

We're IKE, The PoleOS™ Company

43'0" Pole Tip

● 12M Guy Wire

IKE / IKE+ Device User Manual

34'6" X ARM 8'



Visit www.ikegps.com/field-support for software updates, manuals, tutorials, and videos.



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IKE Documentation

IKE Quick Start Guide

A guide to getting started with your IKE device

IKE User Manual (this guide)

The most comprehensive A-Z guide to using your IKE device

IKE Fieldcraft Guide

How to get the best results from your IKE, tips and tricks to improve performance, accuracy, and productivity

IKE Tripod Setup Guide

How to get the most out of using your IKE tripod

Additional Software

- Web browser – We recommend utilizing Google Chrome to access IKE Office.
- Google Earth™ – View your data and measurements by clicking on their location on aerial photographs.



Introduction

Your IKE is a location-based measuring solution that will greatly increase your productivity when undertaking utility asset management surveys and related measurements. The IKE device integrates a digital camera, compass, laser range finder, mobile computer, and precision GPS. Data collected on the IKE Device in the field must be uploaded to IKE Office Cloud software to allow for additional measurements and annotations.

With your IKE Office Solution you can quickly:

- Collect geo-located pole photos
- Measure wire span heights, even across busy roads
- Determine wire clearances from vegetation or buildings
- Make accurate attachment height measurements on captured photos

This document will guide you through:

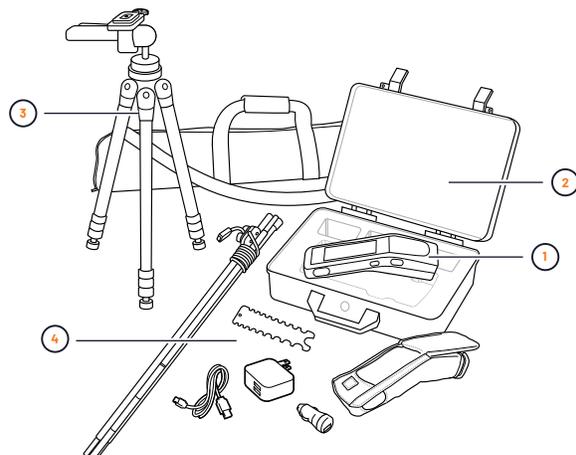
- Setting up your IKE system
- Creating in-field measurement tasks
- Transferring data to the IKE Office cloud software
- Measuring attachment heights from a photo
- Outputting data in industry standard file formats

What's in the box

The IKE product includes:

- 1 IKE Device
- 2 Hard case
- 3 Tripod set with carrying bag
- 4 Accessories: soft case, guy gauge, AC wall charger, car charger.

Software: IKE Field, IKE Office

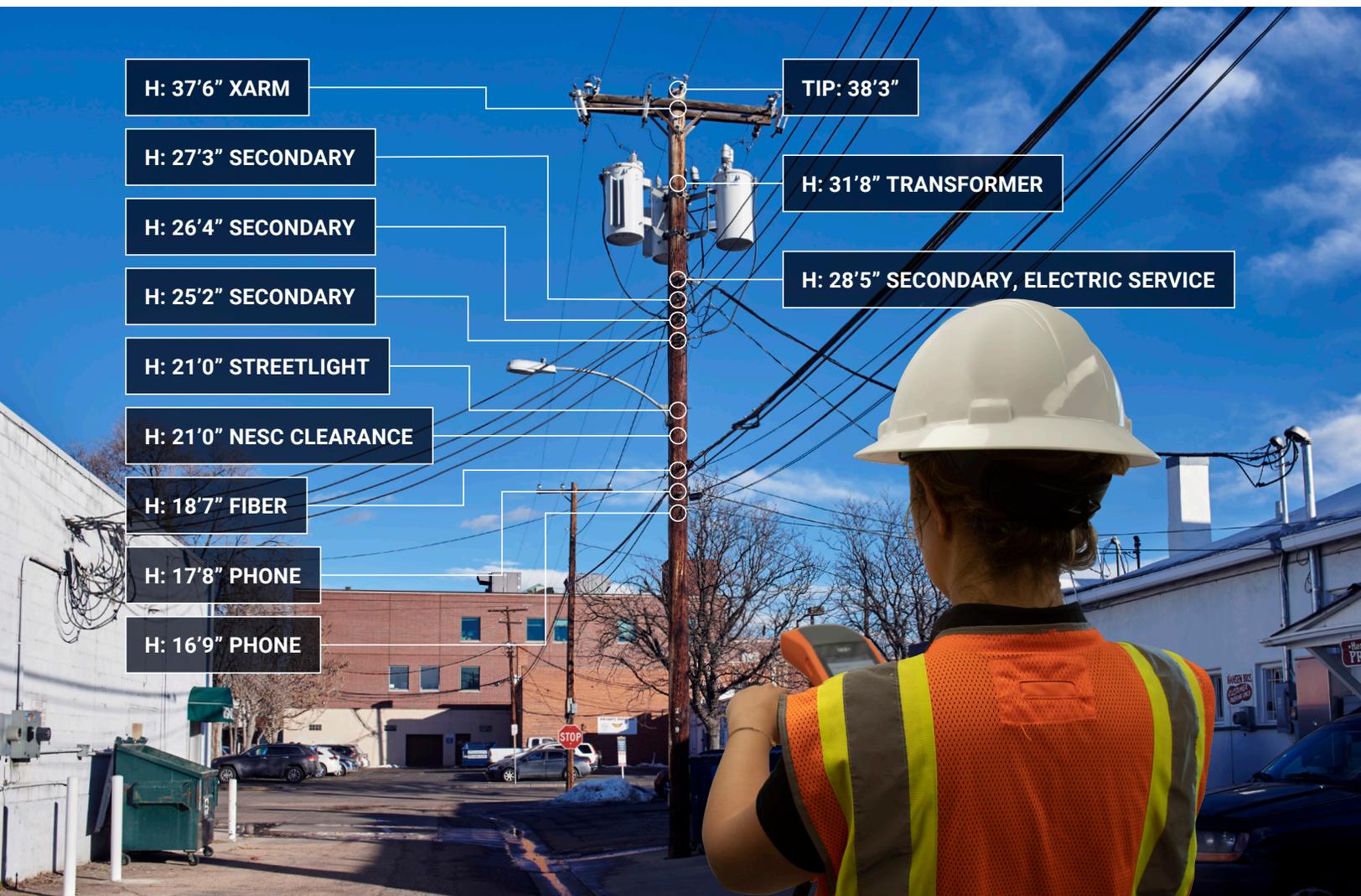


Solution Overview

IKE Device Features

IKE Software Features

The IKE Process



IKE Device Features

The IKE device incorporates the latest mobile technologies to produce a best-in-class high-performance, lower-power field data collection solution.

Key device features include:



Android™ 5.1, Lollipop

Easy to use, smartphone user interface and experiences



13-Megapixel Digital Camera

Larger viewing angle, reducing distance of capture point



Outdoor Screen Readability

4.8" capacitive, multi-touch Gorilla Glass screen:
1280 x 720 resolution



Extended Battery Life

8 to 10 hours of continued usage



Wireless Connectivity

Wi-Fi, bluetooth and broadband data



Class 1M Laser

300m and 650m distance options

ARM High-performance, low-power optimization

MediaTek 64-bit quad-core ARM® Cortex®



GPS Receiver

GPS L1 with RTK option



IKE Software Features

IKE Field

IKE Field is a mobile app that is preloaded on the IKE Device. The app contains general measurement tools for field data collection and specialized utility pole measurements for pole heights, wire spans, attachment points, GPS location and more. Data collection is based on adjustable workflows with custom hierarchical forms that improve the productivity and efficiency in the field. Data collected with IKE Field is uploaded wirelessly to IKE Office.

IKE Office

IKE Office is a cloud-based software service that has multiple functions. IKE Office is used to create and then deploy the IKE custom hierarchical forms. As data is collected in the field, it's uploaded from the IKE Field app to IKE Office where it is used to perform functions such as measuring heights of attachment and quality assurance and quality control. IKE Office stores all of the photos, measurements and field data for long-term archiving and retrieval.

IKE Integration

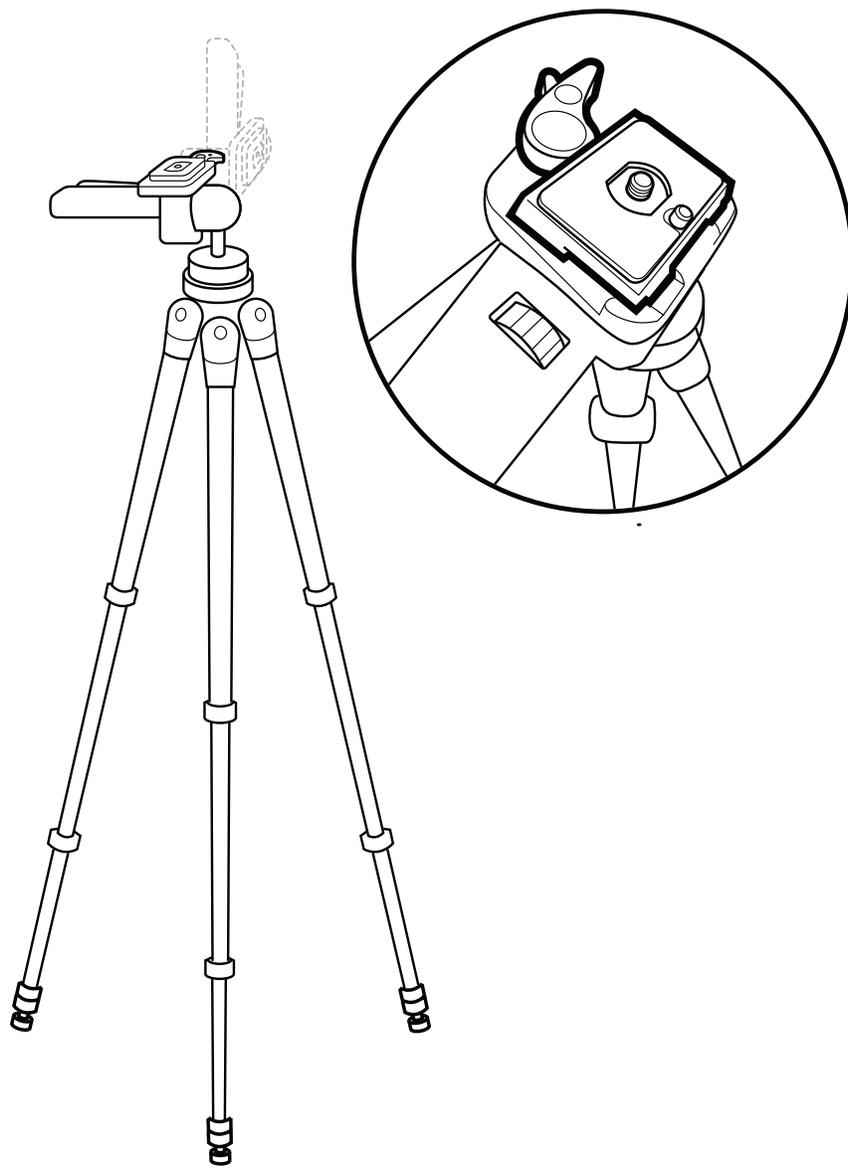
IKE provides several integrations, enabling a user to create reports or directly integrate data into other applications or enterprise databases. Default exports for all users and forms direct from IKE Office include JSON, KML, EXCEL, PDF (labelled IKE Report), and JPEG for exporting a single collection's images. Users have the option to purchase PLA (pole loading analysis) integration from ikeGPS which provides a direct IKE Office export for PLA software PoleForeman, Ocalc, and SpidaCalc. Some other types of 3rd party PLA software can also be supported. There are also options for basic files for use in CAD software and GIS software as well as customized reports.

Hardware Setup

IKE Device Setup

IKE Tripod Setup

User Calibration

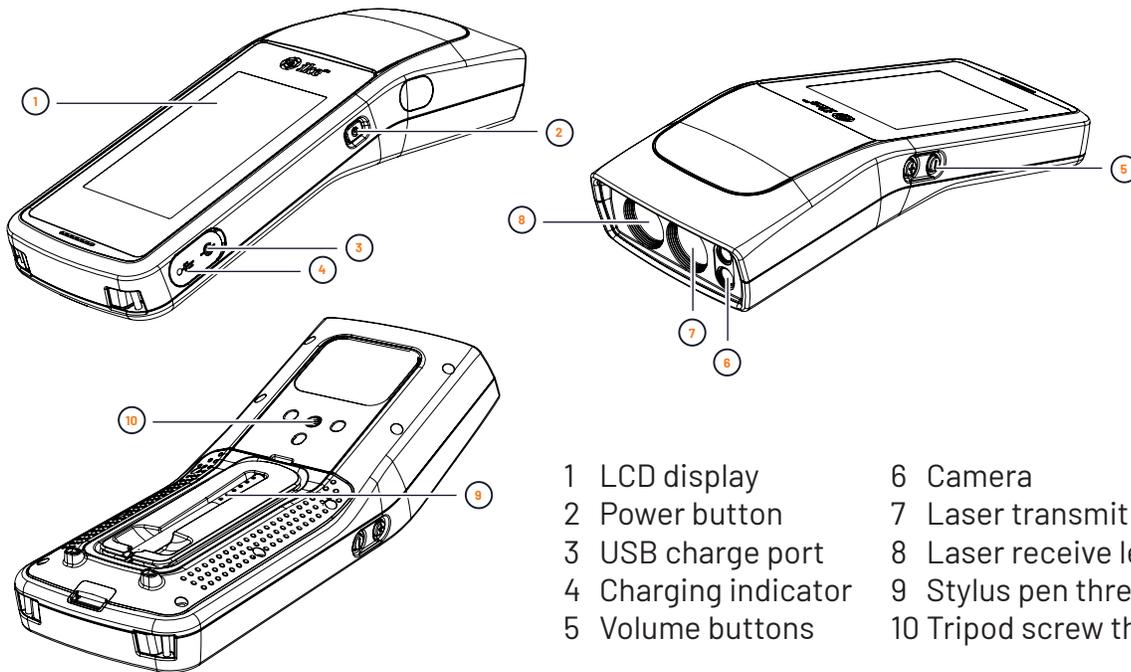


IKE Device Setup



- 1 IKE Device
- 2 Hard case
- 3 Tripod set with carrying bag
- 4 Accessories: soft case, guy gauge, AC wall charger, car charger.

IMPORTANT: The IKE device is designed to be used with the IKE Tripod. It should not be used while being held by hand, or placed close to the user's body.



- | | |
|----------------------|------------------------|
| 1 LCD display | 6 Camera |
| 2 Power button | 7 Laser transmit lens |
| 3 USB charge port | 8 Laser receive lens |
| 4 Charging indicator | 9 Stylus pen thread |
| 5 Volume buttons | 10 Tripod screw thread |



WARNING This device contains an eye safe class 1M 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 ZICFR1040.10 except for deviations pursuant to Laser Notice No.50, dated July 26 2001.



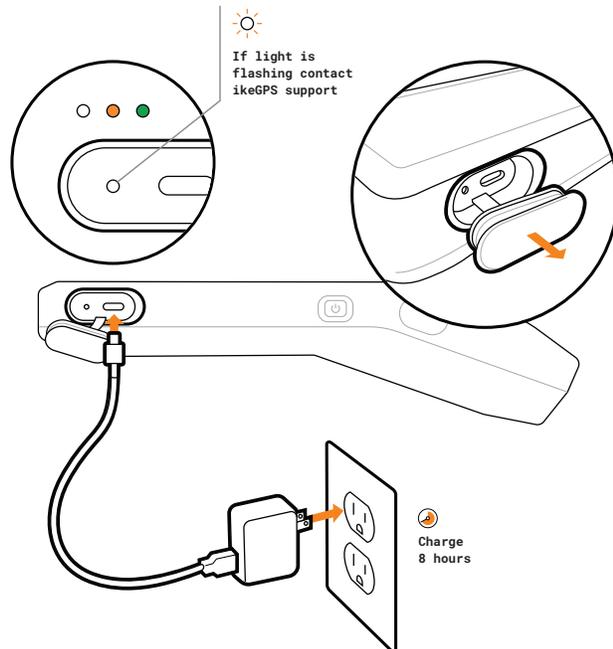
WARNING LASER RADIATION
DO NOT EXPOSE USERS OF TELESCOPIC OPTICS
CLASS 1M LASER PRODUCT



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

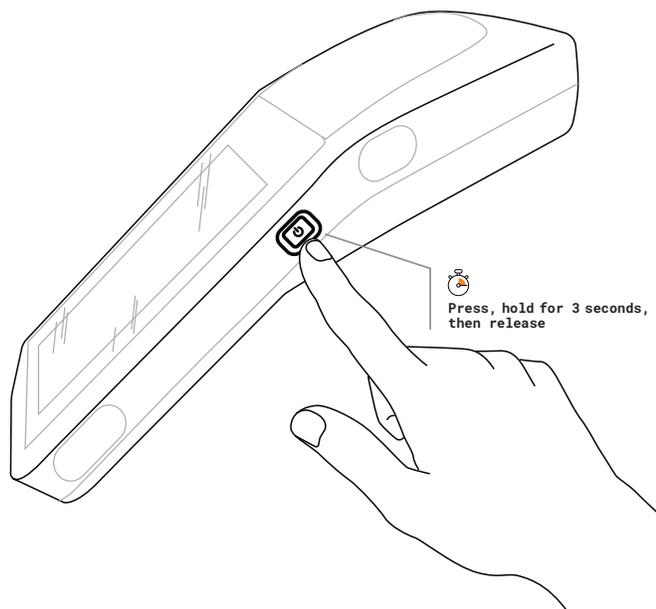
Charge

- Remove the port cover on the right side of the IKE Device and connect the IKE Charging Cable to the charging port.
- Connect the USB end of the IKE Charging Cable to the Wall Charging Adapter.
- Plug the IKE Wall Charging Adapter into an electrical outlet.
- Charge your IKE Device for 8 hours.
- The charging indicator light will display various colors based on the state of the charge.



Power Up

- To power on, press and hold the power button until the display illuminates.
- To power off, press and hold the power button until you see an on-screen menu appear. Then tap "Power off" at the top of the list from the four options 'Power off', 'Restart', 'Screenshot', and 'Emergency'.



IKE Tripod Setup

The IKE Tripod has a low magnetic signature and is designed specifically for use with the IKE device to produce accurate measurements.

We do not recommend using your IKE device with other tripods as the accuracy of your measurements may be affected.



Parts

- 1 Tripod adaptor plate
- 2 Adjustment ring
- 3 Leg angle adjustment clip
- 4 Leg lock
- 5 Rubber/spike feet
- 6 Shoulder strap eyelet
- 7 Main lever
- 8 Quick release lever
- 9 Friction dial

Package Contents

- Tripod
- Carry strap (attaches to bag or tripod)
- Allen keys (2)
- Allen key holder (hooks on to tripod leg)
- Leg strap (with carry strap eyelet)
- Storage bag
- Setup Guide (this guide)

Prepare

Remove the tripod from its bag. Open up the legs of the tripod. Unclip the tripod leg locks and extend the legs to the required height. Clip back to secure the legs. Lower the main lever to a horizontal position.



Squeeze the small lever and turn it to release the tripod plate.



Attach the tripod plate to the base of the IKE device ensuring it is positioned correctly as shown below.

Tighten the screw until it is secure.



Mount

Hold the lever outwards and clip the tripod plate on the back of the IKE device to the tripod.



Lower the IKE unit into position and then turn the lever fully to lock the unit into place.



Ensure that the IKE unit is securely attached.

Adjust

You can fine tune the height of the unit. Turn the adjustment ring counter-clockwise to loosen it and lift the center pole. Turn the adjustment ring clockwise to tighten into place.



To adjust the position of the IKE device, with one hand hold the unit, and with your other hand squeeze the main lever and move to adjust.



For span and pole height measuring, you can further tighten the movement of the lever so that the ball joint remains locked yet the pitch mechanism is still movable. To do this, while pressing the main lever with one hand, use your other hand to turn the friction dial and adjust the tension. Test the tension of the movement between adjustments.



The leg hinges may loosen over time. If this happens, use the Allen key provided to tighten the screws.



Leg Strap

The leg strap allows you to secure the legs closed when not in use and also provides the eyelet for attaching the carry strap. Attach the leg strap just under the padding of the tripod leg. Wrap the strap around the leg and thread it through the buckle. Secure it in place with the velcro. The carry strap can then be attached to the leg strap eyelet and the eyelet on the tripod head.



Left-Handed Use

If you are left-handed, you can change the position of the lever to the opposite side.

With the tripod plate removed (see step 1), use the Allen key provided to unscrew the two screws on the tripod head. Then remove the top plate.



Rotate the lever towards you to the opposite side.



Replace the top plate as shown and secure tightly with the two screws.



Carry Bag

We recommend storing your tripod in the carry bag after use.

Remove the IKE unit from the tripod and make the tripod as compact as possible. Secure the legs with the leg strap. Then lift the main lever to a vertical position.



Place the tripod inside the carry bag and zip up the bag.



The strap provided can be used both on the tripod or on the carry bag.

Specifications

Materials: Aluminum, carbon fiber

Maximum height: Max 59.5 in. (1510 mm)

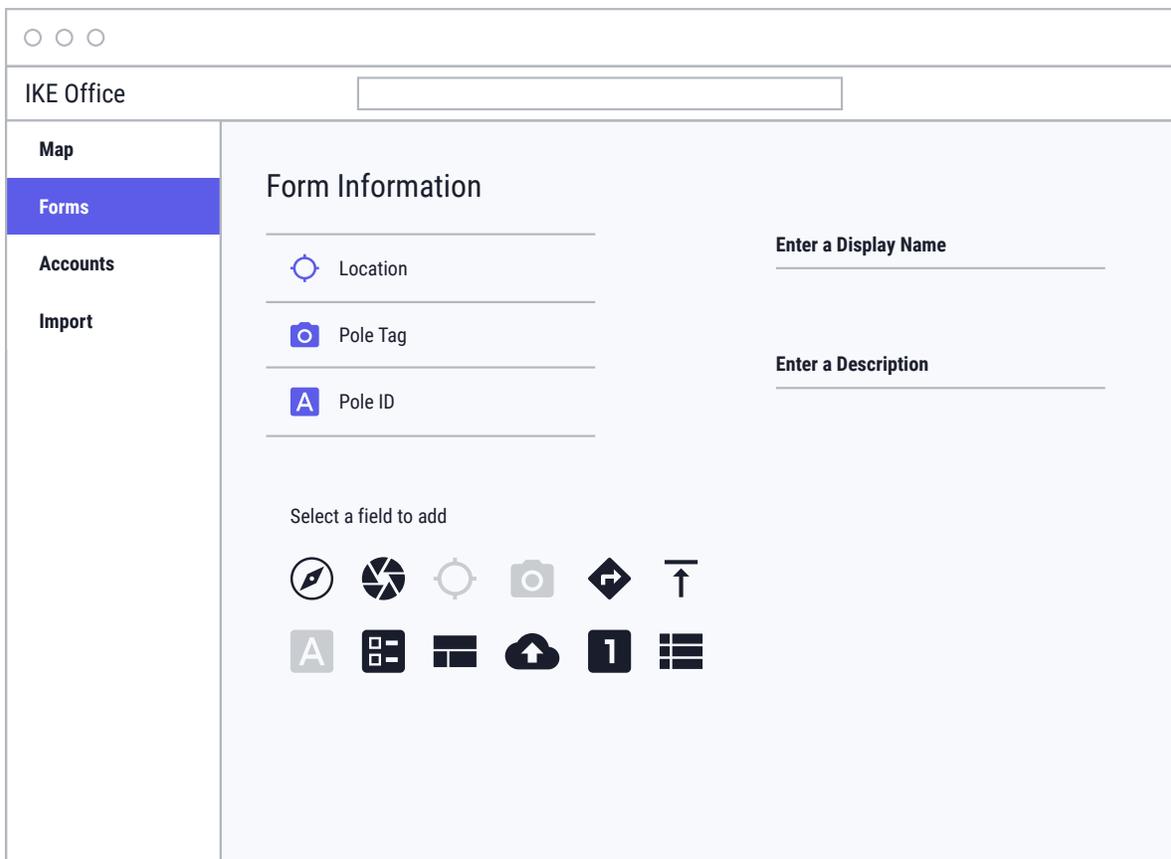
Weight: 5.1 lb (2.31 kg)
(with accessories)

Signature: Low magnetic

Data Collection Plan - IKE Office

Introduction to IKE Office

The Form Builder Tool



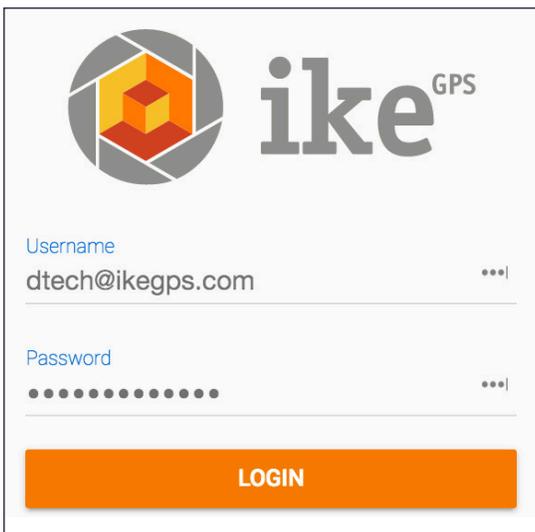
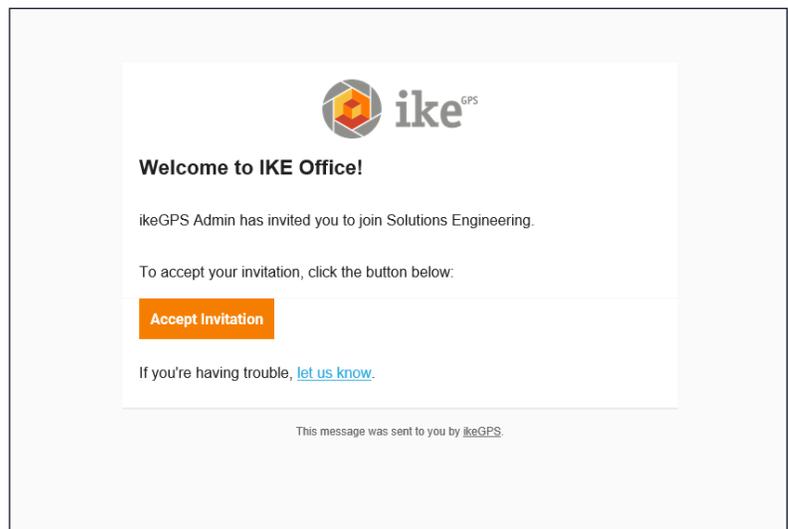
Introduction to IKE Office

IKE Office is a cloud-based file management system with which you can

- Create customizable forms
- Upload and download field data
- Measure heights of attachment on IKE Photos
- Review data, add information, manage users, and more

Accessing IKE Office

You will receive an email invitation from noreply@office.ikegps.com (Please check junk folder and approve this email address for future emails). Click the “Accept Invitation” button in the email. Remember that an invite can only be used once. This will open a new tab where you can select “Signup” and will be guided through creating a new account. If you already have an IKE Office account, make sure to select “Login”.



Logging In

Visit <https://office.ikegps.com> and use the credentials you set up to login to IKE Office. If you have forgotten your password, click on the “Forgot Password” link and enter your email address. You’ll receive an email with further instructions.

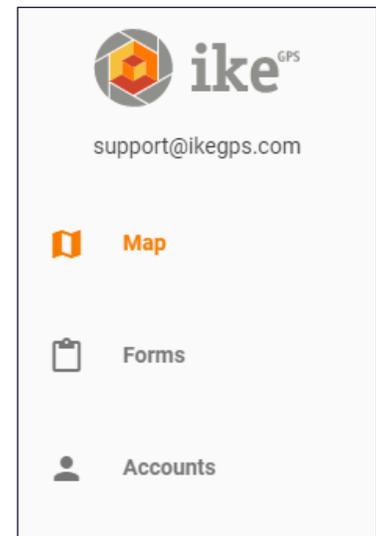
IKE Office Menu

On the left side of the IKE Office page are the various IKE Office Menu tabs*:

- Map
- Forms
- Accounts**

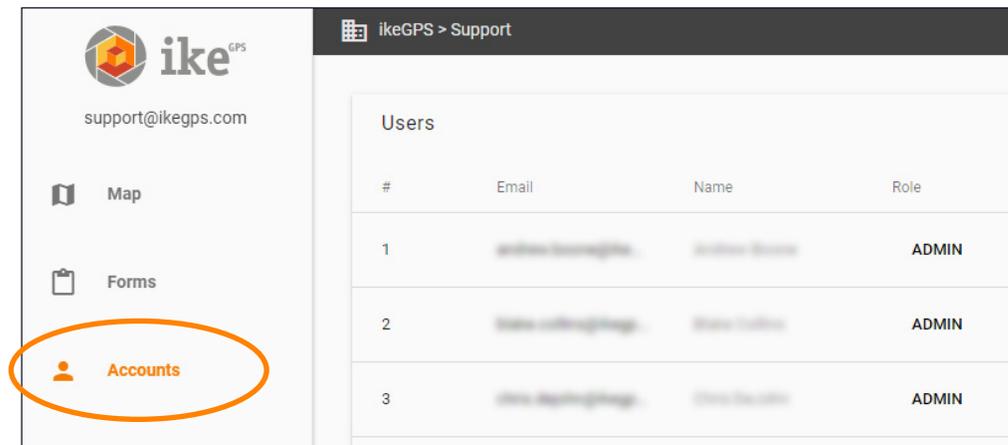
*IKE Office Departments with Premium features may see additional pages

**Accounts page is only visible to Admin user types



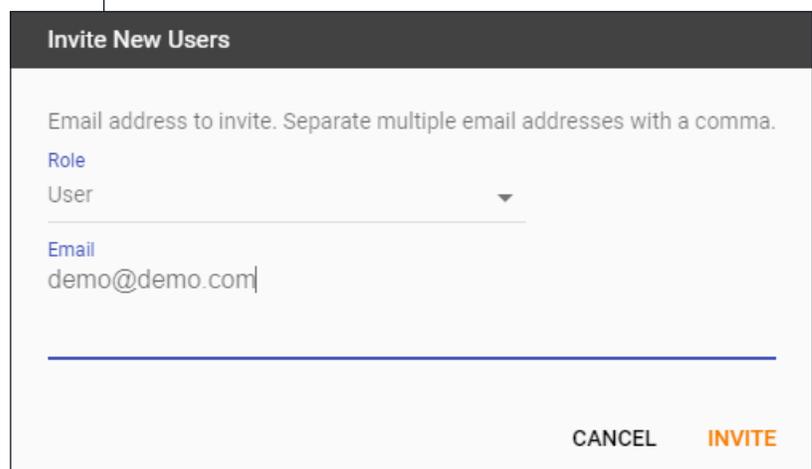
User Accounts

Login as an administrator in IKE Office and visit the Accounts tab. There you will see a list of all users in the system.



Create new users

As an administrator, use the orange "Add" button to create a new user. You will set the new user role and enter up to 10 email addresses to invite to IKE Office. You can always add more users, delete users, or change the user role at any time.



The screenshot shows the "Invite New Users" form with the following elements:

- Invite New Users title
- Email address to invite. Separate multiple email addresses with a comma.
- Role dropdown menu
- User dropdown menu
- Email input field containing demo@demo.com
- CANCEL and INVITE buttons

User Roles

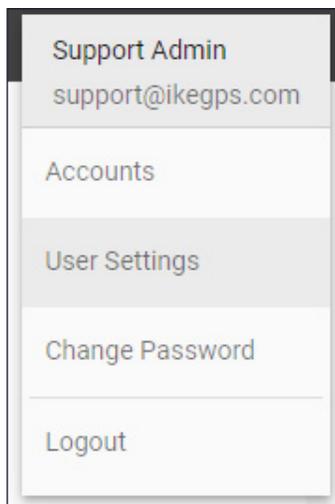
All IKE Office account Admins have the ability to set users in two different role types: Users and Admins. Please note some special account types may have more user role options. Users and Admins can both edit data, upload data, create and edit forms, and export data. Admins have the additional capabilities to add and delete users, delete data, change job names, merge jobs, and delete and duplicate forms.

For IKE Office Premium accounts, Admins have even more capabilities including the ability to move data from one department to another, import CSV data to create jobs, assign collections or jobs to users, and more.

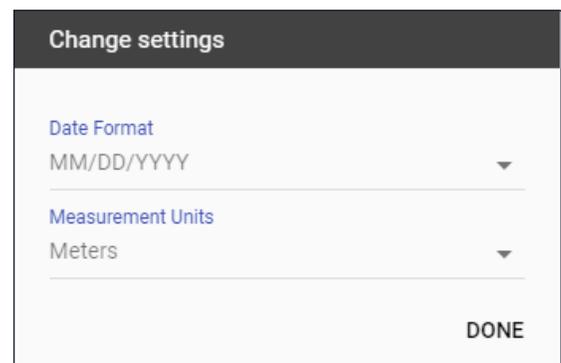
12	support@ikegps.com	Support Admin	ADMIN	
13	support@ikegps.com	Support Admin	ADMIN	
14	support@ikegps.com	Joe Admin	Admin	
15	support@ikegps.com	Joe Admin	User	
16	support@ikegps.com	Support Admin	USER	

User Settings

The user settings can be found under the user icon  in the top right corner of IKE Office.



This menu will allow you to visit the Accounts page if you are an Admin, change user settings, reset your IKE Office password, and Logout of IKE Office.

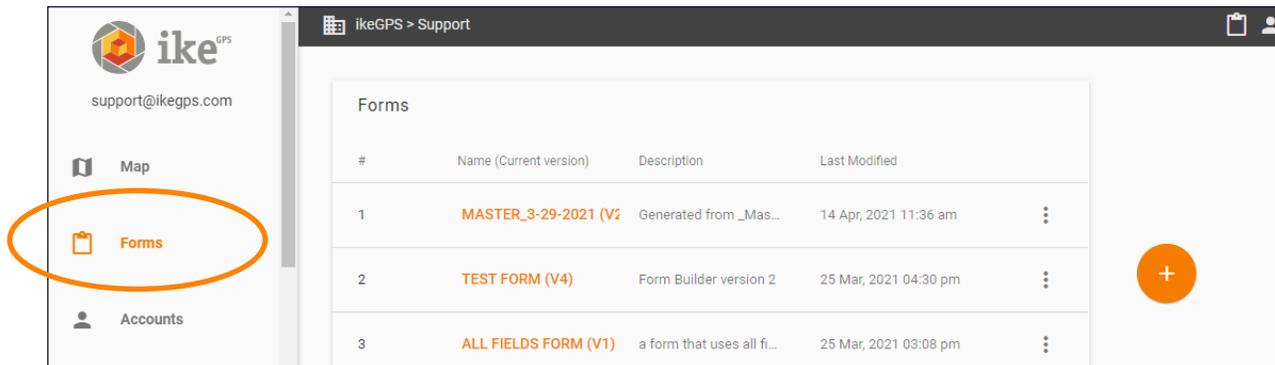


Select "User Settings" to change the measurement units and date display.

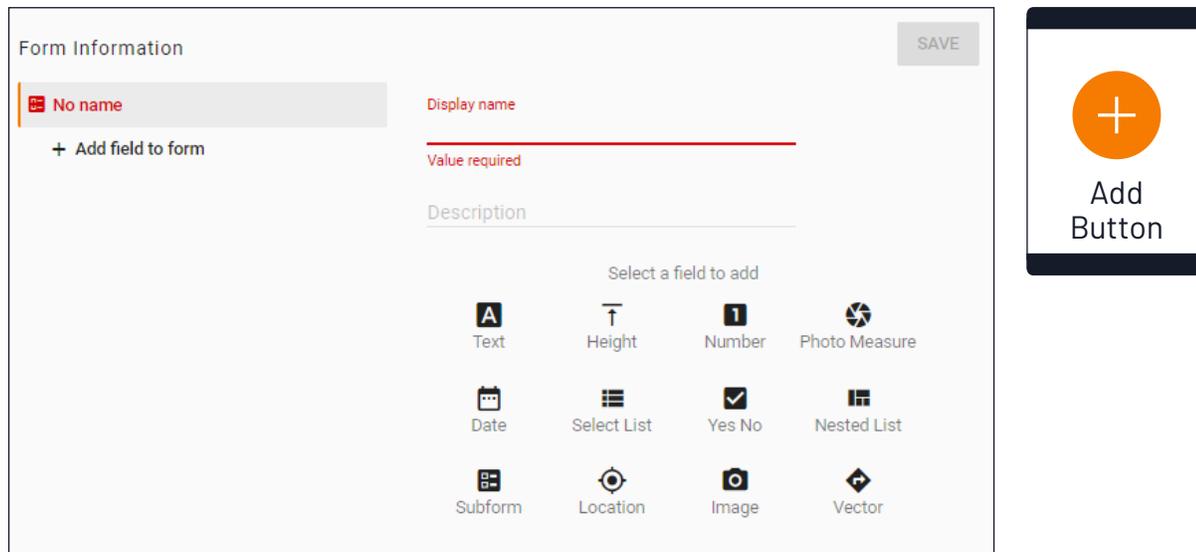
The IKE Form-Builder

The IKE Form-Builder is used to create a field data collection form for use on the IKE Device. To access the IKE Form-Builder, click the IKE icon in the top left corner of IKE Office and select the Forms tab OR select the Forms icon in the top right corner of the screen.

Please note, ikeGPS will need to create any PLA integration forms, so if the data collected on this form needs to integrate into a PLA software, reach out to support@ikegps.com.



Select the tool icons to add fields to your form.



Basic Fields



Date

Date

Input Date into the form.

Date format (MM/DD/YYYY) can be configured in the Settings page.



Number

Number

The Number tool allows numeric input. This tool also contains the Bearing tool. When the number tool is opened in IKE Field, users will have the option to collect a compass bearing for this field.



Text

Text

Allows alphanumeric collection in IKE Office. This can be populated using the keypad.

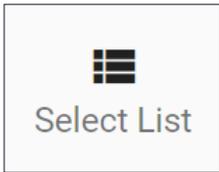


Yes No

Yes / No

Offers the option to respond "yes" or "no" within a field.

List of Values



Select List

Select this icon to create a single level list so that a single option may be selected. This tool can be the field to set your anchor type.

Select List Example:

Anchor Type

- 1" Triple Eye - Anchor Rod and Plate
- 10-Inch Double Helix 1 Pin - 3/8" or 1/2" Anchor Hub
- 10-Inch Double Helix 2 Pin- 3/8" or 1/2" Anchor Hub
- 10-Inch Double Helix 3 Pin- 3/8" or 1/2" Anchor Hub
- 3/4" Double Eye - Anchor Rod and Plate
- 4-Inch Double Helix 10 Pin - Granite Anchor
- 5/8" Single Eye - Anchor Rod and Plate
- 8-Inch Double Helix 3 Pin- 3/8" or 1/2" Anchor Hub
- etc...

Nested List

Nested List

Allows creation of nested lists in IKE Office up to 3-levels deep. Nested lists are created using the same process as the main list, however, the selection made at each level dictates the selection options available at the next level.

Example defining use of nested lists for the field "Owner":

Form Information SAVE

Training Form - Liz

- pole id
- simple image
- IKE Photo
- Pole Owner**
- Pole tip
- Pole type
- Tag photos
- GPS location

Display name: Pole Owner NESTED LIST

Label Cloneable Hide Admin-only

Industry	Owner Type	Owner name
Utility	CATV	Acme Cable
Communications	Telco	Demo TV
Municipal	Fiber	Example Company
Value	Other	Value

Enter first level value. In this case, the first level is Industry, and the selected value is Communications.

The second level value is Owner Type. Enter all owner types applicable for Communications Industry.

The third level is Owner Name. You can define different Owner Names for each Owner Type.

You will need to fill out the list options for each nested list. For our example, we need to add Owner Name options for Industry: Utility. We already added Owner Name options for Communications, but this is a different nested list so you can have different options and different list names. You do not need to fill out all 3 nested list levels, but you do need to fill out any name fields, otherwise they will appear red (see image) and you will not be able to save the form.

Form Information SAVE

Training Form - Liz

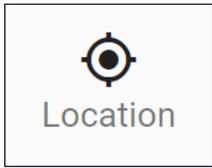
- pole id
- simple image
- IKE Photo
- Pole Owner**
- Pole tip
- Pole type
- Tag photos
- GPS location

Display name: Pole Owner NESTED LIST

Label Cloneable Hide Admin-only

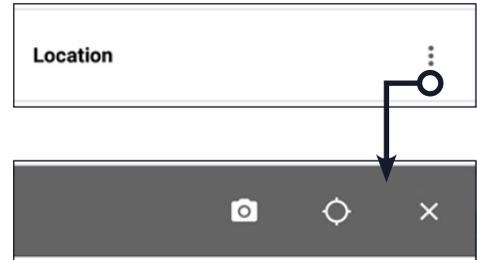
Industry	Owner name
Utility	Value Value required
Communications	
Municipal	
Value	

IKE Capture Tools



Location

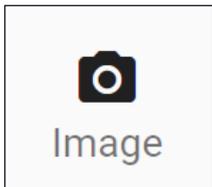
Used to collect a GPS location, with Longitude, Latitude, and Altitude. IKE Devices provide location in WGS84 and IKE+ devices provide the location based on what your RTK Network provider is using. There are two options:



1. Local location: Collected where the device is located (e.g. at the pole) and collects over a 30 second period to obtain the best accuracy available in that time frame.
2. Target location: Collects the location from a distance (offset location) using the camera to aim the laser and compass to provide the location of a target.

When viewed on IKE Field, you will be presented with two options to capture the location of an object:

-  Target Location
-  Local Location



Image

This is a “photo only” tool and captures images that cannot be measured. Users might utilize this tool to capture photos of pole tags, close ups of pole damage, or other items that do not need a location or measurement associated with the image.

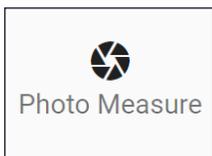


Photo Measure

The Photo Measure tool field is used to capture IKE Photos. IKE Photos are calibrated images captured in the field that can be measured in the back office with very high accuracy. IKE Photos capture several other measurements, including location, distance offset, bearing and vertical angle (between the IKE device and laser), and more.



Height

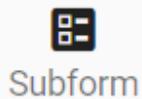
Tool used to capture height above ground, such as a wire mid-span height. This tool captures 2 photos to obtain a point-to-point vertical measurement.



Vector

Tool used for measuring azimuth and distance between two points, such as a span length and the angle between two utility poles.

Subform



Subform

The Subform tool field can be used for several purposes:

- Used to group common fields for an object, such as equipment.
- Used to create parent-child relationships between two fields. For example, the span would be the “parent” subform and the Wire within that span would be the “child” sub-subform.
- Copy or delete form fields quickly: subforms can be copied by swiping right on a subform field in IKE Field or by selecting “Duplicate” on a subform in IKE Office. Swipe left to delete the subform.

Additional Field Options

In addition to the form tools, there are option checkboxes that allow a form field to be cloned or labeled. IKE Office Pro accounts have additional tool form fields as well as additional option checkboxes.

Cloneable Fields

When this option is checked, the field will carry the data that was input in one collection over to the next within the same job.

^ Display name
v Pole Owner NESTED LIST v

Label Cloneable

Industry Owner Id

UTILITY Power

COMMUNICATION Unknown

The field can still be edited, but this allows for time-saving when entering repetitive data. For example, form creators may select "Pole Type" to be cloned because the field user is typically collecting data on poles in the same area that are mostly the same size and type.

Label Fields

When the Label option is checked, this field's entry will act as a label for an associated Height tool on the IKE Photo.

Form Information SAVE

Pole IKEphoto

Equipment

Type Cloneable

Orientation

Quantity

Owner

Attachment Height

Bottom Height

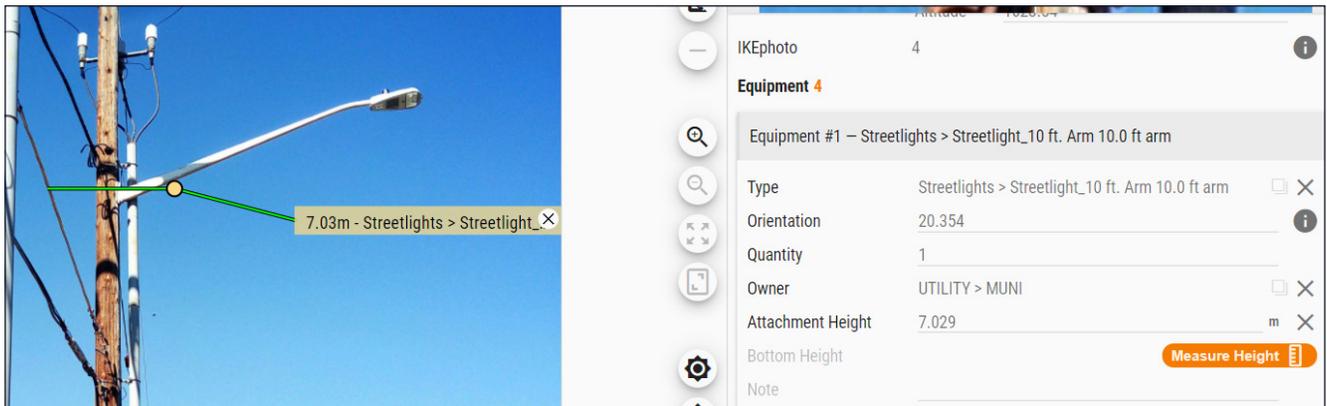
Note

+ Add field to Equipment

Display name: Type NESTED LIST

Type	Size
Streetlight	Streetlight_3 ft. Arm 3.0 ft arm
Single Phase Transformer	Streetlight_6 ft. Arm 6.0 ft arm
Three Phase Transformer	Streetlight_8 ft. Arm 8.0 ft arm
Single Arm Crossarm	Streetlight_10 ft. Arm 10.0 ft arm
Double Arm Crossarm	Streetlight_12 ft. Arm 12.0 ft arm

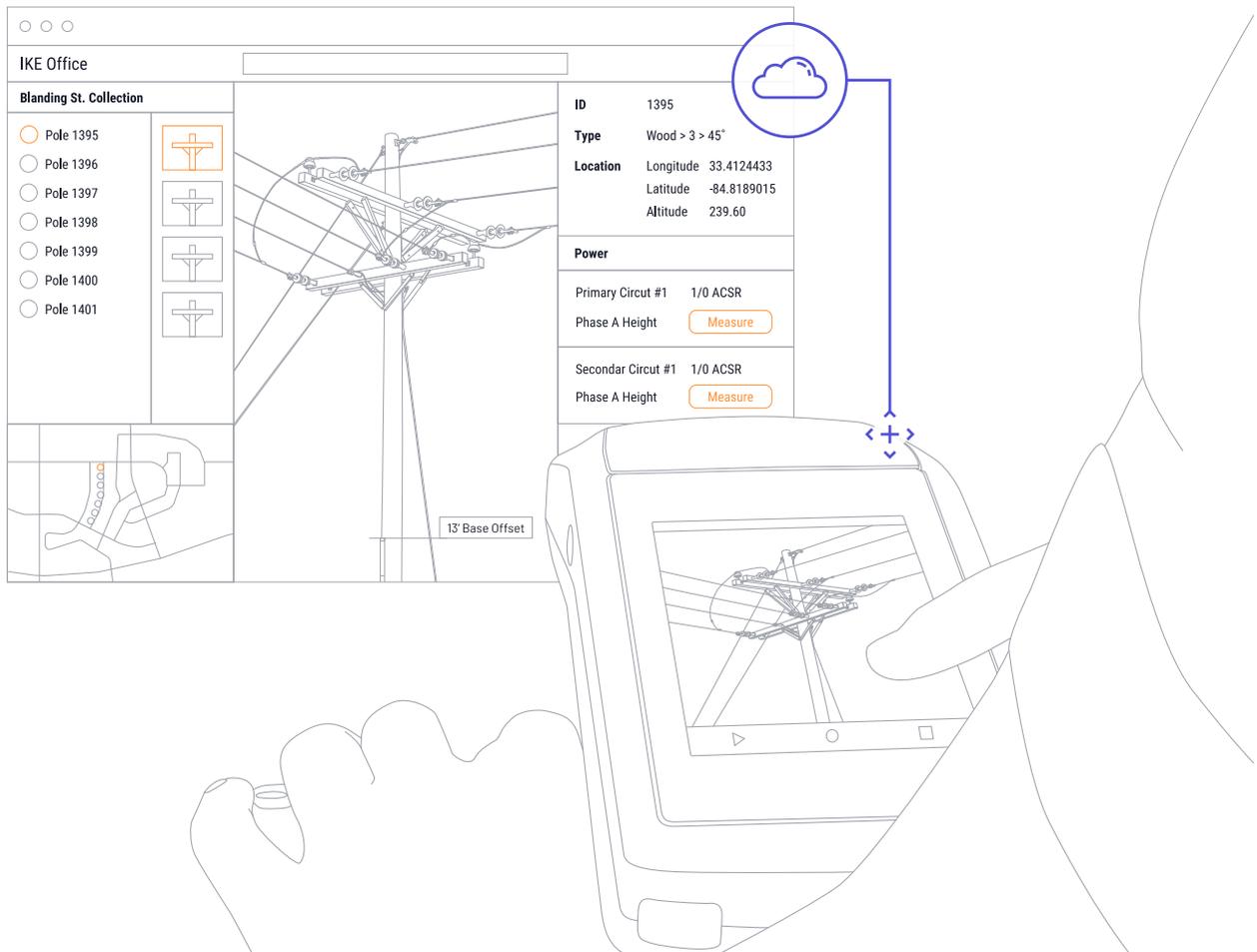
For example, within a subform you have an "Equipment type" field, an "Equipment height" field, and a "Notes" field. The form creator could choose to use "Notes" or "Equipment type" as the label field, but "Equipment type" is more useful for their purposes. When data collected on that form is viewed in IKE Office, a user will set the height for the equipment on an IKE Photo and the photo will show the equipment annotation with both the height and whatever was selected in the "Equipment type" field. The label will appear similar to the example photo where you can see the annotation on the IKE Photo and the Equipment type are the same.



Data Capture & Upload - IKE Field

Introduction to IKE Field

Field Data Collection Step-by-Step

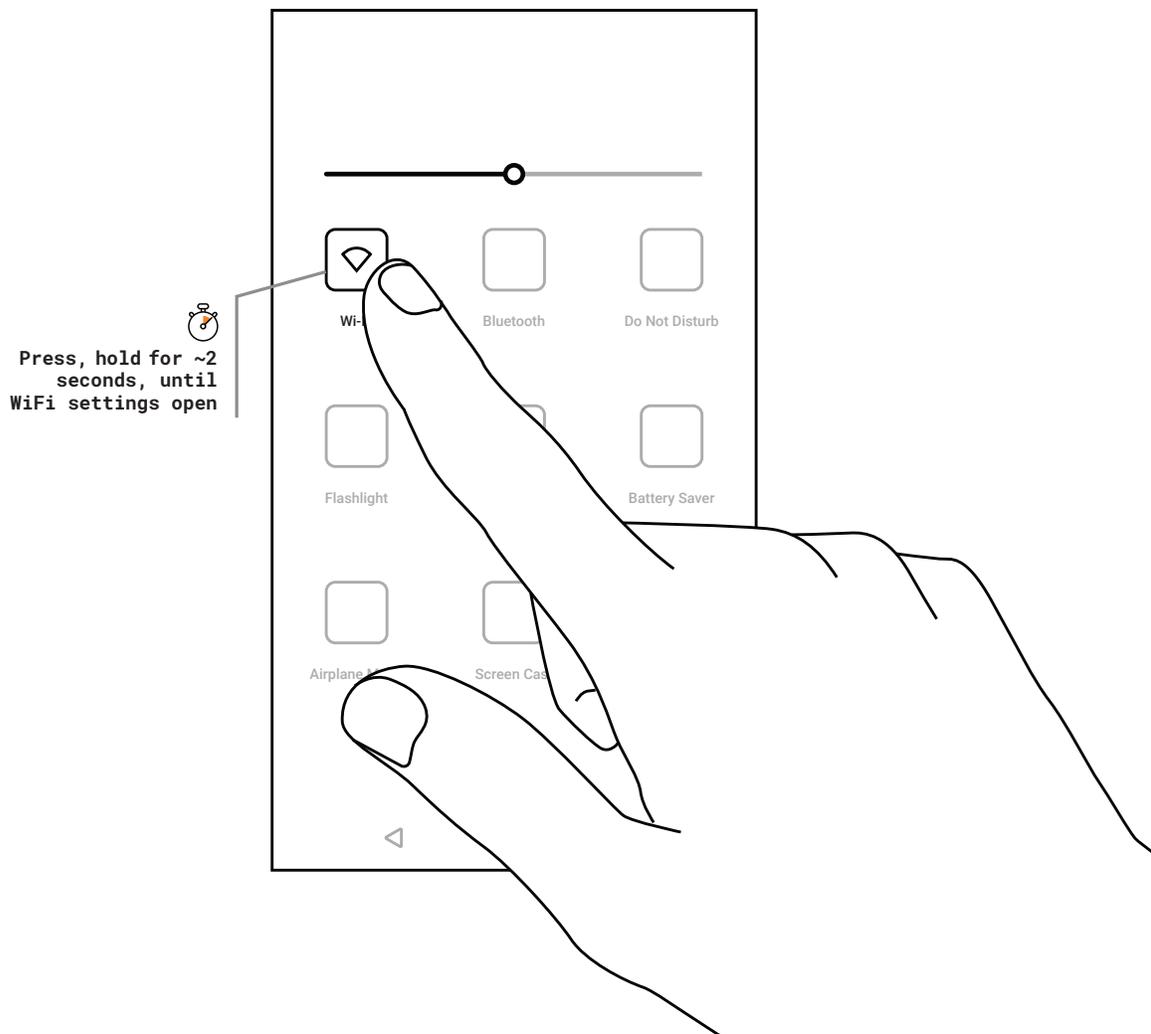


Introduction to IKE Field

IKE Field is the data collection app on the IKE device.

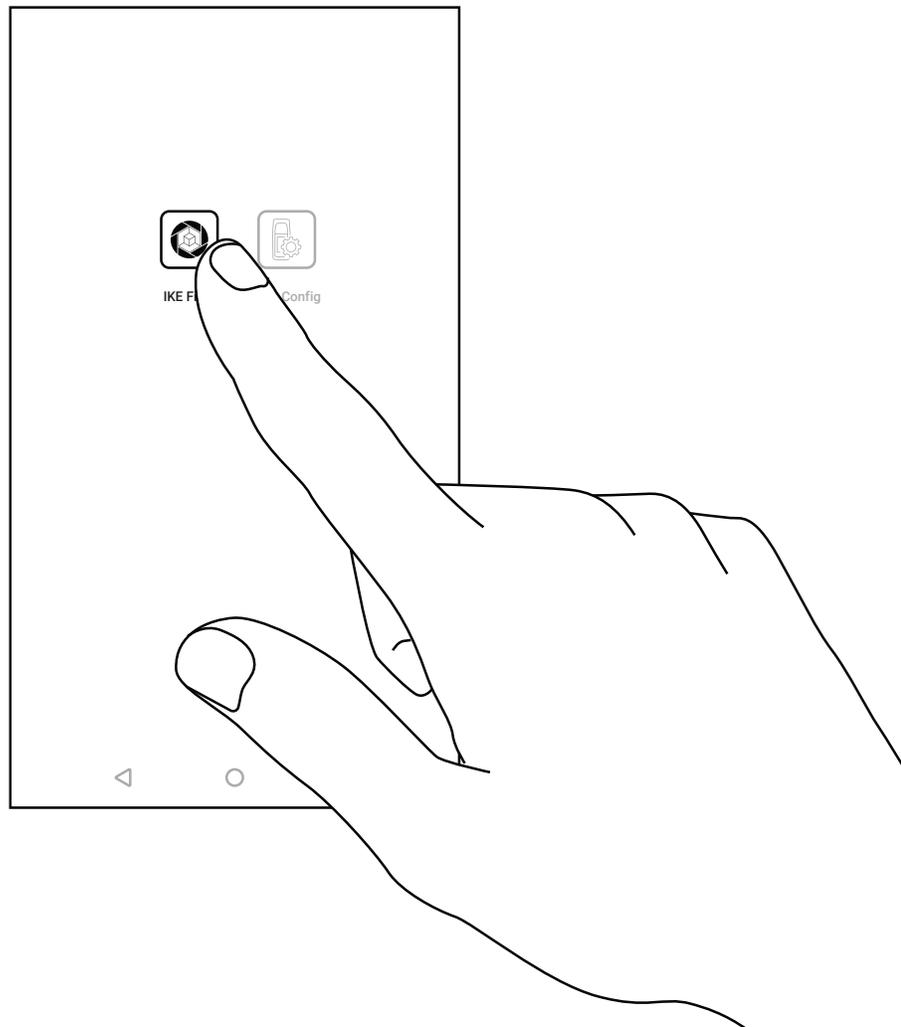
Connecting to WiFi

- With the IKE Device turned on, swipe down from the top of the screen.
- Press and hold your finger on the WiFi icon at the top left corner of the screen. Hold until the WiFi setting screen opens (~2 seconds).
- Ensure WiFi is toggled ON.
- Select the WiFi Network you would like to connect to.
- In the dialogue box that opens, enter the WiFi password and select "Connect".
- Allow the connection to establish.

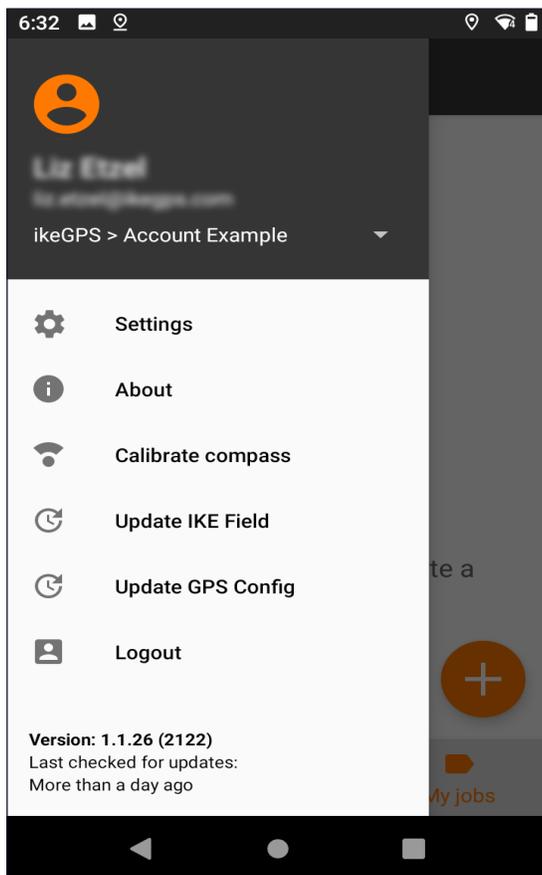


Getting started in IKE Field

- Locate the IKE Field App and tap the icon to open.
- Input the credentials you made in IKE Office (desktop software).
- After logging in, tap the menu icon in the top left corner of the screen. You will see an IKE Office department name at the top of the menu. If you want to change the department you are collecting data in, tap the department name and choose the correct department from the list.
- Next you can follow the on-screen instructions to add a new job, select a data collection form for the job, and add a new collection. For further details, please refer to IKE Field Training Resources at
- www.ikegps.com/field-support.



IKE Field Settings



IKE Field Menu

Tap the menu icon in the upper right corner to view the IKE Field Menu.

You will see your name and email address at the top of the menu.

Next, you'll see the department you are currently collecting data in, for example in the image, we are collecting in "ikeGPS > Account Example" department.

- See "Settings" below.
- The "About" section has basic information about the IKE device.
- See "Calibrate Compass" below.
- Select "Update IKE Field" to check for app updates.
- Select "Update GPS Config" to update the GPS Config app. Please note that this app is more relevant for IKE+ (RTK enabled) users than IKE users.
- "Logout" will log you out of IKE Field. Please note that IKE Field requires a wifi connection to log back in, but does not require one to logout.
- "Version" provides the IKE Field app version number.

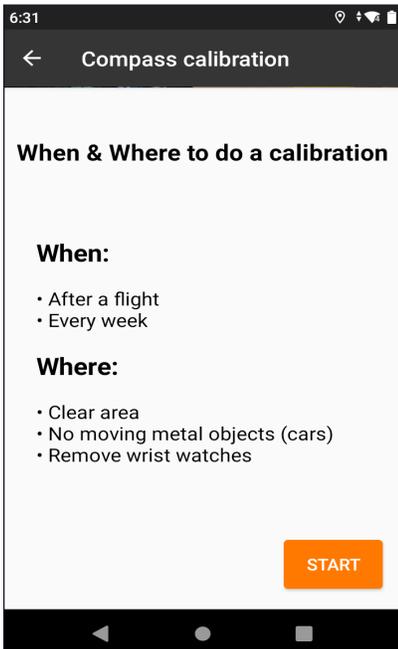
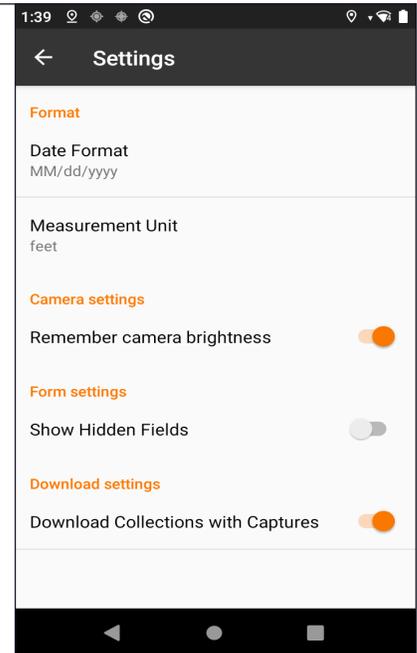
Settings

The IKE Field Settings will allow you to set a measurement unit and date format.

When “Remember camera brightness” is enabled, IKE Field will remember where you set the brightness for a photo and use the same setting automatically when capturing your next photo.

When “Show hidden fields” is enabled, your data collection form will show fields that are normally filled out in the back office rather than in the field. For example, “Attachment height” fields are often hidden fields.

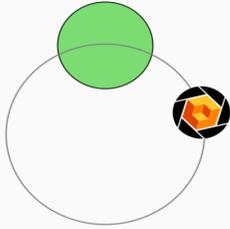
IKE Office Pro users can configure whether they would like to download or not download collections that have photos from IKE Office into IKE Field.



Calibrate Compass

We recommend calibrating the IKE Device compass weekly. This must be done outside and the unit should be off of the tripod. Tap “Start” to go through the guided compass calibration process.

Aim ike to put logo in circle



You will need to turn the IKE unit to align the logo on the below screen to the circle. This is easiest if you stand in the same direction that the IKE is pointing.

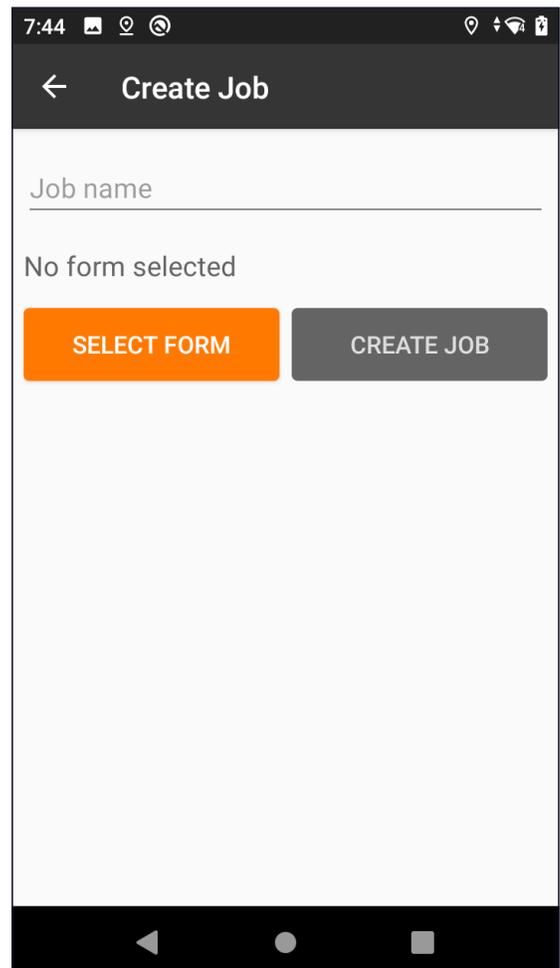
NEXT

Create a New Job

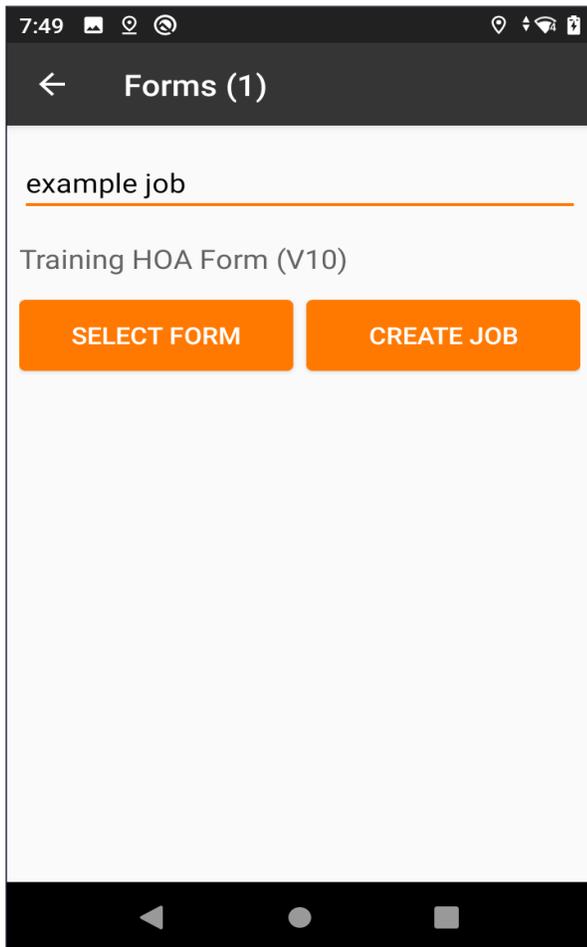
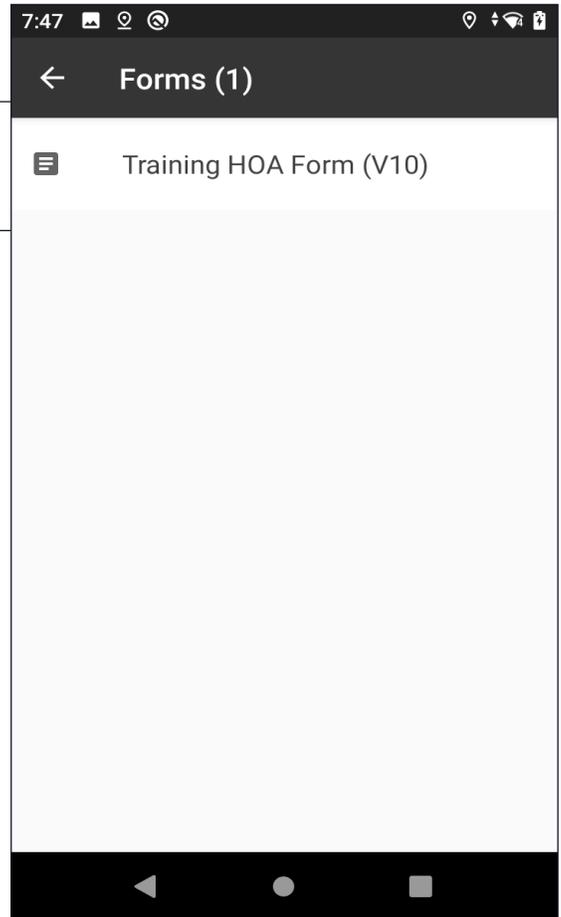
On the My Jobs screen, use the orange "Add" button to create a new job.

Enter the name of the Job.
Tap "SELECT FORM".

When connected to the Internet, the page will automatically check for any available new or updated forms.



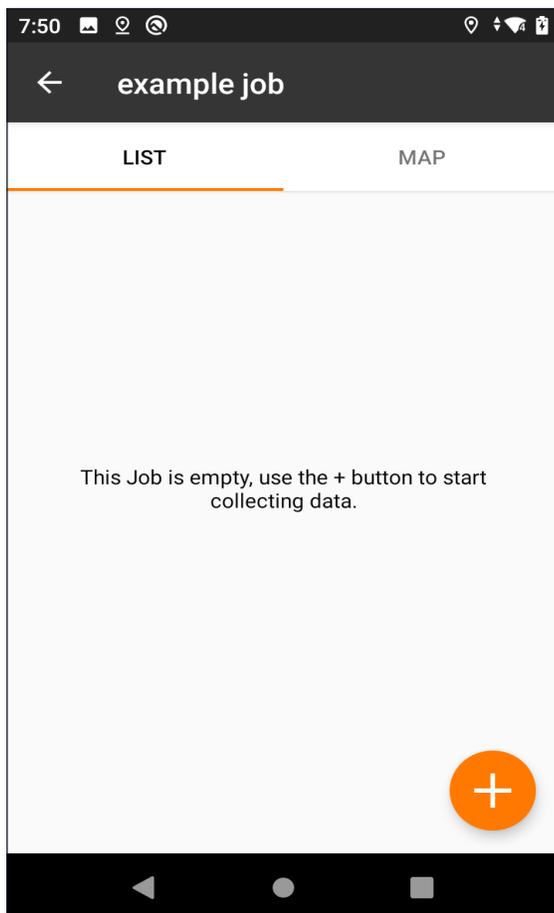
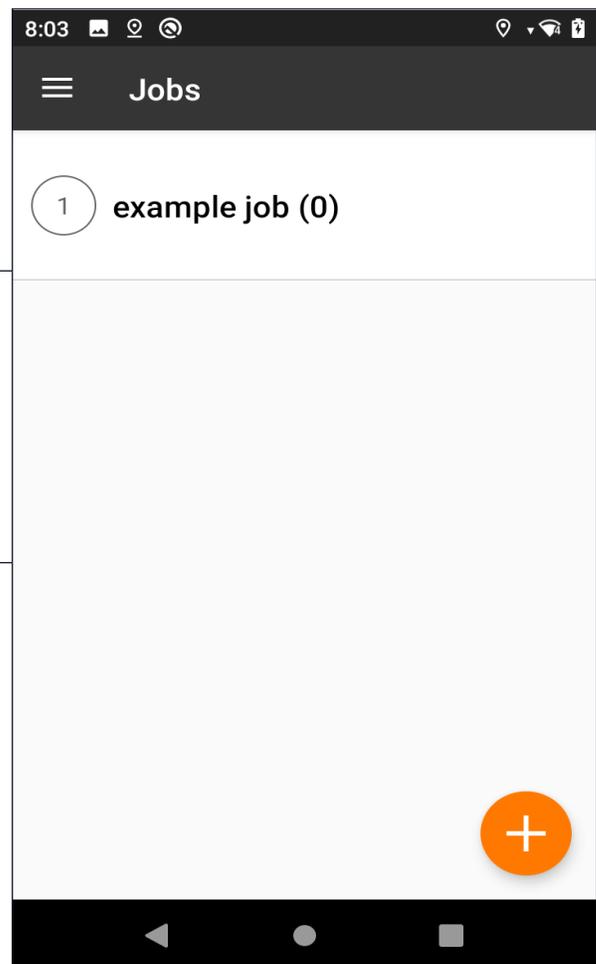
Select the form you want to use.



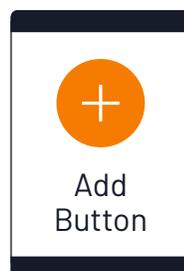
When the job has a name and a form attached to it, tap the **CREATE JOB** button.

We recommend creating your job and selecting the form while connected to Wi-Fi so that you can ensure the data collection form is up to date

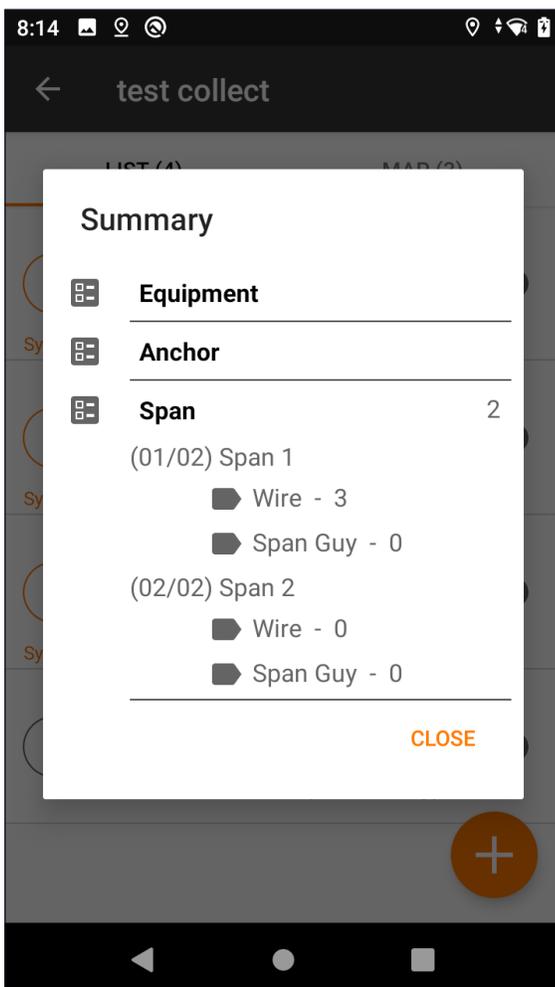
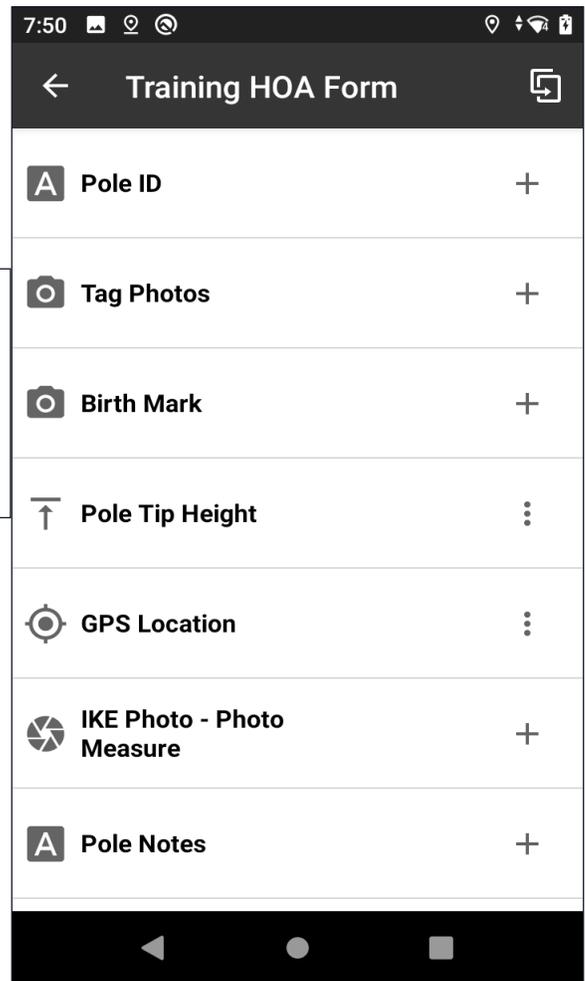
The My Jobs screen shows all of the jobs on the device that are within the department you are currently working under. Select the Job you wish to work on to proceed.



Now you are ready to start collecting data. Tap the "Add" button to create your first collection.



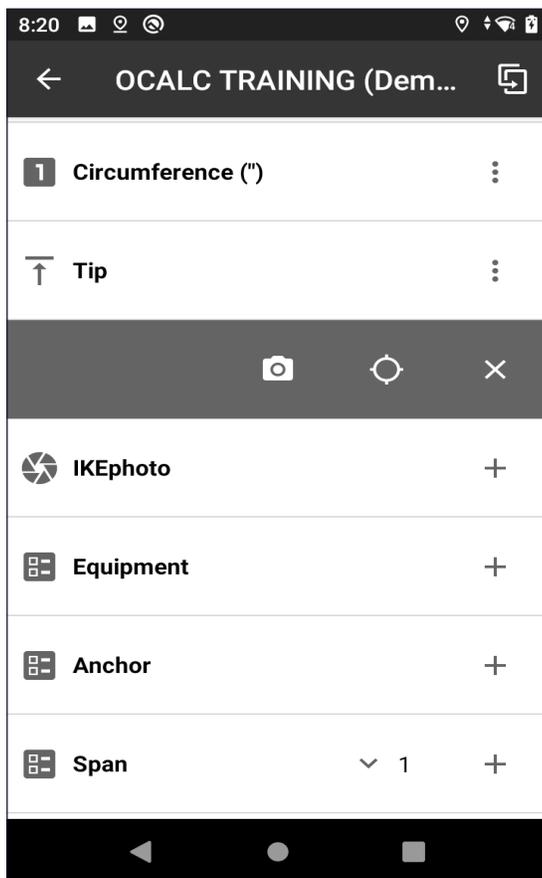
You can enter data directly into the on-screen form and use tools to make measurements. Data entered is saved automatically.



The Job screen shows all of the collections you have made for this job in both a list and on a map.

In the List tab, tapping the down arrow next to a collection shows a summary.

Local GPS Position



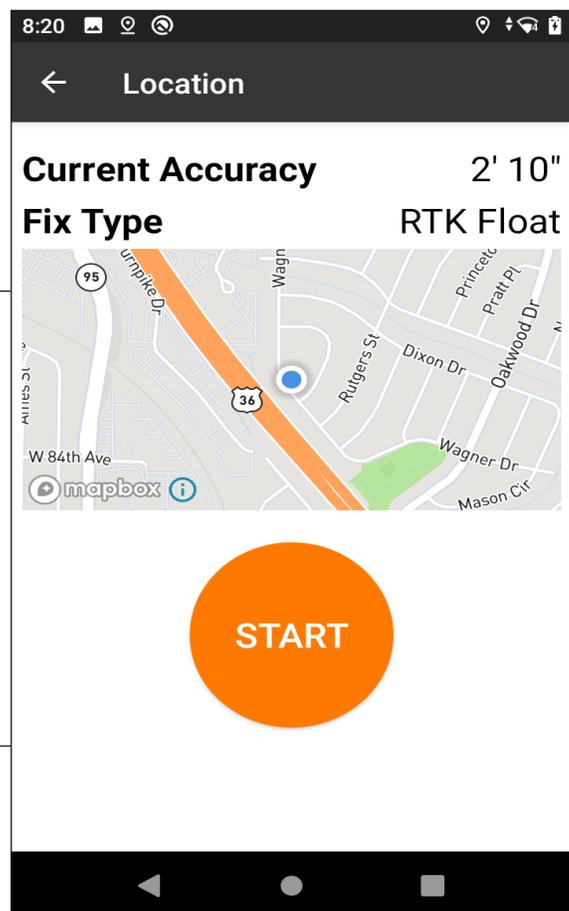
1

To capture a location, select the field and choose from:

-  Target Position (GPS + laser offset)
-  Local Position (GPS Only)

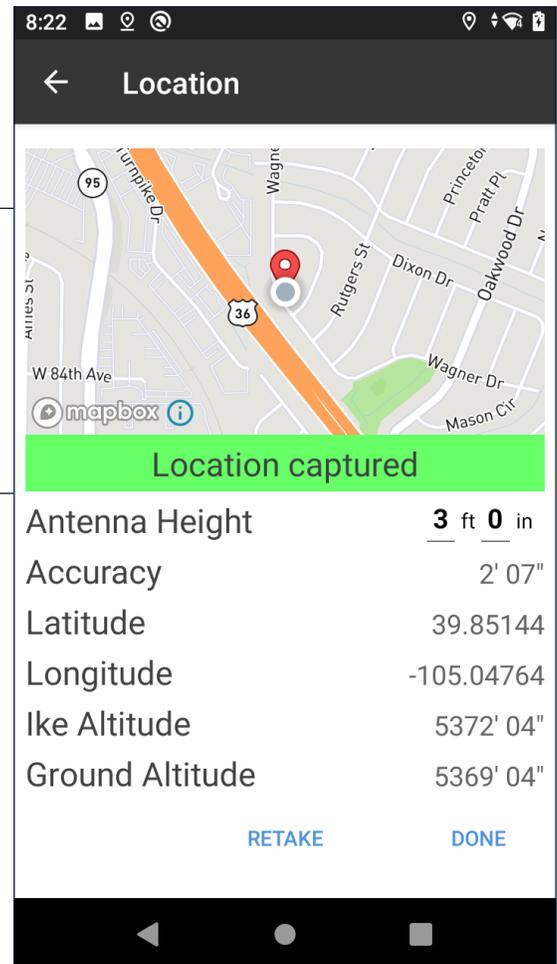
2

For the Local Location tool, the current accuracy shows the expected accuracy of the position. Pressing START begins averaging GPS data for a 30-second period to get the best accuracy. Try not to move or cover the device during this process.

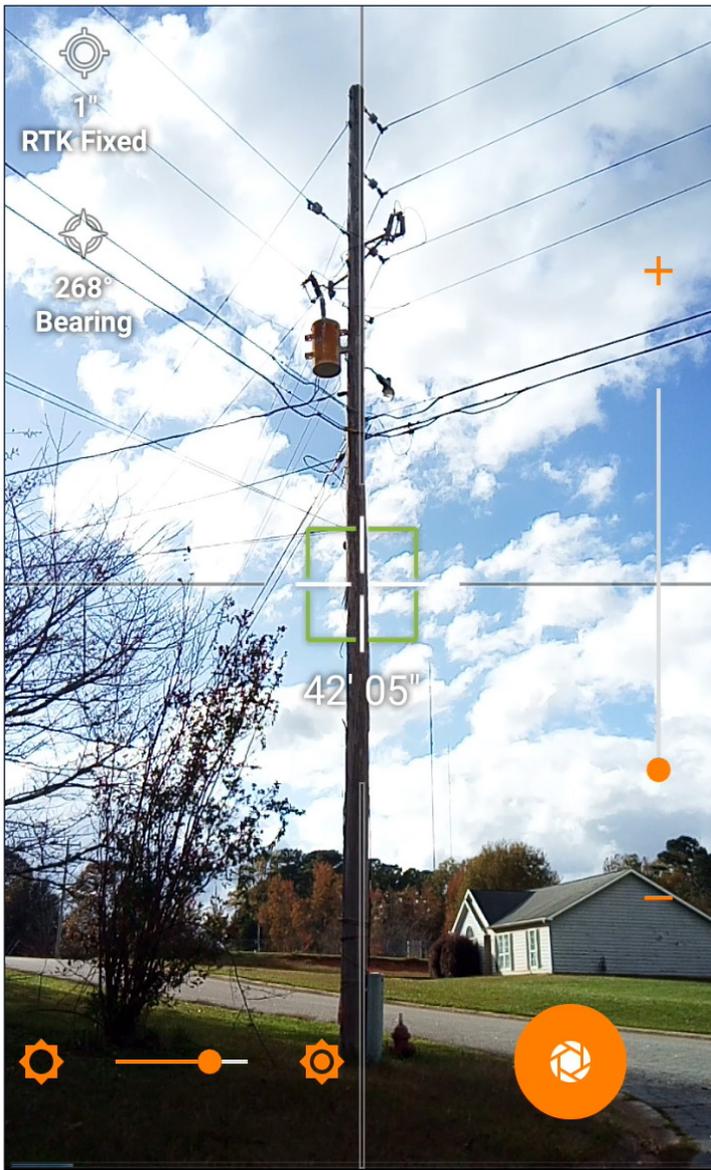


3

Location captured. The red pin on the map shows the location captured. The gray dot shows your current location.



Target GPS Position



1

Aim at the target with the crosshair to ensure the laser is hitting the object you want to locate.

2

Ensure the crosshair turns green, which indicates that all of the instruments (GPS, Compass and Laser) are providing information.

3

Tap the orange Capture button at the bottom of the screen to take a picture and capture the location.

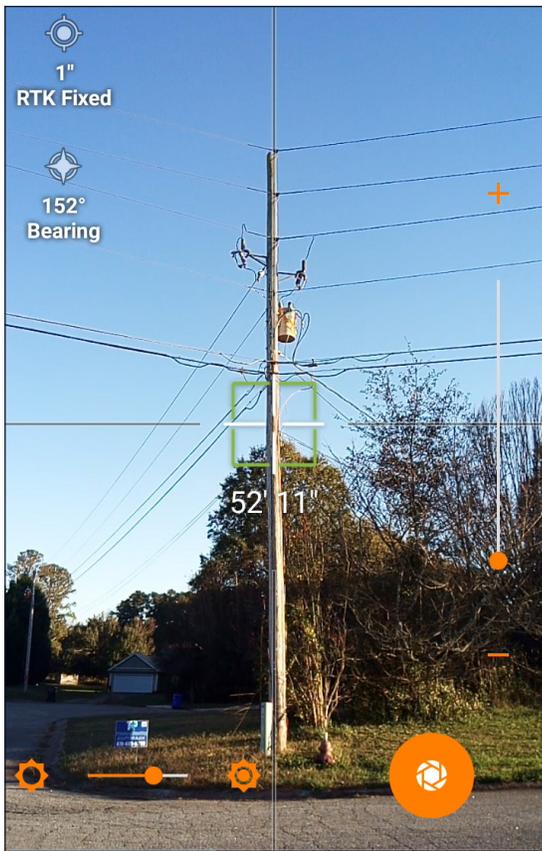
Note: You can zoom in using the slider on the right to help with aiming. This will not result in a zoomed-in photo.

Note: The image will not be utilized. This is simply a way to collect the GPS location.

Point-to-Point

The Point-to-Point workflow is used anytime the Vector tool is used. Look out for the  icon in your collection form.

Span	
 Span Length	
 Type	+
 Note	+
 Wire	+
 Span Guy	+

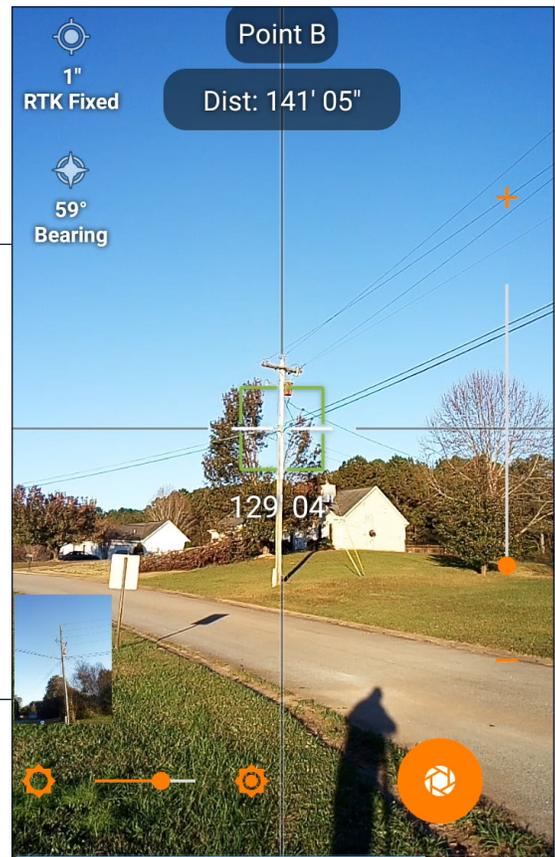


1

Aim at the target. Zoom in to ensure you are hitting the correct target and confirm that the distance on screen is reasonable.

2

Keeping the IKE Device on the tripod and the tripod in the same location, use the tripod lever to point the IKE camera towards Point B. On-screen, aim at the target. Zoom in to ensure you are hitting the correct target and confirm that the distance on screen is reasonable.



Review

Slope Distance	141' 04"
Horizontal Distance	141' 03"
Vertical Distance	5' 09"
Bearing	39.69°
Pitch	2.32°



RETAKE

DONE

3

The distance and bearing from Point A to Point B are calculated.

4

Click "RETAKE" if you're not satisfied with your results.

Mid-Span Height



1

Aim at the wire. Zoom in to ensure you are hitting the correct wire and confirm that the distance on screen is reasonable.

2

Use the orange guide arrows to locate the position directly below the wire.

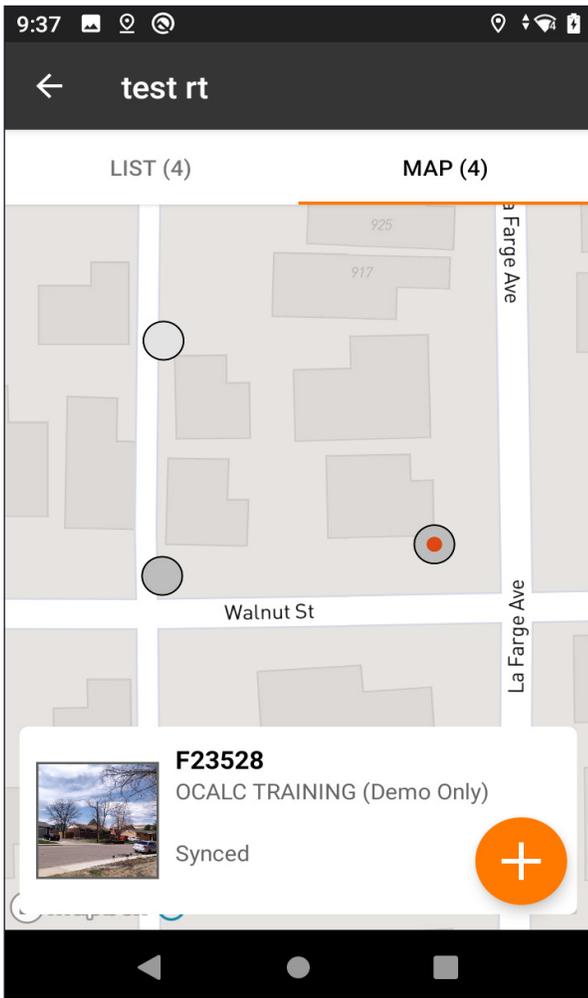
3

When the arrows disappear and both the crosshair and the height measurement area turn green, tap the Capture button.



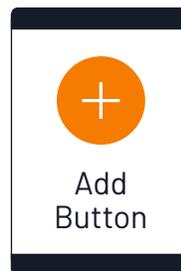
4

The results screen shows the height of the wire and a photo with the crosshair.



Tapping the Map tab displays the collections for this Job on a map.

Tapping the "Add" button will take you to the Form screen to add another collection. Tapping on the location balloon will take you to that collection.



Upload Data

After you've collected the data, you will want to upload the data to the IKE Office.

1

Re-establish a Wi-Fi connection, if necessary.

2

Return to the Jobs list on the My Jobs screen.

3

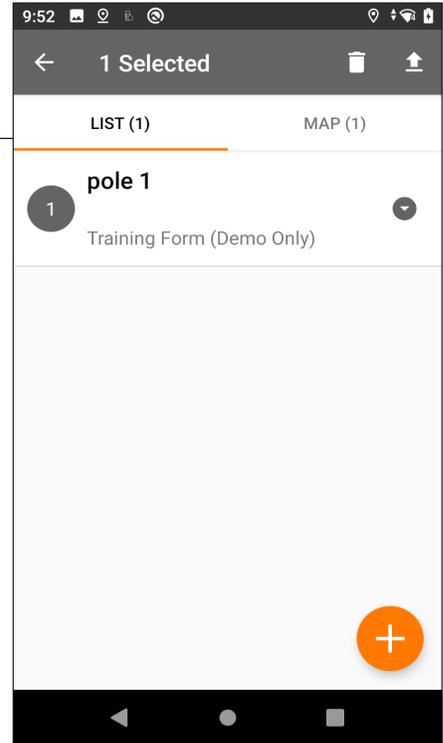
Touch the circle outline, located to the left of the Job name.

4

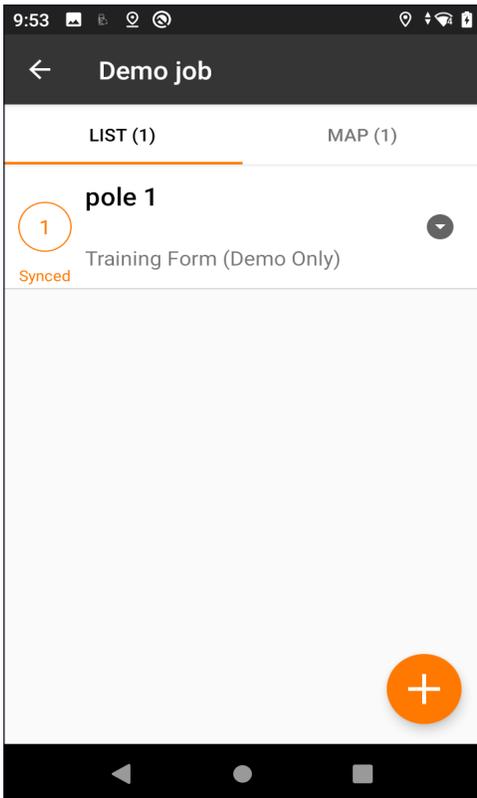
Once activated, the circle should become gray and show the number of selected files at the top of the screen.

5

Touch the upload arrow to upload your job.



A dialog box indicates the status of the upload and indicates when successful.



After uploading, the job is paired with an orange, uploaded circle.

Now you can view the job in IKE Office. After uploading your files, we recommend exiting the IKE Field app prior to powering down the IKE device.

Photo Measure - IKE Office

IKE Office Map

IKE Office Measurement Screen

Annotating an IKE Photo

The screenshot displays the 'IKE Office' measurement software interface. The main window shows a diagram of a utility pole with two annotations: '42'8" - 1395' pointing to the top crossarm and '36'4" - 1/0 ACSR' pointing to a lower attachment point. The left sidebar lists 'Blanding St. Collection' with radio buttons for poles 1395 through 1401. A map at the bottom left shows a street grid with a blue dot indicating the pole location. The right sidebar contains a data panel with the following information:

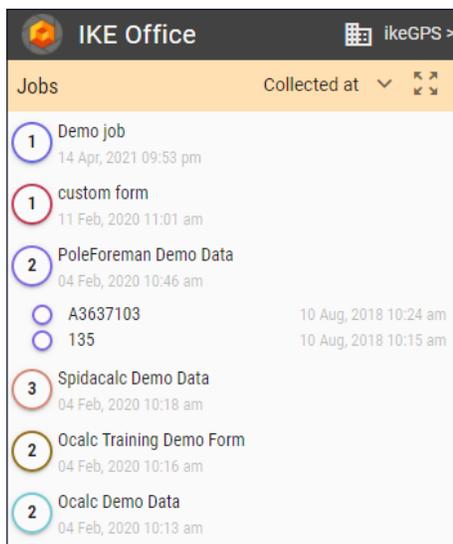
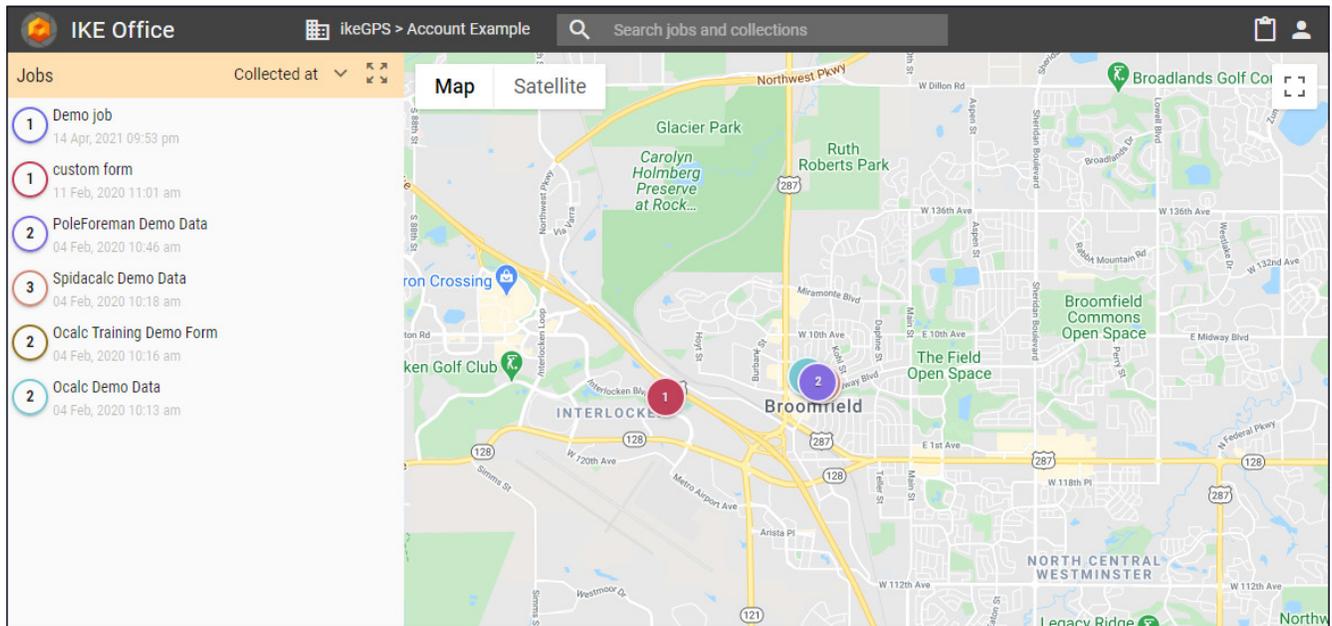
ID	1395
Tag Photos	2
Type	Wood > 3 > 45°
Location	Longitude 33.4124433 Latitude -84.8189015 Altitude 239.60
IKE Photo	2
Power	
Primary Circuit #1	1/0 ACSR
Phase A Height	36'4"
Secondary Circuit #1	1/0 ACSR
Phase A Height	Measure
Communications	
Communications #1	1.00" CATV
Height of Attach.	Measure

Photo Measure – IKE Office

IKE Office Map

Visit <https://office.ikegps.com/> in your web browser to open IKE Office. If you are logged in you will land on the home screen of IKE Office, referred to as the Map page.

On the Map page, you will see an overview of all of the jobs in the department.

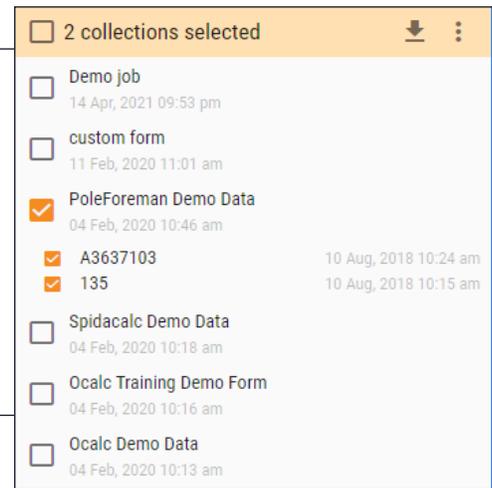


On the left of the screen, you'll see the Jobs list. Here you can view Jobs and the Collections within Jobs. The list can be sorted by when the job was collected, when the job was last modified, by the title of the job, or by who collected the job. Ike Office Pro accounts may see additional sorting options.

Click on the job name to see the list of collections it contains and zoom into the job on the map.

Click on a collection name to highlight the collection on the map and open the form for viewing.

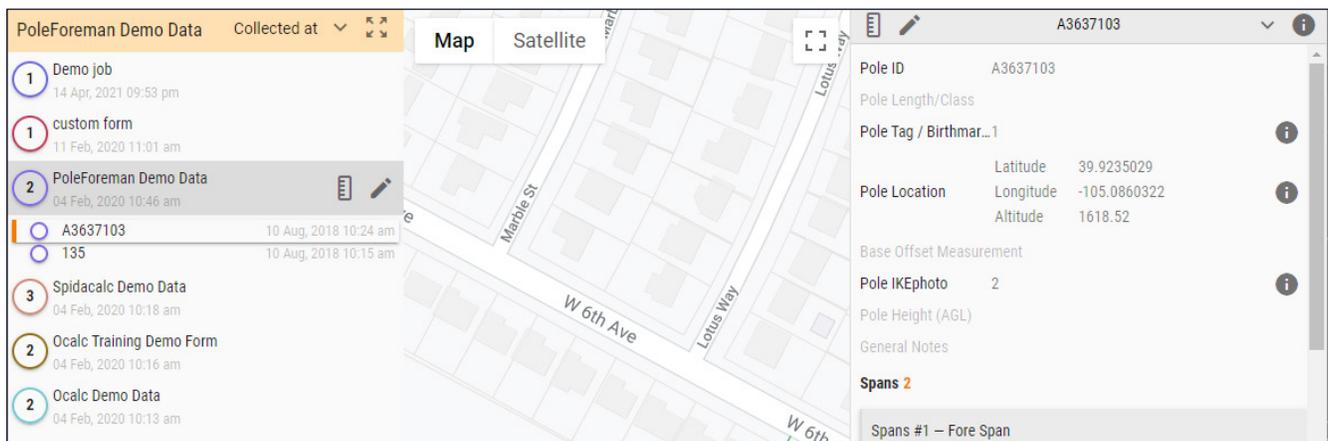
Clicking the circle next to the job name will select the job or collections so that you can click the download arrow and choose how to export the data. The more options icon (next to the download arrow) houses additional actions to perform with the data, such as deletion.



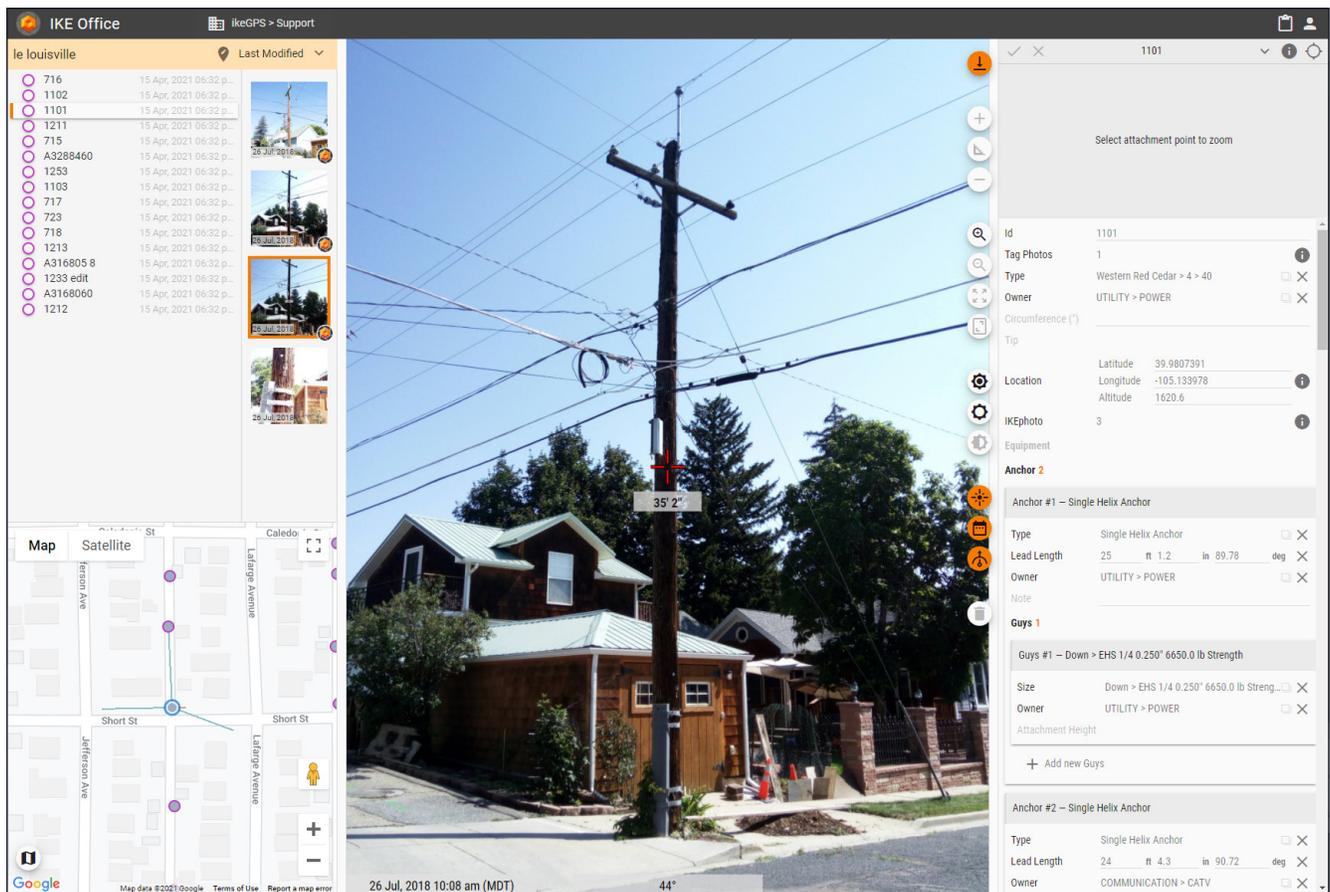
Opening the Measurement Screen for a Collection

There are 2 ways to access a collection in order to view or measure the IKE Photos in the collection.

- Hover your mouse over the name of the job so that it highlights grey and a small ruler icon appears. Click the ruler to open the Measurement screen for this collection.
- Click on a job to view the list of collections under the job. Click on a collection to view the collection form on the right side of the page. At the top of the form, you'll see a small ruler icon. Click the ruler icon to open the Measurement screen for that collection.



IKE Office Measurement Screen

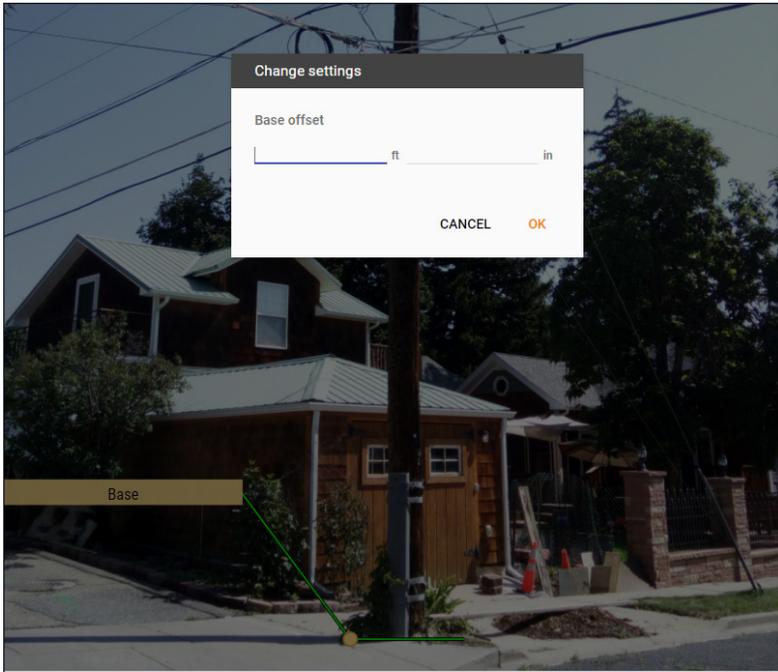


The Measurement screen is where IKE Photos can be measured to provide accurate heights of attachment.

On the left side of the screen, users can view a list of the collections within a job, an interactive map of where the collection took place, and the simple photos and IKE Photos that were captured for the active collection. On the right side of the screen, users can utilize the small circle icon tools to perform various functions with the selected photo, view information about the collection, fill out form data pertaining to the collection, and select objects from the form to measure on IKE Photos.

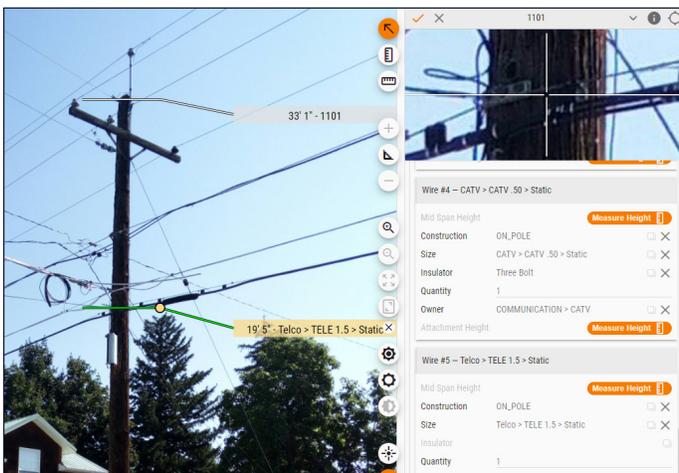
Annotating an IKE Photo

Click on the IKE Photo to set the base of the pole. This will be the base for all the other measurements on the pole. If you used a base-offset in your IKE Photo, double-click on the “Base” annotation to enter in the offset measurement.



A base offset should be used for collecting IKE Photos of poles where the base of the pole is not visible due to vegetation, snow, or anything that obscures the base.

Once the base of the pole is set, begin going down the IKE collection form and measuring the heights of objects listed in the form. Click the orange “Measure Height” button within a height field for an object and then click on the IKE Photo where the object is attached to the pole.



Users can edit any information in the collection form. For example, users can add new wires or equipment, change the size of a wire that was already input in the field, or edit span information.

When editing and annotating a collection is complete, make sure to save the changes by clicking the orange check icon at the top of the collection form.

Data Export - IKE Office

KML

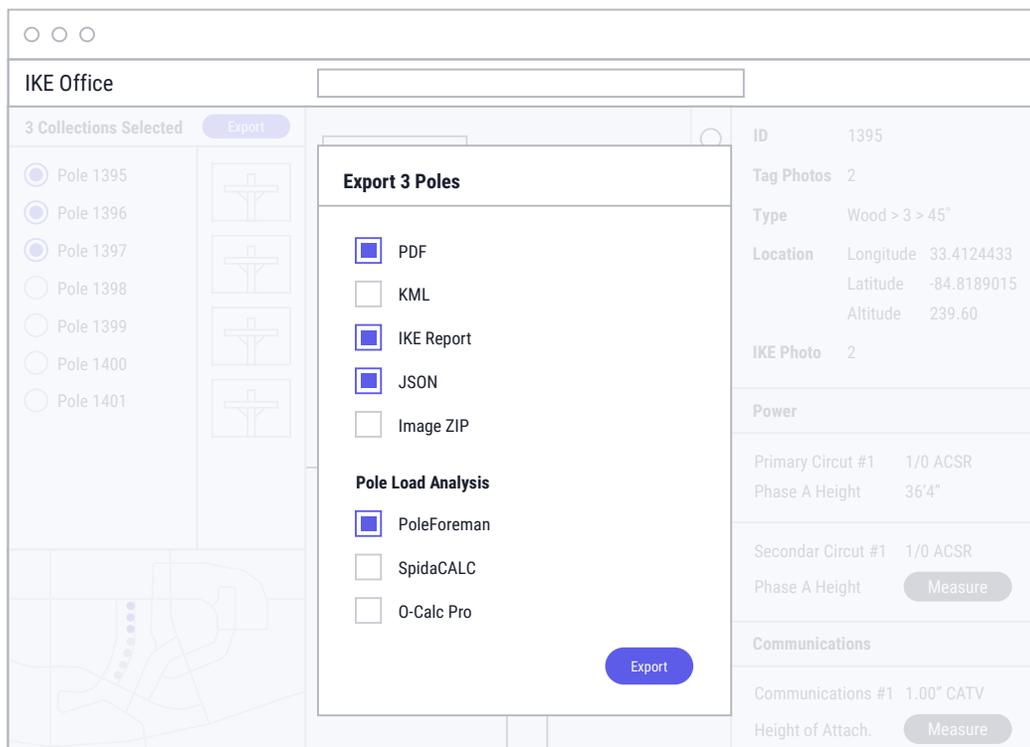
Excel

JSON

IKE Report (PDF)

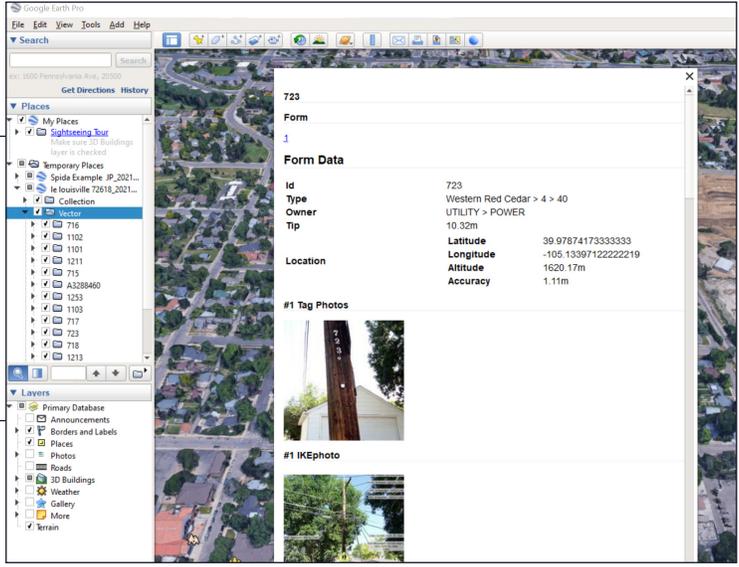
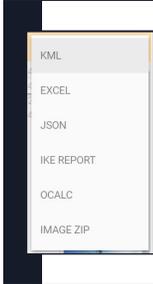
Image Zip

PLA Integration Export



KML

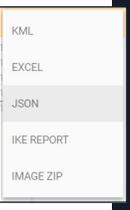
Select the "Download" arrow to view the Export Menu. Choose the KML format.



JSON

```
1 {
2   "schema": "https://office.ikegps.com/v1/schema/collection.json",
3   "id": "Bm30gpnG2r",
4   "url": "https://office.ikegps.com/v1/collection/Bm30gpnG2r.json",
5   "uuid": "c4829061-fe3a-4e99-be17-9b243ecb4af0",
6   "instanceId": "t01Q8euCkg",
7   "revision": {
8     "id": "m88XZbDnt0",
9     "url": "https://office.ikegps.com/v1/collection/Bm30gpnG2r/m88XZbDnt0.json"
10  },
11  "job": {
12    "id": "62qGHAE5dm",
13    "url": "https://office.ikegps.com/v1/job/62qGHAE5dm.json"
14  },
15  "form": {
16    "id": "BU2gabiVie",
17    "url": "https://office.ikegps.com/v1/form/BU2gabiVie.json",
18    "import": {
19      "type": "ikecalc",
20      "version": "0.3.0",
21      "attachment": {
22        "id": "HKFxuF0pCelQfmmA6iH9hGFERY715m7",
23        "url": "https://office.ikegps.com/v1/attachment/HKFxuF0pCelQfmmA6iH9hGFERY715m7.j"
24      }
25    }
26  },
27  "createdAt": "2020-12-11T20:59:31.198Z",
28  "collectedAt": "2020-12-11T20:54:06.633Z",
29  "collectedBy": {
30    "id": "S4E59Njf1F",
31    "url": "https://office.ikegps.com/v1/user/S4E59Njf1F.json"
32  },
33 }
```

Select the "Download" arrow to view the Export Menu. Choose the JSON format.



IKE Report PDF

- KML
- EXCEL
- JSON
- IKE REPORT
- IMAGE ZIP

The IKE Report provides all the form details, tag photos, and IKE Photos captured for a collection. Any IKE Photos that contain annotations, will appear extra large within the document. To download the report, select the "Download" arrow to view the Export Menu. Choose the IKE REPORT option.



PRINT

723 In Louisville 7/26/18 (1 of 1)

Type: Western Red Cedar 4 x 4-0 Owner: UTILITY + POWER Tip: 33 10' Location: (lat: 39.97874, lng: -105.10397, alt: 5315 ft)

Tag Photos



2018-07-26

IKPhotos




2018-07-26 2018-07-26

Span #1: Other

Span Length: 110 11' w/ 359.84' Environment: ALLEY

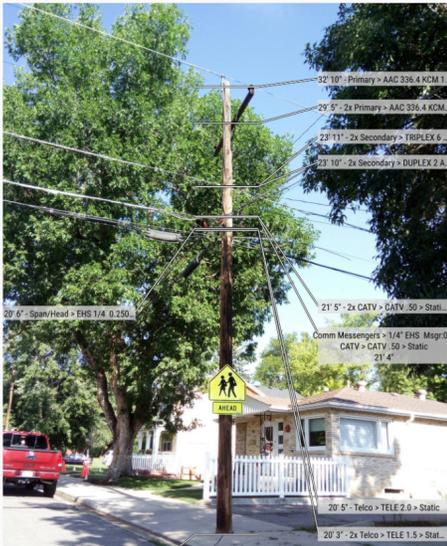
Wire #1: Primary - AAC 350.5 KCM 19 STRAND BAKULA - Static	Insulator: Pin 9	Quantity: 1	Attachment Height: 33 5'
Construction: CROSSARM_X1			
Wire #2: Primary - AAC 338.4 KCM 19 STRAND TULIP - Static	Insulator: Pin 9	Quantity: 1	Owner: UTILITY + POWER
Construction: CROSSARM_X1			
Attachment Height: 29 5'			
Wire #3: Secondary - TRIPLEX 6 AWG - Static	Insulator: Deadend	Quantity: 1	Owner: UTILITY + POWER
Construction: OH_POLE			
Attachment Height: 23 11"			
Wire #4: Comm Messengers - 1/4" EHS Mggr:0.250' - Static	Insulator: Three Bolt	Quantity: 1	Owner: COMMUNICATION + CATV
Construction: OH_POLE			
Attachment Height: 21 4'			
Wire #5: Telco - TELE 1.5 - Static	Insulator: Three Bolt	Quantity: 1	Owner: COMMUNICATION + TELCO
Construction: OH_POLE			
Attachment Height: 20 3'			

Span #2: Back Span

Span Length: 131 7' w/ 238.65' Environment: PARALLEL_TO_STREET

Wire #1: Secondary - DUPLEX 2 AWG - Static	Insulator: Three Bolt	Quantity: 1	Owner: UTILITY + POWER
Construction: OH_POLE			
Attachment Height: 23 10"			
Wire #2: CATV - CATV 50 - Static	Insulator: Three Bolt	Quantity: 1	Owner: COMMUNICATION + CATV
Construction: OH_POLE			
Attachment Height: 21 5'			
Wire #3: Telco - TELE 2.0 - Static	Insulator: Three Bolt	Quantity: 1	
Construction: OH_POLE			
Attachment Height: 15 5'			
Mid Span Height: 15 5'	Construction: OH_POLE	Insulator: Three Bolt	Quantity: 1
Owner: COMMUNICATION + TELCO	Attachment Height: 20 3'		

IKPhotos (1 of 2)



32' 10" - Primary - AAC 338.4 KCM 19 STRAND TULIP - Static

29' 5" - 2x Primary - AAC 338.4 KCM 19 STRAND TULIP - Static

23' 11" - 2x Secondary - TRIPLEX 6 AWG - Static

23' 10" - 2x Secondary - DUPLEX 2 AWG - Static

20' 6" - Span/Head - EHS 1/4 0.250'

21' 5" - 2x CATV - CATV 50 - Static

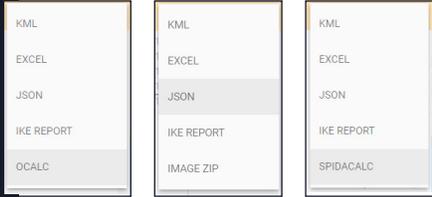
Comm Messengers - 1/4" EHS Mggr:0.250' - CATV - CATV 50 - Static

21' 4"

20' 5" - Telco - TELE 2.0 - Static

20' 3" - 2x Telco - TELE 1.5 - Static

PLA Integration Export

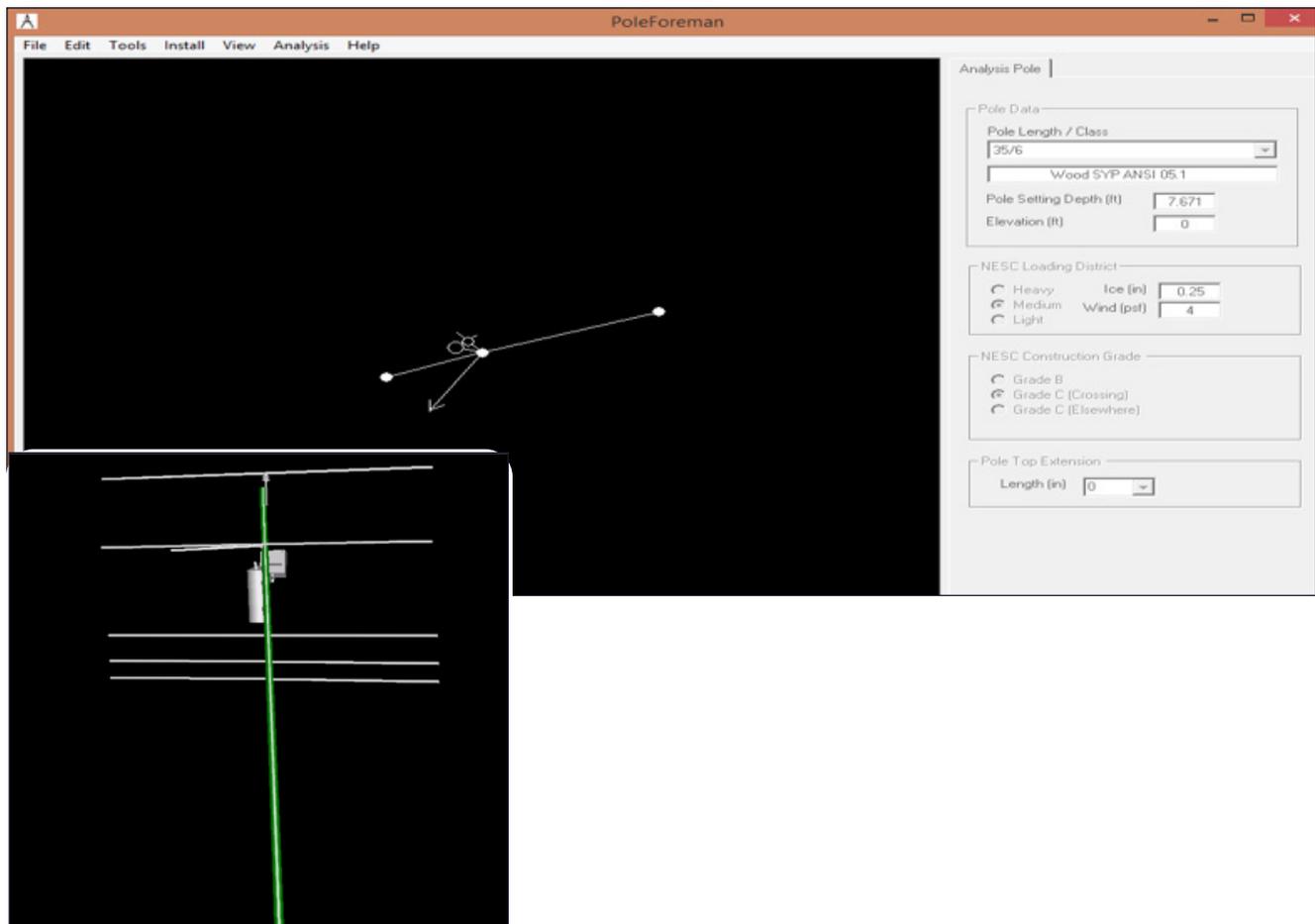


The options under the export menu will vary depending on the form the data was collected on. Some exports for Pole Loading Analysis (PLA) will be downloaded using the "JSON" option- such as PoleForeman.



When exporting from IKE Office for Pole Loading Analysis, be sure to follow these guidelines:

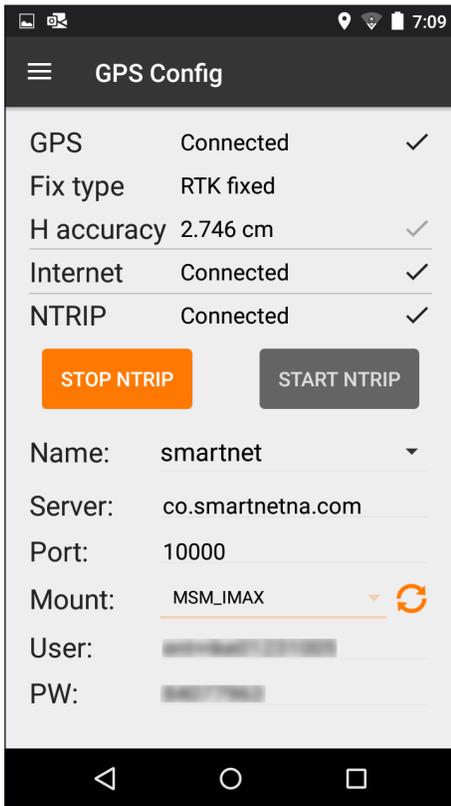
- Ensure your IKE collection form contains all of the relevant information about your pole such as spans, attachment heights, pole tip height, down guys, span guys, and equipment.
- Ensure all of your heights of attachment are annotated on the IKE Photo
- If you have proposed equipment or wires, you can add these to your IKE collection form and these features will appear on the modeled pole in your PLA software.



IKE+ Information

The IKE+ is exactly like the IKE but contains an advanced GNSS module that is able to utilize RTK positioning. The IKE+ has the ability to connect to an RTK Network or base station using NTRIP. The GPS Config app must have valid credentials input to access the location corrections.

The GPS Config app doesn't need to be opened other than to input RTK connection information as IKE Field automatically begins utilizing the location correction information when a location is collected.



Please note, connecting to an RTK network requires a strong WiFi connection and an open location - such as outdoors, away from building walls.

You should receive the following information from your RTK connection provider. Fill out this information within the GPS Config app

- Server
- Port
- User
- PW (Password)
- Mount

The "Mount" field should automatically populate a list for you to select the correct Mount Point for.

We've compiled some helpful links and quick actions to solve problems while you're out collecting poles. Visit our Field Support webpage at www.ikegps.com/field-support. You can also reach support at 1-720-381-1634 or support@ikegps.com

FCC Guidelines/Documentation

FCC Information

1520894-003
Model: IKE-IK04-L / IKE-IK04-L2
FCC ID: 2ACBG4000
IC: 11952A-4000
This device complies with Part 15 of the FCC Rules.

Contains

FCC ID: 2AFDI-ITC00626S
IC: 9049A-ITC00626S

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes of modification to this unit not expressly approved by party responsible for compliance could void the user's authority to operate the equipment. Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Industry Canada

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

- This device may not cause interference; and
- This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- l'appareil ne doit pas produire de brouillage;
- l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Notes:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense

Changes or modifications not expressly approved by ikeGPS could void the user's authority to operate the equipment.

This equipment is not suitable for use in locations where children are likely to be present.

This equipment complies with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65 and RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment has very low levels of RF energy that are deemed to comply without testing of specific absorption ratio (SAR)

Class 1M Laser Product

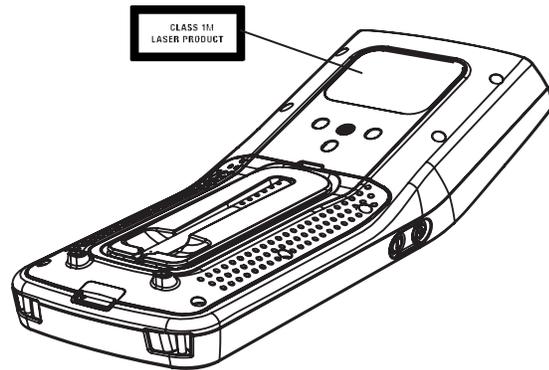
IEC60825-1:2014 (3rd Edition)

Caution: This instrument emits a non-visible laser beam. The laser beam emitted is Laser Class 1 per IEC 60825-1 and complies with 21 CFT 1040.10 and 1040.11 except for deviations pursuant to Laser Notice 50, date June 24, 2007

Caution: Hazardous Radiation. Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Caution: while the laser tool is in operation, be careful not to expose your eyes to the emitting laser lens. Exposure to a laser beam for an extended time may be hazardous to your eyes.

Warning: the following label samples are placed on your laser tool to inform of the laser class for your convenience and safety. Please reference the Product Manual for the specifics on a particular product model.



Support

Need Assistance or have a question? Please contact our support team:

www.ikegps.com/field-support

Customer Support

Phone: +1 720 381 1634

Toll-free: +1 844 445 3477 ext 3

Email: support@ikegps.com

8:00 am to 5:00 pm (UTC -06:00)

Monday – Friday (Closed on major US holidays)



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If you require further assistance or more in-depth help regarding specific work flows, please contact

support@ikegps.com

