



# Setup Workflow (Adobe Photoshop)

Updated July 2018

## Filters

The Target-UV has been calibrated to give the best color rendering using the following filters:

1. Kodak Wratten 2e pale yellow filter
2. Peca 918
3. Internal camera sensor filtration
  - For UV-IR or modified cameras that have had this filtration removed, a BG-38, blue-green glass filter is recommended

## About this Workflow

This workflow provides setup steps for new users of the Target-UV. See relevant capture workflow on our website for an outline of image composition and capture. Found at: [www.uvinnovations.com/resources](http://www.uvinnovations.com/resources).

Users must shoot in RAW mode to use this workflow. Screen shots and settings are based on a Nikon D800E tethered to a computer. Images were captured with Nikon Capture II on a Windows system running Windows 8. Adobe Photoshop (version 14.2.1) Camera Raw 8.3 was used for image processing. Separate curves and raw processing settings for other common programs will be provided, as needed. See [www.uvinnovations.com](http://www.uvinnovations.com).

**Please email us at [info@uvinnovations.com](mailto:info@uvinnovations.com) for clarification, questions, or comments on this workflow.** For questions about sales and availability contact Image Science Associates at 1-888-801-6626 or [www.imagescienceassociates.com](http://www.imagescienceassociates.com)

## Troubleshooting

Frequently asked questions and suggestions for troubleshooting are provided on our website [www.uvinnovations.com](http://www.uvinnovations.com). In addition to this resource, see *The AIC Guide to Digital Photography and Conservation Documentation*<sup>1</sup>, for more detailed information on the use of UV-visible documentation, workflows, equipment, file management, and other general digital documentation instructions.

## Summary

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<sup>1</sup> Warda, Jeffrey (ed.), Franziska Frey, Dawn Heller, Dan Kushel, Timothy Vitale, Gawain Weaver. *The AIC Guide to Digital Photography and Conservation Documentation*, 2<sup>nd</sup> Edition. Washington, D.C.: American Institute for Conservation, 2011.

## Setup for UV Innovations Workflow

### Safety



Ensure that all users have protective eye wear. UV radiation is damaging to the human eye and skin. Have pieces of black foam core or other dark material on hand to cover sensitive artwork, as needed. Limit exposure to UV radiation by covering the lights when not in use.

### Step 1: RAW settings

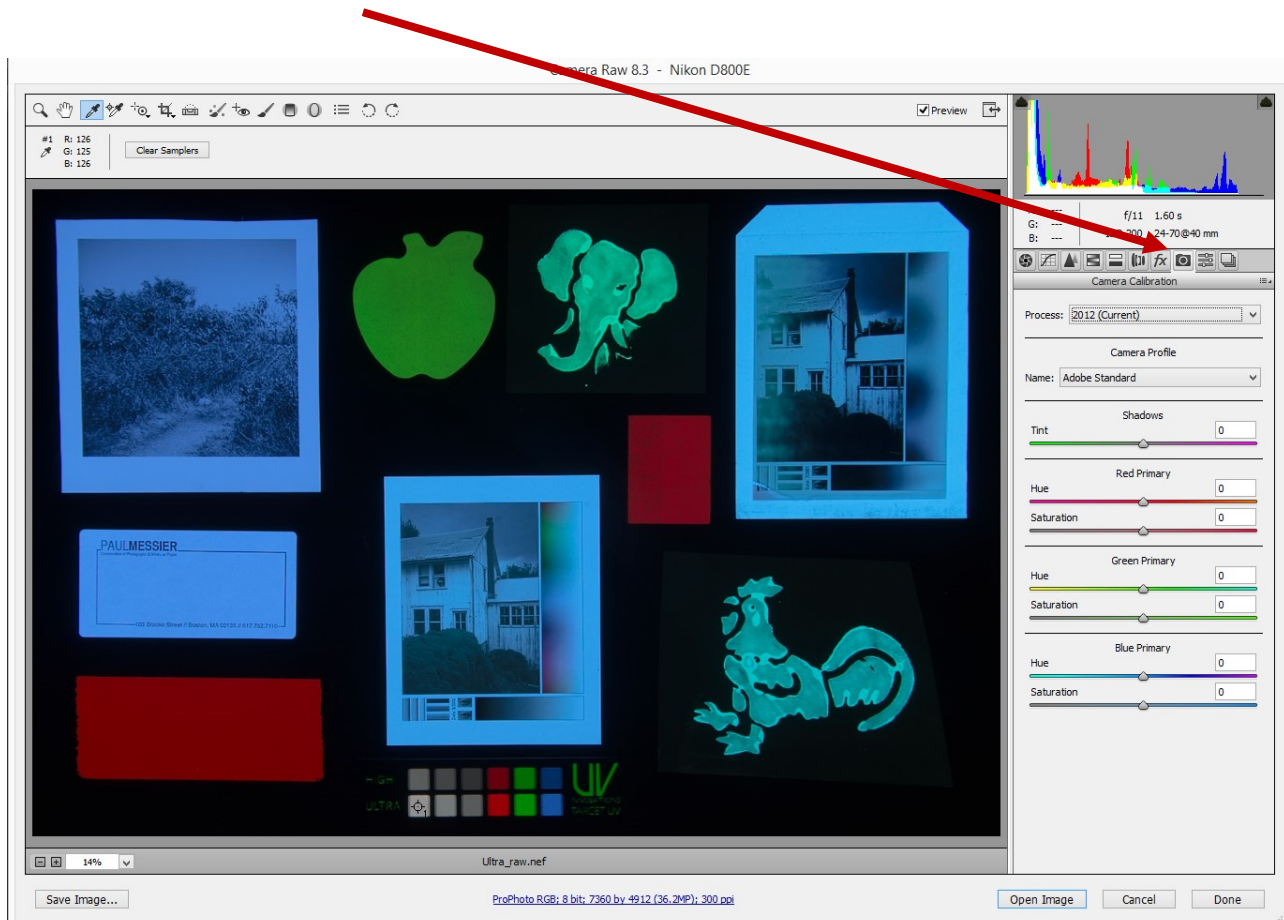
- Save the UV-Innovations RAW pre-sets to apply to your images. This only needs to be done once per computer/user.
- Copy “[uv\\_innovations\\_recommended\\_raw\\_adjustment.xml](#)” file from UV Innovations and save in the following location (on Windows machine only):

[C:\Users\\[insert your computer user-name-here\]\AppData\Roaming\Adobe\Cameraraw\Settings](#)

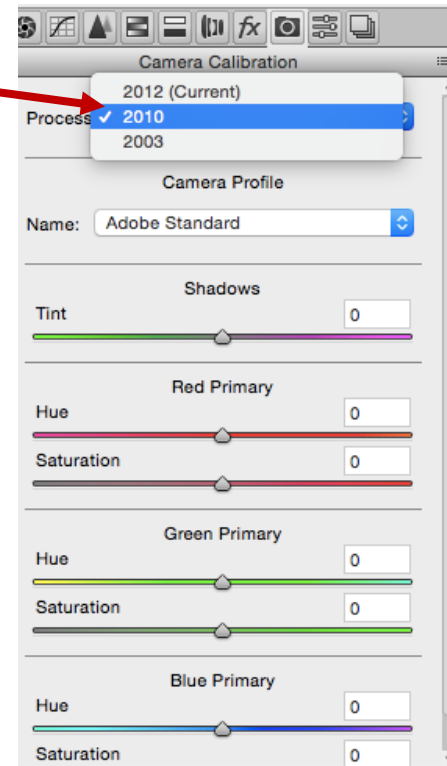
**\*\*Alternately, save these settings for UV documentation on your own based on the following procedure. Works with Windows and Mac. See the Photoshop help for further instructions.** This only needs to be done once per computer/user.

a. Open any RAW image in Adobe Photoshop Raw.

b. Click on the  “Camera Calibration” Icon.

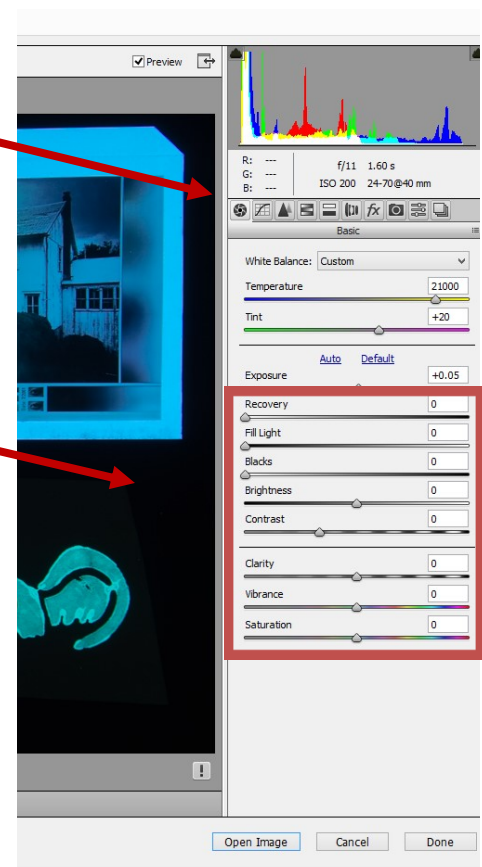


- c. Click the dropdown menu “Process” and select “2010”. This ensures compatibility with previous versions of Photoshop.



- d. Go back to the “basic” tab and ensure that sliders are zeroed out\*


Recovery: 0  
Fill Light: 0  
Blacks: 0  
Brightness: 0  
Contrast: 0  
Clarity: 0  
Vibrance: 0  
Saturation: 0



*Recommended RAW settings to save as pre-set*

\*Note, different versions of Camera profiles may have additional sliders you see additional sliders.

ettings if

e. Go to the Tone Curves tab by clicking the  icon.

f. Set the following curves:

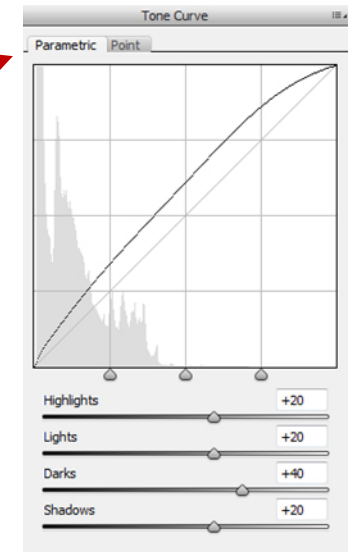
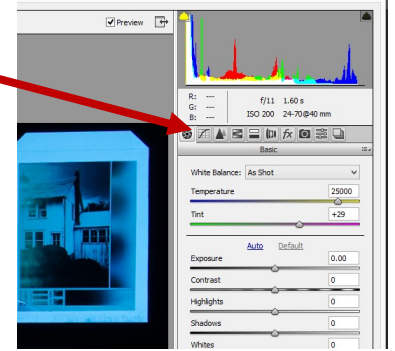
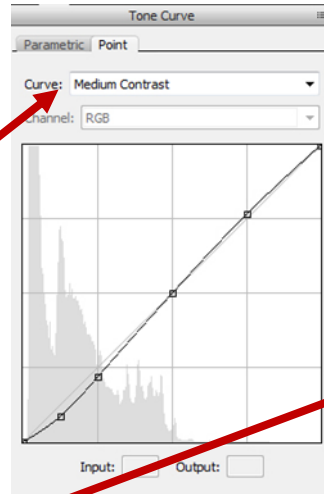
- “Point” Curve.  
Select “Medium Contrast” from the dropdown menu. This is often the default curve.
- “Parametric” Curve.  
Click the “Parametric” curve tab and input the following values in the sliders below.


Highlights +20

Lights+20

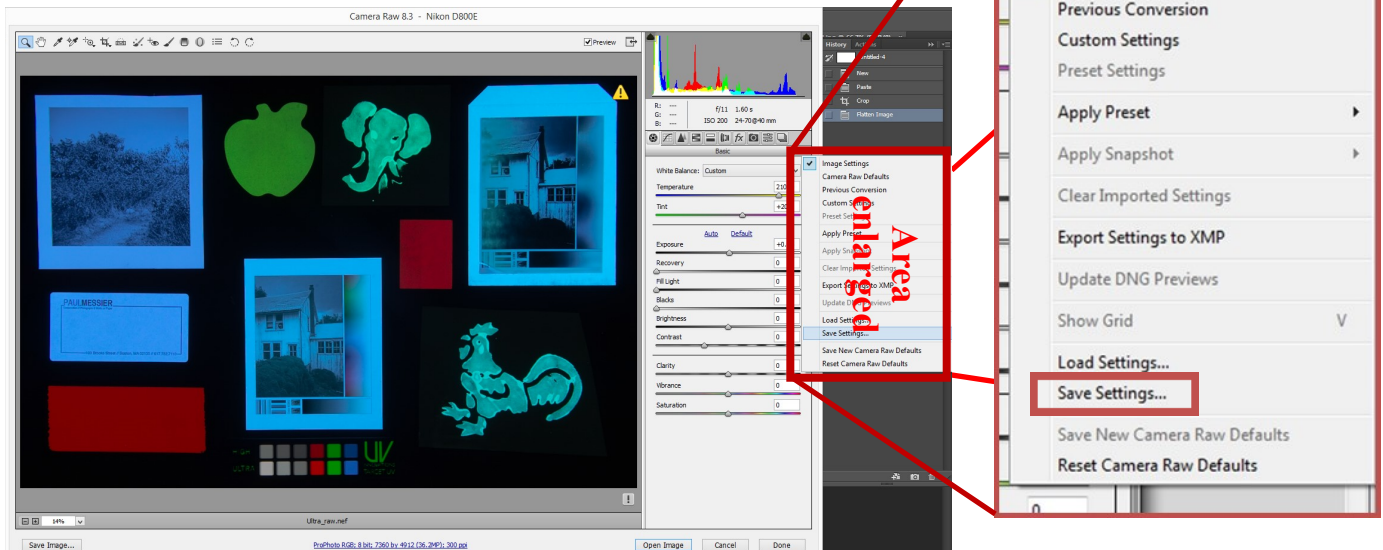
Darks +40

Shadows +20



g. Click on the small Camera raw settings menu “ ” icon in the upper right corner just above the white balance adjuster.

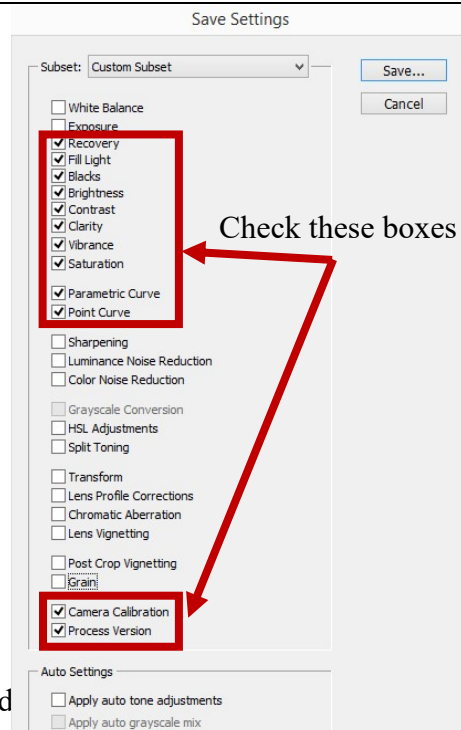
h. Select **Save Settings...** from menu.



- i. Ensure that **ONLY** the following boxes are checked:

“Recovery”, “Fill Light”, “Blacks”, “Brightness”, “Contrast”, “Clarity”, “Vibrance”, “Saturation”, “Parametric Curve”, “Point Curve”, “Camera Calibration” and “Process Version”.

Note: You can save other commonly used settings, like sharpening here, if desired.



- j. Hit “Save” and name file: uv\_innovations\_recommend

## Step 2: Recommended Setup For UV-Visible Documentation

Setup UV lamps and camera, in a non-fluorescent work space. Ensure that all visible light can be blocked from the documentation area.

- Roughly position the lamps and camera (see diagram below for example) so that your lights are at the proper angle and approximate distance from the object and (you can fine tune this later if needed). Ensure that the subject will be evenly illuminated by the UV source.
- Calibrate monitor if needed.
- Place filters on camera lens, or use filter holder, as needed. The filters should only allow visible light from approximately 420nm to 700nm. A Kodak Wratten 2e and PECA 918 are recommended. An external BG-38 or other IR filter may be needed for modified digital cameras.

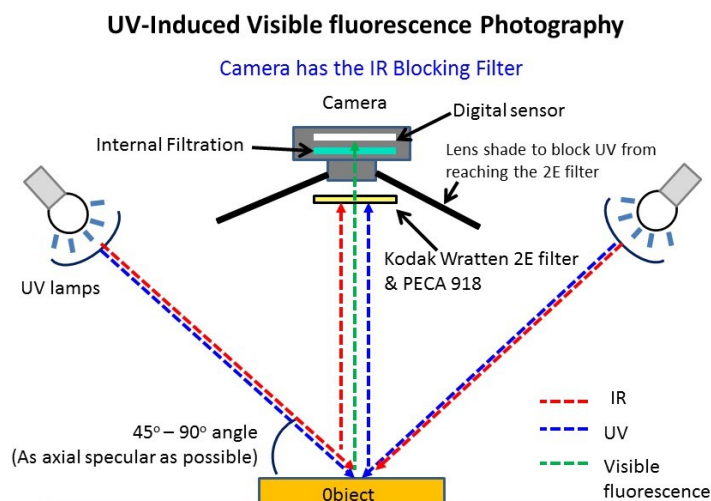


Diagram by Jiuan-Jiuan Chen

Illustrated by Jiuan Jiuan Chen, updated May 2014



### ***Step 3: White Balance***

#### **a. In camera white balance (recommended)**


1. Turn on the camera and open the camera control software on your documentation computer.
2. Turn on UV source. Note: Some UV lamps require a warm up period, allow for warm up times. Typical recommended warm up time for low pressure mercury sources is 1-5 minutes. Continue to work with room lights or a working light.
3. Position white balance UV-Grey card so it is evenly illuminated by your UV source and fills the frame of the camera. Be sure to fill the camera field of view with the UV-Grey card.
4. Don't worry too much about focusing on the grey card, since you are capturing the color. Shut off the autofocus on your lens.
5. **Shut off room lights or working lights.** Uncover or turn on UV source.
6. Position mouse over appropriate capture or white balance button on your computer screen, then and cover or shut off monitor before capturing the white balance image.
7. Capture and save the white balance image for your camera following the camera manufacturer's instructions.
8. Turn off or cover UV source until needed for image capture. Turn on room lights or working light, as needed.

#### **b. White balance from RAW image**

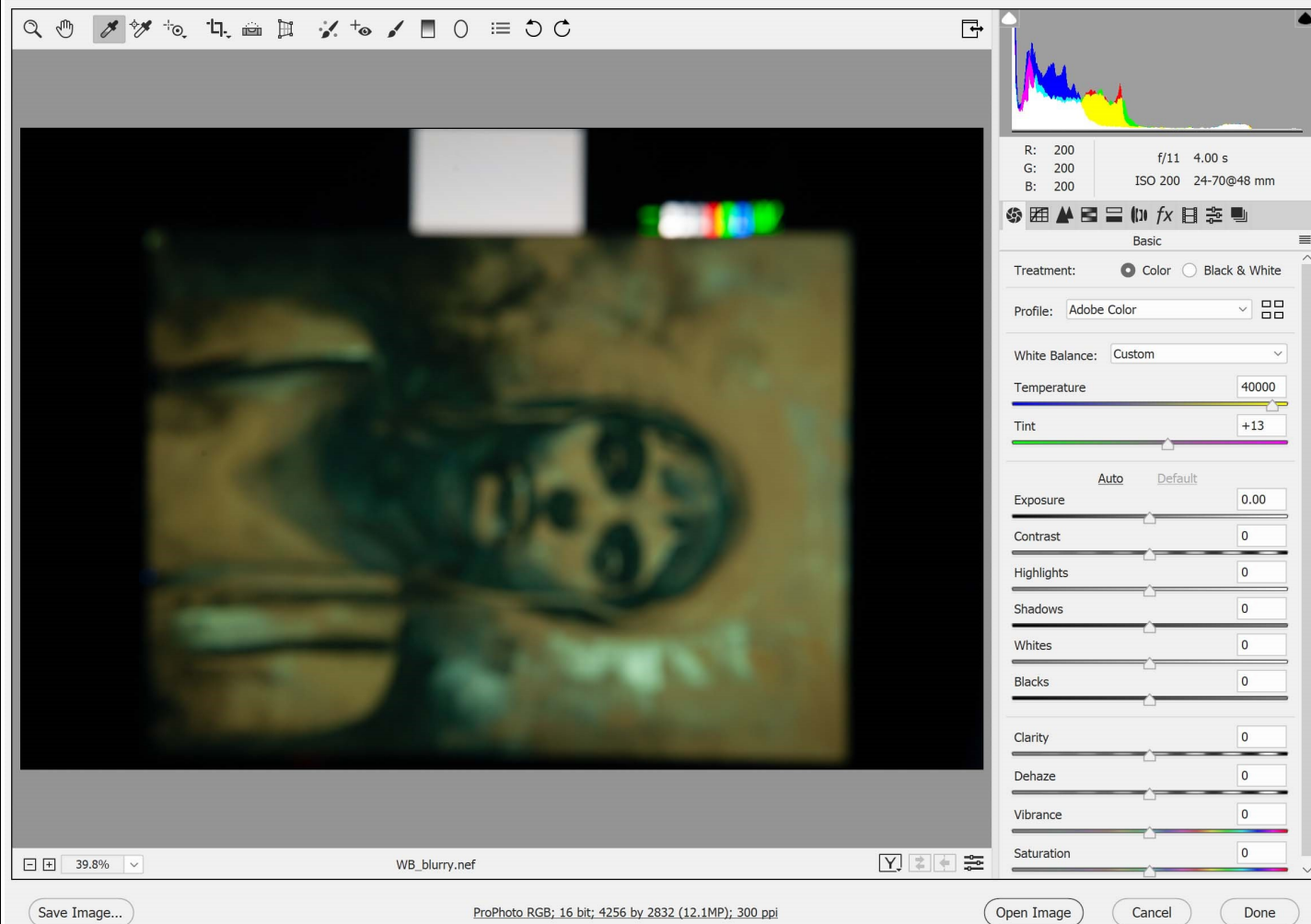
- Set up for UV/visible fluorescence image of the UV-Grey card (or composition with grey card)
- Blur image to blend the pigment particles from the UV-Grey and provide more consistent white balance
- Turn on UV lamps (allow for warm-up time if needed), turn off room lights and capture image. The exposure does not need to be precise, but ensure that no channel has maxed out (255 RGB)



## White Balance continued

- Open image in Adobe Camera Raw
- Load previously saved preset “uv\_innovations\_recommended\_raw\_adjustment.xmp”
- Select  White Balance Tool and click on UV-grey to set white balance

Camera Raw 10.4 - Nikon D700



- Save new preset (as in Step 1). Ensure that “White Balance” is checked when saving your new preset.