

# CHECK-A-STEP

## *Multi-Function Stair, Handrail & Guardrail Measurement Tool*

*This device allows multiple measurements in more comfort than previous methods.*



User Manual – Version 5

## 1. Introduction

Check-a-Step is a multi-use, upright inspection tool designed for fast, accurate verification of:

- Stair riser height
- Handrail height
- Guardrail height
- Intermediate baluster/picket spacing
- Minimum tread depths (tread nosing to toe kick)
- Nosing depth
- Stair spandrel
- Electrical outlet box elevation

## 2. Components Overview

### 2.1 Calibration Post

- Fixed 34-inch height
- Forms the main vertical body
- Provides reference for all measurements

### 2.2 Sliding Measuring Arm

- Moves vertically along the calibration post

- Displays 1/8-inch measurement increments over a 13-inch region
- Used for riser height, handrail, and guardrail measurements

## 2.3 Upper & Lower Guide Brackets

- Maintain sliding arm orientation with calibration post.

## 2.4 Adjustable Tread Foot

- Allows differential measurement between the bottom of the calibration post and the bottom of the sliding arm on different surfaces.
- Width  $\approx 3 \frac{1}{4}$  inches+thickness of calibration post equals 4" which acts as a 4" guardrail spacing gauge.

## 2.5 Handle + Locking Screw

- Located at the top
- Used to secure the sliding arm at multiple measurement positions
- Handle depth  $\approx 4 \frac{3}{8}$  inches (also functions as  $4 \frac{3}{8}$ " handrail spacing gauge)

## 2.6 Electrical Box Checker Bracket

- Adjustable at 14 inches above the bottom of the calibration post attached to the sliding arm.
- Lateral projection engages interior lower edge of an electrical outlet box

# 3. Calibration Procedures

## 3.1 Calibrating the Adjustable Tread Foot

1. Move the sliding measuring arm to an **even number** on the measurement markings.
2. Measure from the **bottom of the calibration post** to the **bottom of the adjustable foot**.
3. Adjust the foot until this dimension matches the number set on the sliding arm.
4. Tighten the foot to secure the position.
5. Check the sliding action once more to confirm accuracy.

## **3.2 Calibrating the Electrical Box Checker**

1. Confirm that the electrical tab is **14 inches above the bottom of the calibration post.**

## 4. How to Use Check-a-Step

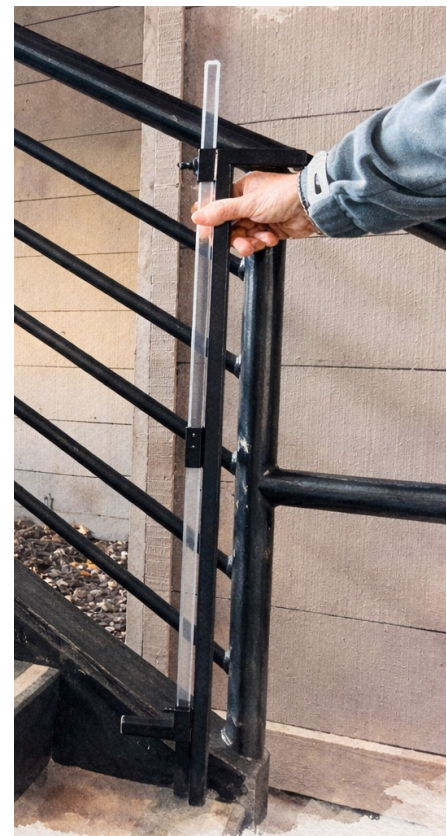
### 4.1 Measuring Stair Riser Height

1. Stand upright at the stair. Hold the check-a-step **just under the handle** with one hand.
2. Place the **Adjustable Foot** on the nosing of the **upper** tread/riser to be compared.
3. Let the **Calibration Post** descend to touch the **lower** tread/landing.
4. Lightly squeeze your finger to hold the **sliding measurement arm**, or tighten the **lock screw** for repeat checks.
5. Read the measurement markings. Mark on the sliding arm's side if needed (dry-erase).
6. Move to the next step and repeat to compare uniformity across the flight.



### 4.2 Measuring Handrail Height

1. Stand the tool vertically on the stair tread directly beneath the handrail.
2. Raise the sliding measuring arm upward until its reference point (4") aligns with **the top of the handle on the calibration post**.
3. The **top of the handrail** should fall **between the top of the sliding arm and the handle**, corresponding to typical 34–38 inch handrail height requirements.
4. Tighten lock screw to secure the sliding arm if desired.





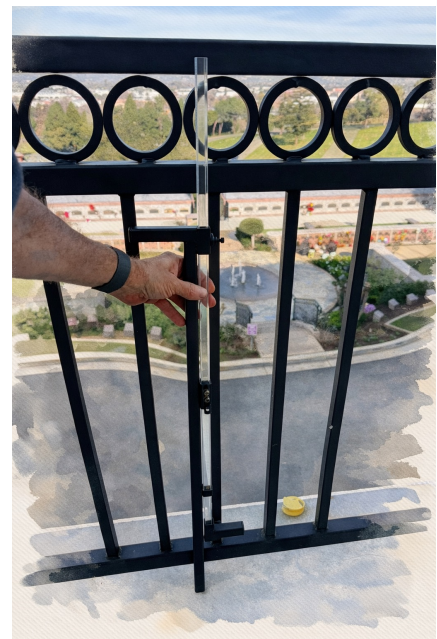
### 4.3 Checking Handrail Intermediate Spacing

1. Insert the **handle and calibration post horizontally** between two balusters/pickets.
2. The **handle's 4 $\frac{3}{8}$ -inch depth** represents the maximum allowable handrail baluster spacing.
3. If the handle fits through the gap → spacing exceeds code allowance.
4. If it does not fit → spacing is compliant.



### 4.4 Measuring Guardrail Height

1. Stand the tool vertically on the walking surface (deck, balcony, landing).
2. Raise the sliding measuring arm upward until its reference point (8") aligns with **the top of the handle on the calibration post**. – This corresponds to **42 inches**, the typical minimum guardrail height.
3. Tighten the lock screw to secure the sliding measurement arm.



## 4.5 Checking Guardrail Intermediate Spacing

1. Insert the **adjustable tread foot** and calibration post horizontally between two balusters.
2. The foot's **4-inch width** equals the maximum code-permitted gap.
3. If the foot passes through → spacing fails.
4. If it does not pass → spacing meets code.



## 4.6 Measuring Electrical Outlet Box Height

1. Insert the **electrical tab** into the lower interior edge of the electrical box.
2. Lower the calibration post until the adjustable foot or base contacts the **floor or subfloor plane**.
3. Read the measurement from the scale.
4. Apply corrections for **finish floor thickness** if required (e.g., to confirm 15-inch AFF minimums).



## 4.7 Measuring Stair Tread Minimum Depth

1. The tool is held horizontally with measurement markings located on the sliding measuring arm, facing upward with the adjustable foot resting against the nosing of the stair tread.
2. The calibration post is advanced until it contacts the toe kick of the above riser or stops moving, if it doesn't reach the toe kick, it meets the minimum tread depth measurement.



## 4.8 Measuring Nosing Maximum Depth

1. The tool is held horizontally with measurement markings located on the sliding measuring arm, facing downward with the calibration post resting against the nosing of the stair tread.
2. The adjustable sliding arm is pushed until it makes contact with the toe kick of the below riser.
3. Read the measurement from the scale. CHECK-A-STEP



## **4.9 Measuring Stair Spandrel (space between stair tread, toe kick and bottom of handrail)**

1. Raise the sliding measuring arm upward until its reference point (5 1/8") aligns with **the top of the handle on the calibration post.** – this sets the top of the adjustable foot and the bottom of the calibration post to equal 5 7/8".
2. Slide the adjustable foot under the handrail and the right angle of the toe kick and tread, if it fits it could exceed the 6" maximum measurement for this location.

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## **5. Safety & Operating Notes**

- Always ensure the sliding arm is free of debris for smooth operation.
- Avoid over-tightening the lock screw; secure but do not crush the acrylic.
- Use two hands when lowering the calibration post on steep stairs.
- Do not use the device as a lever or pry bar.
- When used around energized electrical boxes, follow OSHA and NEC safe-work practices.

## **6. Maintenance**

### **6.1 Cleaning**

- Wipe rods and guides with a microfiber cloth.
- Avoid solvents that may cloud acrylic components.

### **6.2 Storage**

- Store upright or in a padded tool bag.

- Protect from prolonged UV exposure to preserve accuracy of measurement markings.

Disclaimer

Verify required dimensions with the local AHJ.

**Invented and hand-crafted in the USA by a veteran and professional building inspector.**

As with all handmade tools, slight variations may occur.

Always check calibration before use to ensure accurate measurements.

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