

Aligning top and bottom scans

CAD-022 / REV A / 2026.09.01

Register separate orientations using geometry or targets that remain fixed relative to the object.

STATUS	Recovered/Partial
CLASSIFICATION	CAD
MATERIAL	CAD / AUTOMATION
DISPOSITION	PUBLIC / RECOVERED/PARTIAL
CATEGORY	CAD / Scanning / Automation
RECORD TYPE	how-to

GOAL

Run the first test described in this guide and record the result for aligning top and bottom scans.

SOURCE STATE

New reference guidance; not a recovered test result

EQUIPMENT

- Scanner / mesh workflow
- Representative test model
- Measurement or inspection method

METHOD / STEPS

1. Choose a broad overlap band visible in both orientations. Add an asymmetric reference fixed to the object if its shape is too repetitive.
2. Capture the first side, then turn the object without changing the reference-to-object relationship.
3. Capture the second side and identify several well-separated non-collinear corresponding features for coarse alignment.
4. Refine alignment over trustworthy overlapping surfaces, inspect a section and check an independent dimension before merging.

THINGS TO WATCH FOR

Markers stuck only to the table move relative to the object when it flips. Symmetric shapes can align incorrectly while showing a deceptively low local error. Do not smooth away a double surface.

FIRST TEST / WHAT TO RECORD

There is no duplicated skin or step at the seam, and independent measurements agree.

RESULT / WHERE THIS STANDS

There is no duplicated skin or step at the seam, and independent measurements agree.

TROUBLESHOOTING

- Markers stuck only to the table move relative to the object when it flips. Symmetric shapes can align incorrectly while showing a deceptively low local error. Do not smooth away a double surface.

SPECIFICATION

TOOL PATH	Scanner / mesh workflow
DELIVERABLE	HOW-TO
VALIDATION	Representative model / known dimension
STATUS	Recovered/Partial

DEVELOPMENT HISTORY

2026.09.01 / Rev A

Imported as an independent manifest record; public copy keeps uncertainty visible.

2026.10.10 / PROJECT UPDATE

Connected the newer project records: HOW-PIKA-001, CAD-SMOKER-CAP-001. Existing test limitations remain in place.

REFERENCE NOTES

Official rshelp.capturingreality.com reference (<https://rshelp.capturingreality.com/>).

HOW-TO SOURCES

Official rshelp.capturingreality.com reference

<https://rshelp.capturingreality.com/>

RELEASED MATERIAL / SOURCE LINKS

cad-022-public-summary.txt

PUBLIC SUMMARY / RECOVERED NOTES

<https://u225x.com/downloads/manifest-records/cad-022-public-summary.txt>

CONNECTED RECORDS

HOW-PIKA-001

<https://u225x.com/record/HOW-PIKA-001>

CAD-SMOKER-CAP-001

<https://u225x.com/record/CAD-SMOKER-CAP-001>

RETURN TO THE LIVING RECORD

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This PDF preserves the public notes at this revision. Visit the record for updates and attached images.

<https://u225x.com/record/CAD-022>