Christmas Lights Photography Using HDR

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High Dynamic Range

High-dynamic-range photographs are produced by capturing several images of the same scene with differing exposures (EV), and merging them into one image.

- Use Bracketing and/or Exposure Compensation to take 2 to 9 images at various exposures.
- Examples: (-2, 0), (-2, 0, +2), (-4, -2, 0, +2) or (-4, -2, 0, +2, +4).

Automatic Bracketing

- The camera automatically changes exposure for each shot.
- Nikon: BKT button, Canon: AEB menu setting.
- Most cameras limited to 3 exposures.
- Some cameras limit bracket to +-1 EV.
- On most cameras if you use Bracketing and the timer mode, the camera will take the bracketing sequence automatically. (Nikon: Release Mode Dial) (Canon: Self-Time menu-> 2 Second Timer)

Exposure Compensation

Take several images, setting the exposure compensation (+/- button) before each shot. This may take more work but you have more control.

Combine Bracketing and Exposure Compensation:

For a wider EV range, set Bracketing for -1,0,+1 and Compensation to -3; shoot 3 shots.

Set Compensation to 0; shoot 3 shots.

Set Compensation to +3 ; shoot 3 shots.

High Dynamic Range Settings

Mode:	Aperture Priority
Long Exposure Noise Reduction:	On
Image Stabilization (VR):	Off
ISO:	Low (100, 200 or 400)
Active D-Lighting (Nikon):	Off
White Balance:	Tungsten or Flash (LEDs)
Aperture:	F8

High Dynamic Range Settings

- If the Aperture is too small (> f/16) the lens will produce star bursts for each light source.
- Start with EV of -2, 0 , 2. Make sure the under-exposed (-2 EV) image does not have any blown highlights. No blinkies.
- If you have blown highlights you many need -4, -2, 0, +2.

High Dynamic Range Process

- Use Tripod with mirror lockup and cable release or timer mode.
- If using Photoshop shoot Raw.
- Some standalone HDR programs require JPG or TIFF.
- May need to use manual focus, as autofocus may not work.
- HDR software: Photoshop+Lightroom, Photomatix, HDR Efex Pro.
- Free software: SNS-HDR, Luminance, Picturenaut, Fusion, FDR.

HDR Using SNS-HDR Lite

1. Install SNS-HDR: Free software from www.sns-hdr.com
2. Place Images: Move JPG images to a folder.
3. Select Images: In Windows Explorer select images.
4. Drag: Drag the images to the SNS-HDR Lite icon on Desktop
5. Results: Composite Image is placed in the same directory

Using SNS-HDR

Three master Images for HDR Image

Composite HDR Image

Composite HDR Image

Composite HDR Image

Composite HDR Image

HDR Using Lightroom 4 & PhotoShop CS

Select Images: In Lightroom 4 (LR4), highlight the images in the sequence.

Combine in Photoshop (PS)

1. "Edit In" then "Merge to HDR Pro in Photoshop" . Let PS do its thing, a 32-bit image is opened in HDR Pro.
2. Click OK and the image will open in PS.
3. Go back to LR4 by saving and closing the image in PS. The image is now a 32-bit image in LR4. – Adjust tonalities as usual.

In the following sample, only two images are used. The darker one is still a little bright, so lower the highlights.

HDR Using PhotoShop CS or Elements

If you are not using Lightroom, you can edit directly in Photoshop CS or Elements.

- In Photoshop CS.

  File>Automate>Merge to HDR Pro
- In Photoshop Elements 8 or later.

  File > New > Photomerge Exposure

Example using Photoshop & two master images for HDR Image

Composite HDR Image