

User Manual

(of Spike iOS version 1.14.6 and Android version 1.7.2)



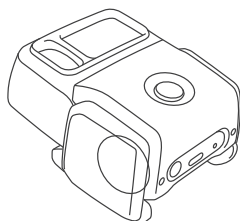
This User Manual will guide you through the steps to set up your Spike and take measurements.

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|----------|----------------------------|----------|-------------------------------------|
| 1 | Mounting Your Spike | 5 | Taking a Point-to-Point Measurement |
| 2 | Installing the Spike App | 6 | Using the Spike Cloud |
| 3 | Starting Up | 7 | Exporting & Sharing |
| 4 | Taking a Photo Measurement | 8 | Spike Icon Guide |

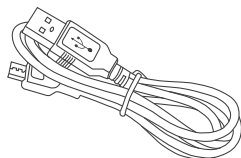


What's in the Box

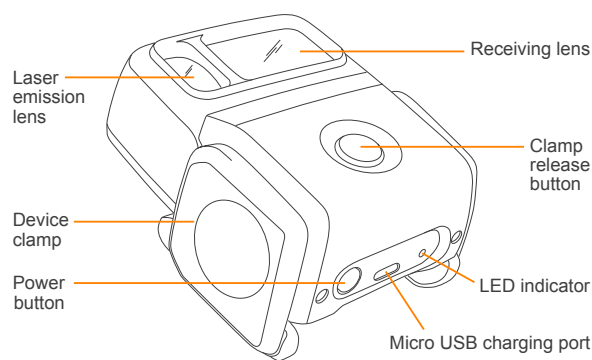
Spike for Smartphones



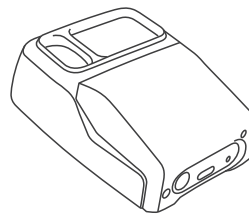
Spike unit



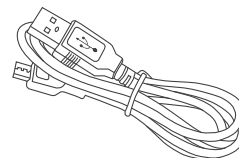
USB cable



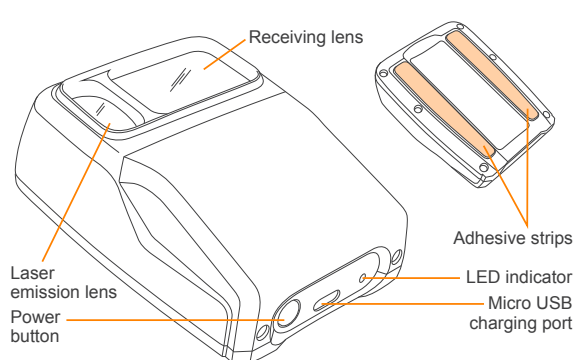
Spike for Tablets



Spike unit



USB cable



WARNING This device contains an eye safe class 1 laser product. Invisible laser radiation is emitted from (and received into) the front apertures. Avoid staring into the laser beam. This product complies with IEC60825-1 Ed 2.0 and 21CFR1040.10 except for deviations pursuant to Laser Notice No.50, dated July 26 2001.



WARNING This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm during normal operation.



CAUTION Use of controls or adjustments, or performance of procedures other than those specified herein may result in hazardous radiation exposure.

For Technical Support

Visit the Spike Support Center for FAQs, video tutorials, resources, and to contact technical support: www.ikegps.com/support

Contact Technical Support:

support@ikegps.com

toll-free: +1 844 445 3477 ext 3

1

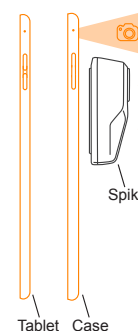
Mounting Your Spike: Tablets (or first generation Spike)

IMPORTANT TO NOTE...

- Mount your Spike to a smartphone or tablet case. You may wish to use two cases - one with Spike attached to it and the other for general day-to-day use.
- We recommend attaching your Spike to a hard case with a flat back. It will not attach securely to a soft or curved back design. Silicon cases should be avoided.
- Optimal surfaces to attach Spike to are metal and hard plastic surfaces.

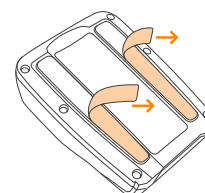
1 Find the best location for your Spike on the back of your smartphone or tablet case.

- Place Spike close to the camera, but ensure that Spike **does not obstruct the view from your camera or flash**.
- To verify, start your camera app and hold your Spike against the back of your smartphone or tablet to validate correct placement.
- For tablets, Spike may be orientated in a position that is most comfortable when holding your tablet in landscape.



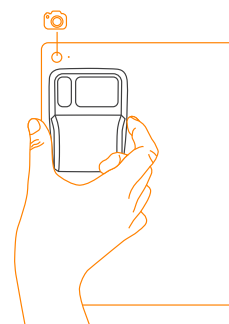
2 On the back of your Spike, peel off the protective backing to expose the adhesive tape.

- Peel a corner of the backing strip using your finger or a small knife.
- The adhesive tape adheres best at room temperature.



3 Make sure the selected position on your case is clean, then position Spike onto your case. Press down firmly for approximately 60 seconds

Ultimate bond strength is dependent upon the amount of adhesive-to-surface contact developed. Be sure to press firmly to develop this bond strength.

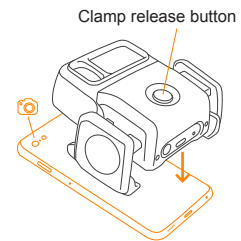


Mounting Your Spike: Smartphones

IMPORTANT TO NOTE...

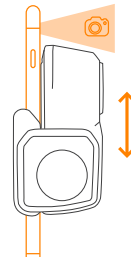
With the smartphone clamp, you can attach your Spike to a smartphone with or without a case on it.

- 1 **Press on the clamp release button. The clamps will fully extend.**

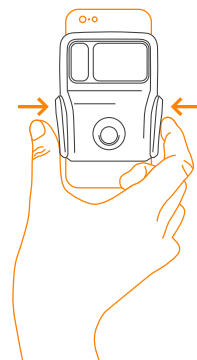


- 2 **Find the best location for your Spike on the back of your smartphone.**

- Place Spike close to the camera, but ensure that Spike **does not obstruct the view from your camera or flash.**
- To verify, start your camera app and hold your Spike against the back of your smartphone to validate correct placement.



- 3 **Once you have found the best location for your Spike, use your fingers to squeeze the clamps until they lock tightly around the edges of your smartphone.**



2

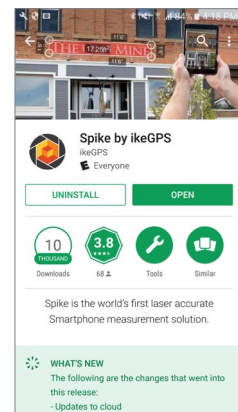
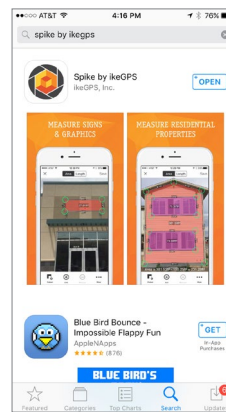
Installing the Spike App

The Spike app is available for download from the App Store or Google Play.

- 1 On your smartphone or tablet, launch the App Store or Google Play.



- 2 Within the search box, search for **Spike by ikeGPS**.
- 3 Follow the instructions to download and install the app on your smartphone or tablet.



- 4 Once installed, the Spike app icon will appear.








- 5 Create your Spike Cloud account. Spike Mobile App: Go into the Settings, scroll to the Cloud section, and then sign up for an account.
- 6 Once you have signed up for a Spike account, you can log in at any time by visiting www.ikegps.com and clicking on the **Customer Login** button.

3

Starting Up

IMPORTANT TO NOTE...

The LED indicator shows the status of your Spike:

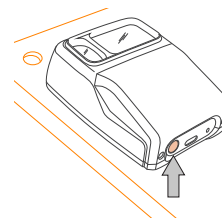
-  Blue flashing: Spike discoverable over Bluetooth
-  Blue on: Spike connected to Smartphone
-  Green flashing: Spike charging
-  Green on: Spike fully charged
-  Off: Power off

1 Turn on Bluetooth on your smartphone or tablet.

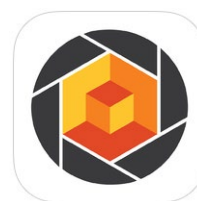


2 On your Spike, press the Power button.

- The LED indicator flashes blue indicating that the Spike is discoverable over Bluetooth.
- If the LED indicator remains off, Spike may need charging.



3 On your smartphone, tap on the Spike app to launch it.



4 Tap on **Tap To Connect Device. Then select your Spike unit name to pair it with your smartphone or tablet.**

If no unit name appears, check that the Spike unit's LED indicator is flashing blue (see Step 2).

TIP: After connecting your Spike, go into the Spike app settings and select your preferred units of measurements: feet, inches, meters, or centimeters.



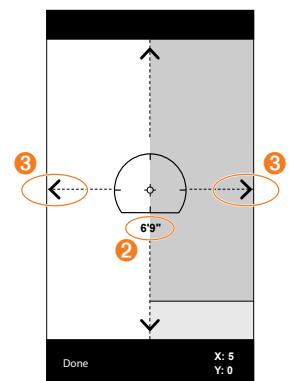
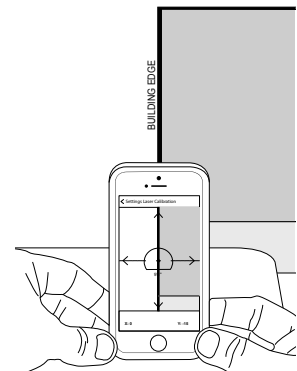
Aligning the Spike Laser to the Camera

IMPORTANT TO NOTE...

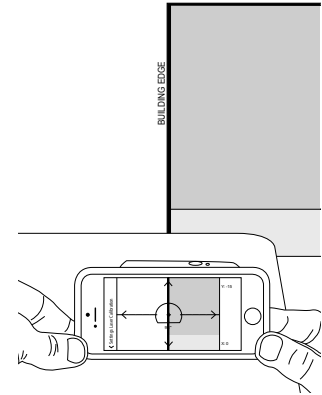
- The laser of your Spike device only needs to be calibrated with the camera of your smartphone or tablet if you intend to use the Point-to-Point Measurement feature (see page 16). Otherwise this step can be skipped.
- If you determine that you would like to use the Point-to-Point Measurement feature, the Spike laser only needs to be calibrated the first time it is used with a new smartphone or tablet. After a smartphone or tablet has been calibrated with Spike, it does not need to be calibrated again. If Spike is removed from the device, ensure that Spike is returned to the same location as when it was calibrated.

TIP: Video tutorials can be found in the Spike Support Center. Visit www.ikegps.com/support

- 1 In the Spike app, go to the Settings, and select **Align Laser**.
- 2 Hold your smartphone vertically and aim it towards two objects that are at different distances, for example the edge of a building or a light pole and the sky. Ensure that the closest object has a vertical edge.
 - The distance between Spike and the closet object should be at least 30 feet (9 meters).
 - In order to position yourself at least 30 feet (9 meters) from an object, it is recommended to complete the calibration outdoors using an object and the sky.
- 3 Slowly move your smartphone sideways ① and check that the distance measurement ② changes when the crosshair in the center of the screen moves on and off the vertical edge.
- 4 If the measurement changes at the point where the crosshair moves on and off the vertical edge, your laser is correctly aligned. If this does not happen at the correct point, tap on the left and right blue arrows ③ to adjust to the correct point.



- 5 Turn your smartphone horizontally and aim at the same two objects. Repeat steps 3 and 4 to align the laser horizontally.



Additional Information

Calibrating Your Compass

Calibrating your compass is only required if you intend to capture the location of your target (latitude, longitude, altitude), and export KMZ files. You need to ensure that your smartphone or tablet's compass is calibrated so your target's location can be accurately captured.

TIP: Calibration instructions and video tutorials can be found in the Spike Support Center. Visit www.ikegps.com/support

Charging Your Spike

Your Spike has an internal battery that requires charging. After setting up your Spike, we recommend charging your Spike for approximately 3 hours.

- 1 Connect the USB cable provided to the micro USB charging port on the bottom of your Spike.
- 2 Connect the other end of the USB cable to any device that can charge USB devices (e.g. computer, wall charger, etc). The LED indicator will flash while charging.
- 3 The LED indicator will turn green when Spike is fully charged. Disconnect the USB cable and store in a safe place.

Turning Your Spike Off

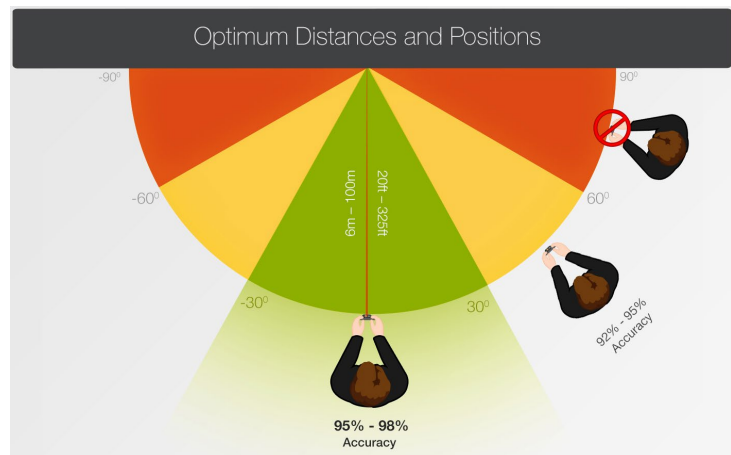
Your Spike will automatically turn off after 1 minute of inactivity. Alternatively, you can turn it off manually by holding down the Power button for 5 seconds until the blue LED indicator turns off.

4

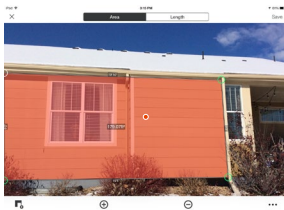
Taking a Photo Measurement

To take an accurate Photo Measurement with your Spike, you need to ensure that:

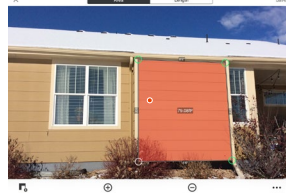
- 1) Your target is a flat surface and is all on the same plane.
- 2) Your target is or has a rectangular shape on it (to align the object).
- 3) Your laser (crosshair on the screen) is pointed at your target. The crosshair should be on a solid surface and not a window.
- 4) You are perpendicular to the target. Photo measurements taken from the optimal position typically see an accuracy of $\pm 1\%$. Please reference the following target distance and positioning guide when taking a Spike photo.



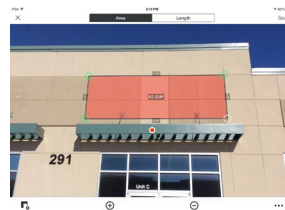
You cannot measure an object or objects that are on different planes. Below are some examples.



✗ The bump out and the side of the house are on different planes, so you cannot measure the wall if the laser was pointed at the bump out.



✓ The bump out is on the same plane that the laser was pointed at (red dot), so measurements will have higher accuracy.



✗ The awning and the wall are not on the same plane, so you cannot measure the wall if the laser was pointed at the awning.



✓ The awning is on the same plane that the laser was pointed at (red dot), so measurements will have higher accuracy.

Taking a Photo of the Object to Measure

SPIKE MOBILE APP

To measure an object, you need to take a photo of it first. Be sure to aim the laser (crosshair on the screen) directly at the object you wish to measure.

- 1 On your smartphone, ensure that the Spike app is open and connected to your Spike.

Refer to Section 2 “Starting Up” for details.

- 2 From the Spike app menu, tap on **New Photo Measurement**.

- 3 Point your smartphone at the object you wish to measure, ensuring that the crosshair is on the target.

- The object you wish to measure must be on the same surface or plane that you are aiming the crosshairs (laser) at.
- Ensure the crosshair is on a solid surface and not on a window or hole.
- Use the zoom slider so you can better view the crosshair location on your target, or when you are positioned at a distance from your target.



- 4 Tap  on the screen to take a picture.



- 5 Tap on the small preview image to display the photo you have just taken.



Aligning to the Object

SPIKE MOBILE APP

Before you can measure an object, you need to set the surface's perspective by outlining a large rectangle on it. This identifies and corrects the horizontal and vertical angle from which the photo was taken. Your target must be or must contain a rectangular shape so that the object can be aligned.

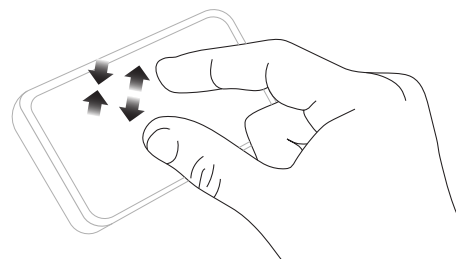
1 When measuring a photo for the first time, you will be in alignment mode by default.

A rectangular shape will appear over your target.



2 Drag the anchors of the rectangle to align them to the extreme corners of the surface you want to measure.

TIPS: Use the zoom window to help you align the anchors precisely to the corners of your object. You may also use your fingers to Pinch & Zoom on the photo to better view the object.



IMPORTANT TO NOTE...

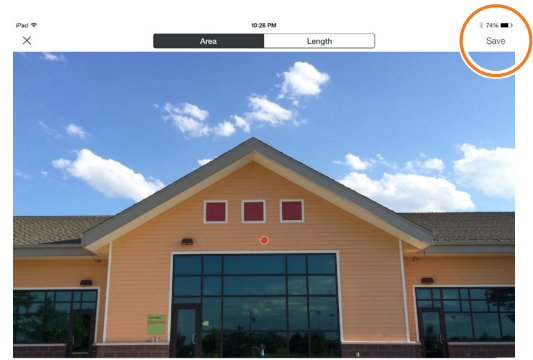
Measurement anchors are the circles that you drag to create the shapes you want to measure, such as a rectangle or line.

Measuring the Area of the Object

SPIKE MOBILE APP

Once you have aligned the perspective of your object, you can measure the area of your object.

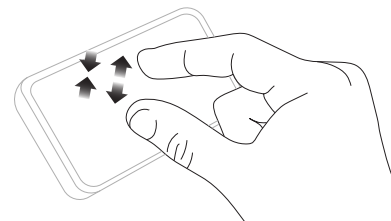
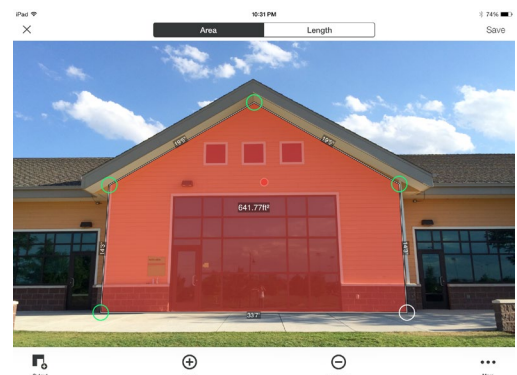
1 After you have drawn the alignment rectangle, tap **Next** to measure an area.



2 Tap and drag to create an area rectangle.

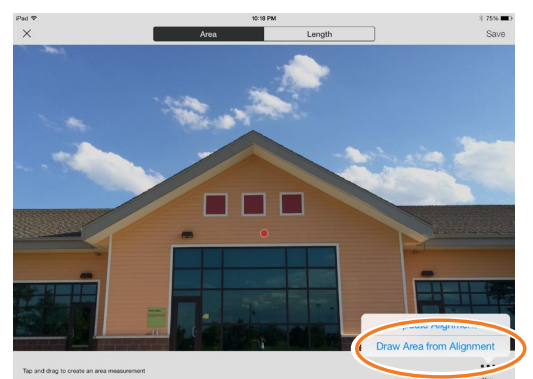
- Use the zoom window to help you align the anchors precisely to the corners of your object.
- You can add more anchors by selecting \oplus and then tapping anywhere on a line. Drag the new anchor to create a polygon.
- To delete anchors, tap on an anchor to select it, then tap on \ominus to delete it.

TIP: You may also use your fingers to Pinch & Zoom on the photo to better view the object.



3 Alternatively, you can select to copy your alignment rectangle as your area rectangle.

To select this option, tap on \dots , and select **Draw Area From Alignment**.

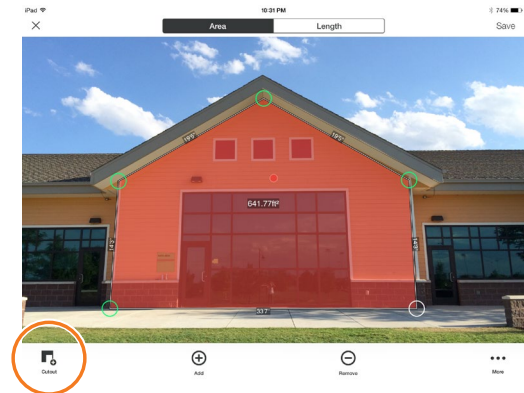


Cutting Out a Section of Your Object



SPIKE MOBILE APP

You can cut out a section of your object that you do not want included in the total measurement of the object area. For example, you may want to measure the surface area of a wall without including the area of windows or doors. Alternatively, the cutout tool can be used to measure additional areas on your object.

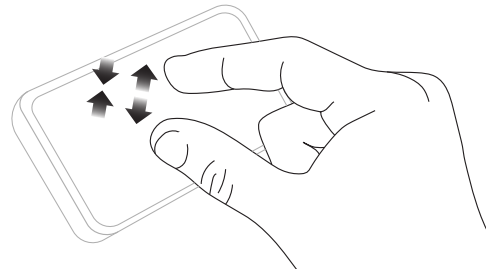
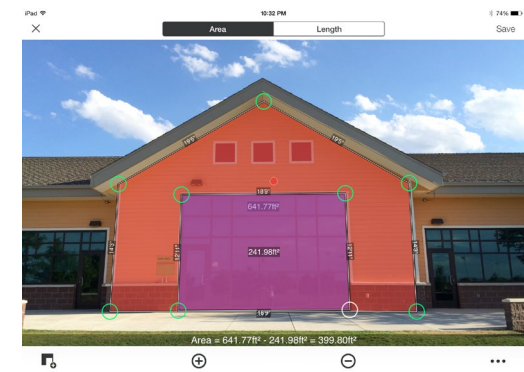
- 1 Tap on  and then tap and drag to create a cutout rectangle.



- 2 Drag the anchors of the rectangular shape to align them to the section of the object you want to cut out.

- Use the zoom window to help you align the anchors precisely to the corners of the cutout object.
- You can add more anchors by selecting  and then tapping anywhere on a line. Drag the new anchor to create a polygon.
- To delete anchors, tap on an anchor to select it, then tap on  to delete it.
- The screen will display the new area measurement excluding the cutout section.

TIP: You may also use your fingers to Pinch & Zoom on the photo to better view the object.



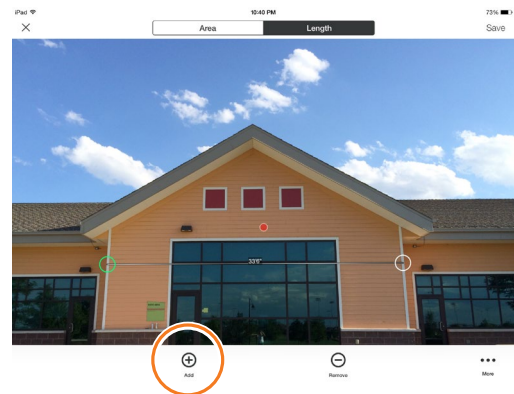
Measuring a Length SPIKE MOBILE APP

- 1 To measure a length, tap on **Length** at the top of the screen.



- 2 Tap and drag to create a line. Adjust anchors as needed.
 - Use the zoom window to help you align the line precisely to the edges of your object.
 - The length of your object will display on the screen.
 - Draw connecting lines by tapping on **+** and then tapping and dragging on one of the line anchors.
 - To add another line, tap **+** and drag to create a line.
 - To delete anchors or lines, tap on an anchor to select it, then tap **-**.

TIP: You may also use your fingers to Pinch & Zoom on the photo to better view the object.

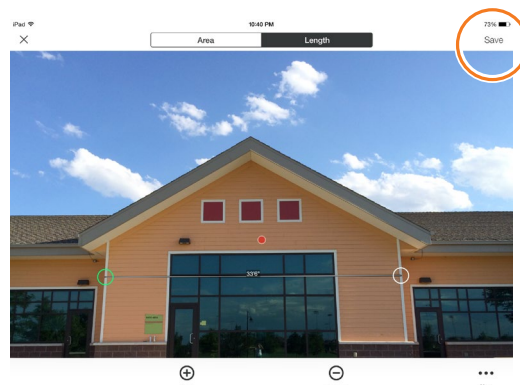


Saving Your Measurements

SPIKE MOBILE APP

Once you are done taking measurements or making edits, be sure to save your photo. All saved photos are placed in the Gallery.

- 1 To save your measurements, tap **Save**.

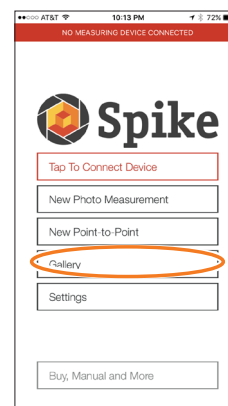




Using the Gallery

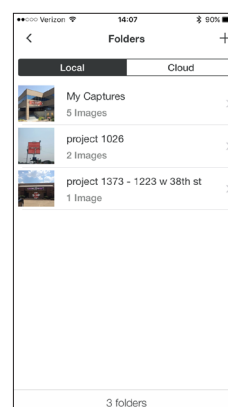
SPIKE MOBILE APP

Use the Gallery to access all saved photos. From the gallery you can view, edit, export, or delete your saved photos.

- 1 In the app home screen, select **Gallery**.
You can view photos that are stored within your Spike app, or on the Spike cloud.
- 2 Photos may be organized in folders.
To add a new folder, tap + and then name your folder.



- 3 From the Gallery, you can also upload photos to the cloud  or download photos from the cloud .

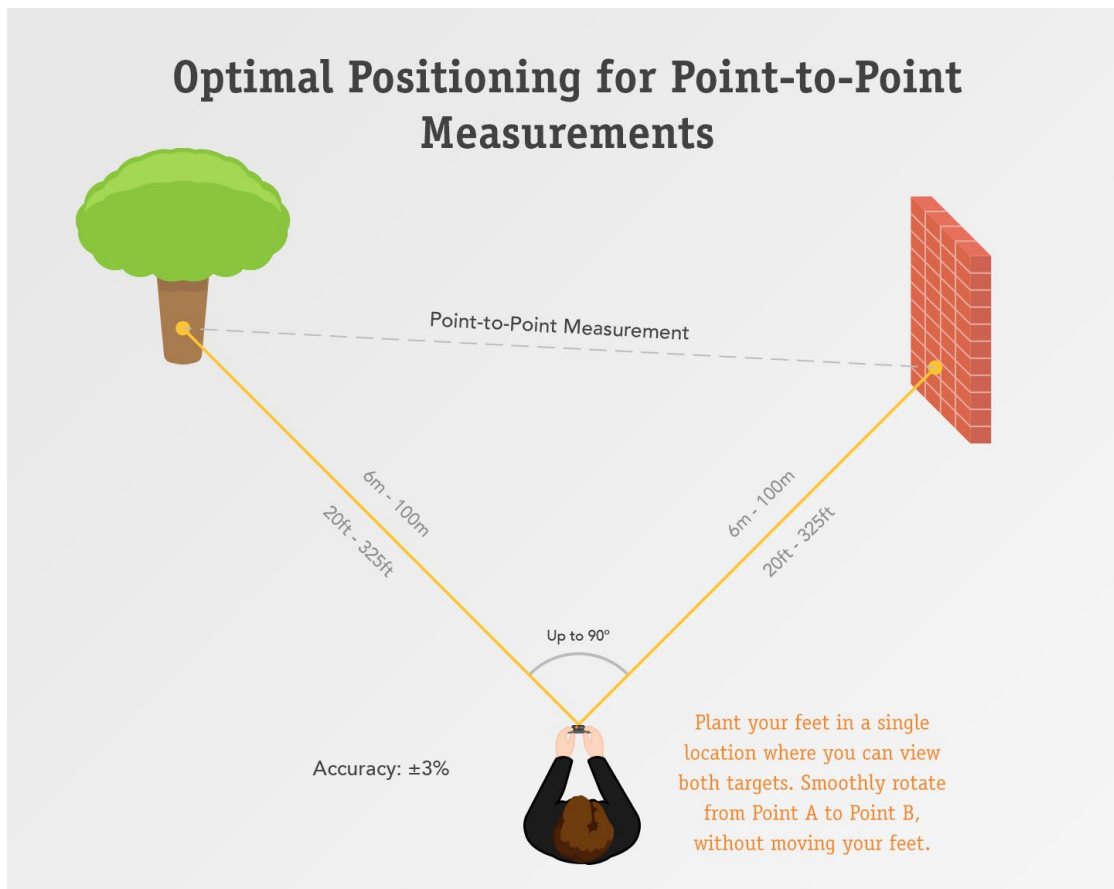


5

Taking a Point-to-Point Measurement

To take an accurate Point-to-Point Measurement with your Spike, ensure that:

- 1) Your feet are planted in a single location where you can view both targets.
- 2) You keep the two targets within a 90-degree arc for best accuracy.
- 3) Your targets are at least 20ft/6m away and within 325ft/100m.
- 4) You maintain a consistent arms length and hold Spike at approximately 1 foot from your head.
- 5) You aim Spike at your first target and hold it steady. Spike will be ready to capture the first point when the border of the screen changes from red to green and the “Hold Steady” message goes away.
- 6) You smoothly and quickly rotate from Point A to Point B, without moving your feet.

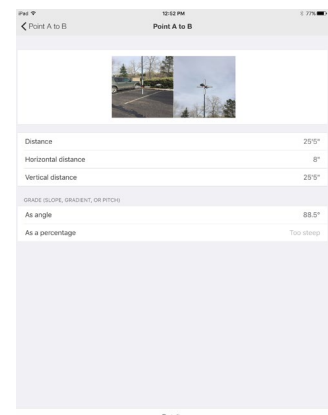


Take Photos of the Objects to Measure

SPIKE MOBILE APP

A Point-to-Point measurement captures the distance between two points (objects) by taking two photos.

- 1 **From the Spike app menu, tap on New Point-to-Point.**
- 2 **Aim the Spike laser at your first target and hold it steady.**
 - Maintain a consistent arm's length and hold Spike approximately 1ft/.5m away from your head.
 - Spike will be ready to capture the first point when the border of the screen changes from red to green and the "Hold Steady" message goes away.
 - Press the capture button.
- 3 **Smoothly and quickly rotate your body from Point A to Point B at a consistent arm's length, without moving your feet.**
 - Aim the laser target icon at Point B.
 - Press the capture button.
- 4 **A new window will appear showing you the results of your Point-to-Point Measurement. You may choose to either save or discard the measurement.**



6

Using the Spike Cloud

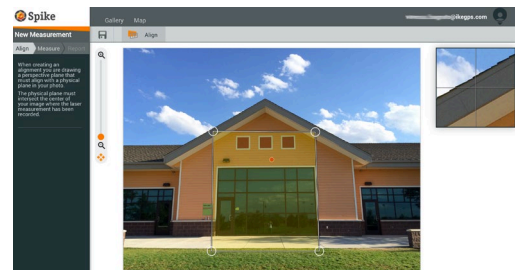
Once you have taken a photo of the object you would like to measure using the Spike app, you may upload that photo to the Spike Cloud. From the Spike Cloud you can view, edit, measure and export Spike photos. The Spike Cloud can be accessed from the Customer Login button on www.ikegps.com.

Aligning to the Object SPIKE CLOUD

Before you can measure an object, you need to set the surface's perspective by outlining a large rectangle on it. This identifies and corrects the horizontal and vertical angle from which the photo was taken. Your target must be or must contain a rectangular shape so that the object can be aligned.

1 From the Gallery, click on the photo you would like to measure.

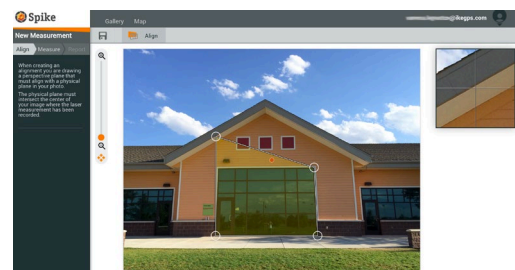
A rectangular shape will appear over your target.



2 Drag the anchors of the rectangle to align them to the extreme corners of the surface you want to measure.

TIPS: Use the zoom window to help you align the anchors precisely to the corners of your object.

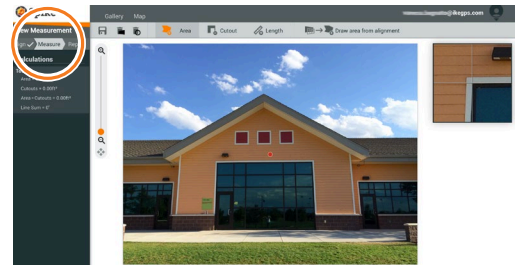
You may also use the zoom slider to better view your object.




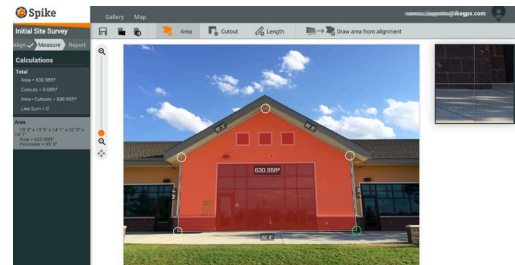
Measuring the Area of the Object SPIKE CLOUD

Once you have aligned the perspective of your object, you can measure the area of your object.



- 1 Click on **Measure** on the left side of your screen to take measurements.

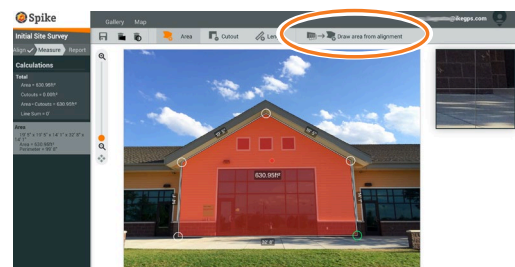


- 2 Click and drag to create an area rectangle.
 - Use the zoom window to help you align the anchors precisely to the corners of your object.
 - You can add more anchors by clicking anywhere on a line. Drag the new anchor to create a polygon.
 - To delete anchors, tap on an anchor to select it, then click on  to delete it.



- 3 Alternatively, you can select to copy your alignment rectangle as your area rectangle.

To select this option, click on  → .

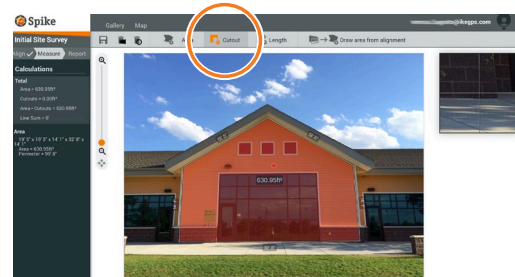


Cutting Out a Section of Your Object


SPIKE CLOUD

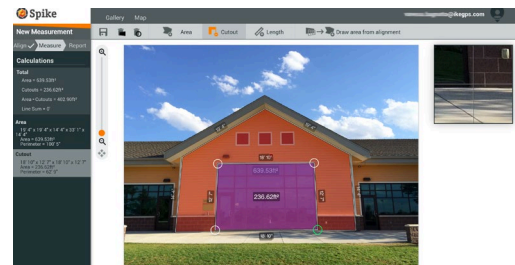
You can cut out a section of your object that you do not want included in the total measurement of the object area. For example, you may want to measure the surface area of a wall without including the area of windows or doors. Alternatively, the cutout tool can be used to measure additional areas on your object.

- 1 Click on  and then click and drag to create a cutout rectangle.



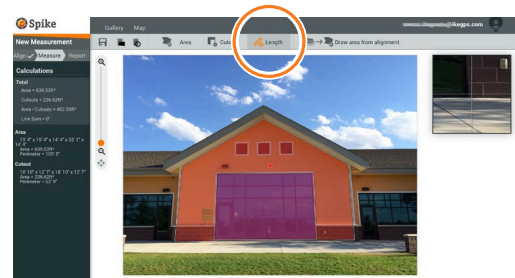
- 2 Drag the anchors of the rectangular shape to align them to the section of the object you want to cut out.


- Use the zoom window to help you align the anchors precisely to the corners of the cutout object.
- You can add more anchors by clicking anywhere on a line. Drag the new anchor to create a polygon.
- To delete anchors, tap on an anchor to select, then click on  to delete it.
- The calculations column will display the new area measurement excluding the cutout section.

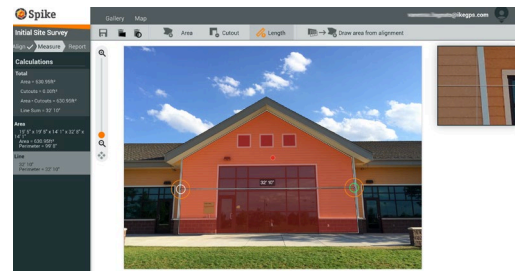


Measuring a Length SPIKE CLOUD

- 1 To measure a length, click on **Length** at the top of the screen.




- 2 Click and drag to create a line.
Adjust anchors as needed.
 - Use the zoom window to help you align the line precisely to the edges of your object.
 - The length of your object will display on the screen.
 - Draw connecting lines by dragging the anchors.
 - To add another line, click and drag to create a line.
 - To delete anchors or lines, tap on an anchor to select it, then click .

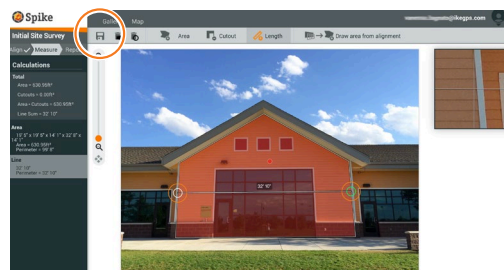


Saving Your Measurements SPIKE CLOUD

Once you are done taking measurements or making edits, be sure to save your photo. All saved photos are placed in the Gallery.

- 1 To save your measurements, click .

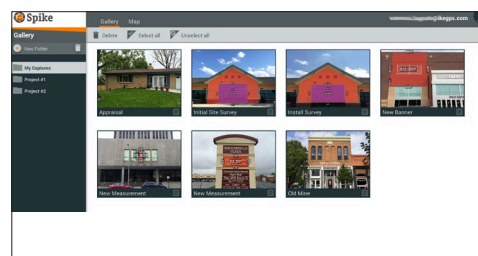
You must save your edits before returning to the Gallery, or the edits will not be saved.



Using the Gallery SPIKE CLOUD

Use the Gallery to access all saved Photo Measurements. Point-to-Point Measurements cannot be saved to the Cloud.

- 1 Once logged in, you will be in the Gallery by default.



- 2 To add a folder, click on  **New Folder** and then name your folder.

To rename a folder, double click on the name.

- 3 From the Gallery, you can view, edit, move, export, or delete a photo.

7

Exporting and Sharing

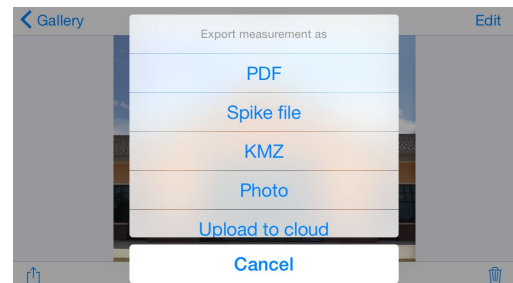
Measurements are saved with the photo and can be exported as different file formats and shared.

Exporting SPIKE MOBILE APP

A photo can be exported as a JPG, PDF, KMZ, and Spike file. For Android only, HTML is also an option. The Spike file is a compressed ZIP file, which contains three Spike photos (JPG without measurements, JPG with measurements and a thumbnail JPG), and an XML file with measurement and location data.

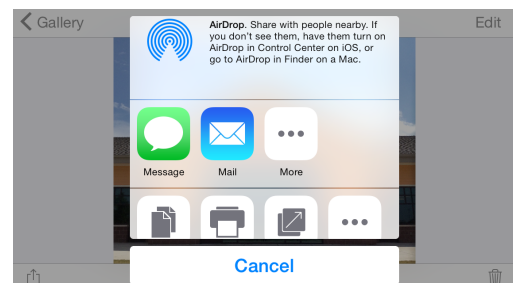
In addition, a photo can be exported to the online, cloud-based Spike tools. By uploading a photo to the **cloud**, you can view, edit, measure, and download Spike photos using your browser.

- 1 **Access the Gallery and tap on the photo you want to export.**
- 2 **Then tap the **Share** or **Export** button, and select an export format. Select **Upload to cloud** to export the photo to the online Spike tools.**
- 3 **Once a Spike photo has been uploaded to the cloud, the photo can be accessed from the **Customer Login** button on www.ikegps.com.**



Sharing SPIKE MOBILE APP




Photos can be shared via email or through various installed apps, such as Airdrop, Google Drive, Dropbox, Evernote, etc.

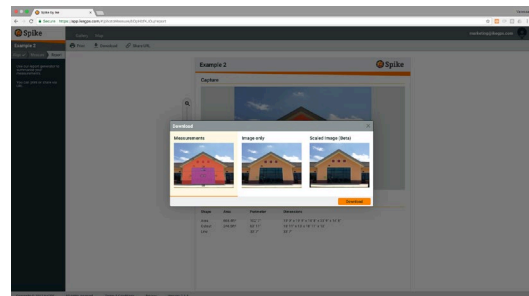


Exporting SPIKE CLOUD

A photo and measurements can be exported as a JPG, PDF report, or a shareable URL. There are three options for the JPG export: with measurements, image only, or a Scaled Image. The Scaled Image is a 1:1 scaled, flat perspective (also commonly known as deskewed) JPG, that can be imported into design tools including AutoCAD, ARCHICAD, Adobe Illustrator, Flexi or Corel.

The URL can be shared with anyone, such as co-workers, customers, or partners. Guests will be able to view the shared report, and Spike online users will be able to import the photo into their own gallery.

- 1 **After you are done taking measurements, click on Report on the left side of your screen.**
- 2 **Then select your export format:**
 - Click on  to print or save a PDF.
 - Click on  to download a JPG
 - Click on  to share a URL of your report.



8

Spike Icon Guide

Capturing a Photo Using the Spike Mobile App



Tap to capture a photo of the object you want to measure.



Indicates whether there is a GPS lock with your smartphone or tablet.



Represents the Spike laser. Point the crosshairs at the object you want to measure.



Select the folder where you would like to save your photos.



Displays a thumbnail of last photo you captured.

Taking Measurements with the Spike Mobile App

Area

Measure the area of a polygon. Anchors can be added ⊕ or deleted ⊖ to create the desired polygon shape. Length measurements are also calculated.

Length

Measure straight lengths. Additional lengths can be added by selecting ⊕ and dragging a new line. Lines can be connected by selecting ⊕, tapping on an anchor, and then dragging to extend a line.



Exclude areas from your main measurement by using the cutout tool. Alternatively, use the cutout tool to measure additional areas on your photo.



Add additional cutout areas and lines. Highlight ⊕ and then drag to create a new area or line.



Delete anchors. Tap on an anchor to select it, then tap the ⊖ icon to delete that anchor. To delete a shape, delete all of the anchors.









Save

Save measurements and changes. Photo and measurements are saved within the Gallery.



Tap for additional options.

Using the Spike Mobile App Gallery

	Displays all the folders and images that are saved locally within the Spike mobile app.
	Displays all the folders and images that are saved to your Spike online account.
	Tap to add a new folder locally.
	Upload photos to measure from your desktop using the online tools.
	Select to download photos from your online account.
	Delete photos from your gallery.
	Tap to delete a folder, rename a folder, or set a current folder.
	Indicates a Point-to-Point Measurement.

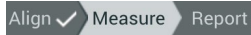
Taking Measurements From Your Desktop




Set the surface's perspective by outlining a rectangle on the surface you want to measure. This identifies and corrects the horizontal and vertical angle from which your photo was taken.




Select to copy your alignment rectangle as your area rectangle.



- Measure the area of a polygon. Anchors can be added by clicking anywhere on a line or deleted  to create the desired polygon shape. Length measurements are also calculated.
- Exclude areas from your main measurement by using the cutout tool. Alternatively, use the cutout tool to measure additional areas on your photo.
- Measure straight lengths. Additional lengths can be added by dragging a new line. Lines can be connected by dragging the anchors.



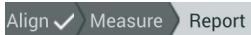
Delete anchors. Tap on an anchor to select it, then tap the trash can  to delete that anchor.



Delete shapes or lengths. Tap on the shape, or select the measurement from the left calculations list, and then tap on the trash can to delete the shape or length.



Save measurements and any changes. Photo and measurements are saved within the Gallery.



View and export reports.



Print a report or save as a PDF.



Download the photo as a JPG, and select your preferred JPG format.



Copy and paste a URL of your report. If opened by a user without a Spike account, the user can view and print the report. If opened by another user with an online account, the user can import the image into their gallery.

Using the Gallery From Your Desktop



View a report of one of your photos.



Tap to select the photo(s) you want to delete.



Delete a photo.



Exclude areas from your main measurement by using the cutout tool. Alternatively, use the cutout tool to measure additional areas on your photo.

New Measurement

The default name of a photo is "New Measurement". To rename, double click and enter a name.



Add a new folder.



Delete a selected folder.

