutes the “Blue Moment”?

- Convergence of street lights coming on and ambient light diminishing--they balance each other.
- At night, it's easy to blow out bright details, especially street lights. Street lights need time to get to full brightness. When they reach full brightness they loose detail & blow out. Need the proper balance between the two so as not to blow out those details.
- The dusk sky offers some illumination on buildings, reducing the contrast range among a dark sky, bright lights, and the sides of the buildings.
- With enough street light, buildings will glow in the photo even though effect is not seen with the naked eye.

Example of the balance

Still early – 8:18 pm

12mm, f/9 for 5 seconds

Just 10 minutes later – 8:28 pm, 11mm, f/9 for 13 seconds

Time to Quit?

- How do you know when the blue "moment" is over?

1. The sky becomes black in photos rather than that intense blue color.

2. Efforts to increase exposure only further blow out the lights.

Essential Tools

1) Tripod, for working with slow shutter speeds
2) Remote shutter release or timer at 2 seconds
3) Extra charged batteries – long exposures eat up battery power very quickly

Essential tools, cont'd

- Camera that can take long exposures.
- Flash unit that can be turned off.
- Lens suited to the subject, but generally wide angle is best. A wide-angle lens or widest setting on your zoom lens will not only give you a wider field of view, it will increase depth of field (DOF) and help make up for small errors in focusing.
- If you use a wide angle lens (recommended) shoot wider than your composition dictates so you can correct distortion in post processing.

Subjects (other than the sky itself)

- Subjects must be lighted in some way.
- Examples:
  - Cityscapes
  - City streets
  - Buildings with lights, internal or external, or both
  - Bridges
  - Factories – with chimneys and smoke
  - Monuments
  - Fountains
  - Ferris wheels
  - Car head and tail lights

Preparation

- ISO: Use camera's “native” ISO to minimize noise and slow the shutter.
- White balance: recommend Auto WB; can change it in post processing if necessary (and if shooting raw).
  - If subject looks too yellow or orange, you can compensate by adding blue with software.

Preparation, cont'd

- Use standard metering mode: Evaluative for Canon; Matrix for Nikon
- Focus while you have enough light.
  1. If using auto-focus, make all focus points active.
  2. After auto-focusing, switch to manual focus. Be careful not to bump focus ring.
- Turn off Image Stabilization. (You're on a tripod.)
- Use Mirror Lock Up to minimize vibrations. Reminder: If using a remote shutter release, push button twice – once to lock up mirror, second to take the shot.
- Use Manual or Aperture Priority exposure mode.

Composition Tips

- Arrive on site as much as an hour in advance.
- Compose your best shot, then focus and wait for the blue "15 minutes."
- Take a few shots and look at your LCD to be sure to find the right time. Remember that you will not see the blue moment in the sky, because our brains neutralize the blues. But the camera will see it and capture it.
- Be flexible--as the light changes you may want to tweak your composition. Something that seemed important when you first arrived may become less important as light fades.

Compostion Tips, cont'd

- Wind can move tree branches, flags, and other objects, causing blur at long exposures.

- The sky becomes blue in the east first, then in the west. Keep this in mind if you want to catch a photo in both directions – shoot looking east first, then recompose to shoot looking west.

Composition Tips, cont'd

- Select the aperture that best suits the subject.
  - Sharp front to back = smallest apertures. Use f/16 max; f/22 if necessary. Also needed for "star burst" lights.
  - Subject and background all at same distance? DoF not as critical, so you may be able to use the sharpest apertures (f/8 to f/11).
- Consider an Adjustable Neutral Density filter
  - Reduces amount of light reaching sensor, so it enables a slower shutter speed for special effects such as blurring water, light trails, ghosting people, etc.
  - Use the exposure meter in your camera to verify that the selected filter strength is appropriate to the ambient light level. The best choice is usually between -1 EV and -2 EV, or a reduction of one or two "stops" of light. (E.g.: 10 seconds > 20 or 40 seconds.)

Composition tips, cont'd

- Bright light sources
  - Best to photograph straight on. If light enters your lens at a low angle you may see lens flares and decreased overall contrast.
  - Selecting small apertures (f/16 or greater) can render bright lights as "stars."

Composition Tips, cont'd

- Moon: With wide-angle lens, it will be too small. Exclude it from your composition, or clone it out later and substitute larger view.
- Water: also appears blue. It can provide reflections. Or you may want to blur the water with shutter speed of 6-8 seconds. (Small apertures and low ISO will slow shutter speed, but you can slow further with AND filter.)

Composition Tips, cont'd

- People and animals:
- At 1/15 second and slower shutter, moving people and animals will start to "ghost". If they're your subject, and if you're close enough, you can fire flash on rear curtain sync or 2nd curtain sync to get clearer figures. If they're *not* your subject, the blurring will not matter--or you can blur further with AND filter.

Composition Tips, cont'd

Light trails – Plan your exposure time so that passing cars have enough time to pass completely through your frame. Usually need 8 - 15 seconds or greater, although this is largely dependent upon the speed at which the vehicle is travelling.

- White lights – vehicle is moving towards you.
- Red light trails – vehicle is moving away.
- Remove the UV filter from your lens to minimize blaze or haze that could ruin your photo.
- Longer exposures will allow for more trails, but the trails will look more faded.

Time sequence w/composition changes

Composition Tips, cont'd

- When you are happy with the shot you have, look around for a completely different composition. (Remember:You have 15 minutes.)

- Also, by looking in a different direction, you may find that the blue moment has yet to occur there.

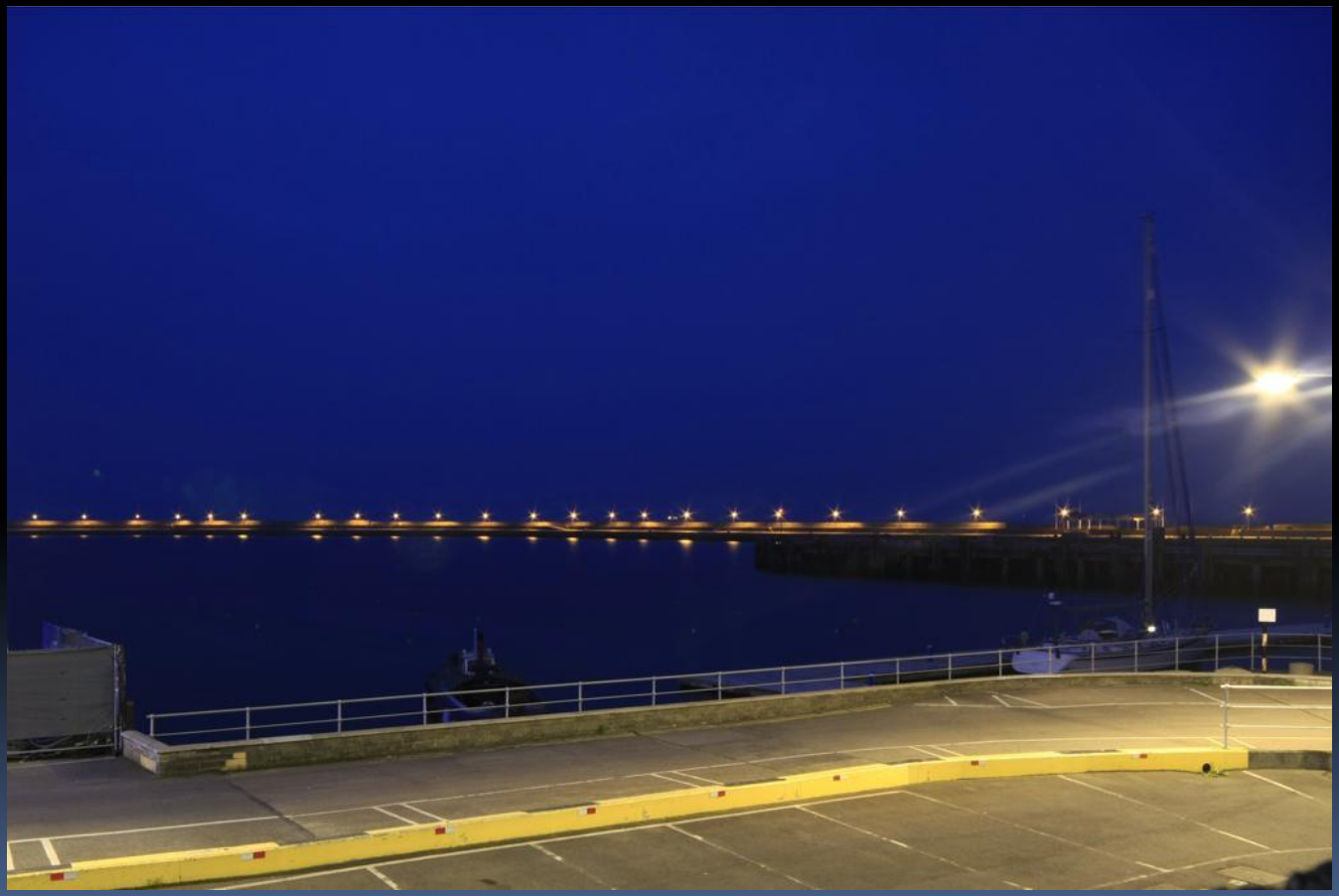
First move:

14mm, f/11, 4 sec

2nd Move

3rd Move

And while the tripod was being dismantled . . .



Summary and checklist

- Tripod secure, legs fully splayed, camera locked down tight
- Image stabilization off since you are on a tripod
- Manual or Aperture priory mode
- Focus with all focus points active, then switch to manual focus
- Auto white balance
- Native ISO
- Standard metering (Evaluative or Matrix)
- Mirror lock up and remote shutter release or timer

Summary, cont'd

- After taking photo
  - Check camera histogram for over/under exposure
  - Check for overexposure warning indicators ("blinkies") to make sure your highlights are not washed out, which can happen in high contrast scenes.
  - If they are washed out. . .

    --In Aperture Priority, use your camera's exposure compensation (+/-) feature to reduce the exposure.

    --In Manual mode, increase shutter speed.
  - Take additional photos at different shutter speeds to see how you can improve your photos.

As with everything related to improving your photography, experimentation and trial and error will eventually get you to a point where you are comfortable taking pictures in any situation.