NOTE: The following symbols indicate areas where you should take special care to avoid danger to individuals or property.

WARNING
Hazardous situation. If not avoided, could result in serious injury to installer or user.

CAUTION!
Hazardous situation. If not avoided, could result in serious damage to property.
PREPARATION

The Helix PhotoMap system is used to capture the usable area of a stairway, including any obstructions, and allow the subsequent calculation of various key angles and distances so an accurate curved stair-lift can be designed and manufactured for that space.

Helix PhotoMap Kit

Everything needed to take the photos and process a Helix Curved Stair Lift order easily is included in the Helix PhotoMap Kit packaged in a compact case to organize all the materials.

Your kit contains:

- Markers
- Calibration Markers
- Camera
- Charger
- Helix Measurement/Order Form
- Tape Measure

If you are missing any items, contact Harmar at 866-378-6648 before attempting to measure a customer’s staircase.
Preparation

Prepare the Site
Clear the area of obstructions such as hall tables, artwork or other decorative materials on or near the staircase and area you’ll be working.
Move furniture away from the projected path of the rail system.

Fill Out /Update the Order Form
- Draw an accurate sketch of the site.
- Important: 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

Marker Description & Purpose

The Helix PhotoMap System requires two types of Markers:
- Calibration Point Markers (points 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) [Figure 4-1]

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 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 target per card) [Figure 4-2]

NOTE: 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 a specific distant to ensure the marker is flat.

NOTE: Each Marker is unique. They each have two ‘Target Symbols’ each one represents a specific number and location. The software that processes your photos uses them to determine specific information required during the process.
MARKER PLACEMENT

Calibration Points

Markers exactly two feet apart at the center of the step on the lowest landing. [Figure 5-1]

Place a tape measure next to the points centered on the dots on the markers. This verifies the distance in the photos you will take later. [Figure 5-2]

NOTE: Be sure to allow enough room for you to step as you work.

Landing Markers

Place Markers on All Landings. 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. [Figure 5-3]

Mark significant points such as the corner of walls, lower corner/edges of tread and door jams. Place appropriate Markers to show important areas but avoid placing needless markers.
Marker Placement

Step Markers

Place two markers on each tread along the right and left leading edge, being mindful of the handrail or other obstructions. [Figure 6-1]

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.
Special Cases

Spiral, Curved (‘Arched’) or Winder Stairs (‘Pie’ Stairs). In some cases, Markers on Spiral and Winder Steps cannot be placed in the corner of the tapered end of the stair tread without the marker falling off the tread. This is not an issue because that narrower portion of the stair is not considered to be usable since support posts cannot be located there.

To mark the tapered end of the tread, simply locate the marker as close to the end of the tread as possible and move to the next tread. However, offset by the same distance on each step where you offset. [Figure 7-4]

Curved Steps represent a particular challenge as the leading edge of the tread is not a straight line. 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. [Figure 7-1 – 7-4]
PHOTOGRAPHING MARKERS

Camera Settings & Overview

- Important: Set the camera to the "C" setting. [Figure 7-1]

- Never use the zoom or telephoto function.

- Always use the auto-focus functionality. (Critical Point and denoted by a Green Box on the screen when the shutter button is slightly depressed)

- Need to see as close to as possible 14 targets in each photo (7 markers and some overlap is needed)

- Be deliberate in taking the pictures. (Critical Point) If you are not sure if you took a good picture, simply review and take a 2nd picture if needed… Do not rush through the session, potentially cutting off targets and/or taking blurry photos.

- Watch your step! If you accidently move a marker… you will need to replace the marker to the correct position and restart the picture taking from the top. (If a marker has ‘moved’ the software will NOT be able to match the pictures/targets taken before the movement to the pictures/targets taken after.) Helping you avoid a frustrating return trip to the Client’s house.

- Hold the camera as high as possible. Try to get the tip of yours shoes. [Figure 8-1]

Do not change or zoom the camera once you have started the series of photographs. In the photo there needs to be both sides of the step. If there is only one marker and we can’t see the other side of the step the pic is no good.
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.
- Make sure you can see the toe of your shoes in the photos. [Figure 9-2]
- When you have four shots of the landing, then take a picture from the center of the landing down the stairs.
- Step to the toe of the landing and take a picture down the steps. [Figure 9-3]

NOTE: Sometimes it’s helpful to rotate the camera in order to capture additional targets in the frame.
**Move Down the Stairs.**

- Before you walk down the stairs, shoot down the stairs.
- Go down three steps, then turn and shoot up the stairs.
- Turn around and shoot down the stairs.
- Move down three more steps, turn around and shoot upstairs; then turn and shoot down the stairs.
- Continue this process until you reach a mid-level landing or significant transition.

![Figure 10-1](image1)

![Figure 10-2](image2)

![Figure 10-3](image3)
**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.

- Turn around and shoot down the stairs.

- Move down three more steps, turn around and shoot upstairs; then turn and shoot down the stairs.

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

- One each step then should be 3 photos taken right left center.

**NOTE:** If the stair includes arched or pie-shaped steps, you can step down one or two treads at a time (as opposed to the normal three) to completely capture the transition. [Figure 11-5]

- When past the transition, continue down the stairs with the ‘three steps down, turn’ systems until reaching the lowest landing.
Photo Sequence

Shooting the Bottom Landing

- At the final landing, turn around and 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.

- It may be helpful to 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.
- It is also advisable to take some general photos of the area near the stairway’s upper and lower landings.
Final Steps

- Pick up the markers, ensuring that they remain in proper order within the kit.
- Return all customer items you moved to their original locations.

Review Process

Harmar will contact you to confirm receipt of the photos and approve the design of the proposed rail system.

If you have any questions, contact Harmar Technical Support at 866-378-6648.
SUBMITTING PHOTOS

1. Connect camera to PC or install SD card

2. Locate the camera or card on your computer system

3. Copy the photos right from the camera to whatever submitted method you have chosen.
   - Option 1  Drop Box (Preferred Method) (See page 15 for instructions)
   - Option 2  Email the photos: Helix@harmar.com
   - Option 3  Return camera with photo intact (As a last resort)
Submitting Photos

Uploading to Drop Box

Go to Harmar.com. Sign on as a dealer. Click on the 'ALL PRODUCTS' link at the top of the page. Click on 'Stair Lifts'. Click on 'CSL500 Helix Curved Stair Lift'. Choose the 'DROPBOX' tab. This will open this screen below.
Submitting Photos

Uploading to Drop Box

**Figure 16-1**

**Figure 16-2**
Submitting Photos

Uploading to Drop Box

Send to my Dropbox now ..

Your Name: [John] [Dealer]
First Name Last Name

Your E-Mail Address: john.dealer@email.com

Additional comments: I took the CSL measurement photos for Mr. Smith. Please contact me at (***-***-*** if you have any problems.

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

Figure 17-1

Figure 17-2
Submitting Photos

Uploading to Drop Box

Figure 18-1
Sample Photo Sequence

Top of Stairs, No Landing

Mid Landing

Mid Landing

Shooting up

Mid Landing
Sample Photo Sequence

Mid Landing

Mid Landing

Mid Landing

Mid Landing Shooting Down

Mid Landing

Mid Landing From 3 Steps Down
Sample Photo Sequence

Shooting Down

Bottom Landing

Shooting Up

Bottom Landing

Bottom Landing

Bottom Landing
Sample Photo Sequence

Bottom Landing

Calibration Shot
COMMON ERRORS .......AND HOW TO AVOID THEM

Too much angle / Low shots
As a general rule if the photo shows the tips of your shoes the angle is correct.

Blurry photos
Ensure the photo is sharp; if not, the photo system will not be able to function properly.

Not enough photos.
The system requires a minimum of 14 good photos showing the markers. It is best to have more than 14.
Plan your shots carefully. And if you are in doubt, take extra photos.

Incorrectly Placed
Common Errors

Marker Moved

Targets Cut Off

Targets Washed Out

Too Many Markers