

# HELIX PHOTO MEASURING MANUAL





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# SAFETY

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## SECTION 1

# SAFETY

## SAFETY DEFINITIONS



This safety alert symbol appears when the lift detects an issue within the unit that may affect the user's safety. Please follow the message that accompanies this safety alert symbol.

### **WARNING**

Indicates a hazardous situation that could result in death or serious injury.

### **CAUTION**

Indicates a hazardous situation that could result in minor or moderate injury to property.

### **NOTICE**

*Indicates a situation which can cause damage to the lift and/or the environment, or cause the lift to operate improperly.*

*NOTE: Indicates a condition that should be followed in order for the lift to function in the manner intended.*

## SECTION 2

**PREPARATION**

The Helix PhotoMap is designed to capture the usable stairway areas, including any obstructions. By using the system, you receive subsequent calculations of multiple key angles and distances so Harmar can manufacture a curved rail to perfectly fit your client's unique space.

**HELIX PHOTOMAP KIT**

Packaged in a compact case for optimal organization, the Helix PhotoMap Kit includes all that's needed to take photos and easily process a Helix Curved Stairlift order.

**YOUR KIT CONTAINS:**

- Markers
- Calibration markers
- Camera
- Data / SYNC cable
- Charger
- Thumb drive, with videos, forms and manuals
- Tape measure

If you are missing any items, contact Harmar at 800-833-0478 before attempting to measure a customer's staircase.

**SITE PREPARATION**

Clear the work site of any obstructions including tables, dressers, stands, photos, artwork, and other personal property.

Move furniture away from the projected path of the rail system.

**FILL OUT / UPDATE THE ORDER FORM**

- Draw an accurate sketch of the site
- Note the camera number on the form
- Note power location and loading/unloading areas
- Remember to ask customer/confirm color of rail and chair desired

# PREPARATION

## MARKER DESCRIPTION & PURPOSE

### THE HELIX PHOTOMAP SYSTEM REQUIRES TWO TYPES OF MARKERS

- Calibration Point Markers (Targets #1 & #2)
- General Markers with Target Symbols

**Calibration Markers** are designed to be positioned exactly two feet apart at the center of the step on the lowest landing. They provide a known distance for the design software to use as reference in establishing the proper lengths, curves, and proportions. *(There is one target per card).*

See Figure 2-1.



Figure 2-1

**Markers** can be used interchangeably on landings or steps, marking significant architectural points. These are usually placed at the corners of walls or the leading edge of the treads, but can also be used to mark door jams and other obstructions such as the floating edge of a handrail or window sills. They also mark potential end points for the rail if it will not be located next to a wall. *(There are 2 targets per card)*

See Figure 2-2.



Figure 2-2

### NOTICE

All markers should lie flat on the floor or stair tread. If a carpet runner or other object will prevent the markers from lying flat, either remove the object or offset the marker to ensure the marker is flat.

### NOTICE

Each marker is unique with two "Target Symbols", each representing a specific number and location. The software that processes your photos uses them to determine specific information required during the process.

SECTION 3

# MARKER PLACEMENT

## CALIBRATION POINTS

Ensure you include markers on the floor, or the lowest landing, around the calibration markers. Note: There must be enough markers for Harmar to create a standing plane. Remember the markers should be two feet apart at the center of the step on the lowest landing. *See Figure 3-1.*

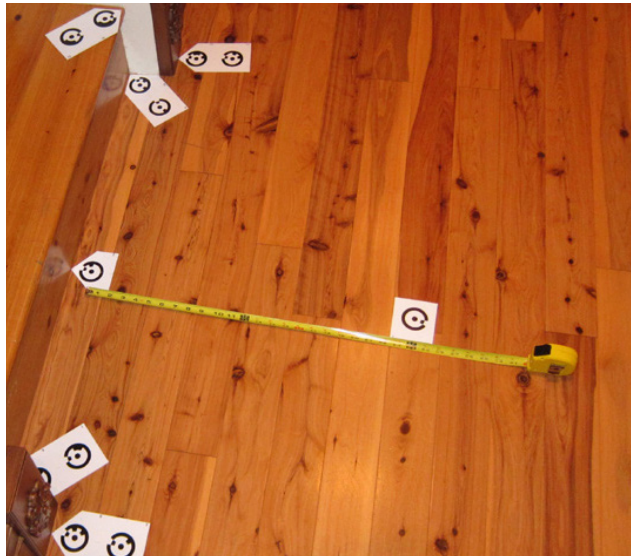


Figure 3-1

For accuracy, place a tape measure beside the points centered on the markers. *See Figure 3-2.*



Figure 3-2

### NOTICE

*Be sure to leave enough room for movement as you work.*

## LANDING MARKERS

Work consistently in a clockwise manner to place markers on all landings, including lower, intermediate and upper landings. Position the markers 16 to 24 inches apart along the walls. *See Figures 3-3 - 3-5.*



Figure 3-3



Figure 3-4

# MARKER PLACEMENT



Figure 3-5

Mark the corners of walls, lower corners, and edges of the tread and door jams.

## STEP MARKERS

Place two markers on each tread along the right and left leading edge, being mindful of the handrail or other obstructions. See Figures 3-6 through 3-9



Figure 3-6



Figure 3-7



Figure 3-8



Figure 3-9

**Work from the bottom to the top of the stairs.** If you cannot place the marker on the leading corner of tread, offset it by a consistent distance.

### NOTICE

*Unless there is an obstruction at the edge of the steps, ensure the markers are all placed on the outside edge.*

## SPECIAL CASES

*NOTE: Markers may not stay put on spiral or winder steps.*

This won't be an issue; the narrowest portion of the stair is not usable because it cannot accommodate the rail posts.

Place the marker as close to the end of the tapered tread as possible.

For curved steps, place markers at either end of the tread and use additional markers to provide enough 'points' to reflect the curved leading edge of the tread. *See Figures 3-10-3-13.*



Figure 3-10



Figure 3-11

# MARKER PLACEMENT



Figure 3-12

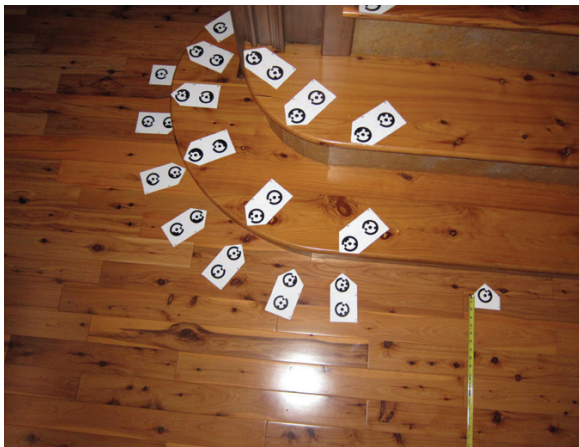


Figure 3-13

## CAMERA SETTINGS & OVERVIEW

- Important: Set the camera to the “C”
- Never use the zoom or telephoto function.
- Always use the autofocus functionality.

### NOTICE

*Denoted by a green box on the screen when the shutter button is slightly depressed*

- Include 14 targets in each photo (7 markers and some overlap is needed)

### NOTICE

*Be deliberate in taking each photo and aim for accuracy. With each photo, we recommend capturing a second for safety. Do not rush this process. Each target is equally important.*

- Watch your step! Should a marker be accidentally moved, place it back in the original position and restart the photography process. Note: If any marker has moved, the software will not match the photos/targets taken prior to movement.
- Hold the camera as high as possible. Try to get the tip of your shoes. **See Figure 3-14.**



*Figure 3-14*

Do not change or zoom the camera once you have started the series of photographs. Each photo should capture both sides of the step. The image is not usable if only one marker or side of the step is visible.

# PHOTOSEQUENCE

## SECTION 4

# PHOTO SEQUENCE

## START AT THE TOP LANDING

- Take four pictures, one from each corner, towards the center of the landing.
- Photograph at least 14 complete targets, each showing a minimum of 7 markers.  
*See Figure 4-1.*



Figure 4-1

- Make sure you can see the toe of your shoes in the photos. *See Figure 4-2.*



Figure 4-2

- When you have four shots of the landing, take a picture from the center of the landing down the stairs.
- Step to the edge of the landing and take a picture down the steps.  
*See pictures 4-3 through 4-5.*



Figure 4-3



Figure 4-4



Figure 4-5

### NOTICE

*Sometimes it's helpful to rotate the camera in order to capture additional targets in the frame.*

## MOVE DOWN THE STAIRS

- Always make sure you photograph down the stairs before you start walking down the staircase.



Figure 4-6

- Go down three steps, then turn and shoot up the stairs.



Figure 4-7

- Turn around and shoot down the stairs.

# PHOTOSEQUENCE



Figure 4-8

- Continue this process until you reach a mid-level landing or significant transition.

## LANDINGS

- When on the landing, take four corner shots to the center of the landing.
- Before you walk down the stairs, shoot down the stairs.
- Go down three steps, then turn and shoot up the stairs.

### NOTICE

*If the staircase includes arched or pie-shaped steps, step down one or two treads at a time (as opposed to the normal three) to completely capture the transition.*

- Another option for better coverage would be 3 photos from each step. Move so the camera has 3 angles; right, center, left.
- When pasts the landing, continue down the stairs with the 'three steps down, turn' system until reaching the lowest landing.



Figure 4-9



Figure 4-10



Figure 4-13



Figure 4-11



Figure 4-12

## PHOTOSEQUENCE

### SHOOTING THE BOTTOM LANDING

- At the final landing, take one last picture up that portion of the stairs.
- Continue by taking the four corner shots to the center of the landing.
- Shoot the Calibration Points; be sure to include the tape measure.

### PHOTOGRAPH THE OVERALL SITE AND ITEMS OF INTEREST

Take extra photos (beyond the specific target photos) of details that will help recall the site. For example: Low ceilings, alcoves, doors, or any other obstructions.

- Take some general photos of the area near the stairway's upper and lower landings.  
**See Figures 4-14 through 4-15**



Figure 4-14



Figure 4-15

See the below figures for proper survey examples:  
*See Figures 4-16 through 4-20.*



Figure 4-16



Figure 4-17

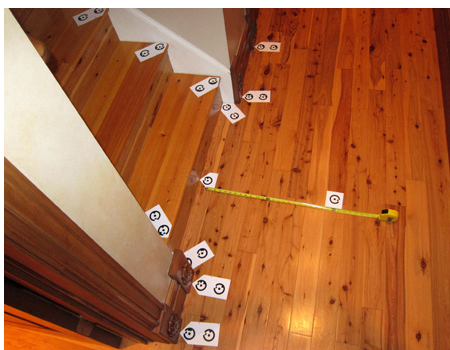


Figure 4-18



Figure 4-19



Figure 4-20

SECTION 5

# SUBMITTING PHOTOS

## FINAL STEPS

- Pick up the markers
- Be sure to always keep your markers organized and in the correct order in your kit.
- Return all customer items you moved to their original locations.

## REVIEW PROCESS

Harmar will confirm the receipt of your photos and approve the proposed rail.

If you have any questions, contact Harmar Technical Support at 800-833-0478.

## SUBMITTING PHOTOS

1. Connect your camera to PC or install SD card
2. Locate the camera or card on your computer
3. Copy the photos from the camera to your chosen submission method:
  - Option 1: Drop Box (Preferred Method)  
(See page 17 for instructions)
  - Option 2: Email photos:  
Helix@harmar.com
  - Option 3: Return camera with photo intact (As a last resort)

## UPLOADING TO DROPBOX

Visit [harmar.com/project-image-upload](http://harmar.com/project-image-upload).

Fill out all fields in the Dropbox form. When finished, click on "Select files" and find the images from your camera you would like to submit. When all files are attached click "Submit Transfer Now". *See Figure 5-1.*

**Send to my Dropbox now ..**

**Your Name: \***    
First Name Last Name

**Your E-Mail Address: \***

**Camera Serial Number \***

**Additional comments:**

**Select files ..**  
Select multiple files up to 300 MByte, but consider the time needed for uploading!

**Submit transfer now ..** **Clear Form**

Powered by Jotform

Figure 5-1

# SAMPLE PHOTO SEQUENCE

## SAMPLE PHOTOS



Top of Stairs, No Landings



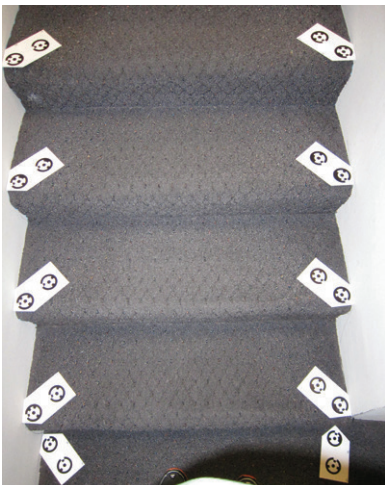
Mid Landing



Mid Landings



Mid Landing



Shooting up



Mid Landing



Mid Landing



Mid Landing from 3 steps down



Mid Landing, Shooting Down



Mid Landing



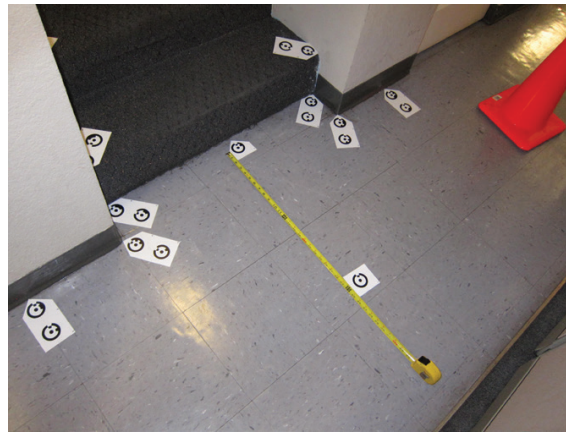
Mid Landing

# SAMPLE PHOTO SEQUENCE

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Shooting Down



Bottom Landing



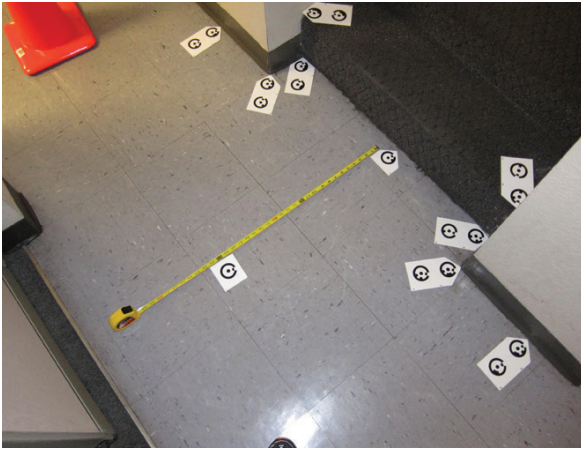
Shooting Up



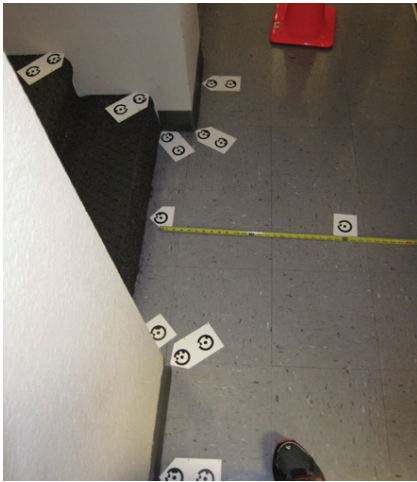
Bottom Landing



Bottom Landing



*Bottom Landing*



*Bottom Landing*



*Calibration Shot*

## COMMON ER-

### SECTION 6

## COMMON ERRORS

### COMMON ERRORS..... AND HOW TO AVOID THEM

One major error that can easily be fixed is not having enough photos.

The system requires a minimum of 14 good photos showing the markers. As stated earlier, you should consider having more than 14 photos.

Plan your shots carefully. And if you are in doubt, take extra photos.



*Too Much Angle / Low Shots*

As a general rule, if the photo shows the tips of your shoes the angle is correct.



*Blurry Photos*

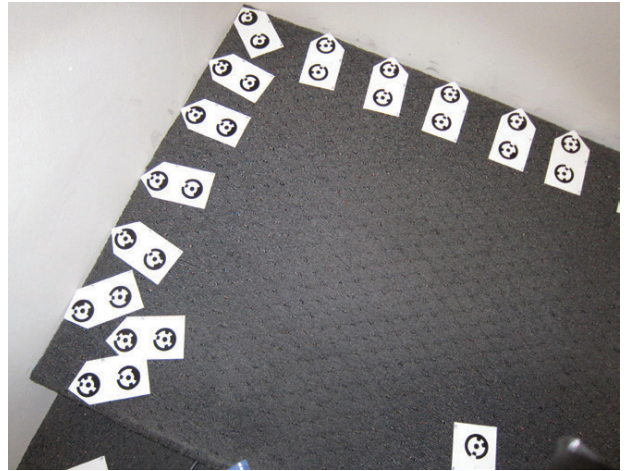
If any photo is blurry, the system will not be able to use it. Ensure all photos are crisp.



*Incorrectly Placed*



Too Much Angle / Low Shots



Too Many Markers



Target Cut Off



Target Washed Out

**COMMON ER-**

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*Target Blocked by Rail*





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