

Ephemeral Cities

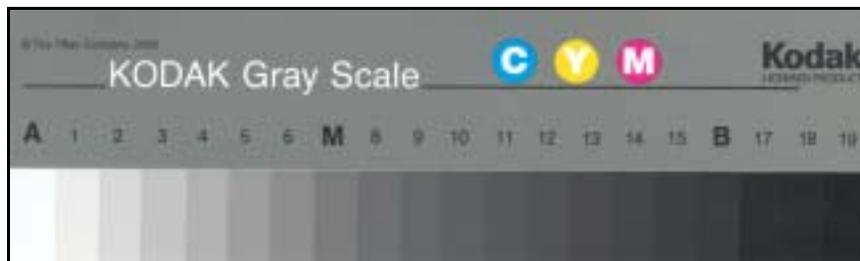
Guidelines for photographing three-dimensional objects

HARDWARE CHECKLIST:

1. **Digital camera**
(6-megapixel or higher resolution, manually controllable with normal lens.)
2. **Kodak Q-13 target. Color Separation Guide and Gray Scale (Small)**
CAT 152 7654.
Sold as a pair by B&H Photo and Video at a cost of \$18.50. 1-800-856-9048.
<http://www.bhphotovideo.com/bnh/controller/home?O=productlist&A=details&Q=&sku=26662&is=REG>



Kodak Q-13 target - Color Separation Guide



Kodak Q-13 target - Gray Scale (Comes as a pair)

3. **Adjustable Tripod**
4. **Seamless backdrops for objects**
(Black velvet, and neutral grey velvet, each measuring at least 46" x 80").
Black velvet is easy to find, the grey can be found here:
http://www.dollarfabric.com/Merchant2/merchant.mv?Screen=PROD&Store_Code=00000001&Product_Code=3504p-12&Category_Code=7060
We recommend storing the backdrop, velvet side inward, on a PVC tube or thick cardboard tube to reduce wrinkling and dust accumulation.
5. **Fluorescent Work Lights**
Economical lights can be ordered from Naturallighting.com.
http://www.naturallighting.com/fixtures_worklights/worklights.cfm
(2) sets of Fluorescent Work lights and stands are required, item FWS130.
Each work light should have two lamps.

6. **Iron or Clothes steamer**

Used to remove wrinkles from the backdrop as necessary.

7. **A Table.**

PROCEDURES:

A small photographic studio will be constructed to photograph three-dimensional objects. This setup should accommodate everything but very large objects. The single camera studio setup is constructed as follows. Multiple camera studios may require light barriers between the individual studio setups.

1. Table & Imaging Area Setup

Start by setting up a table large enough to accommodate one of the backdrops.

The area needed for the studio should be a minimum of 9' deep by 12' wide, and the table should be approximately 3' by 5'. The table should be placed with the long side against the wall, and in the center of the room.

For consistency it is important to use the same type of lights for all setups. Additionally, the cameras should be calibrated to their particular light set.

2. Backdrop Setup

The backdrop should be carefully ironed to remove any wrinkles and then hung from the wall with pushpins or duct tape at a height of approximately 4 feet above the top of the table.

Once the fabric is secured to the wall, gently drape it across the table to form a concave seamless back with several feet of fabric laying flat across the front of the table.

Objects should be positioned just forward of the concave area for photographing.

Choice of backdrop (black or grey velvet) should be selected based on aesthetics: its ability to provide contrast to the object and to enhance the objects dimensionality.

3. Camera Positioning

Mount the camera on the tripod and place it directly in front of the table. Initially the camera should be centered with each object to be shot.

The lens of the camera should be 15 degrees higher than the object. The exact angle and positioning of the camera (as well as the object itself) can be altered to achieve a pleasing composition that also best represents the object and its dimensionality.

When photographing an object carefully consider the objects composition, its most important features, and areas of special interest. The combination of all these elements may necessitate multiple shots of the object.



The basic three-dimensional setup

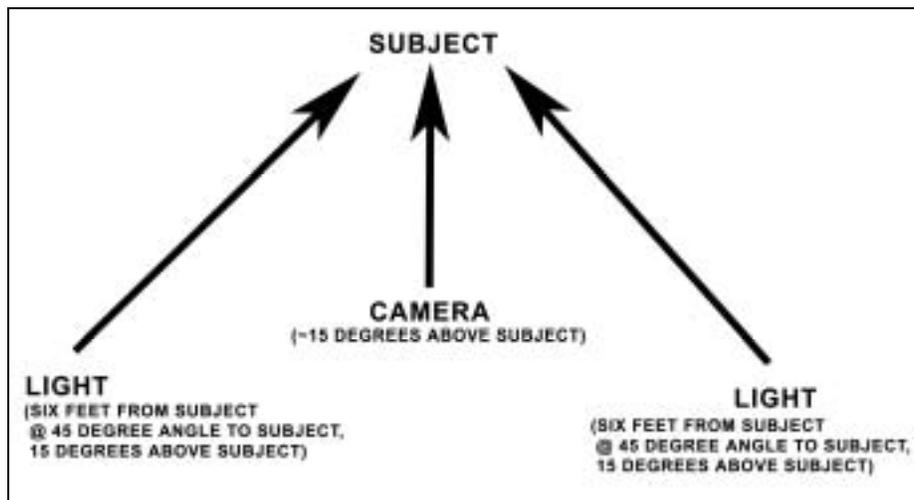
4. Lighting

Two sets of lights (a total of 4 lamps) will illuminate the object. The two light sources should be of the same type, wattage, and color temperature.

No other light sources, including overhead lights or lights from windows, should be in the room when photographing (other light sources can cause unwanted shadows as well as problems with color balance).

Positioning the light stands 6 feet from the object will provide even illumination. This distance can be increased to provide more coverage for larger objects, but the lights should remain equidistant to the object unless the effect of a shadow is desired.

Position each of the two lights at a 45-degree angle from the object being photographed. The lights should be approximately 15 degrees higher than the object and aimed directly at the object. (See diagram below.)



Positioning of the lights and camera in relation to the subject.

5. Exposure

Using the specified hardware configuration, the exposure should be in the range of ½ second @ f22 @ ASA 100.

You will need to experiment with the exposure time to determine the precise exposure specific to your camera and lighting. However, note that the ASA is kept low to reduce noise in the image, and the aperture is kept small (f22) to provide the greatest depth of field for the object being photographed.

Also note that since the exposure is relatively long, depressing the shutter can cause slight movement of the camera and blur the image. To insure the camera and tripod do not move during exposure, the shutter timer (i.e., delayed exposure) should be used. Be careful not to touch the camera or tripod while the camera is exposing.

The preferred workflow is to capture using the RAW image format or directly to the TIFF format. Capture in the JPEG format only as a last resort. If you must capture as JPEG's, make sure the camera is on the "best quality" setting. All images will be archived as uncompressed TIFF's with an untagged RGB colorspace.

6. Color Balance/Color Temperature

The FWS130 Fluorescent work lights have a 6000 degree Kelvin color temperature. Although they approximate "daylight," it will be necessary to use a "custom white balance" setting. This allows you to "make neutral" your whites, grays, and blacks under any type of lighting.

In order to use the custom white balance setting of your camera, you will need to read your camera's instructions. You will also need the grey scale chart from the Kodak Color Separation Guide and Gray Scale (Small) CAT 152 7654.

To set the custom balance of the camera, place the grey scale into the set and make an exposure.



Using the Kodak Gray Scale to set the custom white balance-
Sample patch "M" for the "custom white balance" setting.

Then, from this exposure, sample grey patch “M” to set neutral grey. (This is middle gray, 18% reflectance, a.k.a. photographic grey.) This setting should now be preset for the rest of the shoot.

Once the “custom white balance” (color balance) has been set remove the grayscale from the setup and proceed to shoot the object with the custom setting.

7. File Naming:

FOR CAMERAS NOT TETHERED TO A COMPUTER WORKSTATION:
(*Anticipated configuration during Community-Day Sessions*)

Digital cameras give the photographer little opportunity to name images. Commonly, they assign sequential file names. For this reason and for reference purposes, image the template-form (during Community Days) or an assigned PALMM-compliant Item ID (IID) target in advance of the object being photographed. A template-form includes metadata supplied by the “image-donor”. This method keeps the metadata and file name together with the object images on the Camera’s memory card.

SEQUENCE FOR OBJECTS (ONE IMAGE)



00001



00002

← file name assigned by camera

SEQUENCE FOR OBJECTS (RELATED IMAGES)



00001



00002



00003



00004



00005



00006

Subsequently, file names assigned by the digital camera must be converted to PALMM-compliant file names.

FOR CAMERAS TETHERED TO A COMPUTER WORKSTATION:
(*Potential configuration for In-house Imaging*)

Digital cameras tethered to a computer workstation can integrate the imaging, file naming, and metadata collection processes.

Use of a file name target or template form will not be necessary when the image file can immediately be given a PALMM-compliant file name.

PALMM-COMPLIANT FILE NAMES

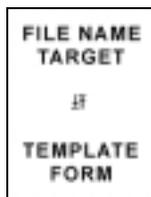
Three-dimensional objects will be deployed in PALMM's Visual Collections (VC). VC technology assumes a specific file naming format as outlined below. *Do not use PALMM file naming guidelines for resources targeted toward PALMM's Textual Collections (TC).*

The image or images associated with any single object, together with MXF, are presumed to be shipped within a directory bearing the name of the PALMM-compliant Item ID (IID) e.g., MM12345678, FI12345678, SF12345678, or UF12345678.

File names share the IID as illustrated below.

SEQUENCE FOR OBJECTS (ONE IMAGE)

Objects represented by a single image take the form [IID].[extension].



00001
Directory:
UF12345678



00002
Files:
UF12345678.tif
UF12345678.jpg
UF12345678.sid

← file name assigned by camera
← PALMM-compliant directory/file name

SEQUENCE FOR OBJECTS (RELATED IMAGES)

Objects represented by multiple images take the form [IID]-[sequential number].[extension].



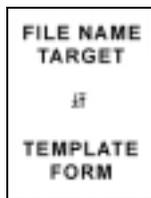
00001
Directory:
UF12345678



00002
File:
UF12345678-1.tif
UF12345678-1.jpg
UF12345678-1.sid



00003
File:
UF12345678-2.tif
UF12345678-2.jpg
UF12345678-2.sid



00004
Directory:
UF87654321



00005
File:
UF87654321-1.tif
UF87654321-1.jpg
UF87654321-1.sid



00006
File:
UF87654321-2.tif
UF87654321-2.jpg
UF87654321-2.sid