REALITY SYSTEMS, LLC

SlamScanner.com

SLAM Scanning: Operation Options

There are multiple ways to operate the SLAM scanners depending on project needs, desired feedback, and system configuration. Workflows range from simple button-based operation to more advanced setups involving mobile devices, GNSS corrections, and panoramic imagery.

Mobile App Usage +/- (Simplest → More Advanced)

- The simplest and fastest workflow is to operate the scanner without a mobile device using onboard buttons
- Adding the mobile app introduces real-time status, trajectory tracking, and live point cloud visualization
- Use the mobile app when visibility and control are important; skip it for maximum simplicity and speed

GNSS / RTK Corrections (Accuracy vs. Complexity)

- Requires the mobile app for setup and management of correction services
- Adds field setup time and post-processing considerations
- Enables georeferenced datasets with higher absolute accuracy
- Best suited for workflows where coordinate alignment and survey-grade positioning are required

Pano Camera Integration (Enhanced Output vs. Additional Effort)

- Operates independently of scanner and mobile app workflows
- Can be used with or without GNSS and mobile operation
- Adds additional steps in both field collection and office processing
- Produces richer, more immersive deliverables (e.g., image-linked or 3DGS-style outputs)

Operational Modes (Increasing Complexity)

1. Basic Operation (No Mobile Device)

- Start/stop scanning using onboard buttons
- System status conveyed via **audio tones and indicator lights**
- No real-time visualization of trajectory or point cloud
- Simplest and fastest deployment method

2. Basic + Mobile App

- Start/stop scanning via mobile device
- Real-time visibility into:
    - Scanner status (ready, scanning, processing, complete)
    - Walking trajectory
    - Live point cloud generation
- Improved situational awareness during capture

3. RTK / GNSS-Enabled Operation

- Mobile app required
- Enables connection to RTK correction services (e.g., NTRIP)
- Supports georeferenced workflows
- Control points can be captured via:
    - Scanner hardware button
    - Mobile app interface
- Adds setup complexity but improves absolute accuracy

4. Pano Camera Integration (Optional Add-On)

- Operates independently of scanner and mobile app
- Compatible with:
    - Basic operation
    - Mobile workflows
    - RTK-enabled workflows
- Mounted via fixed-position mechanical adapter

Summary

- **Simplest:** Button-only scanning (no mobile)
- **Most common:** Mobile app for visibility and control
- **Most precise:** RTK-enabled workflows (mobile required)
- **Most immersive:** Add pano camera (independent of other options)