

Section 2—Capture

Digital Imaging Workflow for Treatment Documentation

Conservation Division, Preservation Directorate, Library of Congress

CAPTURE

Section 2—Capture

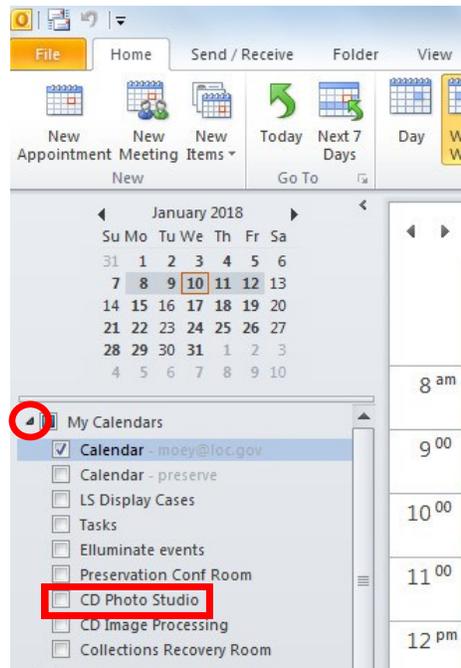


Figure 2.01

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Before Your Scheduled Time in the Photo Studio

Confirm or Request the Project Folder on N:\PROJECTS (Windows)

1. You can do this from any computer in the lab that has the *N:* drive mapped.
2. In **Windows**, click through *N: > PROJECTS* to find your project's folder. If your project folder is there, skip step 3.
3. If your project folder is not on the *N:* drive yet, email  in the following format:

Email subject: **Request new project folder**

Email body: Provide **project number** and **project name as it appears in the Project Database**; CD staff name(s) requiring access

Reserve the Photo Studio (Outlook)

1. In **Outlook**, click *Calendar*.
2. Under *My Calendars*, check the box *CD Photo Studio* (fig. 2.01).
3. Click on a date/time to create a New Appointment. Put your name as the Subject.

Reserve the Image Processing Room (for Sections 3-5) by repeating steps 1-3, but instead check *CD Image Processing*.

Print Your Project Label (Word)

Minimum required text on label: Project Number, Date, Treatment State

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Photo Studio

Tripod Only: Set Up Gray Background Paper

1. Position the copystand with the bottom of the collar around 25”.
2. Carefully drape the gray roll paper over the copystand camera and hook the black strap onto the camera column behind the handle that sticks out on the right.
3. Weight the four corners of the gray roll paper on the copystand.

Set Up Lights and Computer

1. Copystand capture: Confirm each light stand is at the 66” mark on the floor.
Tripod capture: Position the light stands on the three red tape marks on the floor.
2. Confirm the top of the collar is at the 52” mark on the light stand; to adjust, turn the crank.
3. Turn on the lamps and allow to warm up for 15 minutes before taking any images. If the lights were just turned off, wait 10 minutes before turning on again.
4. Turn on the computer and monitor.
5. Turn on the camera: rotate the *On/Off* switch on top of the camera and remove the lens cap.
6. Close the studio door and turn off the overhead room light.

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Figure 2.02

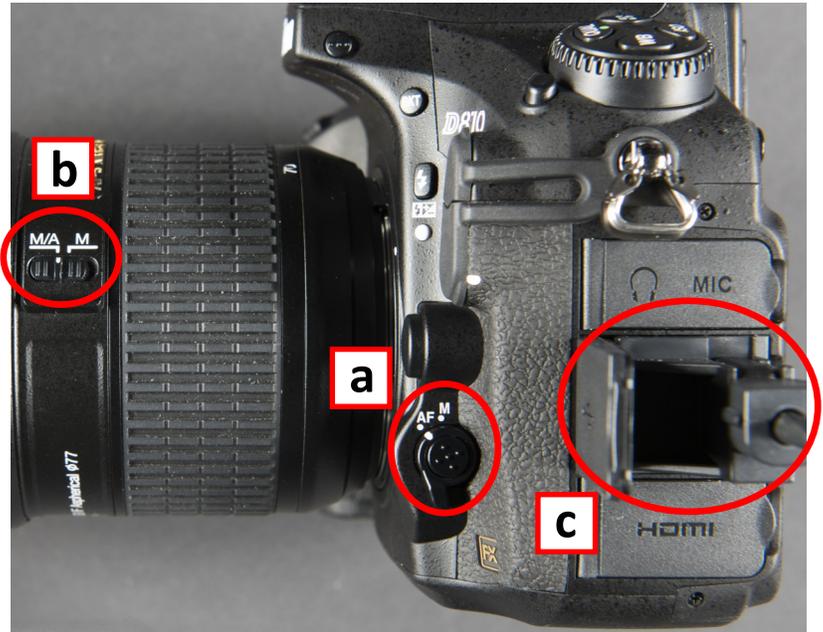


Figure 2.03

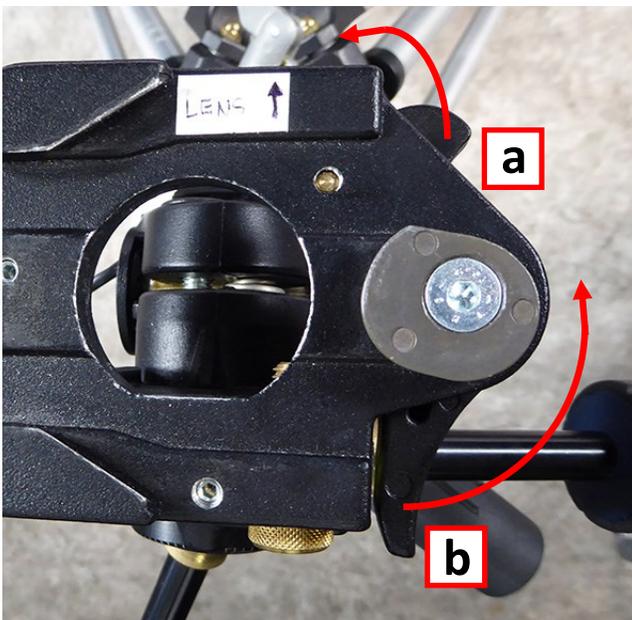


Figure 2.04

NOTE: This shows the position of the tripod parts a and b when the camera is mounted (but the camera is not shown mounted so as to better show the tripod parts)

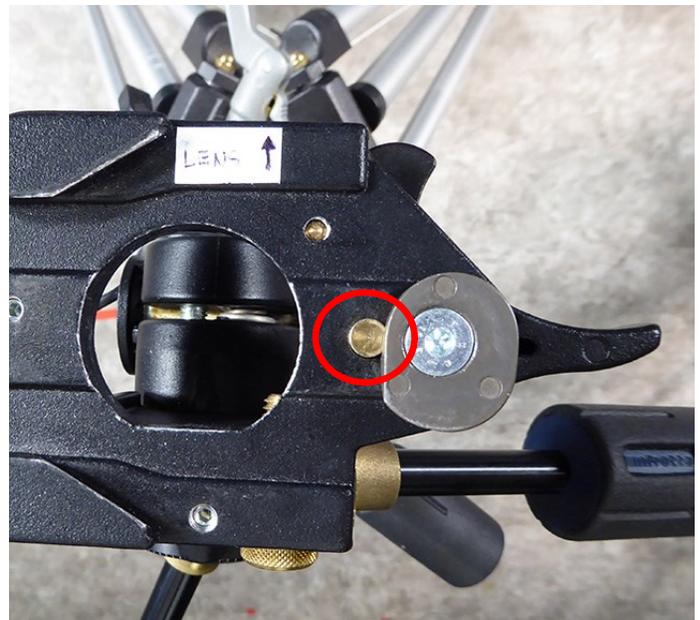


Figure 2.05

Tripod, ready for camera mounting (the brass button is visible)

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Confirm Camera and Lens Settings

1. Confirm on camera body: still image function (fig. 2.02).
2. Confirm on camera body: *AF* focus mode (fig. 2.03a).
3. Use the 60 mm lens (which should remain on the camera), unless your object is too big and you need the zoom function of the 24-70 mm lens.
4. Confirm on the lens: *M/A* focus mode (fig. 2.03b).

Confirm Camera Mount and Cords

1. The copystand camera (Camera 1) with its 60 mm lens remains mounted on the copystand. The USB download cord (fig 2.03c) and the power cord (coming out from the bottom of the camera) remain connected to the camera.
2. The tripod camera (Camera 2) with its 60 mm lens remains mounted on the tripod. Pick up the tripod by its legs to move it. Position the tripod on the three marks on the floor. Connect the USB download cord for Camera 2 (coiled behind the computer monitor). Disconnect the power cord from Camera 1 and connect it to Camera 2. Confirm the camera is mounted level on the left-right axis (this arm is labeled on the tripod).

If you need to release Camera 2 from the tripod: Cradle the lens with your left hand. Use your right index finger to push back the moon-shaped release (fig. 2.04a) while using your right thumb to push back the paisley-shaped spring (fig. 2.04b) — when you’ve pushed the paisley spring far enough, the tripod will let go of the camera.

To remount Camera 2 on the tripod: Confirm (or adjust so) that the *LENS* mark on the bottom of the hexagonal tripod mount is pointing towards the lens. Check whether the brass button (fig 2.05) is visible (if you do not see the brass button, follow the instructions for **Releasing the Camera** until the brass button stays popped up). Align the direction of the camera lens with the label on the tripod, then push the hexagonal mount down onto the brass button, which will trigger the spring-loaded catch. Keep your fingers away from the paisley spring, which will snap with force. Don’t let go until you know the camera is secure.

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Figure 2.06



Figure 2.07

Note how the color target is positioned so that the lightest gray patch is centered between the left and right (this ensures even exposure)

Note also how the color target is parallel to the bottom of the image field, not parallel to one of the sides of the book in 3/4 view

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Set Up Object

1. Open **Camera Control Pro**. Click the *Lv* button on the bottom right (fig. 2.06) OR click *Camera* → *Live View*.
2. Place your object on the gray background. Place the color target (handle only by its edges) with the gray scale close to the object and with the lightest gray patch midway between both lamps (fig. 2.07). Place the identification label next to the color target or within the blank black area of the color target.

NOTE: When setting up a book for a 3/4 overall shot, use the camera on the copystand as a reference to center the book on the gray paper. This is important because the floor marks for the tripod are centered to the copystand. Place the color target as seen in figure 2.07.

3. While viewing on the computer monitor, move the camera closer to or away from the object to fill the image field.

NOTE: Even for books as large as 20" tall x 16" wide (and possibly larger, but not much larger can fit on the copystand in 3/4 view anyway), just moving the tripod back one foot from the floor marks is enough to accommodate the entire book, in 3/4 view, in the 60 mm lens image field.

NOTE: When using the 24-70 mm zoom lens to shoot oversized objects, if you do not need to zoom all the way out to 24 mm, try to stay as close to the 50 mm focal length as possible.

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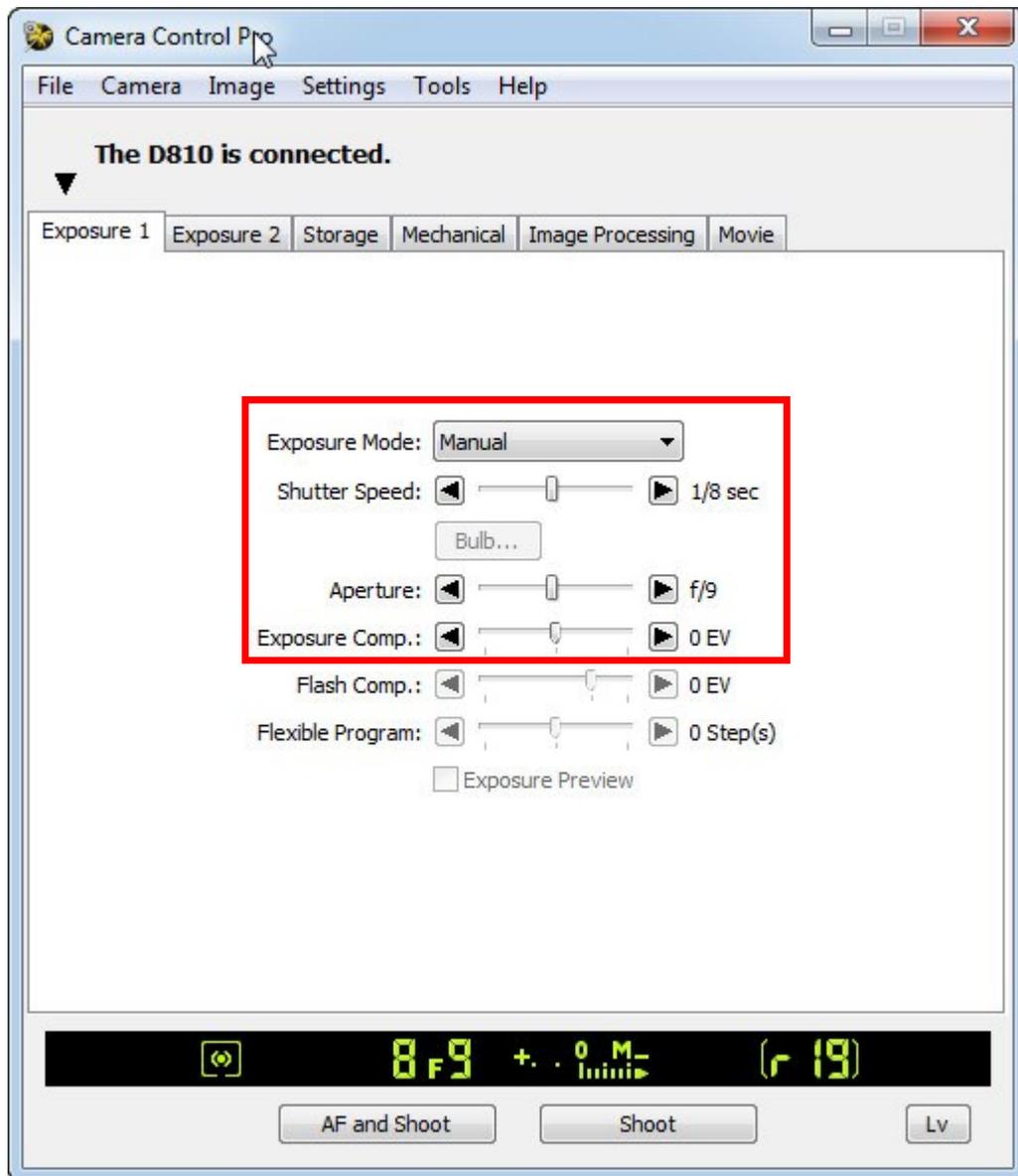


Figure 2.08

Exposure settings shown for using the 60 mm lens, on the copystand with the bottom of the camera collar below 26"; see settings recommendations at right for settings when the camera is above 26", for tripod, and when using the 24-70 mm zoom lens

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Confirm Settings in Camera Control Pro

1. In **Camera Control Pro**, confirm/select the following in the *Exposure 1* tab.

Copystand capture with the standard 60 mm lens (fig 2.08):

<i>Exposure Mode</i>	Manual	Manual
<i>Shutter Speed</i>	1/8 s when bottom of copystand collar above 26"	1/10 s when bottom of copystand collar below 26"
<i>Aperture</i>	f9	f9
<i>Exposure Comp.</i>	0	0

Tripod capture with the standard 60 mm lens (use as a starting point):

<i>Exposure Mode</i>	Manual	Manual
<i>Shutter Speed</i>	1/6 s for books about 10" tall x 8" wide	1/4 s for larger books
<i>Aperture</i>	f13	f16
<i>Exposure Comp.</i>	0	0

Oversize copystand capture with the 24-70 mm zoom lens (use as a starting point):

<i>Exposure Mode</i>	Manual	Manual
<i>Shutter Speed</i>	1/6 s at 50 mm focal length	1/8 s at 24 mm focal length
<i>Aperture</i>	f9	f9
<i>Exposure Comp.</i>	0	0

NOTE: Starting guidelines for tripod capture with the 24-70 mm zoom lens are not given here. If you find you must use the 24-70 mm zoom lens, use the copystand guidelines as a starting point.

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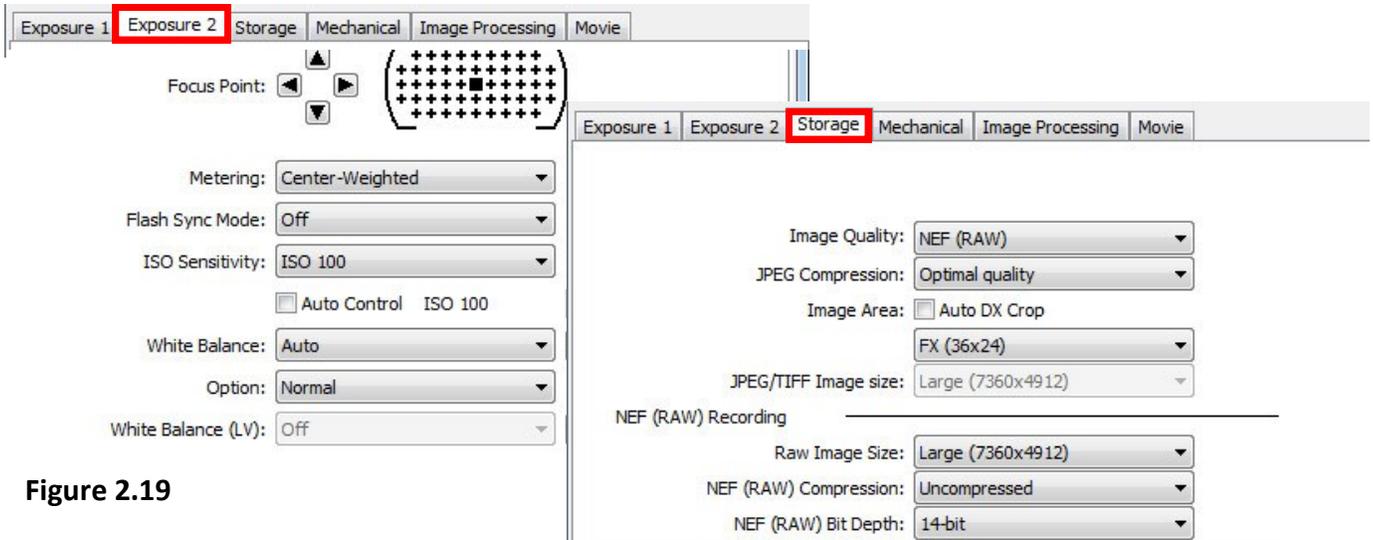


Figure 2.19

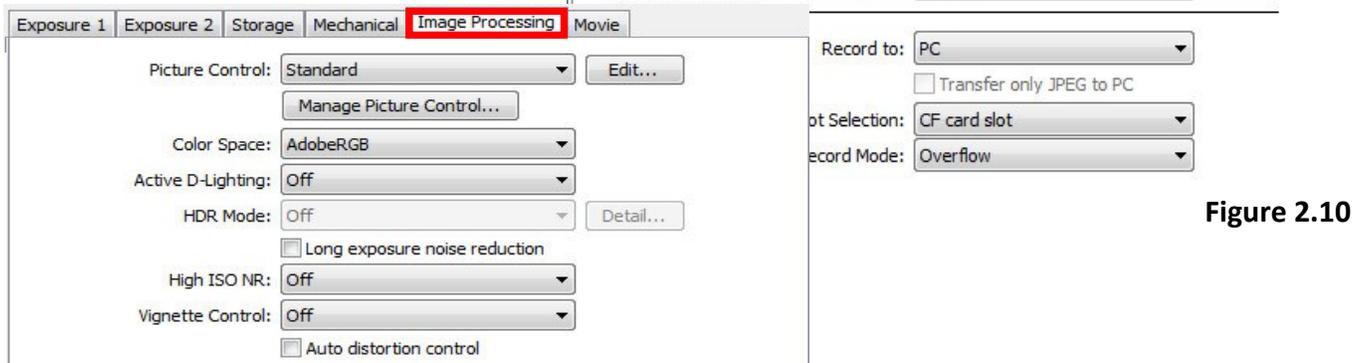


Figure 2.10

Figure 2.11

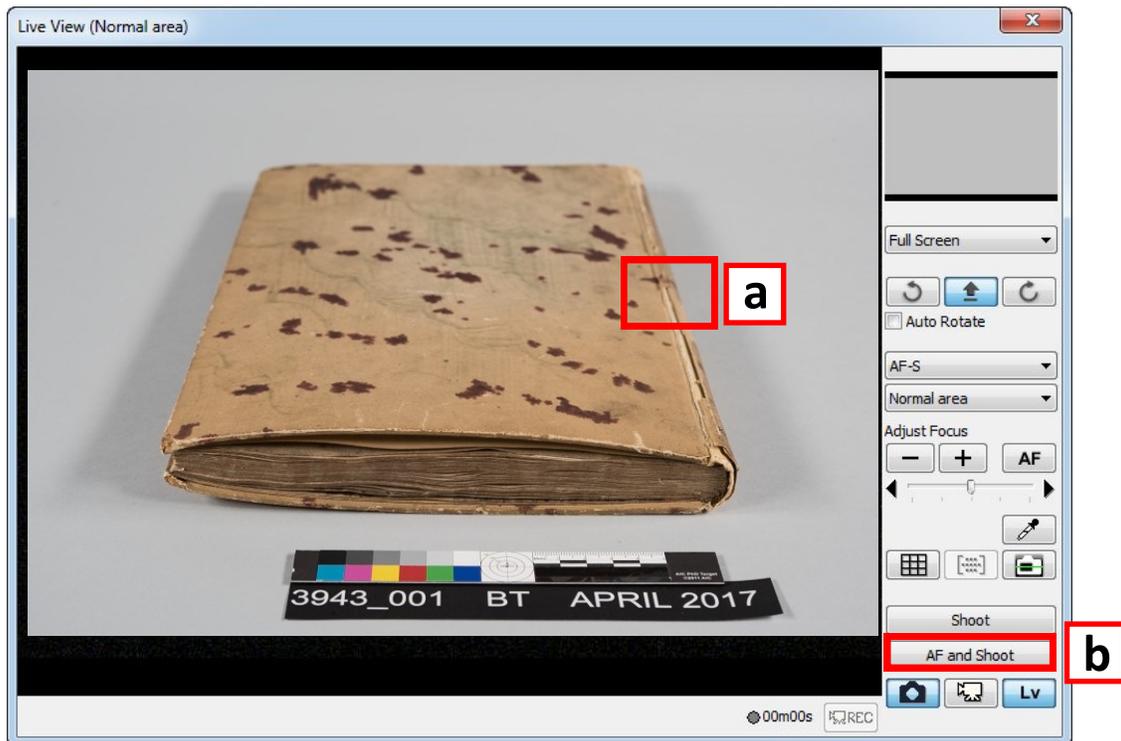


Figure 2.12

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Confirm Settings in Camera Control Pro, continued

2. Click *Exposure 2* tab. Confirm/select the following (fig. 2.09):

<i>Metering</i>	Center-Weighted
<i>ISO Sensitivity</i>	ISO 100
<i>White Balance</i>	Auto

3. Click the *Storage* tab. Confirm/select the following (fig. 2.10):

<i>Image Quality</i>	NEF (RAW)
<i>NEF Compression</i>	Uncompressed
<i>NEF Bit Depth</i>	14-bit

4. Click the *Image Processing* tab. Confirm/select the following (fig. 2.11):

<i>Picture Control</i>	Standard
<i>Color Space</i>	AdobeRGB
<i>Active D-Lighting</i>	Off
<i>High ISO NR</i>	Off
<i>Vignette Control</i>	Off

Take Your Desired Shots (Camera Control Pro)

1. In *Live View*, drag the red box (fig. 2.12a) to focus on the object, choosing a spot that (i) contains image elements that help the camera focus and (ii) if using the tripod, a point that splits the depth between the farthest and nearest points.
2. Click the *AF and Shoot* button (fig. 2.12b). The red box (fig. 2.12a) will turn green and the shutter will release. Wait for the image to fully transfer/download to:
(N:\PROJECTS\0000 Convert_to_DNG\[your username]).

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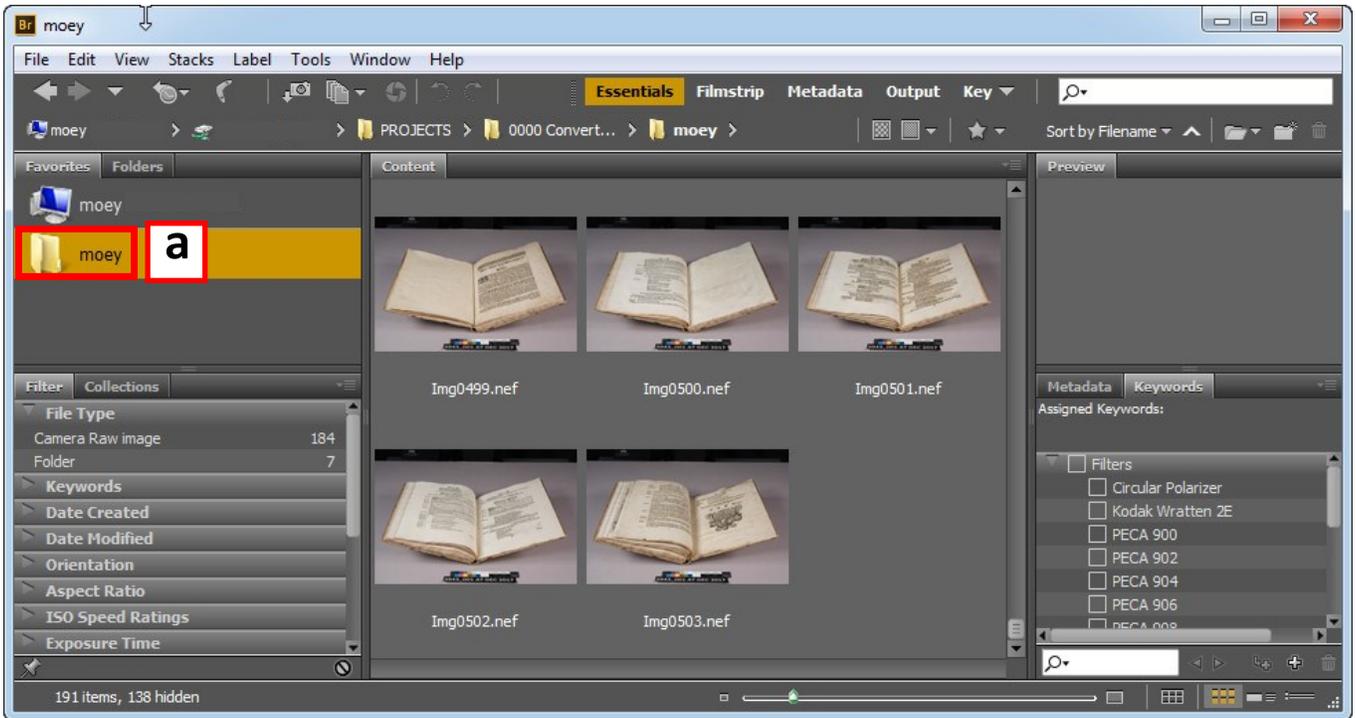


Figure 2.13

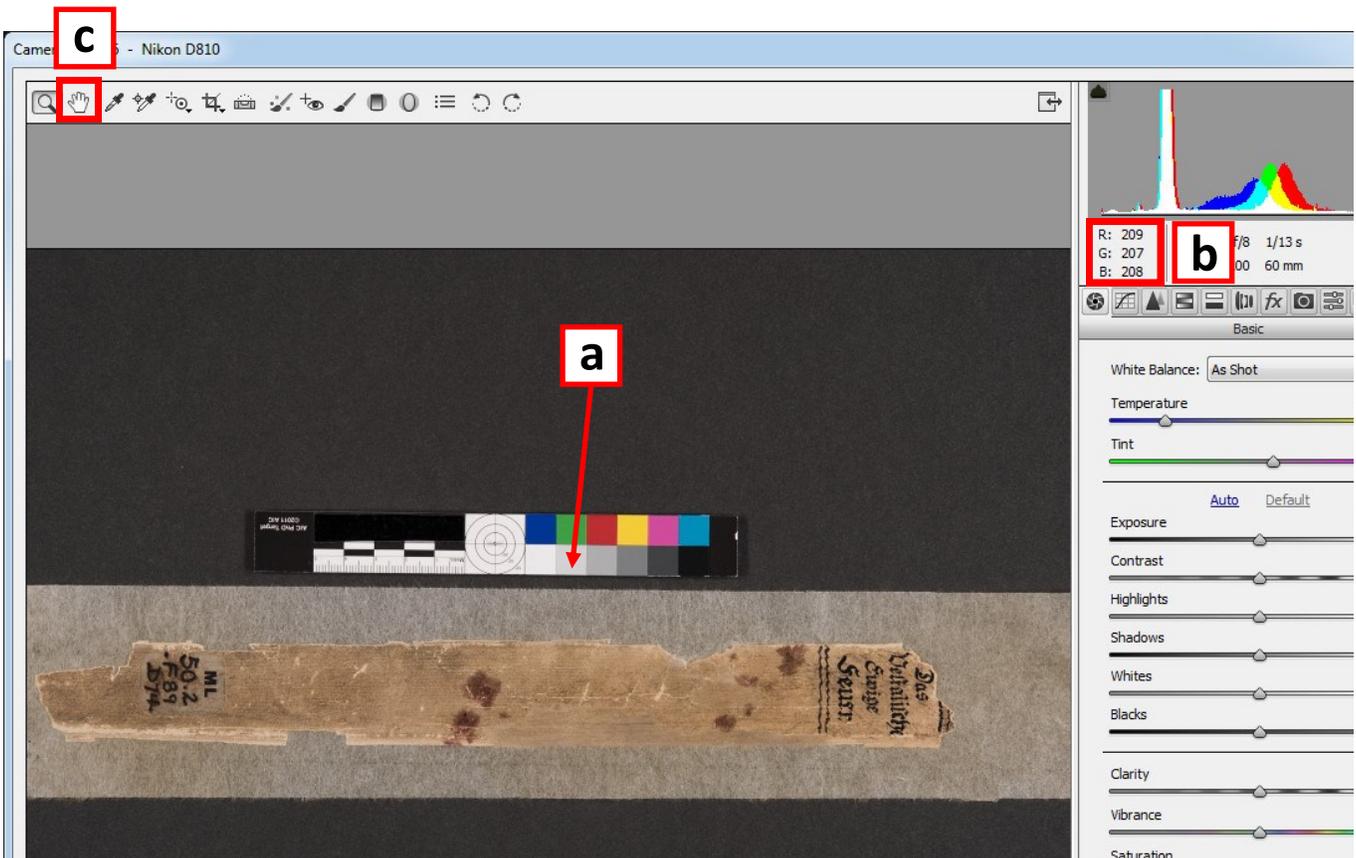


Figure 2.14

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Preview Images and Adjust Camera Settings If Necessary (Bridge)

1. In **Bridge**, under *FAVORITES*, click on your user folder (fig. 2.13a).
2. Find the image you just took in the center *CONTENT* panel. Double click on the thumbnail and the file opens in **Camera Raw**.
3. In **Camera Raw**, position the cursor/magnifying glass over the lightest gray patch (fig. 2.14a). Confirm the RGB values are between 190-210 (fig. 2.14b). If the gray patch is too small, use keyboard shortcut Ctrl + to zoom in on the image. If the gray patch is outside the field of view, use the hand tool (fig. 2.14c) to move the image around.
4. If the RGB values are less than 190 or greater than 210, you must adjust exposure. In **Camera Control Pro**, change the shutter speed. Note: adjusting EV has no effect on exposure when camera is in Manual mode. Reshoot and evaluate new exposure following steps 2-3 above.
5. Delete unwanted images NOW (e.g., shots you retook because the RGB values were > 210 or < 190) from your *0000 Convert_to_DNG* folder. Right click on the image and left click *Delete*.

Finish

1. Turn on the room light.
2. If the Photo Studio Calendar in Outlook shows no one in the room after you, turn off the lamps.
3. Close all programs; log off of the computer; and turn off the computer monitor.
4. Put the lens cap on and turn off the camera: Rotate the *ON/OFF* switch on the top of the camera.
5. Put the target (handle only by its edges) back in the box.
6. Tripod only: Completely lower the center column of the tripod: press the labeled tab and turn the column crank. Hold the tripod by the legs to move it to the wall. Move the lamp stands back to the copystand position.