



## Improve accuracy with Ground Control Targets



**\*NEW IN 2022! PHOTOGRAMMETRY TARGET DECAL**  
**\*USED FOR COMBINED DRONE LIDAR AND**  
**PHOTOGRAMMETRY SURVEYS**

**At Routescene we advocate that every UAV LiDAR survey has ground control established to:**

- ✓ Achieve robust and quantifiable results
- ✓ Calibrate the equipment on every project
- ✓ Demonstrate that the specified level of accuracy is achieved
- ✓ Simplify post-processing and data alignment issues
- ✓ Ensure the best possible accuracy is accomplished

Targets on top of Ground Control Points (GCPs), will enable ground control to be verified. This goes along with a robust survey and data processing methodology.

Improve the quality of  
and your confidence in  
your survey data

### Quality Assurance for every survey

For excellent UAV LiDAR results you need to undertake Quality Assurance and Routescene provide this as standard. Deploying Ground Control Targets on known and accurately coordinated GCPs prior to a UAV LiDAR survey provides the assurance that the survey has been properly executed.

Routescene's Ground Control Targets are large discs to be positioned within your survey area. Placed on known geographical points the coordinate of each Ground Control Target is established using an accurate and independent survey technique. The number of Ground Control Targets to be deployed depends on the size of the survey area: for a 500 x 500m area we recommend 4-8 targets are used for the boresight calibration and as check points. Typically each Target will be hit 200-300 times by the lasers from the UAV LiDAR system and can easily be seen in the resulting geo-referenced point cloud. The point cloud can be consumed in Routescene's post-processing software, LidarViewer Pro, which automatically generates Quality Assurance Reports.

## Targets specifically designed for UAV LiDAR

- Covered with highly retro-reflective material to provide high-intensity returns which are easily identifiable in the resultant point cloud
- Target raised from the ground using a tripod to enable easy identification and allows the returns to be automatically extracted from the point cloud
- Bubble level built in to enable accurate levelling, removes the need for a tribrach
- Robust and wind resistant to stay in position, reduces the time to inspect and reposition targets during the survey
- More likely to remain in place in windy conditions, minimizing the risk of having to reposition during a survey



*Routescene Ground Control Targets are easy to deploy  
(Sand Canyon survey – 2018)*

## Committed to Quality Assurance

Routescene has a strong ethos of Quality Assurance. We are the only manufacturer offering Ground Control Targets specifically designed for UAV LiDAR mapping. Investing in Ground Control Targets for UAV LiDAR surveys increases the value of your data. Taking that extra time and effort to install Targets and to generate Quality Assurance Reports will improve the quality and your confidence in the resultant data.

## Ground Control Target specification

- 60cm diameter Target
- Topped with M3 retro-reflective material provides high intensity return in the point cloud
- Circular black and white checkered target to geo-reference aerial imagery
- Bubble level built in for accurate levelling
- Brass disc with 5/8" threaded hole for fitting onto a standard survey tripod
- Protective rubber rim for easy handling
- Weight: 2.7kg per Target (excluding the tripod)



## Mini tripod specification

- 1 x mini tripod per Target
- Quick locking, ergonomically designed excentric clamping levers for easy handling, even when wearing gloves in cold conditions
- High quality aluminium tubes and profiles. Anodized aluminium, weather-proof for toughest use
- Tripod head made from polymer-fiberglass composite and features integrated circular vial for quick set up
- Solid tips
- Working range: 38–59cm
- Transport length: 47cm
- Weight: 1.8kg



## What's included

- 4 x Ground Control Targets
- 1 x Tough carry bag for Targets
- 4 x Mini tripod
- Procedures on how to deploy and create QA Reports

## Purchase your Ground Control Targets today

Contact us at [sales@routescene.com](mailto:sales@routescene.com)



## About Routescene

At Routescene we design, develop and manufacture integrated 3D mapping solutions specifically for use on drones (Unmanned Aerial Vehicles or UAVs). Designed by surveyors, we build survey-grade end-to-end systems to solve specific industry problems, save time, improve efficiencies and productivity. Our integrated system comprises workflow methodologies, LidarViewer Pro software including specific data processing tools, hardware and firmware including the LidarPod. Based on many years of survey experience and customer feedback we have developed Ground Control Targets for UAV LiDAR surveys.

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