

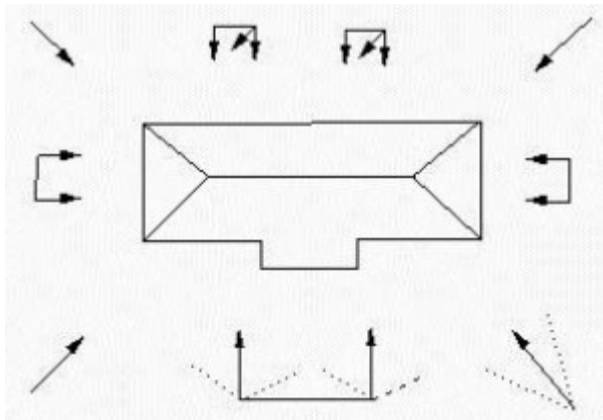
<http://gmvcast.uark.edu> A Method Store for Advanced Survey and Modeling Technologies Mon, 01 Apr 2013 03:29:18 +0000 en-US hourly 1 <http://wordpress.org/?v=3.5.1>  
<http://gmvcast.uark.edu/photogrammetry/hardware-photogrammetry/canon-5d-mark-ii/canon-5d-checklist/list-of-helpful-websites-and-publications-for-close-range-photogrammetry/>  
<http://gmvcast.uark.edu/photogrammetry/hardware-photogrammetry/canon-5d-mark-ii/canon-5d-checklist/list-of-helpful-websites-and-publications-for-close-range-photogrammetry/#comments> Thu, 19 Jul 2012 15:56:04 +0000 adam <http://gmvcast.uark.edu/?p=10756>

## General Photography and Close-Range Photogrammetry Standards and Guides

**Learn more about depth of field, bit depth, EXIF metadata, file formats, and more...**

Glossary of terms found at Digital Photography Review website (dpreview.com)  
<http://www.dpreview.com/learn/?/Glossary/>

## ADS Guides to Good Practice



Learn more about the ADS Guides to Good Practice for close-range photogrammetric documentation...  
Barnes, A; J. Cothren, K. Niven (2011) *Guides to Good Practice: Close-Range Photogrammetry*. Archaeology Data Service / Digital Antiquity: Guides to Good Practice.  
[http://guides.archaeologydataservice.ac.uk/g2gp/Photogram\\_Toc](http://guides.archaeologydataservice.ac.uk/g2gp/Photogram_Toc)

## Documenting Surfaces

An excellent guide for using close-range or aerial photogrammetry to document surfaces (e.g. rock art, trackways, surfaces prone to erosion).

Matthews, N. A. (2008) *Aerial and Close Range Photogrammetric Technology: Providing Resource Documentation, Interpretation, and Preservation*. Technical Note 428. National Operations Center, Denver, Colorado: U.S. Department of the Interior, Bureau of Land Management.  
<http://www.blm.gov/nstc/library/pdf/TN428.pdf>

## HABS/HAER/HALS

Learn more about architectural and engineering documentation for long term archival in the Heritage Documentation Programs collections in the Library of Congress.  
National Park Services: Heritage Documentation Programs (HABS/HAER/HALS)

<http://www.nps.gov/history/hdp/>

## Cultural Heritage Site Surveying

What makes a successful and useful survey of cultural heritage sites? Learn what to record, how to record it, and what performance indicators are important...

Bryan, P., B. Blake, J. Bedford, D. Barber, J. Mills, and D. Andrews (2009) *Metric Survey Specifications for Cultural Heritage*. English Heritage, Swindon.

<http://www.english-heritage.org.uk/publications/metric-survey-specification/>

## English Heritage on Photogrammetric Survey of Historic Buildings

An extensive and detailed guide for the photogrammetric survey of historic buildings...

D'Ayala, D., and P. Smars (2003) *Minimum requirements for metric use of non-metric photographic documentation*, University of Bath.

PART 1: <http://www.english-heritage.org.uk/publications/metric-use-of-non-metric-photographic-documentation/metricextraction1.pdf/>

PART 2: <http://www.english-heritage.org.uk/content/publications/publicationsNew/metric-use-of-non-metric-photographic-documentation/metricextraction2.pdf>

## Intro to Architectural Photogrammetry

A nice introduction to close-range photogrammetry and methods for architectural photogrammetry...

Hanke, K., and P. Grussenmeyer (2002) *Architectural Photogrammetry: Basic Theory, Procedures, Tools*. September 2002, ISPRS Commission 5 Tutorial, Corfu.

[http://www.isprs.org/commission5/tutorial02/gruss/tut\\_gruss.pdf](http://www.isprs.org/commission5/tutorial02/gruss/tut_gruss.pdf)

]]> <http://gmv.cast.uark.edu/photogrammetry/hardware-photogrammetry/canon-5d-mark-ii/canon-5d-checklist/list-of-helpful-websites-and-publications-for-close-range-photogrammetry/feed/> 0

<http://gmv.cast.uark.edu/uncategorized/z-f-laser-scanner-scanning-your-target-2/>

<http://gmv.cast.uark.edu/uncategorized/z-f-laser-scanner-scanning-your-target-2/#comments> Wed, 07 Mar 2012 17:10:47 +0000 Vance <http://gmv.cast.uark.edu/?p=4790>

**This workflow will show you how to start a scan using the Z+F Laser Scanner.**

*Hint: You can click on any image to see a larger version.*

## POSITIONING AND POWERING UP THE SCANNER

1. Position the scanner in the center of the target field

Ensure that the angle of incidence of the laser on the target is larger than 45 degrees

### Recommended distance between the Z+F scanner and targets

RESOLUTION	RECOMMENDED DISTANCE WITH AN ANGLE OF 90 deg.
Middle	1 m to 15 m
High	1 m to 20 m
Super High	1 m to 25 m
Ultra High	1 m to 30 m

With smaller a smaller angle of incidence the target distance is reduced

Power the scanner on by pressing the power button for 0.3 seconds

The power-up process takes approx. 20 seconds in which time it will rotate while the mirror spins

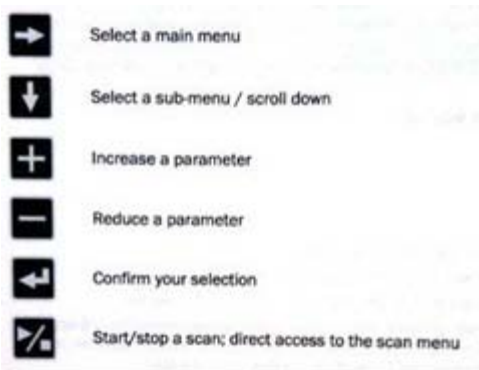
## MENUS AND CONTROLS

Menus and Controls

System Menu shown in the display. Main menu order:

- Info
- Status
- Tilt Sensor
- Scanning
- Data Management

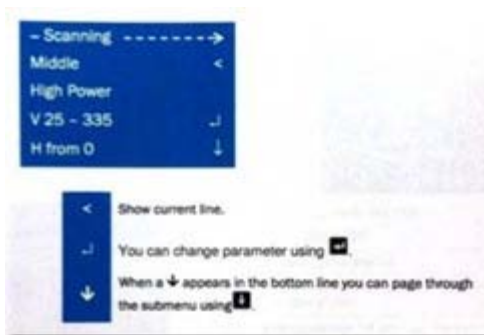
**Control buttons:**



## SCAN MENU SYMBOLS

### Scan Menu Symbols

The top line indicates the menu currently in use



See **User Manual** for full descriptions of all menus

Check the Tilt Sensor Menu

If the inclination in the Y-direction is greater than or less than 2 degrees, an arrow will appear and the inclination should be corrected

## THE SCANNING MENU


### In the Scanning Menu

#### RESOLUTION:

Select the preferred resolution level (**Middle** or **High** is usually preferred)


**Super High, High** and **Middle** resolutions have a **low noise** option that reduces noise by the factor of 1.4, but scanning time is doubled


#### VERTICAL SCAN RANGE:

You can select predefined vertical scan ranges using the + / – buttons or further refine each predefined range by pressing the  button and increasing or decreasing the values by 5 deg. with the + / – buttons. Predefined ranges include:

- V 0-360
- V 25-160 and 200-335
- V25-180
- V 180-260
- V 45-135

#### HORIZONTAL SCAN RANGE:


The horizontal scan range can be set in increments of 5 deg. for both the start and end position using the + / – buttons and pressing the  button to confirm the position

Alternatively the scanner start position can be manually set by rotating the scanner to any position greater than 0.0. Press the  button to confirm the position. Set the horizontal range end position next in the same manner

## START THE SCAN

### Start the Scan



Press the  button to start the scanning process. The process can also be stopped using this button and all data collected prior to interruption will be stored.

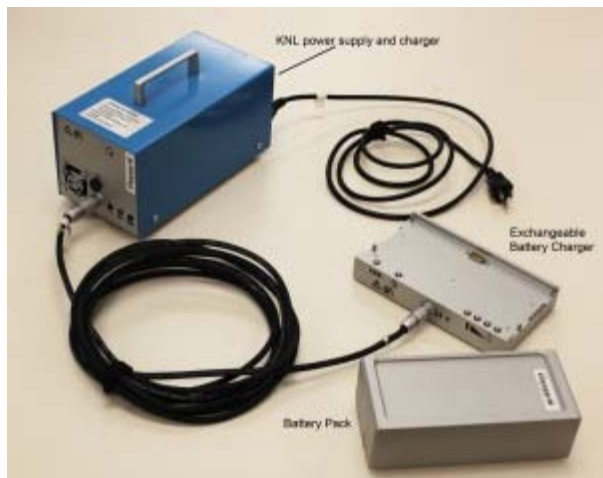
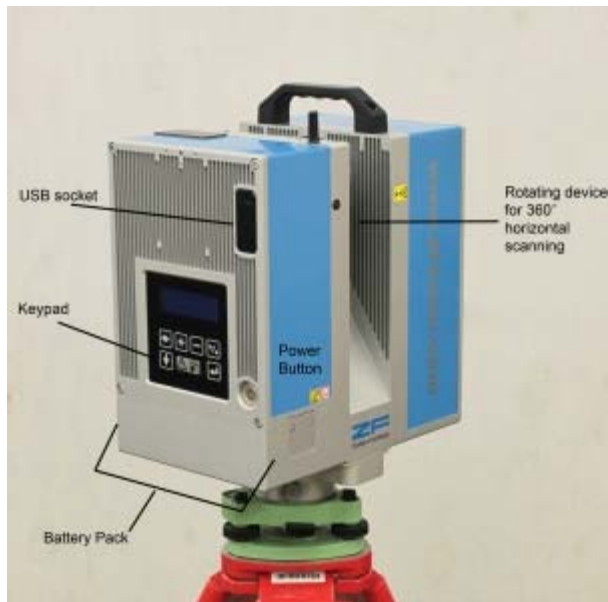
```
]]> http://gmvcast.uark.edu/uncategorized/z-f-laser-scanner-scanning-your-target-2/feed/ 0  
http://gmvcast.uark.edu/scanning/zf-scanning-workflow-2/ http://gmvcast.uark.edu/scanning/zf-scanning-  
workflow-2/#comments Fri, 01 Jul 2011 20:19:37 +0000 snowball 5 meters]]>  
http://gmvcast.uark.edu/3576/zf-scanning-workflow/
```

This workflow will show you how to setup the Z+F Laser Scanner prior to beginning your scan.

*Hint: You can click on any image to see a larger version.*

## INSTRUMENT'S COMPONENTS

### Instrument's Components



## PRE-SCANNING CHECK

### Pre-scanning Check

1. Do not scan in rain, snow or fog
2. Protect scanner from excess moisture and rain
3. If temperatures are outside the calibrated range, an error message will display. Measuring

accuracy cannot be specified if scanning proceeds

4. If the scanner is taken from a cold environment into a warm, humid one, the glass window and even the optic can fog up causing measurement error as does dust, and fingerprints

## Z+F SCANNER SETUP

### Z+F Scanner Setup

1. Set up tripod as stable and level as possible

\*Never use the scanner without the tripod

2. Remove instrument from case with **both** hands, grasping the top with one hand on the handle and reaching under the base with the other in the space provided. Refrain from using the tribrach (base mount) to lift with as it can turn unexpectedly

3. Place instrument on tripod and secure

Always keep one hand on the handle until the scanner is firmly attached to the tripod

4. Level using the leveling screws and built-in bubble level (you will also check the level under the Tilt menu on the instrument once it is on)

5. Power Supplies: A) Li-Ion Battery Pack B) KNL-24 when working near a electric outlet

6. Check to verify that the lens is perfectly clean

## M-CAM SETUP

### M-Cam Setup

1. Mount the M-Cam to the top of the scanner, upright on the same side of the scanner as the keypad and display

2. Align the two adjustment pins on the scanner with the corresponding holes in the camera mount base and fasten to the screw thread in between the pins

3. Remove the port cover that reads "Press"

4. Connect the two USB cables from the M-Cam to the USB ports. There is no particular order

5. Connect the Lemo-Plug to the right hand 7 pin connector port (it is marked with an "M")

6. Remove the lens cover

7. Place the gray card on the magnetic on the corresponding magnetic plate on the scanner below the lens. The red dot should be nearest to the edge in the view of the camera

8. After each scan, the M-Cam will collect three sets/rotations of pictures in the vertical direction starting with the lowest rotation first.

## CONTINUE TO...

Continue to part 2 in the series, [Z+F Laser Scanner: Starting Your Scan](#).

]]> <http://gmv.cast.uark.edu/scanning/zf-scanning-workflow-2/feed/> 0