

Revopoint POP3-ADVANCED

Revopoint POP 3 3D Scanner User Manual

Model: POP3-ADVANCED | Brand: Revopoint

1. INTRODUCTION

This manual provides comprehensive instructions for the setup, operation, maintenance, and troubleshooting of your Revopoint POP 3 3D Scanner. The POP 3 is a high-precision 3D scanner designed for 3D printing, offering handheld scanning with 0.05mm precision and 18FPS speed. It supports full-color 3D model scanning across Android, iOS, Windows, and MacOS, making it a versatile tool for various applications.



Figure 1: Revopoint POP 3 3D Scanner in various configurations, including handheld and tripod setups, alongside a dual-axis turntable and a pineapple for scale.

2. SETUP GUIDE

2.1 Unboxing and Component Overview

Upon unboxing, verify all components are present. The POP 3 Advanced Edition typically includes the POP 3 3D Scanner, Tripod, Phone Holder, USB Type-C Cable, 2-in-1 Mobile Cable, Type-C Adapter, Mini Turntable, Marker Topper, Turntable USB Cable, Dual-axis Turntable, Reusable Sticky Pad, Dual-axis Turntable Charger, Power Bank, Calibration Board, Carrying Case, and a Sample Bust.

Powerful Mobile Scanning

Eliminate the need to manually measure objects by consistently and efficiently capturing accurate and detailed 3D models at fast scanning speeds between 12 to 18fps.



Figure 2: Detailed view of all components included in the Revopoint POP 3 Advanced Edition kit.

2.2 Connecting the Dual-axis Turntable

The dual-axis turntable simplifies scanning by allowing automated rotation and tilt. Connect the turntable to its power source using the provided charger. Ensure the turntable is stable on a flat surface before placing objects for scanning. The turntable can be controlled via the Revo Scan software.

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Video 1: This video demonstrates the unboxing process and initial setup of the Revopoint POP 3 3D Scanner, including connecting the dual-axis turntable and preparing it for use. (Source: POP3 First Use Guide by Revopoint 3D)

2.3 Connecting the Scanner to Your Device

The POP 3 offers versatile connectivity options. For PC (Windows/macOS) connection, use the USB Type-C cable. For mobile devices (Android/iOS), utilize the 2-in-1 Mobile Cable and Phone Holder. Ensure a secure connection for stable data transfer.

Advanced Connectivity



Figure 3: The Revopoint POP 3 3D Scanner connected to both a laptop and a smartphone, demonstrating its advanced connectivity options.

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Video 2: This video illustrates how to connect the Revopoint POP 3 3D Scanner to both PC and mobile devices (Android/iOS), including the use of the Type-C adapter for macOS. (Source: POP3 First Use Guide by Revopoint 3D)

3. OPERATING INSTRUCTIONS

3.1 Scanning Basics: Precision and Speed

The POP 3 scanner offers superior precision with a single-frame accuracy of up to 0.05mm and a point distance of 0.05mm. Its rapid scanning speed of 12 to 18 frames per second (FPS) allows for quick and accurate capture of intricate details, streamlining your 3D modeling workflow.



Highly Detailed Scans

Single-frame precision up to 0.05mm.

24.5cm
9.64 inches



14cm/5.51 inches



Figure 4: An example of a highly detailed 3D scan, showcasing the 0.05mm single-frame precision of the POP 3 scanner on an ornate statue.

3.2 Scanning Hard-to-Scan Objects

Certain objects, such as those with simple geometric features, black, transparent, or reflective surfaces, may require special preparation for optimal scanning results.

3.2.1 Featureless Objects

For objects with simple geometric features (e.g., balls, cups), apply markers in an irregular pattern across their surface. Ensure at least five markers are visible in one frame, with a distance of 2 to 4 cm between them. Use Marker Tracking mode in the Revo Scan software.

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Video 3: This video provides instructions on how to effectively scan featureless objects using the Revopoint POP 3 3D Scanner, including the application of markers. (Source: How to Scan Featureless Objects by Revopoint 3D)

3.2.2 Black, Transparent, or Reflective Objects

Objects that are black, transparent (like glass), or highly reflective (like polished metal) can be challenging to scan. It is

recommended to treat these surfaces with a scanning spray to create a matte, non-reflective coating. If the object also lacks features, apply markers after spraying. Then, scan using Marker Tracking mode.

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Video 4: This video explains which objects a 3D scanner can and cannot easily capture, providing insights into the limitations and necessary preparations for challenging materials like transparent or reflective surfaces. (Source: Objects 3D Scanner Can and Cannot Capture by Revopoint 3D)

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Video 5: This video demonstrates how to 3D scan a phone case using 3D scanning spray, illustrating the technique for preparing reflective objects. (Source: How to 3D Scan a Phone Case with 3D Scanning Spray by Revopoint 3D)

3.3 Dealing with Tracking Loss

Tracking loss can occur if the scanner is moved too fast, or if its position relative to the object changes too much during the scan. If tracking is lost, move the scanner to a previously scanned area and wait several seconds for it to regain tracking. Once re-established, hold the scanner steady and continue scanning at a constant speed. For objects with sharp contrasting color differences, pause the scan and adjust the Depth Camera's exposure until surfaces are clearly detected.

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Video 6: This video explains common reasons for tracking loss during 3D scanning and provides solutions, such as adjusting scanner movement and exposure settings. (Source: How to Deal With Loss of Tracking by Revopoint 3D)

3.4 Lifelike Color Scans

The POP 3 features an enhanced RGB camera with a 30% larger aperture, allowing more light to reach the sensor. Dual white LEDs illuminate objects and remove shadows, enabling the capture of more vivid and realistic full-color 3D scans.

Lifelike Color Scans

Create photorealistic 3D models with POP 3's improved RGB camera and extra LED lighting.



Figure 5: A basket of fruit being scanned by the Revopoint POP 3 3D Scanner, demonstrating its ability to capture lifelike color in 3D models.

3.5 Stabilized Scanning

The POP 3 incorporates an IMU (Inertial Measurement Unit) and smart algorithms to ensure seamless frame stitching and stable tracking. This technology helps maintain scan quality even during handheld operation.

Stabilized Scanning

Get better frame stitching and tracking thanks to POP 3's 9-axis IMU and smart algorithms.

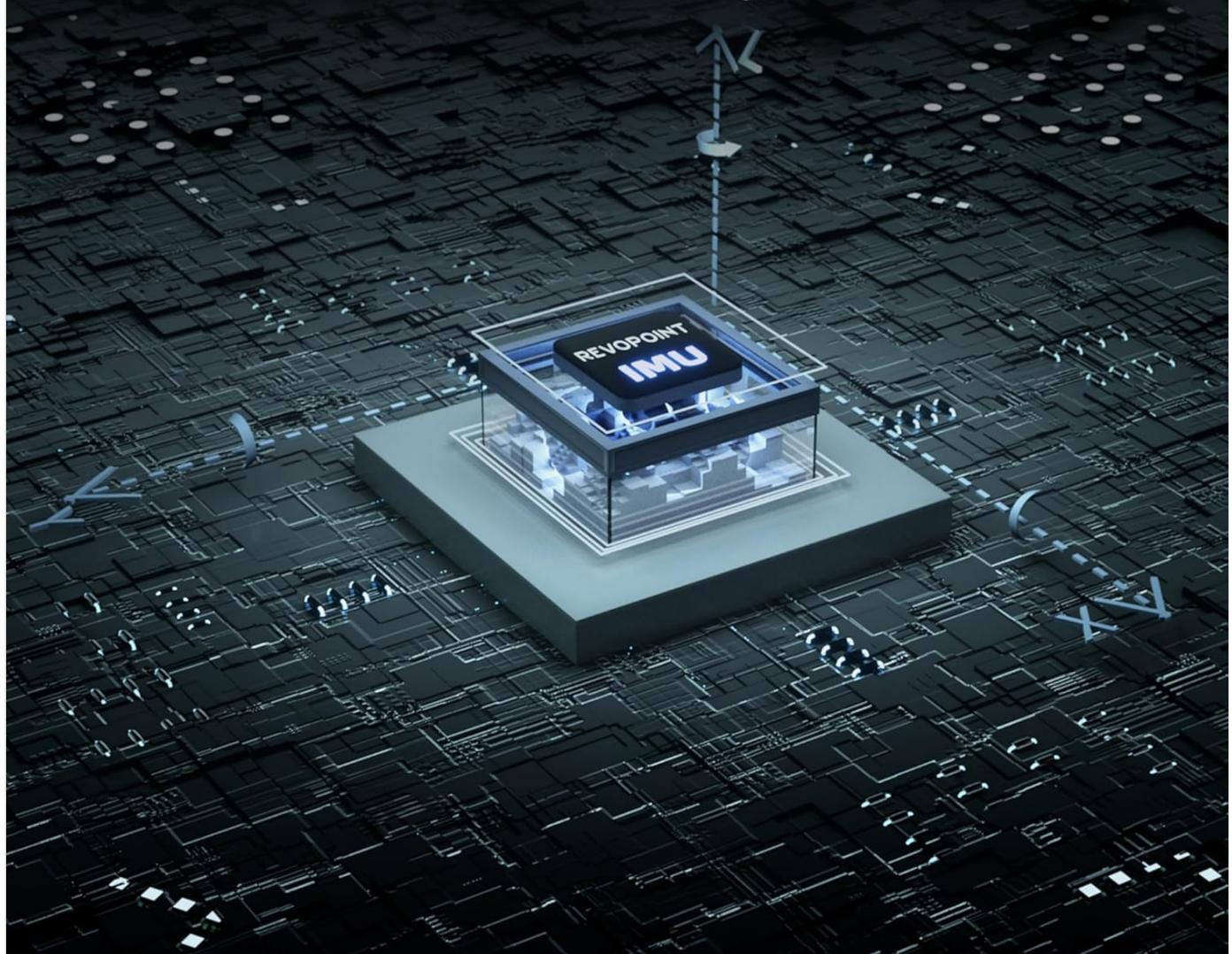


Figure 6: A visual representation of the POP 3's 9-axis IMU and smart algorithms, which contribute to stabilized scanning and improved frame stitching.

3.6 Revo Scan 5 Software

Revo Scan 5 is the intuitive software for 3D scanning and powerful editing. It supports iOS, Android, Windows, and macOS devices. Key features include one-click post-processing, model scanning, and multi-model alignment. Output models can be exported in PLY, OBJ, STL, ASC, 3MF, GLTF, and FBX formats for compatibility with 3D printers and other software.



Capture Highly Detailed Scans

Single-frame Precision: Up to 0.05 mm
Single-frame Accuracy: Up to 0.1 mm



1 Megapixel RGB Camera

Create vibrant, lifelike, full-color 3D scans with POP 3's powerful camera and Flash LEDs, evenly lighting objects.



Figure 7: The Revo Scan 5 software interface displayed on both a laptop and a smartphone, highlighting its cross-platform compatibility and user-friendly design.

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Video 7: This video demonstrates the setup and usage of the Revo Scan 5 software on both PC and phone, including connecting the scanner, adjusting settings, and initiating a scan. (Source: POP3 First Use Guide by Revopoint 3D)

4. MAINTENANCE

To ensure the longevity and optimal performance of your Revopoint POP 3 3D Scanner, regular maintenance is recommended:

- Cleaning:** Gently wipe the scanner's lenses and body with a soft, lint-free cloth. Avoid abrasive materials or harsh chemicals that could scratch the surfaces.
- Storage:** Store the scanner in its protective carrying case when not in use to prevent dust accumulation and physical damage. Keep it in a cool, dry place away from direct sunlight and extreme temperatures.
- Software Updates:** Regularly check the official Revopoint website for the latest Revo Scan software updates. Keeping your software up-to-date ensures access to new features, performance improvements, and bug fixes.

5. TROUBLESHOOTING

This section addresses common issues you might encounter with your POP 3 scanner.

- Tracking Loss:** If the scanner loses tracking during operation, refer to [Section 3.3: Dealing with Tracking Loss](#) for detailed solutions, including repositioning the scanner and adjusting exposure.
- Poor Scan Quality on Challenging Objects:** For black, transparent, or reflective objects, ensure proper surface preparation using scanning spray and markers as described in [Section 3.2.2: Black, Transparent, or Reflective Objects](#).
- Software Connection Issues:** If the scanner does not connect to Revo Scan, verify that all cables are securely connected and that the correct drivers are installed. Restarting both the scanner and the software can often resolve minor connection glitches.
- Software Performance:** For slow performance or crashes, ensure your computer meets the minimum system requirements (refer to [Section 6: Specifications](#)). Close other demanding applications and update your graphics drivers.

6. SPECIFICATIONS

Feature	Detail
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Product Dimensions	1.14 x 1.77 x 6.02 inches; 6.7 ounces
Item Model Number	POP3-ADVANCED
Manufacturer	Revopoint
Date First Available	June 9, 2023
Precision	0.05mm (single-frame)
Scanning Speed	12 to 18 FPS
Connectivity	Type-C USB, Wi-Fi 6
Compatibility	Windows, macOS, Android, iOS
Output File Formats	PLY, OBJ, STL, ASC, 3MF, GLTF, FBX

6.1 PC Requirements

Operating System	RAM	CPU (or better)
macOS	≥8 GB	M1 Pro/Max/Ultra, M2 Pro/Max/Ultra, M3 Pro/Max
Windows	≥16 GB	i5 12th/13th/14th, i7 12th/13th/14th, i9 all series

7. WARRANTY AND SUPPORT

Revopoint offers a **two-year warranty** for the POP 3D Scanner, ensuring a worry-free purchase. For any professional consultation or assistance, **24/7 customer support** is available. Please refer to the official Revopoint website or your purchase documentation for contact details and further warranty information.