

Object photography with QR codes in the frame

QR code photographs are the easiest way to get images assigned to archaeological contexts so that the images can be managed in the File Repository. For object photography, the iPad makes a QR code that is much too large to include in the frame of the photograph. The following is a somewhat hacky first way to effectively get QR codes in object photos. It is not an efficient workflow if you are doing just one object, but if you have a lineup of 10 objects to photograph then this both saves time and prevents mistaken photo IDs down the road. Once you are practiced, it takes mere seconds for getting the QR code up and running; the longer part is still arranging the object and scale and lights.

Please note that with the introduction of sequence QR code photography this may or may not still be useful. If your camera setup is such that the frame of the photo is smaller than an iPad, you will still want this. If your frame is iPad sized then using sequence QR codes and shooting that code before and after your images of the object will likely be faster.

This is written for devices running iOS. If you have a digital watch or other tiny screen that can synchronize images you may be able to customize a similar workflow for the devices you are used to.

You will need:

- An iPhone.
- An Apple Watch that is set to synchronize photos with the iPhone. (<https://support.apple.com/guide/watch/choose-a-photo-album-and-manage-storage-apd-e3d82be52/watchos>) Set this so that it is only one phone folder of photos that is being synchronized. Label your folder QR codes.
 - Set the Apple Watch so that it has the longest awake period possible.
 - Make sure background app refresh is ON (Settings, General) for photos.
- A recording device with the latest version of your team's recording on it to generate the QR codes.
- The objects you wish to photograph, with their object numbers.
- A photography setup as you usually use for object photography, ideally with lights, black cloth, scale, clips, tripod or camera mount, macro lens, etc.



Your workflow:

- Remove the watch from its strap, so that it is just a miniature screen.
- Open the bag with your object in it and arrange your object and scale as you wish on the background.
- On the laptop or iPad on which you have a current workstation up, find the object number. This is easiest by using the magnifying glass on the start page - start typing in the number and it will find it for you.
- Go to the Collected Material record for that object (by clicking on it in the list).
- If your object is a sherd, you'll have to search in ceramics processing. (Sherds are left out of the search in general because that would clutter the results.) Go to the tab "registrar and specialists". Click ceramics. Now the magnifying glass menu in the upper left will let you search for sherds.
- Once you're in the record of the object or sherd you have arranged on your photographic setup, create a QR code: click the hamburger menu in the upper left, then click the bar code looking button. A few seconds later a QR code with that object's unique number will appear.
- Now use your iPhone to take a picture of the QR code you have generated. Give it a little bit of a boundary so it will size right on the watch (takes a few tries to get it right but perfect is not necessary and by object three you'll be in a groove). You do not need to include the human-readable label or the date in your shot.
- Move the image on your iPhone into the QR codes folder: select the photo, hit the arrow button to export it, scroll down and choose "add to album".
- Wake up the Watch and go to photos. It might take a few seconds to register that you changed a photo in the folder. If you can get in a rhythm and keep it so that the watch is always on while you're working it will get much faster at this.

- Touch the photo to get the time and border to disappear.
- Position the watch face in your photo frame so the screen is approximately level with the focal plane you have chosen for the object itself.
- Take your photo.
- Delete the photo from your iPhone. It will now disappear from the watch, waiting for your next one. Having only one photo in that folder at a time is both easier for you and insures against you accidentally having the wrong code in the photo of your object.
- Put the object away, get the next one out, and repeat the process.
- You leave the QR code screen in the recording system simply by clicking anywhere on the screen and then on the “close QR code” button.

A note: don't let the Apple Watch completely deplete its battery or it will have trouble remembering that you set it to synchronize to a photos folder. If this happens you may have to reset settings. As the watch drains quite quickly, it is best to charge it every night.