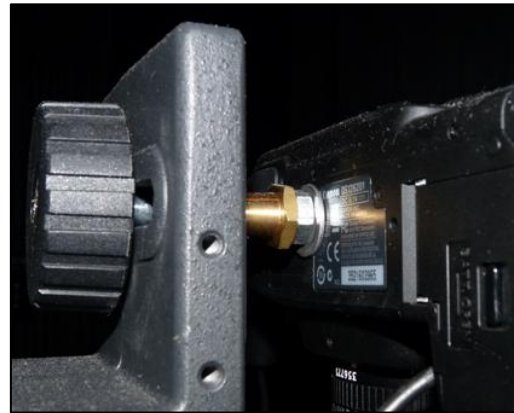
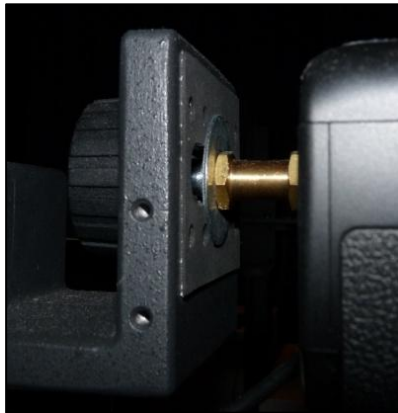


Assembling the Imaging Station

1. Assemble Kaiser Copy Stand:
 - a. Attach pedestal to base, insert screw with knob through pedestal to base, turn knob as tight as possible.
 - b. On repro arm, make sure the camera screw installed is 1/4". If the 3/8" camera screw is installed, loosen the nut on the knob with a standard screwdriver or coin. Unscrew the 3/8" camera screw from the knob, and replace it with the 1/4" camera screw. Tighten screw with screwdriver.
 - c. Tape a plumber's washer with gaffer's tape near each corner on the upper surface of the copy stand. These will act to balance the photo box and provide friction to prevent movement of the photo box relative to the copy stand base.
2. Prepare photo box:
 - a. Remove all shipping tape from around box. Remove doors from front and top.
 - b. Gently place photo box on its back (ideally on shipping foam or another soft surface).
 - c. Gently remove light-diffusing plastic from the shooting surface inside the box (may need something thin to slip beneath the plastic to pry it up).
 - d. Remove the 2 center feet from below the photo box: Use a screw driver and pliers to pry up and off each foot. Center a plumber's washer around each remaining bolt and tape it to the underside of the photo box with gaffer's tape. This is done to increase the distance between the camera lens and the shooting surface just enough to ensure the field of view includes the entire specimen.
3. Place photo box on copy stand. Check all switches are off. Plug transformer into back side of photo box and into surge protector.
4. Attach camera to copy stand:
 - a. Attach Double Female Stud (brass) to Adapter Spigot (silver). Tighten as much as possible using pliers and vise grips.
 - b. Place smaller washer at base of camera and then attach Adapter Spigot; make tight, but not too tight, to avoid damaging the threads inside the camera).
 - c. Place large washer on repro arm's 1/4" screw and attach to Double Female Stud now attached to camera, making sure to raise and center the large washer and repro arm screw in the hole of the repro arm. Tighten repro arm screw to Double Female Stud using knob on repro arm. Leave camera oriented vertically until the knob on repro arm is tight, then rotate (and tighten slightly) until lens points down and camera is leveled.
 - d. Crank camera up the pedestal to the top.



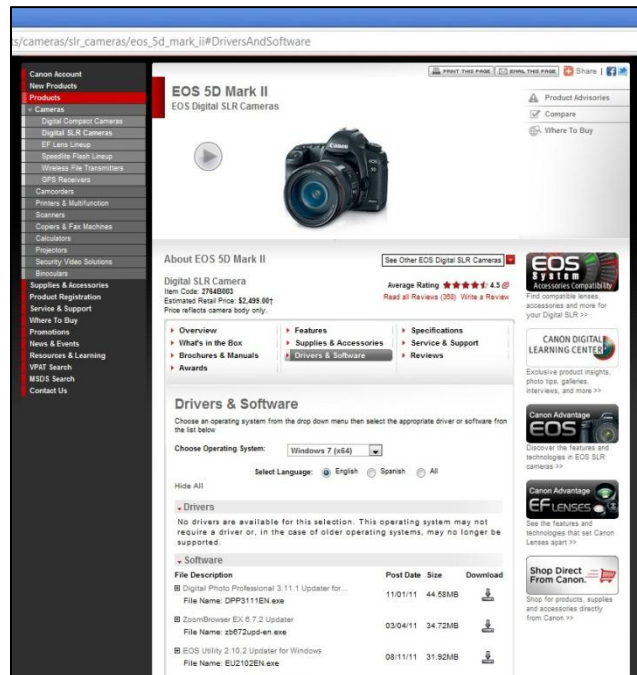
5. Make sure camera is switched off. Attach the camera power cable to the camera inside the battery compartment, threading the cable through a small door flap on the medial side of the compartment. Insert micro-USB cable into camera and connect to computer.



6. Software setup: CD installation

- a. Do custom install, and select only Digital Photo Professional (DPP) and EOS Utility (can opt to install all other software, if desired).
- b. Can register now, or later.
- c. Retrieve updates from Canon.com and Run (no need to save file, just open). Most important to update EOS Utility and Digital Photo Professional.

http://usa.canon.com/cusa/professional/products/professional_cameras/digital_slr_cameras/eos_5d_mark_ii#DriversAndSoftware



7. Run through **Imaging Manual presentation** to set up preferences and settings for camera software. Turn on camera, turn on light box, take photo. Explain where photos are stored.

8. Running test photos:

- a. Place black velvetine background paper in photo box onto glass shooting surface (be sure white plastic has been removed from shooting surface first) and attach with rolled gaffer's tape at corners and along edges.
- b. Take test photo to determine what physical adjustments to camera, pedestal, and herbarium sheet are needed (may need to place something in center of blank sheet on which lens can focus). Use "LIVE View" on EOS software while adjusting. Attach herbarium sheet to velvetine paper using rolled gaffer's tape. Likewise, tape color checker and scale bar at top of herbarium sheet.
- c. Adjust orientation of images in DPP: Click "rotate" on EOS Utility and take photos until image is oriented in DPP as desired.

9. Notes about EOS settings:

- a. Aperture: F8-F11 yields the sharpest image.
 - The smaller the aperture (= the higher the F-stop) = the greater the depth of field = more light needed. However, with a high F-stop, the slower the shutter speed needed, which decreases the sharpness. Mid range produces the sharpest image.
 - High Shutter speed and high F-stop (=narrow aperture) = 0 light. Low shutter speed and low F-stop (=wide aperture) = too much light.

10. Install Adobe Photoshop Lightroom. Go through **Herbarium Image Editing Guidelines** presentation to learn how to create presets and carry out image post-processing.