High Dynamic Range Image Processing

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Free(ish) HDR Software

Photomatix
http://www.hdrsoft.com

Free trial, $39 for Essentials interface, $99 for Pro interface

Photoshop
http://www.adobe.com

Free with Photoshop

HDRExex Pro
Part of the Nik Software Bundle including SilverFX, Viveza, Color Efex, Sharpener, and Dfine

Free trial, $149 to purchase

http://www.google.com/nikcollection

Common Terms

Align Images – If the camera was handheld, slight changes in framing between images can cause the conversion process to fail. Align images helps to align the images so that HDR conversion is possible. This is not necessary if you shot on a stable tripod.

Remove Ghosts – Ghosts are artifacts caused by movement of the subject during the set of exposures. Trees and flags move on a windy day, as do passing cars and pedestrians. When the software attempts to merge images where subject motion happened, the result is an overall blurry image in the areas of motion. To eliminate those, the software has the capability to remove ghosts by selecting the best image with the most detail, and using the data from that image during the conversion.

HDR Conversion

Photomatix

1. Preprocessing options: Align Source images with cropping, Remove Ghosts automatically/High, Reduce noise on underexposed images only, reduce chromatic aberrations, ProPhotoRGB workspace.
2. When the image loads in Photomatix, click Default.
3. Tone Mapping / Detail Enhancement
4. Detail Contrast – adds contrast to details. 80-100.
5. Click Lighting Effects Mode, select Natural or Natural Plus,
6. Show More Options / Smooth Highlights=0, White Point = 0, Black Point = 10%, Gamma(midtones)=30-40%.
7. Show Advanced Options / Microsmoothing=0, Saturation highlights = 90%, saturation shadows = 65%, Shadow Smoothness = 0, Shadow Clipping = 0
8. Adjust luminosity and gamma for better look.
9. Color temperature adjustment creates warmer or cooler look.
10. Click Process
11. Save as 16 bit TIFF.

HDR Workflow

1. Open the bracketed images in the HDR Conversion Software of your choice

2. Convert to a merged image. The technique for this varies widely depending on software choice, images, and the desired result.

3. Save as a 16 bit TIFF

4. Open in Adobe Camera Raw. Make adjustments as needed. We'll add some contrast, and some fill light to brighten it back up.

5. Open the image in Photoshop

6. Dust removal using the spot healing brush

7. Vignette to direct the viewer's attention

8. Curves to tweak. Medium contrast curve, then second curve to increase luminosity, then adjust opacity.

9. Increase detail by duplicating layer, then filter/other/High Pass/Radius 3. Apply in overlay mode.

10. Decrease Saturation