

# Boat Deck Measurement using PhotoModeler

**A GUIDE TO USING TARGETS AND TAKING PHOTOS**  
PHOTOMODELER TECHNOLOGIES

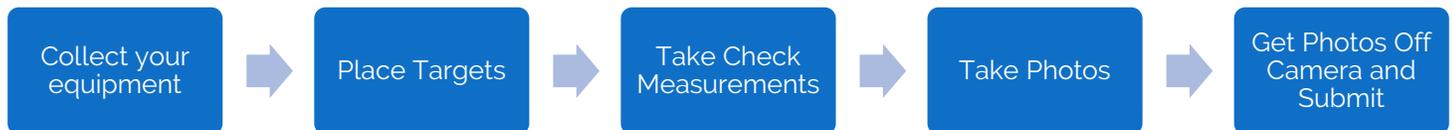


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## BOAT DECK MEASUREMENT USING PHOTODELER

This document outlines how to set up a boat deck measurement project using a camera and the PhotoModeler Letter Sheet System. This document is for people that will be working on their own boats and sending the photos to another party for the PhotoModeler processing. The document is also a good overview of project setup for PhotoModeler operators.

The important steps are:



### 1. COLLECT YOUR EQUIPMENT

You will need to collect these items before you start.

1. A camera. Most cameras can be used but we recommend for best results in this order: a DSLR or mirrorless camera with a fixed lens, a good quality camera with a zoom lens, or lastly a mobile phone camera. If using a zoom-lens camera it can be used only at one zoom setting, and we suggest the widest angle. If using a mobile phone, ensure you use the highest quality settings with the least in-camera changes.



2. A tape measure, and a way to record your measurements.



3. A set of PhotoModeler Letter Sheets.

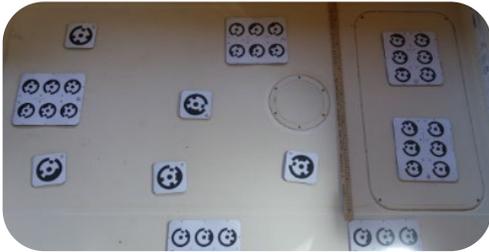
A target is one circle dot with the circular bar code around it. The larger sheets have six targets, and the coaster-sized ones have a single target.



[www.photodeler.com/letter-sheets](http://www.photodeler.com/letter-sheets)

## 2. PLACE TARGETS

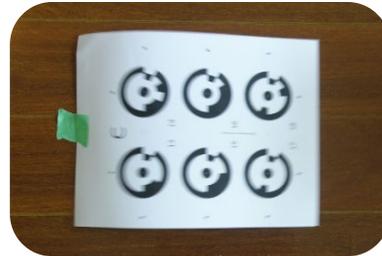
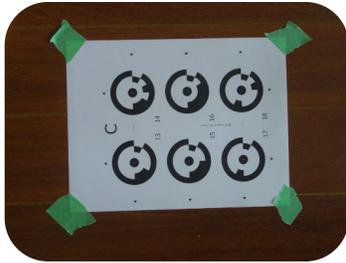
- Treat each panel or small area as a separate project.
- A target is one circle dot with the circular bar code around it. The larger sheets have six targets, and the coaster-sized one have a single target.
- Spread the targets so that most photos capture at least 15+ targets. See taking photos below. Generally, place more targets than you think needed, and get good density.



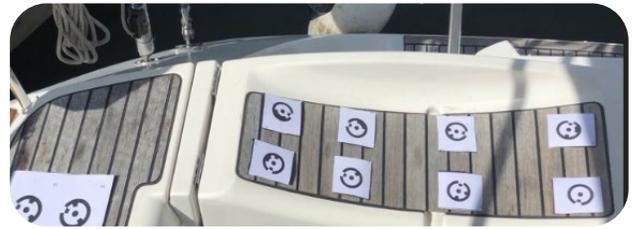
- Lay targets (including sheet 'A') inside the panel, and then additional target around the outside of it. Targets should also be placed in areas you don't need to measure.
- Keep targets flat.



- Make sure the targets do not move between photos. If using paper targets, tape them down on all 4 corners.



- Non-planar surfaces use different techniques not covered here.

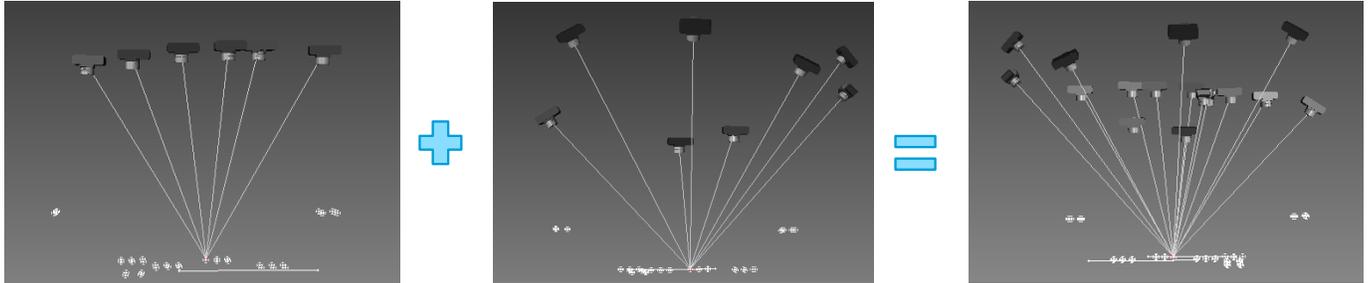


### 3. TAKE CHECK DISTANCE MEASUREMENTS

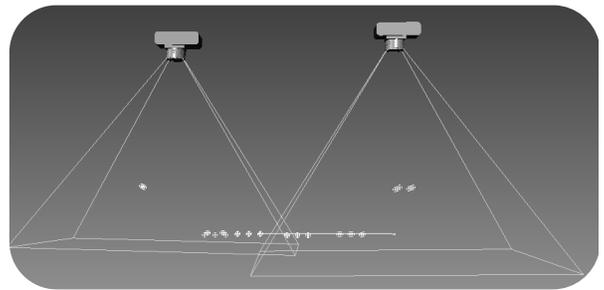
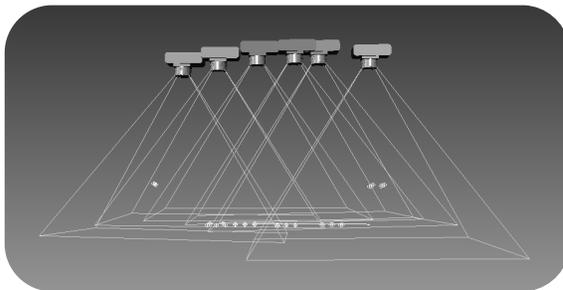
- Measure between the center dots of several target pairs. There is a small white cross in the target center.
- Record the ID numbers of each target (the number printed beside the target in lower corner), and the distance between the pair.
- Ensure your measurements are accurate and precise.
- Be careful not to move any targets while taking measurements.

## 4. TAKE PHOTOS

- Take one group of photos looking down at the panel or area. Then another group with a slight angle to them that circles the panel. These two groups combine to form a good set of photos. The angled photos are sometimes called an 'orbit'.

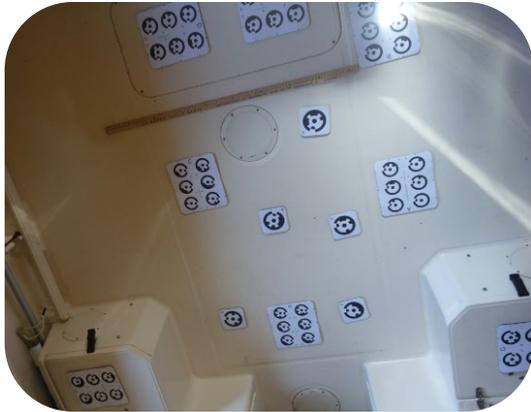


- Move the camera between each photo. Do not just rotate or roll the camera while standing in place. Do the best within the constraints of your boat.
- As the camera moves, make sure there is significant overlap between each photo and the next one. There should be a shared set of targets between each photo.



- Photos can include a mix of portrait and landscape photos.

- Cover as much of the photo as possible with targets. Include targets at the edge of the photo, not just the center. Take more photos than you think needed.

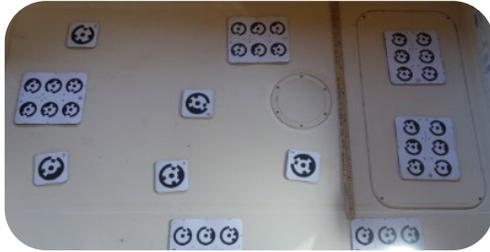


- To reduce blur, make sure you have good lighting. Use a flash and hold camera steady.



- It is not always obvious in the view finder to determine if the photos are in or out of focus. It is best to make sure lighting is sufficient, especially if working indoors or under cover. **Review and check your images at full magnification on your camera before moving the targets!**

- Try to capture as many targets as you can in each image. Aim for photos that capture at least 15+ targets covering as much of the imaging area as possible. The straight down photos will capture fewer targets and the angled ones more.



## 5. GET PHOTOS OFF YOUR CAMERA AND SUBMIT YOUR DATA

- Plug your camera into your computer and copy the images off at full resolution.
- If you need to e-mail the photos, send them as full-size attachments, do not embed them in the email body.
- Do not use a transfer service that changes the resolution/size of the photos.
- Send your photos and your measurements with target IDs to your operator.