User Documentation – PointMan Locate

PointMan

Welcome!

PointMan® is the mobile component of the Transparent Earth system. PointMan® is a GPS-centric mobile software application that enables authorized field personnel to capture precise asset locations and other location related information from a mobile device. PointMan® is designed to collect precision location points and pedigreed 'metadata' associated to the points being captured using our patented processes. PointMan® captures, binds and submits the precision & pedigree™ data to ProStar's geospatial database in real time. The PointMan® mobile solution provides the field worker with the ability to visualize their proximity relative to existing infrastructure, view any historical data relating to that infrastructure and provide the ability to update location data. PointMan® also provides the functions to take geo-referenced photos, complete electronic forms, take field notes or create sketches before submitting the information to the geospatial database service.

See the Help topic for details on how to use the PointMan Help System.

Getting Started

PointMan Locate Installation and Login Procedures

Overview
This topic outlines the procedure to download the **PointMan Locate** application onto a mobile device.

Prerequisites

A. Internet connectivity (on the mobile device).

Procedures

1. On your mobile device, launch a browser application (Chrome).

2. Navigate to the ProStar/PointMan Download website at:
   http://mobile.prostarcorp.com/pointmandownload.htm.

3. Tap the **Download** button to start the download on your tablet.

   NOTE: downloading the application onto your laptop or desktop will not work. This application is designed specifically for your android phone or tablet.
   Do not download this application to your laptop or desktop.

4. Review the **License Agreement**, then click **OK**.
   The download will automatically start.

5. Close the **License Agreement** dialog box by clicking the **X** button in the upper right corner.

6. On your device, navigate to the downloaded file.
   On some devices, you will see a down-arrow icon in the upper left corner of your tablet screen.
   On other devices, you will need to navigate to the Download file, and locate the PointMan application/icon.

7. Tap the downloaded file.
   The **PointMan Privacy Statement** displays.

8. Tap **Next**.

9. Tap **Install**.
   Once the install is complete, you will have the option to close the message window, or directly open the application.

10. Tap **Open**.
    The **Add User Type** message displays.

11. Tap **Create new local user for stand-alone use**.

12. Tap **OK**.

13. Enter a **User Name**
    Note: a tablet can only have one (1) user created for PointMan.

14. Enter an **Email address**.

15. Tap **Add**.
    The License dialog displays.

16. Tap **Close** to return to the log in screen and continue logging into PointMan.
    The **New Project** screen displays.
    Upon initial installation and log into PointMan, you will need to create a new/initial project:
    a. Enter a **Name** for your first Project.
    b. The **Date** field automatically populates.
    c. Select **Standard** from the **Template** drop-down list.
    d. Tap **OK**.
       You will see the map display and you are ready to use PointMan!

    a. For instructions on how to use PointMan, start with the Navigation help topic, and use the rest of the Help System for specific details.
    b. Basic instructions:
       a. Creating a Point
       b. Creating a Line
       c. Creating a Polygon
       d. Creating an eForm
       e. Taking a Photo
       f. Creating a Sketch
       g. Sending information to email recipients

Related Topics:

- Purchase or Renew PointMan License
- Configuring PointMan Settings
- PointMan System Configuration

- Managing Your Projects in PointMan Stand Alone

System Configuration

Overview

Complete these instructions to configure your system for the effective use of PointMan.

Prerequisites

1. PointMan Installed

Quick Reference for Basic Device Settings

Menu Path			Value/Action
Settings	Security	Unknown Sources	Checked
Settings	Location Services	GPS Satellites	Checked
Settings	Display	Sleep	Set to 5 Minutes
Settings	Display	Brightness	Clear Auto Check Mark Slide to right until bright enough
Settings	Advanced Settings	Automatic Date and time	Checked
Settings	Select Time Zone		Select correct time zone
Settings	Bluetooth		ON - if you are using an external GPS and/or Pipe & Cable Locator Tool

Instructions for Basic Device Settings

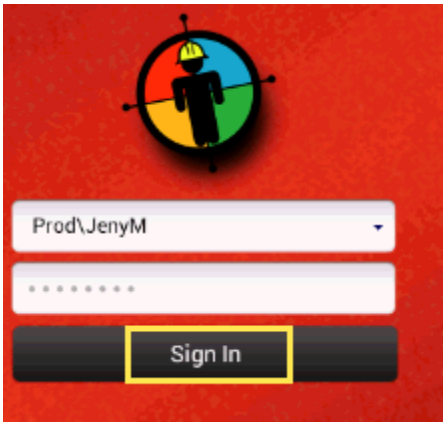
1. On the tablet, locate and tap your **Settings** icon.
2. Tap **Security**, and select the **Unknown sources** check box.
3. Tap **Location Services**, and select the **GPS satellites** check box.
4. Tap **Display**, tap **Sleep**, and select **5 minutes**.

5. Still in the **Display** menu, tap **Brightness**, clear the **Automatic brightness** check box, and move the slider to the right until the screen is bright enough. Click **OK** when complete.
6. Tap **Date & Time**, and select the **Automatic date & time** check box.
7. Still in the **Date & Time** menu, select the **Automatic time zone** check box.
8. Tap **Wireless & Networks** and turn Bluetooth **On**.
9. Return to the home tablet screen by clicking the **Return** icon  .
10. Tap the **Applications** icon. Flip through the applications until you find the **PointMan App** (they are listed alphabetically).
11. Tap and hold the **PointMan** icon, and drag it to the left until the tablet home screen displays. Let go of the PointMan App. This will place the PointMan icon on your home screen and make it easily accessible every time you use the tablet.
12. Double-tap the **PointMan** App to launch the application.
13. Log into PointMan for authentication.

Standard Login

1. On the tablet home screen, tap the **PointMan** icon.

2. Enter the **User ID** and **Password,** then tap **Sign In**.



PointMan opens to the Map display.

Hardware and Software Requirements

PointMan is designed to operate on most 7” – 10” Android Tablets, and the following tablet devices have been fully tested and can be used without issue:

Hardware	Comments
Panasonic 7" Tough Pad	
Panasonic B1	
Panasonic B2	
eCom Tab-Ex 01	
Xplore (RangerX)	

Tablets must have the following:

Software	Comments
Android 4.0.4 or later	

PointMan can also be used on Android Smartphones but due to the many devices available and consequent variations in the firmware, the user experience may be less than optimal. Due to this we recommend that only the devices listed above are utilized.

Purchasing or Renewing PointMan Locate License

Your initial download of the PointMan application will allow you a one (1) year free trial. Notifications that your trial are about to expire will display in PointMan five (5) days before the free trial expires.

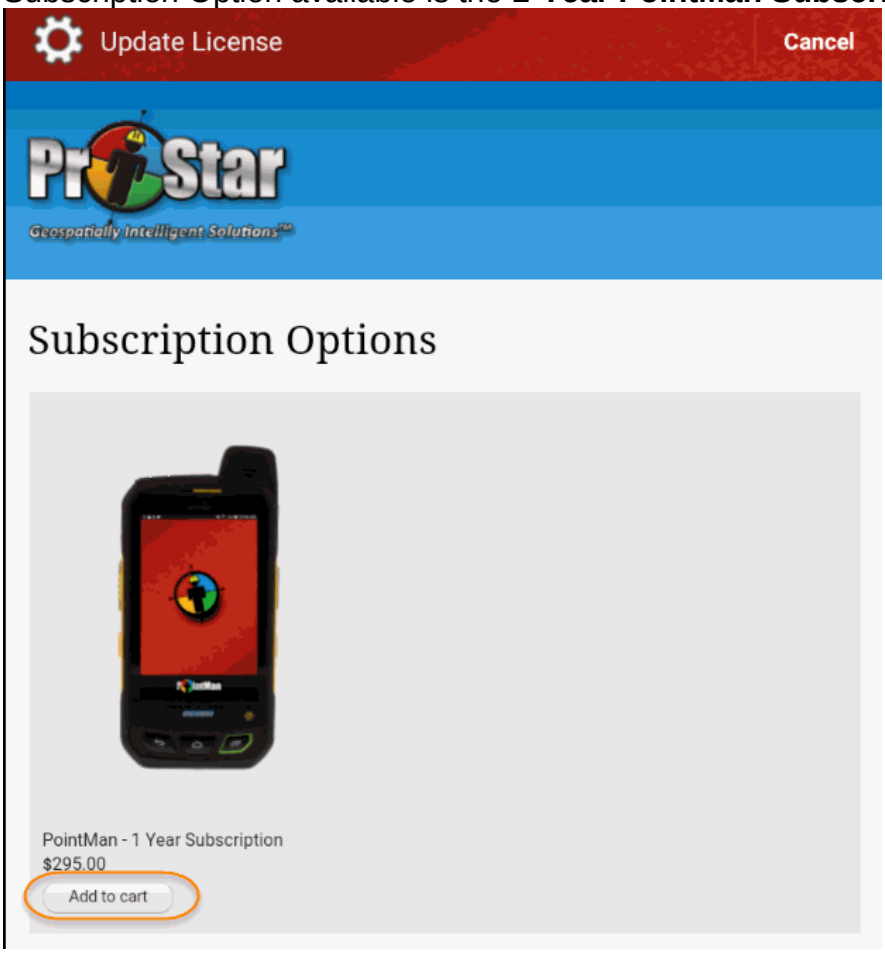
To Purchase or Renew a license:

1. Click **Renew** when the expiration message displays, then proceed to step 4.

   Or,

2. Tap **Menu** > **Settings**.

3. Scroll down to the bottom of the **Settings** screen, and tap: **Renew**.
   The **Update License** screen displays with a list of options. Currently, the only Subscription Option available is the **1-Year PointMan Subscription**.



4. Tap, **Add to Cart**.
   The Checkout screen displays.

5. Enter the following information:

Field	Comments
E-Mail address	Required
Country	Required
Full Name	Required
Address 1	Required
Address 2	
City	Required
State	Required
Zip Code	Required

5. Tap **Continue to next step**
   (Or, tap **Cancel** to exit out of the Checkout Screen).
   If you failed to enter values in any of the required fields, the system will highlight those fields for you and ask that you complete that field.
   The Review Order screen displays.

6. Validate that the Product/Subscription information is correct, and that your email address and Billing Information is correct.

7. Tap **Continue to next step**.

8. Tap **Pay with PayPal**, **Pay with a Card**, or **Pay with pay Pal Credit**.

9. Select the **Country**.

10. Enter the **Card number**.

11. Enter the **Expiration Date**.

12. Enter the **Security Code.**

13. Enter your **email address**.

14. Tap **Continue**.

15. Select to **sign into PayPal**, or select **Pay Now**.
    The Checkout Complete screen Displays, and you should receive an email confirmation.

16. Tap **Done**.
    You will return to the **Setting** screen.

17. Tap **Close** to return to the main map display.

Navigation

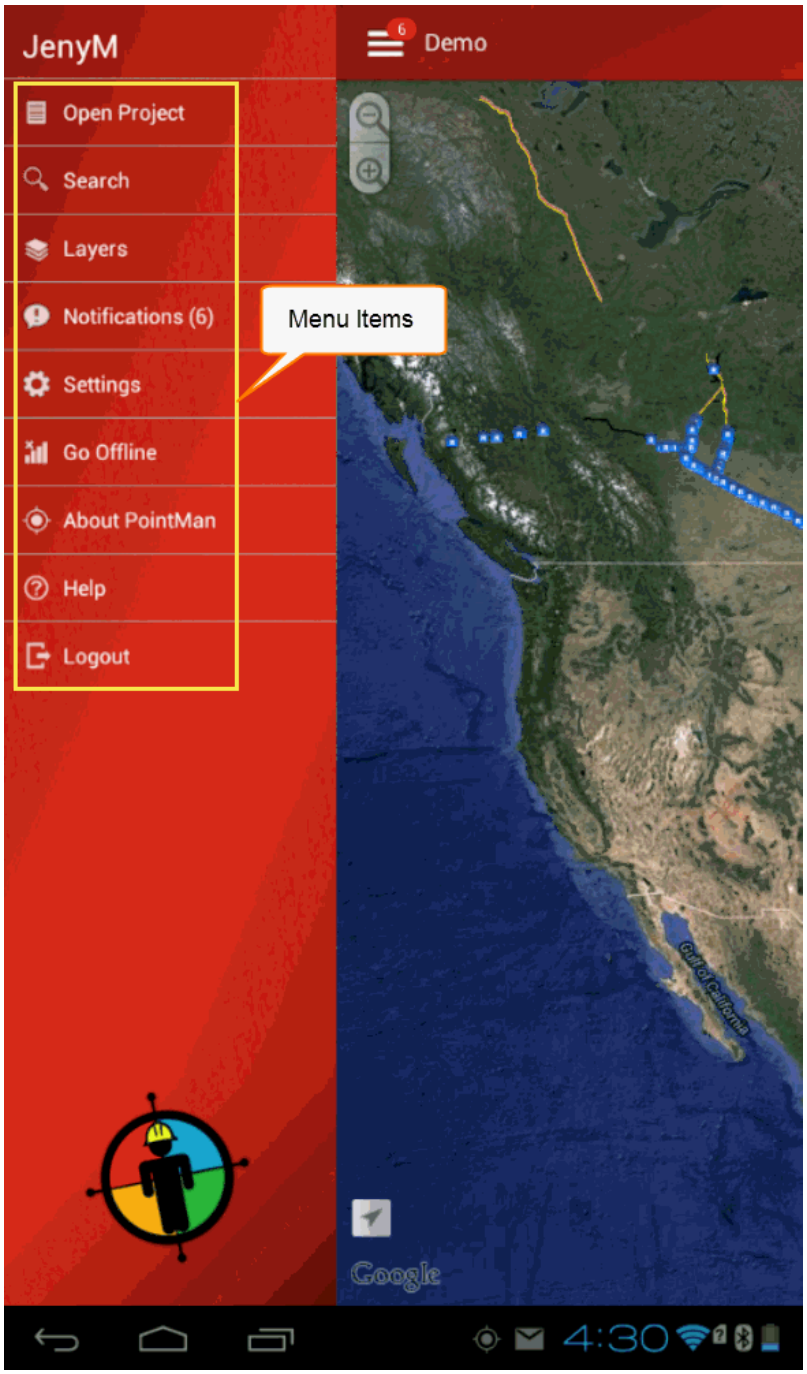
Upon logging into PointMan, you will see the main Map Display:

Item	Description/Directions
Main Map Display	Displays exactly as it was when last logged out. You can touch and drag the screen to move the map to the general desired area, and then double-tap to zoom in.
Zoom In/Out Buttons:	Use the Zoom In/Out buttons to zoom into or away from a specific area. Center the general area you are interested in and tap the Zoom In button. You can also double-tab the screen to zoom in.
Menu Icon	Tap to display options for accessing Layers, Search tools, and other action items.
New Button	Tap to display the New Place Mark dialog. Use this to generate Points, Lines, and Polygons. Also use this to complete eForms, take pictures, and generate sketches.
Return Button	The Return button takes you back one screen. If you click the Return button when a dialog is open, it will close the dialog and return you to the map. Double-tapping the Return button will log you out of PointMan.
Home Screen	Tap the Home button to return you to the main tablet screen.
Other Apps	Tap the Other Apps button to display a list of all apps you have running on your tablet. You can then select an app to go to that app.
Wifi Indicator	Generally displays the level of Wifi connection that you currently have. Tap it to display more details.

Menu

Menu

Tapping the Menu icon displays all Menu Items



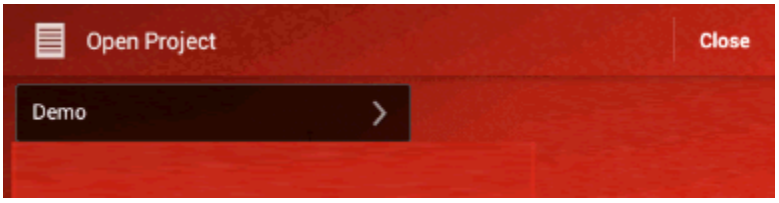
Item	Description/Directions
Open Project	Tap **Open Project** to switch between Projects that you are assigned to. For PointMan Locate users, see the Project Management topic for details on how to create, edit and manage your Projects.
Search	Tap **Search** to open the Search or Query screen. Search for documents, reports, eForms, points, lines, polygons, etc... *Not available in PointMan Locate.
Layers	Tap **Layers** to open a list of all data layers available for display.
Settings	Tap **Settings** to display table settings as they relate to PointMan, GPS, the device, etc...
Go Offline	Tap **Go Offline** to prepare to work without internet connectivity. *Not available in PointMan Locate.
About PointMan	Tap **About PointMan** to display the version number and other details about the PointMan app installed on your tablet
Help	Tap **Help** to display the Help system in PDF format.
Logout	Tap **Logout** to log out of the current project and out of PointMan.

Open Project

Tapping the **Open Project** icon displays a list of all environments available for use. This could be a Test environment or a Production environment.

For PointMan Locate users, see the Project Management topic for details on how to create, edit and manage your Projects.

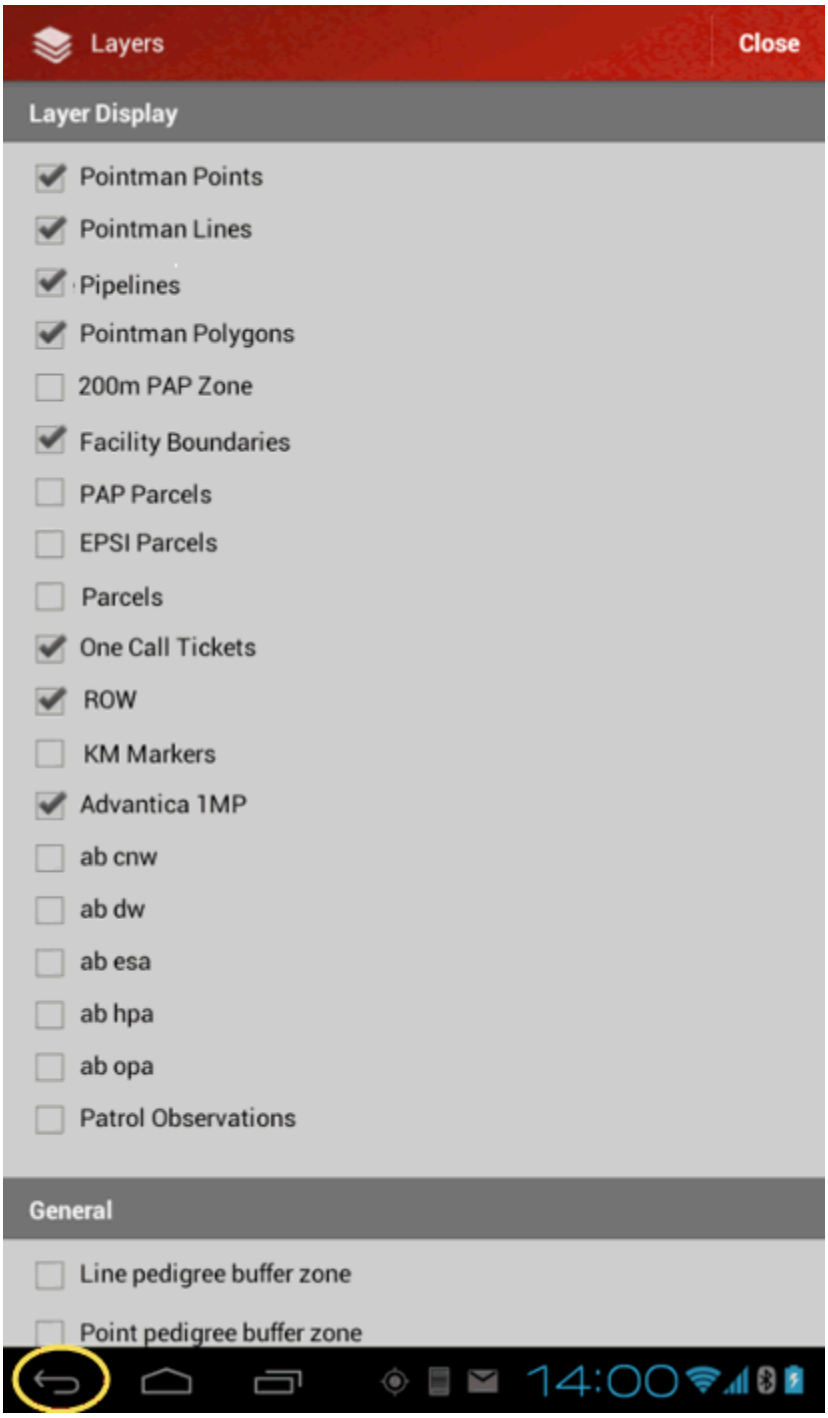
1. Tap the project to open and the map display opens.
2. Tap **Close** to exit out of the screen and return to the map display for the currently selected project.



Layers

Access the Layers screen by tapping the  **Menu** icon, then tapping **Layers**. The Layers screen displays all layers available to view and display on the map. Use different layers for different purposes. For example, select the check box for the PAP layers to view information for the Public Awareness Program. Or, select the One Call Tickets layers to search for and view One Call tickets on the map.

1. To show a layer on the map view, select the check box next to the Layer name.
2. To remove a layer from the map view, clear the check box next to the Layer name.
3. To close the layer screen, tap the **Close** button in the upper right corner. Or just tap the **Layers** icon.


Layers
Close
Layer Display
Pointman Points
Pointman Lines
Pipelines
Pointman Polygons
200m PAP Zone
Facility Boundaries
PAP Parcels
EPSI Parcels
Parcels
One Call Tickets
ROW
KM Markers
Advantica 1MP
ab cnw
ab dw
ab esa
ab hpa
ab opa
Patrol Observations
General
Line pedigree buffer zone
Point pedigree buffer zone
14:00

Project Management

This topic outlines all steps required for managing Projects in your PointMan Locate app. Use these steps to:

- Create Initial Project
- Create Additional Projects
- Open Different Projects
- Edit Projects
- Delete Projects

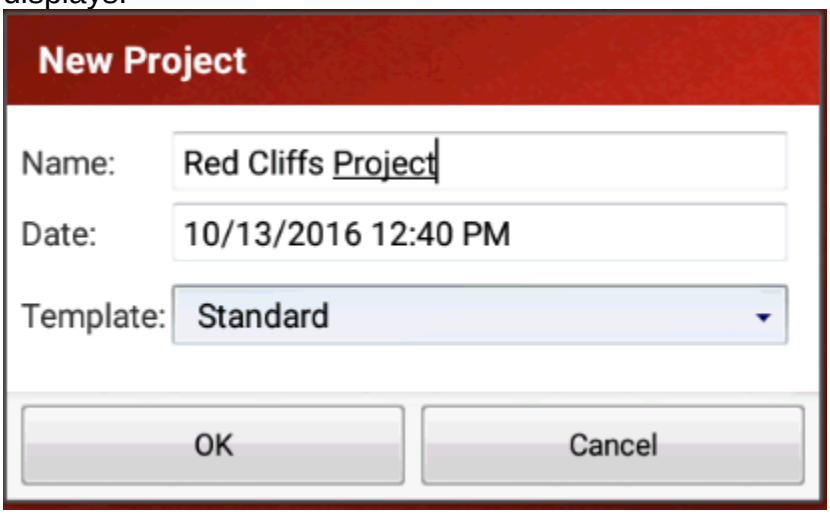
Initial Project Creation:
Upon your first log in to PointMan, there will be no specified projects. You will be required to create a project so that you can manage the data you capture while out in the field.

1. On tablet open PointMan application.

2. In main log-in screen select your Local user from drop down: **Local**

3. **Password** should not be needed.

4. If no local projects exist when opening PointMan; a **New Project** dialogue displays:



5. **Name**: enter a new project **Name**. Project Name should be descriptive enough to distinguish it from other projects.

6. **Date**: automatically populates with the current date and time.
   You can manually select the date and time if needed.

7. **Template**: Select **Standard** from the drop-down list.
   Currently, only the **Standard** template is available.

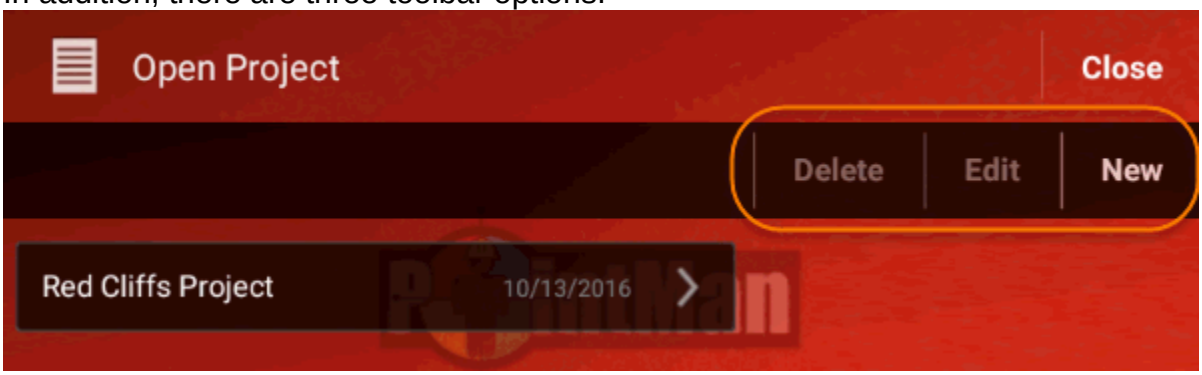
8. Tap **OK**.
   The Open Project list displays briefly, and the system opens the map view for the new project just created.
   From here, you can create points, lines, polygons, eForms and all other data that is related to this specific project.
   Basic instructions:
   a. Creating a Point
   b. Creating a Line
   c. Creating a Polygon
   d. Creating an eForm
   e. Taking a Photo
   f. Creating a Sketch
   g. Sending information to email recipients

Creating New Projects:

You can create as many projects as necessary to manage the data you capture out in the field. Create a separate project for each group of information you are capturing. Or, just capture all of your information within the initial project you created.

1. From the main map display, tap the **Menu** icon (upper left).
   The **Menu** window displays.

2. Tap **Open Project**.
   Your initial project (created upon starting the system) displays.
   In addition, there are three toolbar options:



   1. **New**: creates a new local project on a standard template.
   2. **Edit**: allows user to edit existing local project name and date.
   3. **Delete**: allows user to delete existing local project.

3. **Name**: enter a new project **Name**. Project Name should be descriptive enough to distinguish it from other projects.

4. **Date**: automatically populates with the current date and time.
   You can manually select the date and time if needed.

5. **Template**: Select **Standard** from the drop-down list.
   Currently, only the **Standard** template is available.

6. Tap **OK**.
   The new project will automatically open to the map display.
   You can now start to capture data.

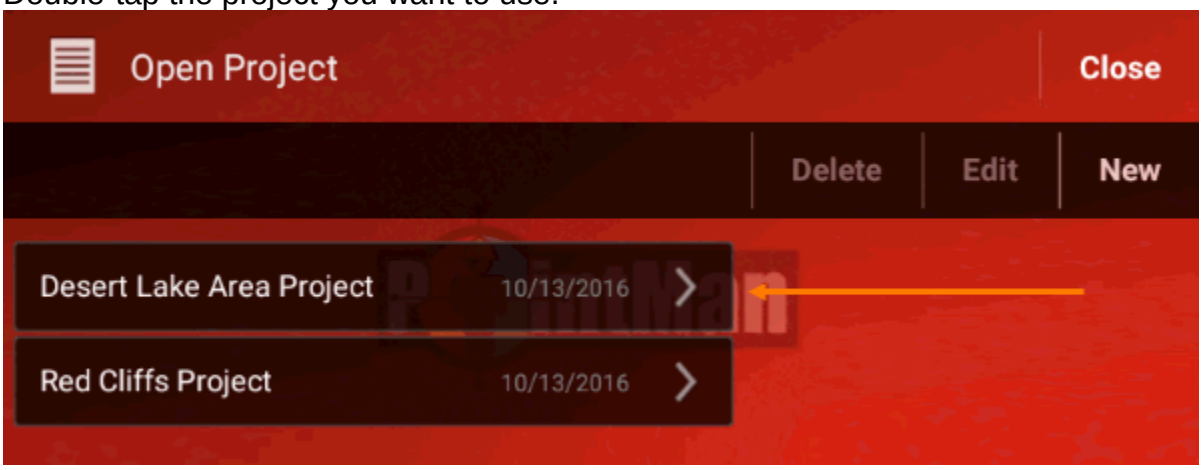
Opening a Different Project:

You can move between existing projects with ease.

1. From the main map display, tap the **Menu** icon (upper left).
   The **Menu** window displays.

2. Tap **Open Project**.
   A list of all projects created to date displays.

3. Double-tap the project you want to use.



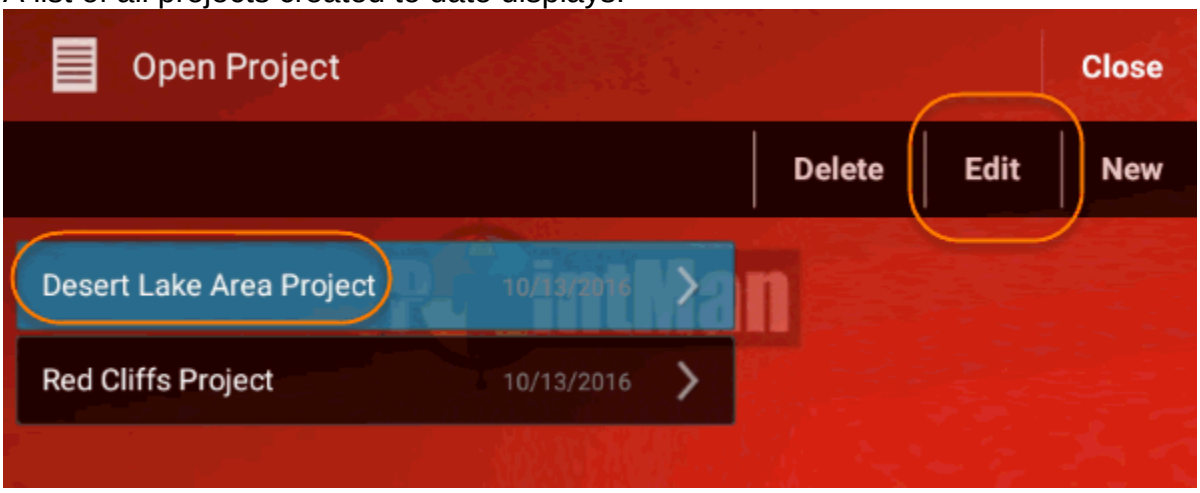
   The project will open in the map display.

Editing an Existing Project:

You can edit the Project Title of existing projects.

1. From the main map display, tap the **Menu** icon (upper left).
   The **Menu** window displays.

2. Tap **Open Project**.
   A list of all projects created to date displays.



3. To edit an existing project, tap the project just created, it will be highlighted blue when selected.

4. Tap **Edit**.

5. Edit the **Project Name** or the **Date** in the Edit Project window.

6. Tap **OK** to save and exit.

7. Double-tap the applicable project to re-open the project and continue gathering data.

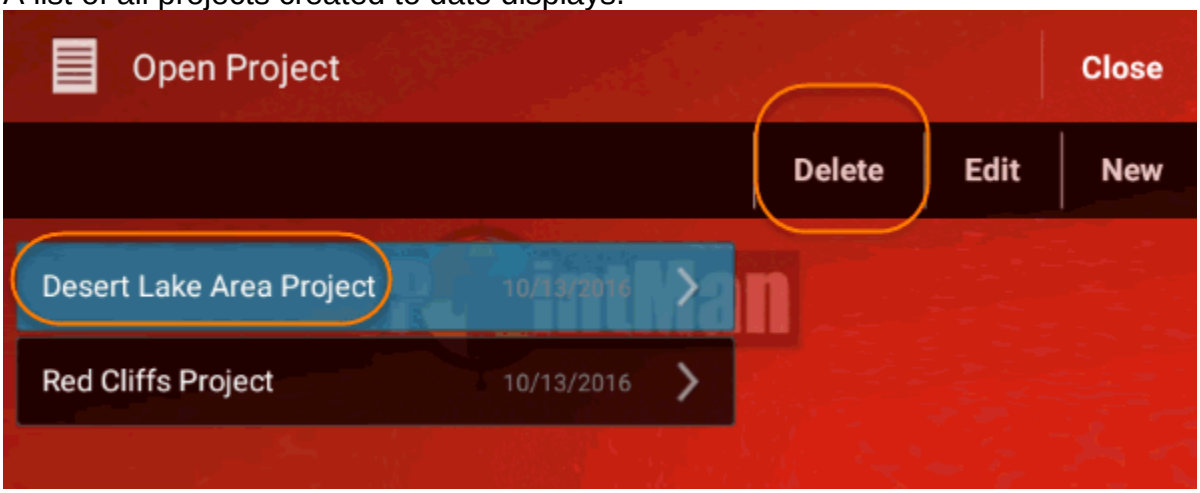
Deleting an Existing Project:

You can delete old projects from the Project list.

NOTE: **Once you delete a project, all data related to that project will no longer be available, and cannot be retrieved.**

1. From the main map display, tap the **Menu** icon (upper left).
   The **Menu** window displays.

2. Tap **Open Project**.
   A list of all projects created to date displays.



3. To delete an existing project, tap the project just created, it will be highlighted blue when selected.

4. Tap **Delete**.

5. A message displays: '*Delete Project: Permanently delete this project?*

6. Tap **OK**.

7. The project will no longer display in the **Open Project** menu.

Settings

The **Setting** page allows you to configure your device and certain PointMan functions.

1. Access the **Settings** page by tapping the  **Menu** icon, and then **Settings**. The **Setting** page displays, allowing you to set up how your device and PointMan work together.

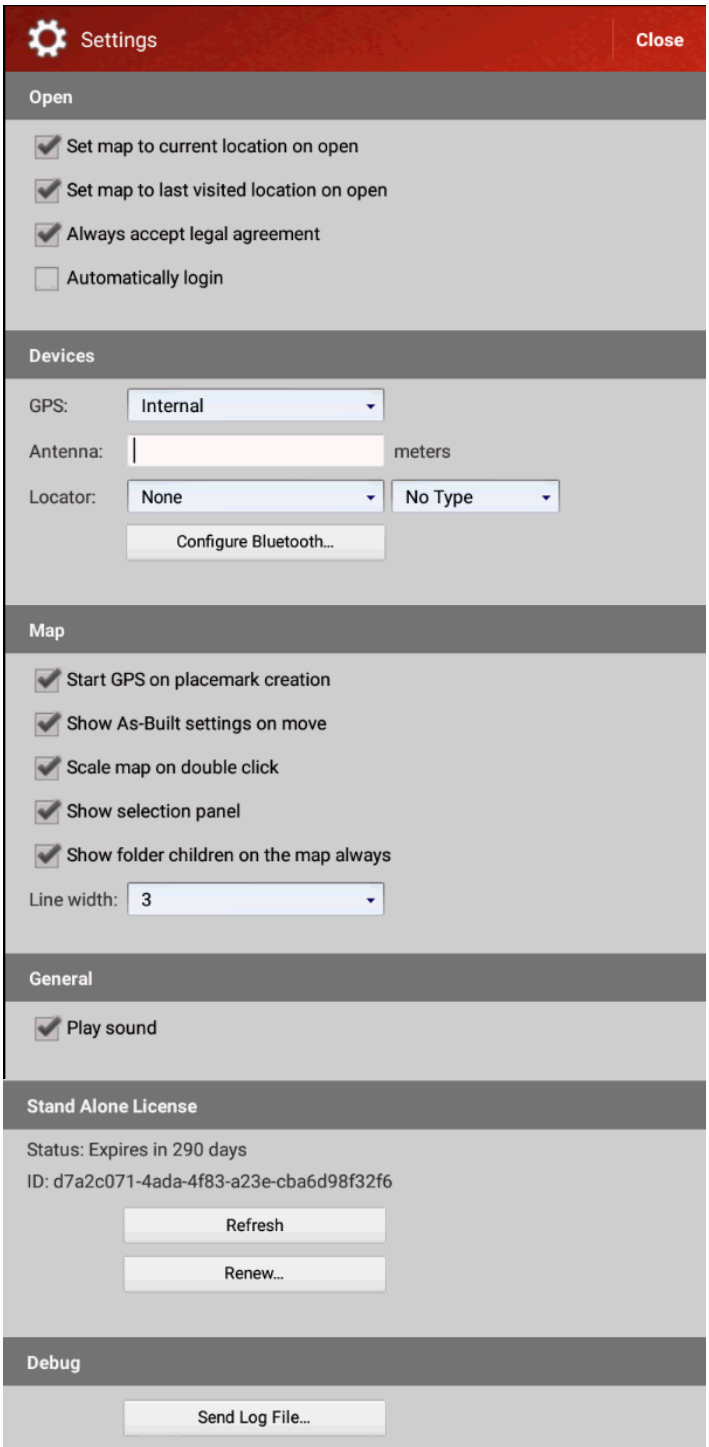
Area	Item	Description	Important Notes
Open	Set map to current location on open	When opening PointMan, the map will center to your current location.	
	Set map to last visited location on open	When opening PointMan, the map will center at the last location you were viewing.	
	Always accept legal agreement	Automatically accepts the legal agreement.	
	Automatically log in	Automatically logs you in when you double-click the PointMan application icon.	
	Update server with device location when open	Updates the server with your current location when you log in.	Not available in PointMan Locate.
Devices	GPS	Select to use the tablets Internal GPS system, or select a GPS receiver that you have paired with your tablet.	Bluetooth devices listed in GPS and Locator drop-down menus list the MAC address of the Bluetooth device, in the event that the common name is not available. The device access reader layer accommodates this when using an external device.

	Antenna	Enter the height of the GPS receiver antenna in meters.	Used to correct the elevation of the feature based on the antenna height
	Locator	Select the Locate device that is paired with your tablet.	Only for use when performing Locates with a GPS receiver and a Locate tool
	Locator Type	Select the type of Locate Device that is paired with your tablet.	Only for use when performing Locates with a GPS receiver and a Locate tool
	Configure Bluetooth	Click this button when pairing the tablet with a GPS receiver or a Locator tool.	Used to perform the initial Bluetooth pairing of devices
Map	Start GPS on place mark creation	When selected, the system will automatically place a place mark at your current location when creating a point, line or polygon.	
	Show As-Built Settings on move	When selected, the system is enabled to display and capture the As-Built dialog box when creating points, lines, polygons and other features.	
	Scale map on double click	Map zooms into/out of the location of a double-tap.	
	Show selection panel	Displays a Selection dialog at the bottom of the map when a feature is selected on the map.	
	Show Folder children ont he map always	Allows all features that have been included in a Folder to be visible at all times.	

	Line width	Widens/narrows the line width on the map.	
General	Play Sound	Select this check box to activate the PointMan sounds.	
Map Cache	Map Cache	Clicking Clear Map Cache will remove clear the PointMan history. It will also clear the cache of any downloaded map files, report files, or any other 'offline' information that you have downloaded.	For PointMan Locate, this item is not available. Use the Project Management functions to remove a Project and it's related data.
Search	Per Page	Defines how many search results rows display per page.	Not available in PointMan Locate
Notifications	Per Page	Defines how many notifications rows display per page.	Not available in PointMan Locate
General	Play sound	Selecting check box will enable PointMan sounds. Clearing the check box will turn off the PointMan sounds.	
Stand Alone License	Status: ID:	Displays the current status of your PointMan Stand Alone license. Clicking **Refresh**: forces PointMan to check the server and validate how many days remain on your current trial or license period. Clicking **Renew** will open the Update License Shopping Cart. Follow instructions for renewing or purchasing a license. The **ID** field displays the device ID.	Visible in PointMan Locate only. See Purchasing or Renewing PointMan Locate License for detailed instructions.

Debug	Send Log Files	Clicking the **Send Log File** button generates a log file attachment to be sent with an email. Clicking the button opens your email options. Select an email option, and the file will be attached to a blank email. This can be helpful when troubleshooting PointMan applications. You will be asked to send the Log File to a ProStar Support team member.	

Settings Screen Details



Clearing Cache

If you are having issues logging on, it is possible that you will need to clear your cache.

NOTE: For PointMan Locate users, the Clear Cache option is not available. Instead, you will need to delete the applicable project in order to remove that data from your system. See the Project Management topic for details on how to create, edit and manage your Projects. Removing a Project will remove ALL data that has been captured to date for that project. You will no longer be able to see or gain access to points, lines, polygons and eForms that have been created on this device.

To clear map cache:

1. Launch PointMan (tap the PointMan icon on your tablet).
2. On the login screen, tap the "gear"  icon in the upper right corner of the screen.
   The **Settings** page will display.
3. Scroll to the bottom of the page, and click **Clear Map Cache**.

About PointMan

The About PointMan screen displays the Version number of the PointMan app you have installed on your tablet.

Often times you will need to refer to the version number of PointMan.

1. Tap the  **Menu** icon.
2. Tap **About PointMan**.
   The About PointMan screen displays.
3. To close, tap **Close**.

Help

The PointMan Help System offers details about navigating and using the PointMan application.

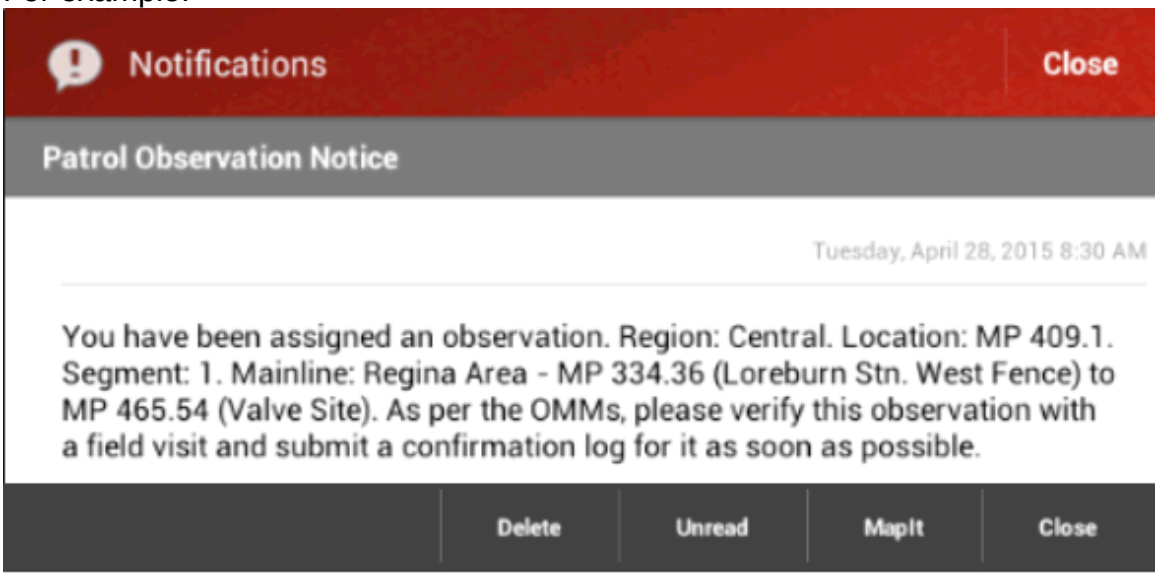
Once the PointMan Help System is open, you can:

1. Use the **Table of Contents** to navigate to the desired topic or process.
2. Use the **Index** to search for a word or phrase and list all related topics.
3. Use the **Glossary** to define key terms.

Notes:

1. Tapping any *green text* will display an example screen shot or a list of details.

For example:



2. Tapping any of the links will take you to a related topic.

Logout

To log out of PointMan from the **Menu** screen:

1. Tap the  **Menu** icon, then tap **Log out**.
   The screen returns you to the PointMan log in screen.

2. Alternatively, you can double-tap the  **Return** icon. This will also return you to the PointMan log in screen.

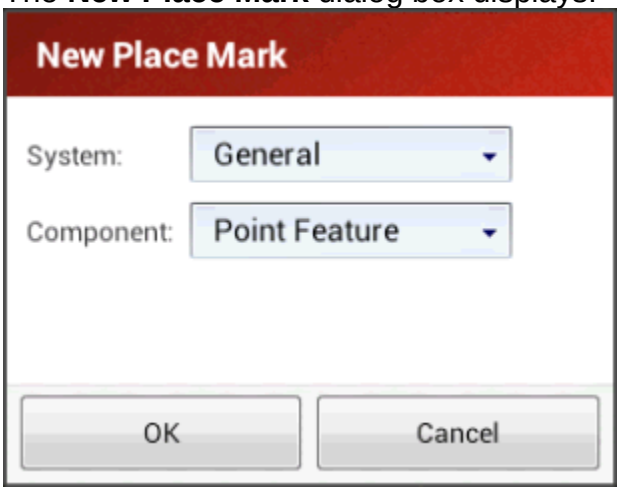
3. To close the PointMan login screen, tap the  Return icon one more time.

New Place Mark Tools

New Place Mark

The **New Place Mark** functionality allows you to create objects (points, lines, polygons, pictures and sketches) on the map. Objects that you create on the map can be real-time GPS geo-referenced, or they can be manually placed in a specific location.

1. From the main map display, tap the **New** button (upper right corner).
   The **New Place Mark** dialog box displays.



2. From the **System** drop-down, select the applicable **System**.
   The type of System you select determines the Component options available. Each system has a color code associated with it so that when the object is logged, it is displayed in the correct American Public Works Association (APWA) color designation. Selecting a System filters the list of Components available so that only those appropriate for that particular system are available for selection.

3. From the **Component** drop-down, select the type of object you want to create.
   The System/Component combination categorizes the type of object being created, the information related to it, and thus the steps to complete the process.

System	Components
Electrical	Cable
	Transformer
	Vault/Enclosure
	Ductbank
	Meter
	Pole
	Crossing Point
	Ground Bed

	Anode
	Photo
	Other Line
	Other Point
Gas	Pipeline
	Valve
	Barrel
	Meter
	Crossing
	Weld
	Vent
	CP test Point
	CP/Ground Bed
	Photo
	Other Line
	Other Point
Oil	Pipeline
	Valve
	Barrel
	Meter
	Crossing
	Weld
	Vent
	CP Test Point
	CP/Ground Bed
	Photo
	Other Line
	Other Point
Telecom	Cable
	Vault/Enclosure
	Ductbank
	Crossing Point
	Photo
	Other Point
Photo	Image
Sketch	Map Image
	Grid Map
	Grid Image
Form	Document
File	Document
	IOS
	Agreement

Point of Concern	Form
	Point
	GIS Discrepancy
Water	Pipe
	Valve
	Meter
	Hydrant
	Crossing Point
	Pump Station
	Thrust Block
	Photo
	Other Line
	Other Point
Sanitary Sewer	Pipe
	Valve
	Manhole
	Crossing Point
	Pump Station
	Photo
	Other Line
	Other Point
Drainage	Pipe
	Valve
	Manhole
	Storm Drain
	Crossing Point
	Photo
	Other Line
	Other Point
Temp Survey	Easement
	Workspace
	Datum
	Area
	Photo
	Other Line
	Other Point
Irrigation	Line
	Valve
	Meter
	Crossing Point
	Pump
	Photo

	Other Point
Excavation Site	Point Feature
	Line Feature
	Area
	Photo
Area of Concern	Polygon
	Circle
	Photo
General	Point Feature
	Line Feature
	Outline
	Residency Point

See specific topics for instructions on:

a. Creating a Point
b. Creating a Line
c. Creating a Polygon
d. Taking a Photo
e. Creating a Sketch
f. Completing an eForm
g. Marking Up a Photo or Sketch
h. Attaching a File to an object
i. Sending an object in an email

5. Note: if you have the setting, "**Show As-Built settings on move**" selected on the **Settings** page, you will be prompted for the following As-Built information after you select the System and Component options: Method As-Built or As-Found), Quality Level, and Antenna.
   For procedures, see the As-Built Information topic.

6. Tap **OK** to create the object and complete the details and process.
   The object is placed on the map, and the menu bar displays at the bottom of the screen.

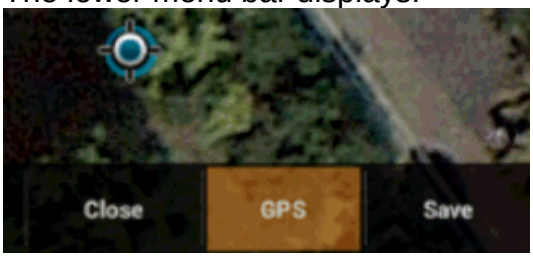
7. Tap **Cancel** to close the new Place Mark dialog and return to the main map display.

Creating a Point

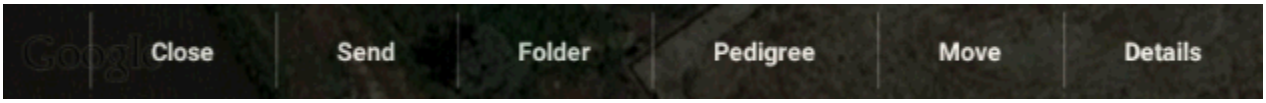
1. From the main map display, tap the **New** button (upper right corner).
   The **New Place Mark** dialog box displays.

2. Select the applicable **System** from the drop-down menu.
   Each system automatically has a color code associated with it so that when the object is logged, it displays in the correct color designation.
   Selecting a System filters the list of Components available so that only those appropriate for that particular system are available for selection.

3. Select the **Component**: **Point**, **Point Feature**, or **Other Point**.

4. Tap **OK**.
   A message temporarily appears on the screen: 'Obtaining GPS fix' and a blinking cursor or point appears on the map.
   The lower menu bar displays:
   

5. Note: if you have the setting, "**Show As-Built settings on move**" selected on the **Settings** page, you will be prompted for the following As-Built information after you select the System and Component options: Method As-Built or As-Found), Quality Level, and Antenna.
   For procedures, see the As-Built Information topic.

6. Select **Save**.
   The system records the point on the map and opens menu items in the lower toolbar.
   

   Note: when using a locate tool to collect data, the **Save** function is triggered automatically from the locate tool. On the Vivax Metrotech tool this is triggered by using the “l” button and then the “+” button to trigger the Save. On the Fuji Telcom tool, this is done when a depth reading is performed (both steps of the depth function). To complete the process, tap **Close**.

7. To access Folder, tap **Folder**. See Folders for instructions.
   The Folder dialog displays with the Point in the list.

8. To move the point to a different location on the map, tap **Move**.

a. Tap **Move**.
b. Tap **GPS** to move it to your current location.
c. Or, tap on the map to move it to a specific point on the map.
d. Tap **Save**.

9. To see **Details** of the point and access the point file details, tap **Details**.
   The point details dialog displays the following file information: Type, Comment, User, Created, Device, Lat/Log coordinates. Will not display altitude information if no external GPS device was used.

10. Tap **Edit** to edit the **Type** and add a **Comment**.

11. Then tap **OK** so save, or cancel to exit without saving.

12. Tap **Close** to return to the main map display.

Creating a Line

1. From the main map display, tap the **New** button (upper right corner).
   The **New Place Mark** dialog box displays.

2. Select the applicable **System** from the drop-down menu.
   Each system automatically has a color code associated with it so that when the object is logged, it displays in the correct color designation.
   Selecting a System filters the list of Components available so that only those appropriate for that particular system are available for selection.

3. Select the **Component**: **Line**, **Line Feature**, or **Other Line**.

4. Tap **OK**.
   A message temporarily appears on the screen: 'Obtaining GPS fix' and a short section of line appears on the map with a blinking point at one end, and a solid point at the other.

5. Note: if you have the setting, "**Show As-Built settings on move**" selected on the **Settings** page, you will be prompted for the following As-Built information after you select the System and Component options: Method As-Built or As-Found), Quality Level, and Antenna.
   For procedures, see the As-Built Information topic.

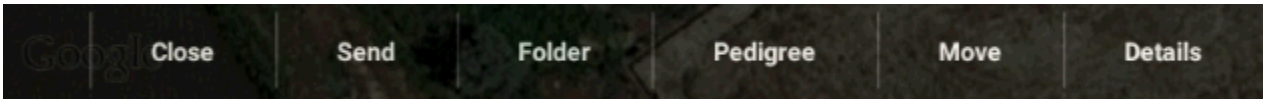
To manually draw the line on the map:

5. Make sure the **GPS** button is **not highlighted** (tap it to turn it black).
6. Tap **Add** to trigger the logging of the first point.
7. Tap the location on the map that you want to mark as the end point of the line.
8. Tap **Save.**
9. Tap **Close** to complete the process.
10. Proceed to step 11 below.

OR, to draw the line using GPS tracking:

5. Make sure **GPS** button **is highlighted** (tap it to turn orange).
6. Tap **Add** to trigger the logging of the first point.
   The system records the start point of the line and moves the end point to your current location.
7. Walk along the line, and tap **Add**.
8. Keep walking along the line, and tap **Add** as often as necessary to track the line as close as possible.
9. Tap **Save.**
10. Tap **Close** to complete the process, and proceed to step 11 below.
    Note: make sure that you select **Close**, or the system will draw a line behind you. If you forgot to click close and created a line behind you, just select **Close** and the system will delete that section of line.

11. After tapping **Close**, the system records the line on the map and opens menu items in the lower toolbar.



    Note: when using a locate tool to collect data, the **Save** function is triggered automatically from the locate tool. On the Vivax Metrotech tool this is triggered by using the “I” button and then the “+” button to trigger the Save. On the Fuji Telcom tool, this is done when a depth reading is performed (both steps of the depth function).
12. To complete the process and return to the main map view, tap **Close**.
13. To access Folder, tap **Folder**. See Folders for instructions.
    The Folder dialog displays with the Line in the list.
14. Click **Pedigree** to display details about the line and each point recorded.
    a. Tap **Details** to view the **Lat/Long** and **Altitude** information.
    b. Tap **Close** to close the Pedigree dialog box.
    c. Tap **Close** again to return to the original menu items.

15. To move the line to a different location on the map, tap **Move**.
    a. Tap **GPS** to move it to your current location.

b. Or, tap the specific point you want to move, then the map to move it to a specific location on the map.
c. Tap **Close** to undo the change.
d. Tap **Save** to save the change.

16. To see **Details** of the General Line Feature, tap **Details**.
The General Line Feature dialog displays the following file information: System, Component, Type Source, Owner, Date and Time Published, Tolerance, User. Will not display altitude information if no external GPS device was used.
    a. Tap **Edit** to edit the **Type**, **Source**, **Owner**, **Published** and **Tolerance fields**.
    b. Tap **OK** so save, or cancel to exit without saving.

Creating a Polygon

1. From the main map display, tap the **New** button (upper right corner).
The **New Place Mark** dialog box displays.

2. Select the applicable **System** from the drop-down menu.
Each system automatically has a color code associated with it so that when the object is logged, it displays in the correct color designation.
Selecting a System filters the list of Components available so that only those appropriate for that particular system are available for selection.

3. Select the **Component**: **Polygon**, **Outline**, **Area**.

4. Tap **OK**.
A message temporarily appears on the screen: 'Obtaining GPS fix' and a short section of line appears on the map with a blinking point at one end, and a solid point at the other.

5. Note: if you have the setting, "**Show As-Built settings on move**" selected on the **Settings** page, you will be prompted for the following As-Built information after you select the System and Component options: Method As-Built or As-Found), Quality Level, and Antenna.
For procedures, see the As-Built Information topic.

6. Wait until the GPS moves to your current location and move to the first corner of the polygon that you would like to log by selecting **Add**.
The system records the location of the first point of the polygon and moves the

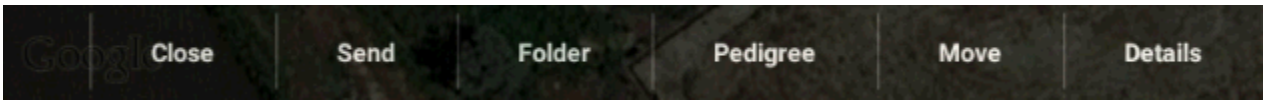
second point to your current location.
Note: The start point of the polygon will be the northwest corner of the polygon. Tapping **Add** will log the first point of the polygon and will move the southwest point to your current location, move to where you want to log the second point of the polygon and select **Add**, then move to the third point and select, **Add** to add the third side and move to the next point. Select **Save** and then **Close** to save the four-sided figure. Selecting **Add** before **Close** will allow you to add more sides to the figure.

7. Move to the second corner of the polygon and log that point by selecting **Add**. The system records the location of the second point of the polygon and moves the third point to your current location.

8. Move to the third corner of the polygon and log that point by selecting **Add**. The system records the location of the third point of the polygon and moves the fourth point to your current location.

9. Move to the fourth corner of the polygon and log that point by selecting **Save**. The system records the location of the fourth point of the polygon and saves the polygon.
   Note: you can add more sides to the polygon by selecting **Add** after the fourth point instead of Save, and moving to the location of the next point of the polygon and either saving or adding another point.

10. After tapping **Close**, the system records the line on the map and opens menu items in the lower toolbar.



Note: when using a locate tool to collect data, the **Save** function is triggered automatically from the locate tool. On the Vivax Metrotech tool this is triggered by using the “I” button and then the “+” button to trigger the Save. On the Fuji Telcom tool, this is done when a depth reading is performed (both steps of the depth function).

11. To complete the process and return to the main map view tap **Close**.

12. To access Folder, tap **Folder**. See Folders for instructions.
    The Folder dialog displays with the Polygon in the list.

13. Click **Pedigree** to display details about the polygon and each point recorded.

    a. Tap **Details** to view the **Lat/Long** and **Altitude** information.
    b. Tap **Close** to close the Pedigree dialog box.
    c. Tap **Close** again to return to the original menu items.

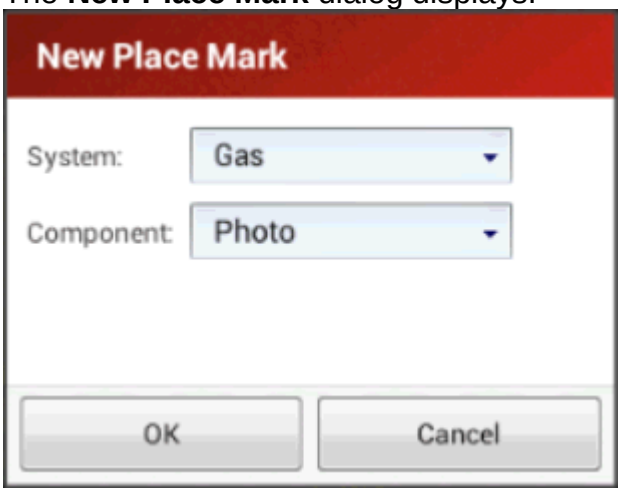
13. To move a line of the polygon, tap **Move**.
    a. Tap **GPS** to move it to your current location.
    b. Or, tap the specific point you want to move, then the map to move it to a specific location on the map.
    c. Tap **Close** to undo the change.
    d. Tap **Save** to save the change.

14. To see **Details** of the General Line Feature, tap **Details**.
    The General Line Feature dialog displays the following file information: System, Component, Type Source, Owner, Date and Time Published, Tolerance, User. Will not display altitude information if no external GPS device was used.

    a. Tap **Edit** to edit the **Type**, **Source**, **Owner**, **Published** and **Tolerance fields**.
    b. Tap **OK** so save, or cancel to exit without saving.

Photos

1. On the main map display, tap the **New** button (upper right corner).
   The **New Place Mark** dialog displays.



2. From the **System** drop-down, select a **System** that the photo will be identified with.

   Options for Photo include: Electrical, Gas, Oil, Telecom, Photo, Sketch, Water, Sanitary Sewer, Drainage, Temp Survey, Irrigation, Excavation Site, Area of Concern.

3. From the **Component** drop-down, select **Photo**.
   Regardless of the **System** selected, you must select **Photo** from the **Component** drop-down.
   If you selected **Photo** in the **System** drop-down, you need to select **Image** as the **Component**.

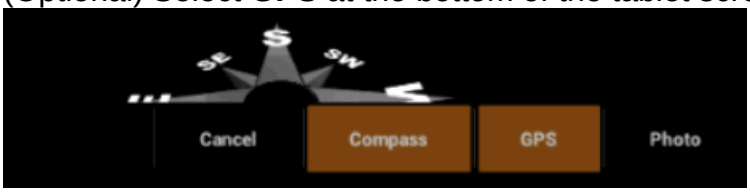
4. Tap **OK**.

5. Note: if you have the setting, "**Show As-Built settings on move**" selected on the **Settings** page, you will be prompted for the following As-Built information after you select the System and Component options: Method As-Built or As-Found), Quality Level, and Antenna.
   For procedures, see the As-Built Information topic.

6. For a brief moment, the **Photo Image** dialog displays, and then disappears. Once it disappears, the tablet is ready to take a photograph.

7. (Optional) Select **Compass** at the bottom of the tablet screen.

8. (Optional) Select **GPS** at the bottom of the tablet screen.

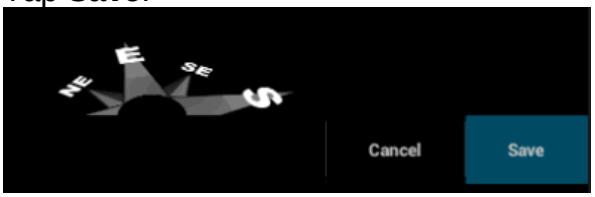


*Note: on the Tab-Ex01 ecom units, the compass function is not available.

9. Orient the tablet to take the photo of the selected item or area (suggest Landscape orientation).

10. Tap the **Photo** button (bottom right of tablet screen).

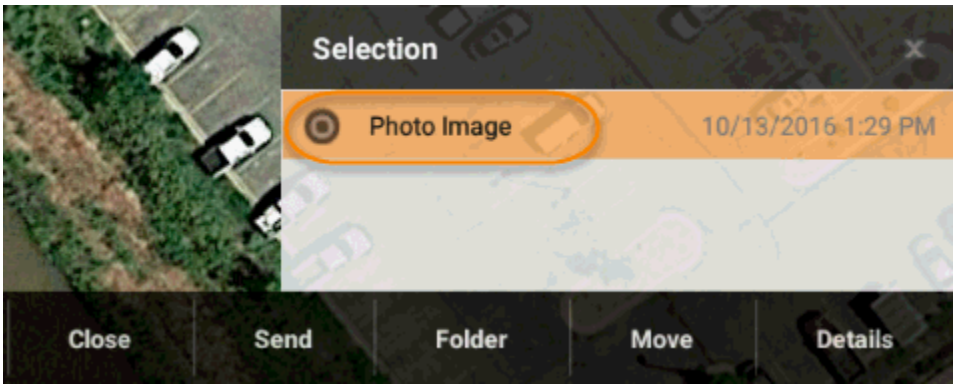
11. Tap **Save**.



12. The photo is now available for marking up. See Mark Up Tools for details on making up the photo with lines and comments.

13. To continue saving the image, tap **Close** (upper right corner).

14. Tap **Save** (lower right corner).
    The system saves the photo and displays a point on the map, with a menu bar at the bottom of the screen.



15. To complete the process and return to the main map view, tap **Close**.

16. To access Folder, tap **Folder**. See Folders for instructions.
    The Folder dialog displays with the Photo as a point in the list.

17. To move the point to which the Photo is related, tap **Move**.
    a. Tap **Move**.

b. Tap **GPS** to move it to your current location.
c. Or, tap on the map to move it to a specific point on the map.
d. Tap **Save**.

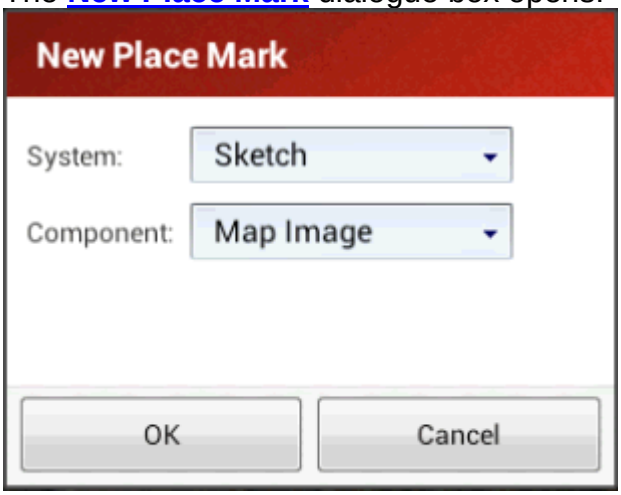
18. To see **Details** of the photo and access the photo file details, tap **Details**.
The photo details dialog displays the following file information: Type, File, Comment, User, created, Device, Lat/Log coordinates. Will not display altitude information if no external GPS device was used.
    a. Tap **Edit** to edit the **Type** and add a **Comment**.
    b. Then click **OK** so save, or cancel to exit without saving.

Sketches

Use the Sketch functionality to document a site condition by capturing a screen shot and marking it up to show details and comments.

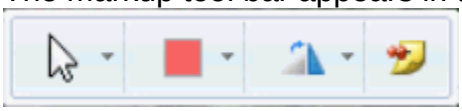
1. On the main map display, use the pan and zoom functions to produce the desired view on the screen.
Note: Ensure that you have all of the layers displayed that you wish to appear in the sketch. The layers are accessible in the **Menu** icon (upper left screen), and then the Layers selection.

2. Tap the **New** button (upper right corner).
The **New Place Mark** dialogue box opens.



3. From the **Component** menu, select: **Sketch.**

4. From the **System** menu, select: **Map Image.**

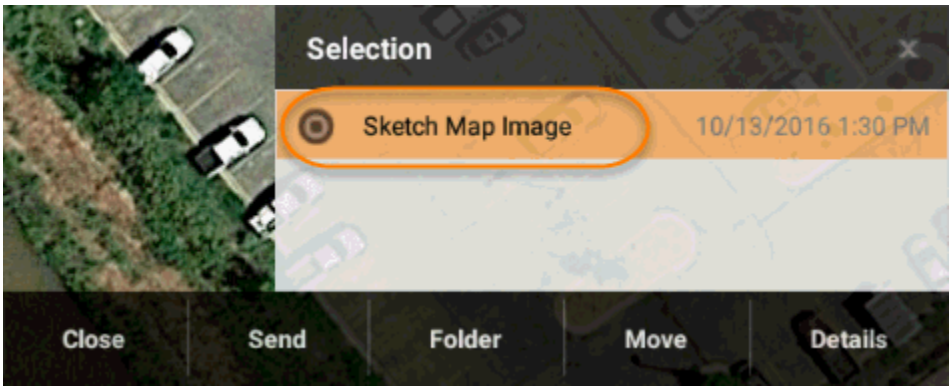
5. Tap **OK**.
   An image appears on screen that is a screen shot of the map you were viewing. The markup tool bar appears in the upper left of the screen.
   

6. Note: if you have the setting, "**Show As-Built settings on move**" selected on the Settings page, you will be prompted for the following As-Built information after you select the System and Component options: Method As-Built or As-Found), Quality Level, and Antenna.
   For procedures, see the As-Built Information topic.

7. From the **Mark Up** tool bar, select the tools that you wish to use to markup or edit the sketch.
   For detailed instruction on the Mark Up Tools, see the Mark Up Tools topic.

8. Review the sketch and tap **OK**.

9. Tap **Close**.

10. Tap **Save**.
    The system saves the sketch and displays a point on the map, with the menu bar at the bottom of the screen.
    

11. To complete the process and return to the main map view, Tap **Close**.

12. To access Folder, tap **Folder**. See Folders for instructions.
    The Folder dialog displays with the **Sketch** as a point in the list.

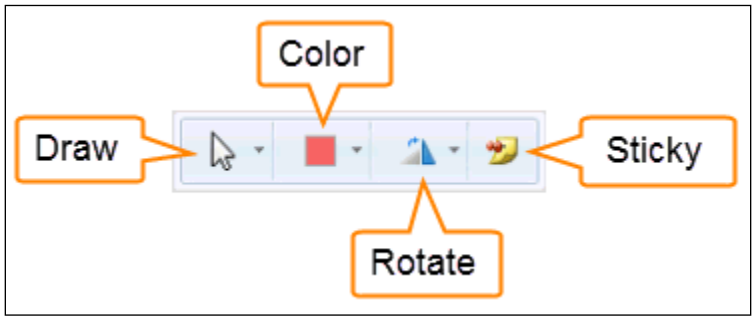
13. To move the point to which the Photo is related, tap **Move**.
    a. Tap **Move**.
    b. Tap **GPS** to move it to your current location.
    c. Or, tap on the map to move it to a specific point on the map.
    d. Tap **Save**.

14. To see **Details** of the sketch and access the file details, tap **Details**.
    The sketch details dialog displays the following file details information: Type, File, Comment, User, created, Device, Lat/Log coordinates. Will not display altitude information if no external GPS device was used.
    a. Tap **Edit** to edit the **Type** and add a **Comment**.
    b. Then Tap **OK** so save, or cancel to exit without saving.

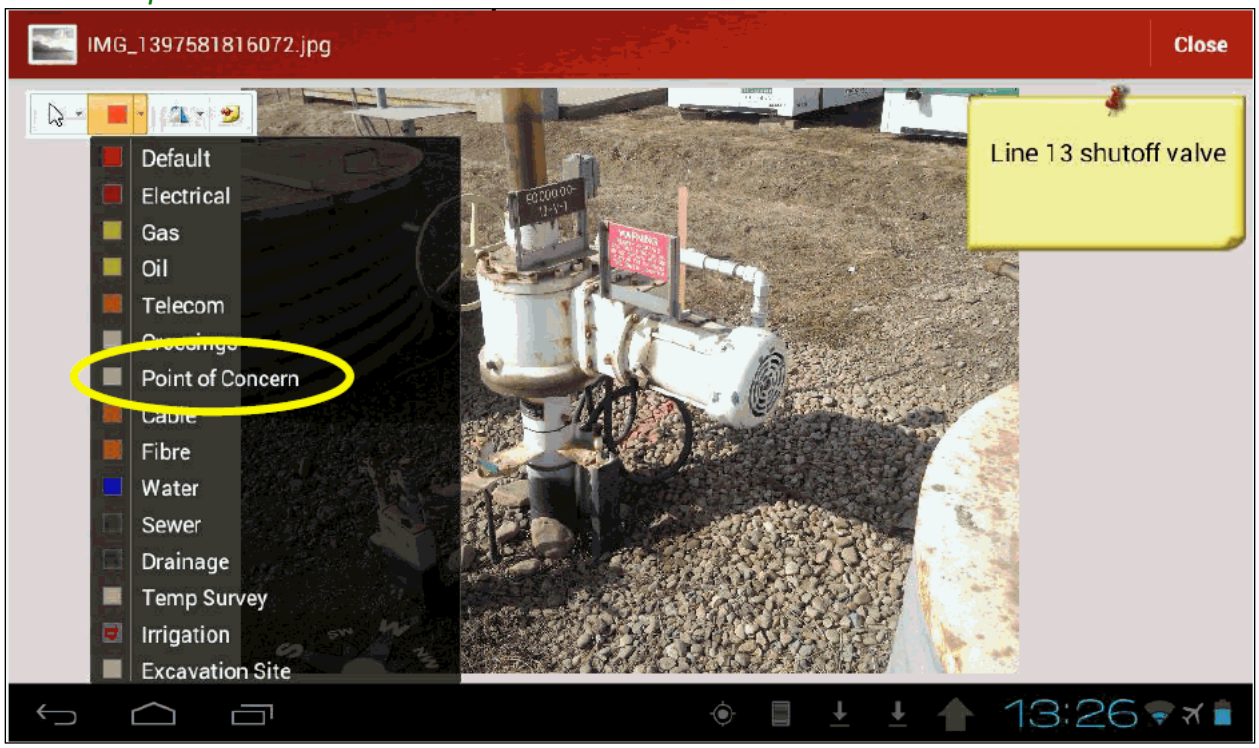
Mark Up Tools

There are two ways to access the markup tools for a photo:

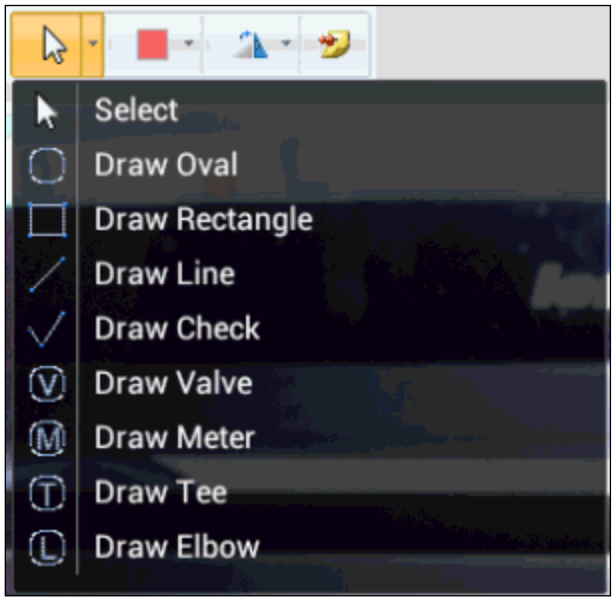
1. When you take a Photo and go to **Save**...
2. Selecting a Photo point from the map (or from within the Folder).



See Examples



Draw Tool

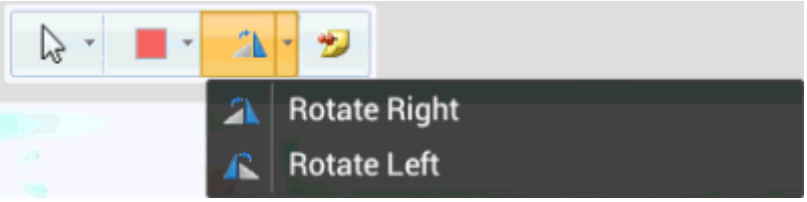


1. With the photo open and the Mark Up Tools visible, tap the **Draw** button.
2. From the **Draw** menu, select the object type you wish to draw on the photo.
3. From the **Color** button, select the color for the shape/line that you want to draw.
4. Tap onto the photo or sketch and draw the shape or line onto the screen.
5. Tap **OK** (lower right corner of screen).
   You must click OK for the shape/line to save on the photo. Otherwise, the shape will disappear the next time you tap the photo.
6. To delete a shape or line that has been saved, from the **Draw Tool** menu, tap the **Select** tool, tap the unwanted shape, and click **Delete**.
7. Tap the **Close** button (upper right corner).
8. Tap the **Save** button (lower right corner).
9. You are returned to the Drop Tools dialog box for that image.
10. Tap the **X** in the upper right corner of the dialog box to return to the map.

Color Tool

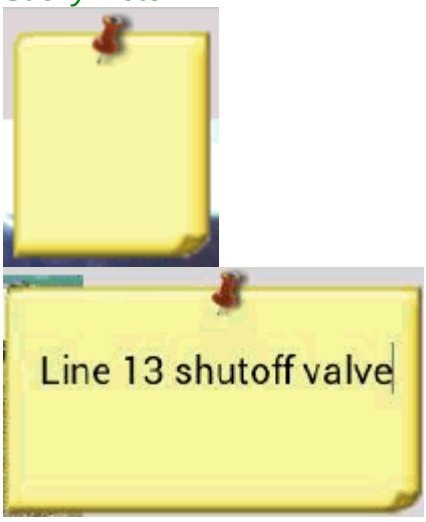
1. With the photo open and the Mark Up Tools visible, tap the **Draw** button.
2. From the **Draw** menu, select the object type you wish to draw on the photo.
3. From the **Color** button, select the color for the shape/line that you want to draw.
4. Tap onto the photo and draw the shape or line onto the photo.
5. Follow instructions for the Draw tool above.

Rotate Tool



1. With the photo open and the Mark Up Tools visible, tap the **Rotate** button.
2. Select to **Rotate Left**, or **Rotate Right**.
   To rotate again, tap the Rotate button and select Rotate Left or Rotate Right.
3. Tap the **Close** button (upper right corner).
4. Tap the **Save** button (lower right corner).
5. You are returned to the Drop Tools dialog box for that image.
6. Tap the **X** in the upper right corner of the dialog box to return to the map.

Sticky Note



1. With the photo open and the Mark Up Tools visible, tap the **Sticky** button.
2. A sticky note displays in the upper right corner of the photo.
3. Double-tap inside the sticky to display the keyboard.
4. Type the applicable note (or access the voice to text function and dictate the message).
5. Close the keyboard by tapping the  button (lower left corner of tablet screen).
6. Tap the **Close** button (upper right corner).
7. Tap the **Save** button (lower right corner).
8. You are returned to the Drop Tools dialog box for that image.
9. Tap the **X** in the upper right corner of the dialog box to return to the map.

Folders

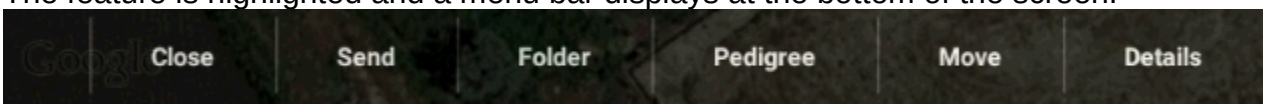
Use the Folder (formerly Drop Tools) functions to organize photos, sketches, points, lines, polygons and other features within a folder structure to help aggregate and manage data. The Folder function is used to assign objects in '**Parent/Child**' relationships. Additionally, PointMan has an email function that allows you to send all or selected contents of a folder via e-mail.

There are two methods to perform the assignments:

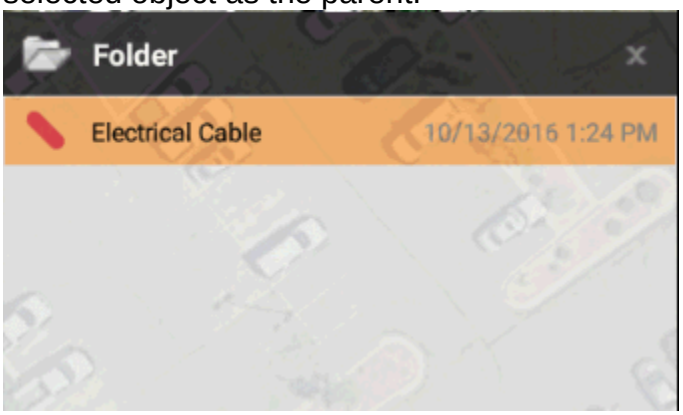
1. Select an object and make the assignment automatically as new objects are created.
2. Make the assignment of existing objects to a 'Parent' object.

Procedure:

1. From the main map display, select the object that you wish to make the **'Parent'**. (Tap a point, line, polygon or other object on the map).
   The feature is highlighted and a menu bar displays at the bottom of the screen.

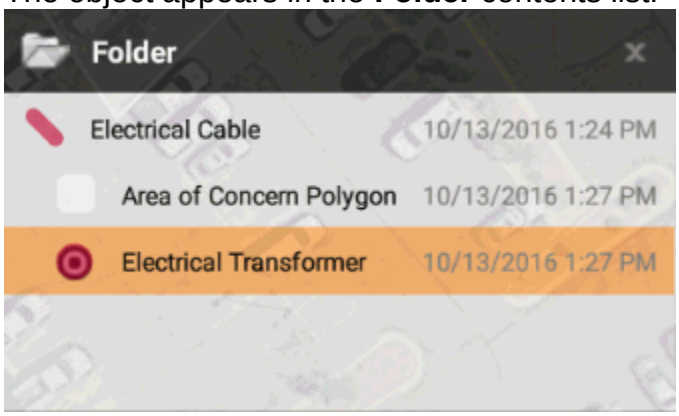


2. Tap **Folder**.
   The **Folder** dialogue box displays at the bottom of the screen, showing the selected object as the parent.



3. To assign another object from the map as a **'Child'** to that **'Parent'** object:
   a. Select the other object you wish to assign to the parent.
      A dialogue box appears asking: "**Drop this place mark in the folder**?"

b. Tap **OK**.
The object appears in the **Folder** contents list.

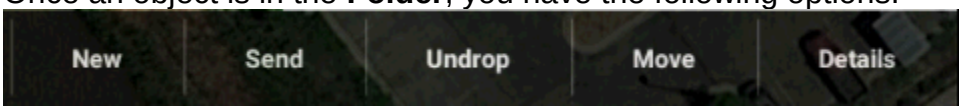


c. Repeat for all objects that you wish to assign to the parent.

4. To automatically assign new objects as they are created:

   a. Select **New** (lower menu bar).
   The **New Place Mark** dialog box displays.
   b. Select **System** and **Component** values as appropriate.
   c. Select **OK** to create the object.
   This will result in the object assignment at the end of the creation process.

5. Once an object is in the **Folder**, you have the following options:



6. Tap **New** to automatically assign new objects as they are created. See steps 4a-4c above.

7. Tap **Send** to attach the selected object to an e-mail. See instructions on Sending Objects via e-mail.

8. Tap **Undrop** to remove an item from the folder.

9. Tap **Move** to move the location of the object on the map. See instructions on Moving an Object on the Map.

10. Tap **Details** to view and edit the details of an object.
    a. Tap the **file link** to open the object for further editing.
    b. Tap **Edit** to open the object details dialog and edit the Type, add a comment, and other details, depending upon the object type.
    c. Tap **Close** to close the detail dialog box.
    d. Tap **Send** to attach the object file to an e-mail.

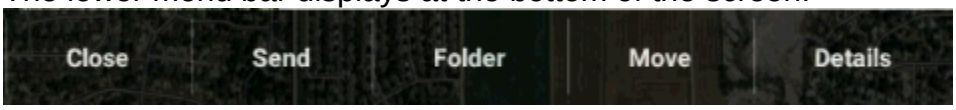
11. To exit the **Folder**, select the “**X**” in the Drop Tools header.

12. Tap the "**X**" in the **Selection** header.
    You will be returned to the map view.

Moving an Object on the Map

This topic outlines the process of moving objects (points, lines, polygons) on the map in PointMan.

1. From the main map display, select the object to be moved.
   The lower menu bar displays at the bottom of the screen.



2. Tap **Move**.
   NOTE: if you have the As-Built settings enabled, you will be prompted to capture the As-Built information before you can move this object.

3. To manually move the object to a specific point:
   a. Tap the map at the new location.
   b. Tap **Save**.

4. To move the object to your current GPS location:

   a. Tap **GPS**.
      A message displays: "Obtaining GPS Fix".
   b. Once object displays at your current location, tap **Save**.

5. To close the menu and return to the map screen, select **Close**.

Sending Objects via Email

This topic outlines the process to email PointMan objects (forms, photos, sketches, and files) from within the PointMan application.

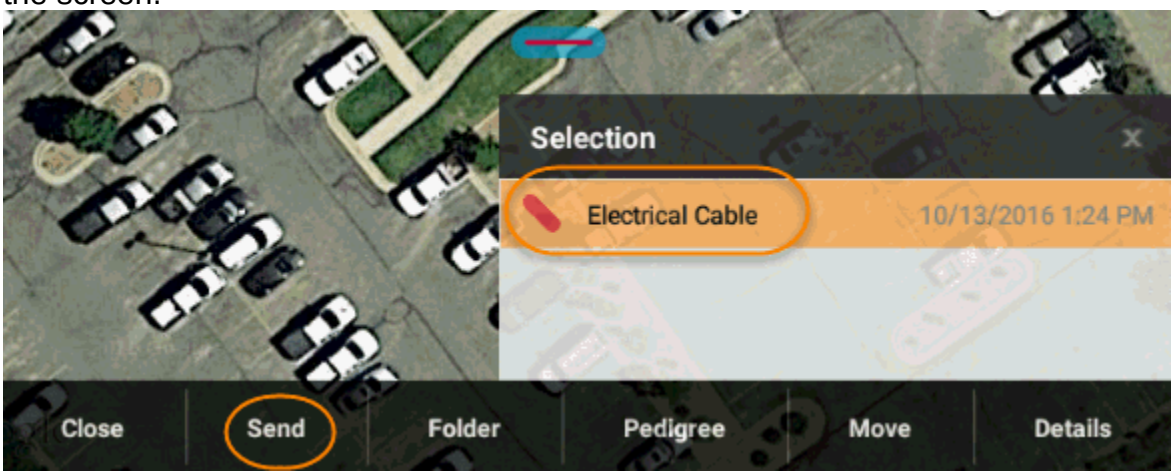
It also describes how the files are received and how to view the attachments and .kmz file.

Files that are sent via email are received as such:

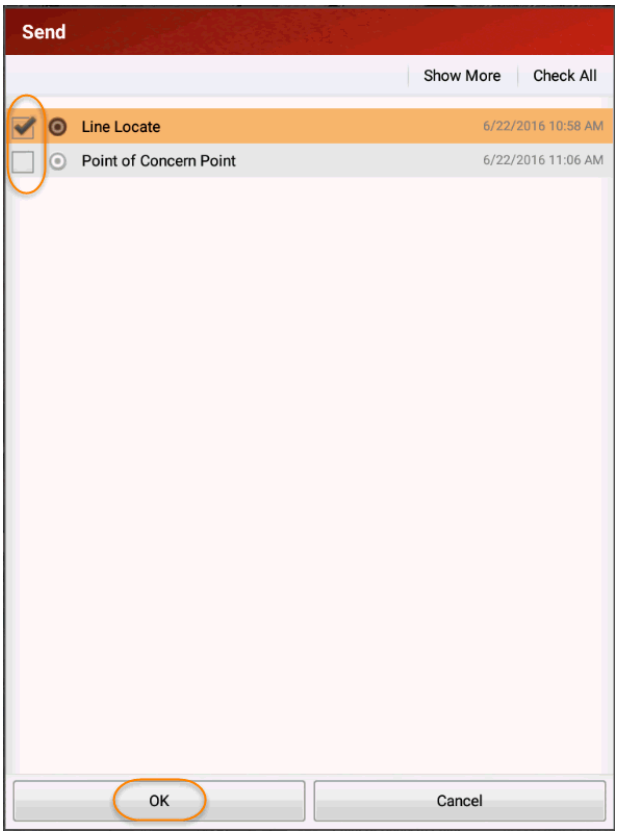
- All photos, sketches, eForms will be received as attachments to the email.
- Points, lines and polygons will contain detailed pedigree information, as well as a link that will open in Google Maps as a point.
- There is no Pedigree information for points, lines and polygons that were placed on the map manually (not using the internal GPS or Bluetooth GPS device).
- The entire set of attachments will be summarized in an attached .kmz file. Double-clicking opens GoogleEarth, and displays the points, lines, polygons and eForms in the exact configuration in which they were saved in PointMan.

Sending Objects:

1. From the main map display, select the object to be emailed.
   The item appears in the **Selection** dialog, and a menu displays at the bottom of the screen.



2. Tap **Send**.
   The Send dialog box displays all features (points, lines, polygons, eForms) that are currently selected in the selection panel (see image above).



3. Select the check box next to all objects that you want to send.
    a. To see more items, click the **Show More** button. When selected, the list of features to send is expanded to include all features visible on the map.
    b. To see fewer items, click the **Show Less** button. When selected, the list of features to displays all features selected in the selection panel.
    c. Select the **Check All** button to select all items in the list.
    d. Select **Check None** to de-select all items in the list.

4. Tap **OK**.
   A list of send options displays.

5. Select the email program that you wish to use.

6. Enter the email address(es) of the recipient(s).

7. Enter any additional text you would like to add to the message by tapping in the message area and typing (or use voice-to-text).

8. Tap **Send**, or the send icon.
   The system responds with a brief message stating “email sent” and you are returned to the map view.

9. Select **Close**.
   If you selected a point from the map, the dialog box closes and returns you to the map display. If you selected an item from a Drop Tools list, the dialog closes and returns you to the Drop Tools list.

10. Items sent via email will be delivered to the desired recipients.
    a. In addition to the attachments, there will be a .kmz file attached to the email.

       - Double-clicking this file automatically opens Google Earth and zooms to the location of the features.
       - Google Earth will display all features as points, lines, or polygons in the exact placement as they were taken in PointMan.
       - Note: User must have Google Earth on their computer.

    b. PDFs (eForms) will arrive as an attachment to the email.
    c. Photos and Sketches will arrive as an attachment to the email.
    d. Points, lines, and polygons will arrive in the email with detailed information about the feature, as well as a "link" to that feature.
       Clicking this link will open Google Maps and only show a point where that feature is located.

Creating and Editing eForms

This topic outlines the procedure for creating an eForm with a point reference on the map. It also describes the process for editing the eForm after saving it, editing the details of the form, and moving the form-point to a different location on the map.

1. From the main map display, tap the **New** button in the upper right corner.
   The **New Place Mark** dialog displays.

2. Select **System**: **Form**

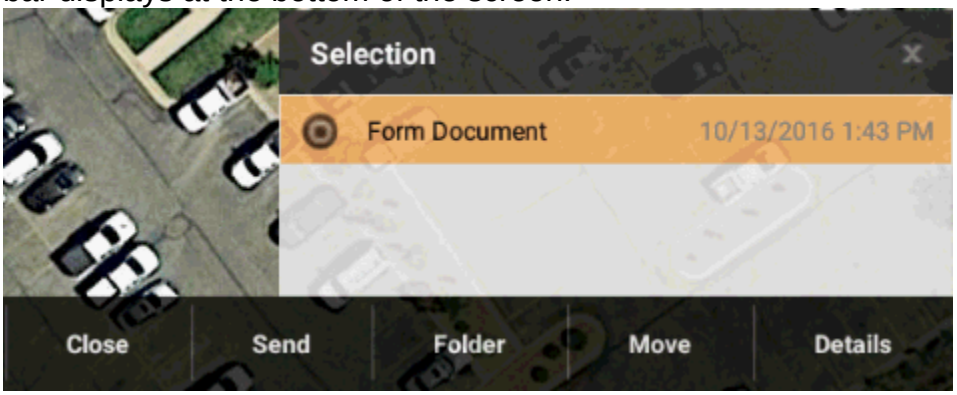
3. Select **Component**: **Document**

4. Tap **OK**.
   The Open eForm list displays.

5. Select the applicable **eForm**, and then click **OK**.
   The eForm displays.

6. Enter all applicable information.
    a. Enter text in applicable text fields. You can use the voice-to-text tools.
    b. Select check boxes and radio buttons.
    c. Add a sketch to the Sketch page by tapping the **Sketch** icon.
    d. Add a photo to the Photo page by tapping the **Photo** icon.

7. When complete, tap **Close** (upper right corner), then **Save** (lower right corner). The form closes, the point for the new form is highlighted on the map, and a tool bar displays at the bottom of the screen:



8. To complete the process and return to the main map view, tap **Close**.

9. To access Folder, tap **Folder**. See Folders for instructions.
   The Folder dialog displays with the **eForm** as a point in the list.

10. To move the point to which the eForm is related, tap **Move**.
    a. Tap **Move**.
    b. Tap **GPS** to move it to your current location.
    c. Or, tap on the map to move it to a specific point on the map.
    d. Tap **Save**.

11. To access the eForm file details, tap **Details**.
    The eForm details dialog displays the following file information: Type, Form, Comment, User, Created, Device, Lat/Log coordinates.
    a. Tap **Edit** to edit the **Type** and add a **Comment**.
    b. Then tap **OK** to save, or **Close** to exit without saving.

12. To edit the PDF, tap **Details**, then tap **Edit**.

13. In the dialog box, tap the pdf link.
    The eForm PDF opens.

14. Make all applicable edits.

15. Tap **Close**, then **Save**.

16. Tap **Close** to complete the process and return to the main map view.

As-Built Information

The As-Built functionality available in PointMan allows users to capture As-Built information for all line, points, polygons captured within PointMan.

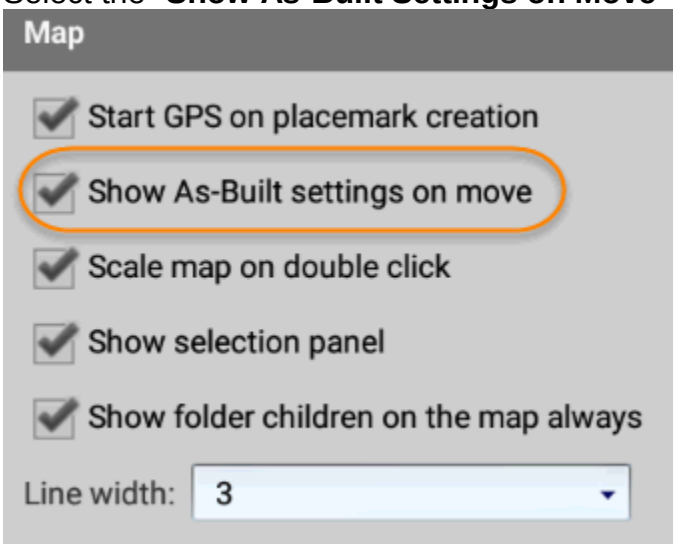
Enabling As-Built functionality and Creating As-Built Data

1. Launch and log into PointMan

2. From the main map display, tap the **Menu** icon (upper left).
   The **Menu** window displays.

3. Scroll to the **Map** section.

4. Select the "**Show As-Built Settings on Move**" check box.

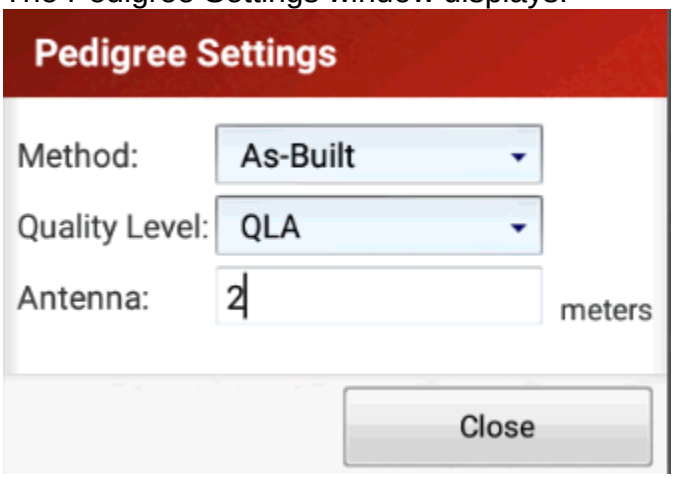


5. Tap the **Close** button (upper right corner).

6. Tap **New** (upper right corner) to begin the process of capturing a point, line, polygon, etc.
   For general instructions on creating these features, see the New Place Mark topic.

7. Select the **System** and **Component** that you want to create (line, point, polygon, etc...).

8. Tap **OK**.
   The Pedigree Settings window displays:



9. Select the **Method**:
   a. **As-Built**
   b. **As-Found**

10. Select the **Quality Level**:
    a. QLA
    b. QLB
    c. QLC
    d. QLD

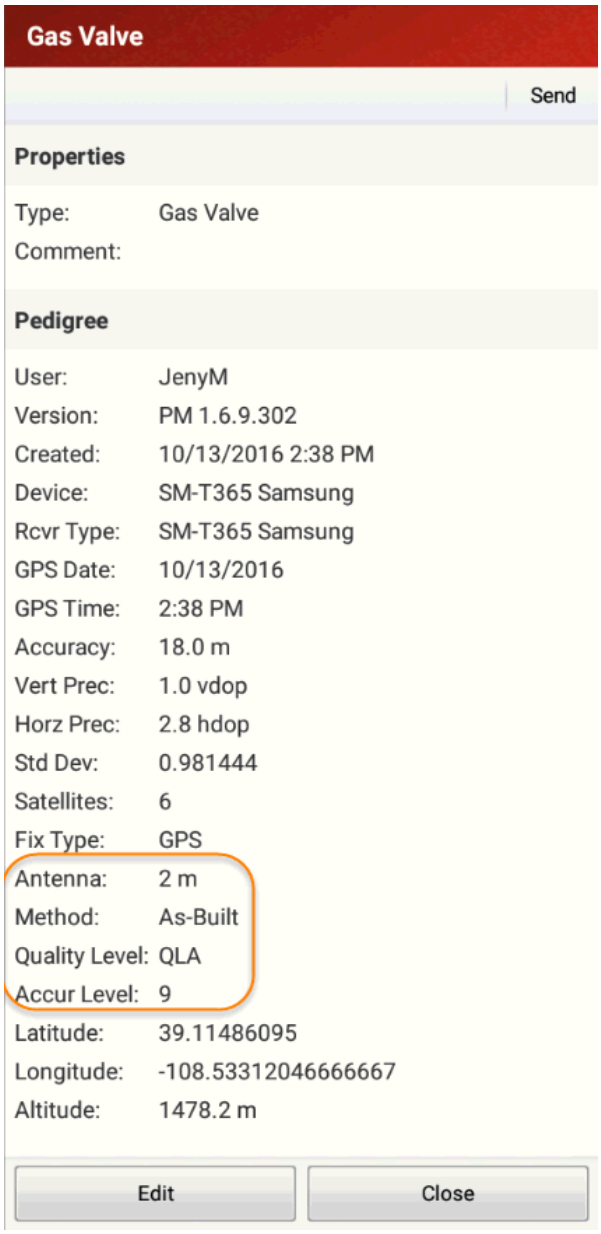
11. Tap **Close**.

12. Complete the process for creating your point, line or polygon: tap **Save** when complete.

13. Tap **Close** (bottom left).

14. To view this information in PointMan:
    a. Tap to select the feature (point, line, polygon) on the PointMan map.
       The feature selected displays in the Selection window.

    b. Tap **Details** (bottom of the screen).
       The Details of that feature display, with the **Method**, **Quality Level**, **Accur Level**, **Antenna** details.
       The same information is available in TransparentEarth.



c. Tap **Close** to close the Details screen.

Common Business Process Procedures

Quick Reference Creating eForms

1. Log into PM:
    a. **Local\YourUserName**
    b. Enter your **Password**
    c. Tap **Sign In**.
2. Zoom into specific location on the map view.
3. Tap **New**.
4. Select: **System** = **Form**
5. Select: **Component** = **Document**
6. Tap **OK**.
7. From the list of eForms, select the appropriate eForm.
8. Tap **OK**.
9. Fill out eForm.
10. Tap **Close** (upper right corner).
11. Tap **Save** (lower right corner).
12. Tap **Close** (lower center).

Quick Reference Creating a Line

1. Log into PM:
    a. **Local\YourUserName**
    b. Enter your **Password**
    c. Tap **Sign In**.
2. Tap **New** button.
3. **System**: select the applicable system type
4. **Component**: select the appropriate line type
5. Tap **OK**.
6. **<u>To draw a line using GPS:</u>**
    a. Make sure GPS is highlighted orange (bottom of screen)
    b. Tap Add.
    c. Walk a ways down the line.
    d. Tap Add again.
    e. Walk a ways down the line.
    f. Tap Add again.
    g. Continue until you are at the end of your line.
    h. Tap Save.

   i. Tap Close.

7. **<u>To draw a line on the map manually (without GPS):</u>**
   a. Make sure GPS is highlighted is NOT orange (black, at bottom of screen)
   b. Tap Add.
   c. Tap the map at the next location along the line on the map.
   d. Tap Add again.
   e. Tap the map again at the next location along the line.
   f. Tap Add again.
   g. Continue until you are at the end of your line.
   h. Tap Save.
   i. Tap Close.

Quick Reference Creating a Polygon

1. Log into PM:
   a. Local\YourUserName
   b. Enter your **Password**
   c. Tap **Sign In**.
2. Tap **New** button.
3. System: select the applicable system type (Area of Concern, Excavation Site, Temp Survey)
4. Component: **Area** or **Polygon**
5. Tap **OK**.
6. **<u>To draw a Polygon using GPS:</u>**
   a. Make sure GPS is highlighted orange (bottom of screen)
   b. Tap **Add**. This creates your Start point. You will finish this process here.
   c. Walk to the first corner of the area.
   d. Tap **Add** again.
   e. Walk to the second corner of the area.
   f. Tap **Add** again.
   g. Walk to the third corner of the area.
   h. Tap **Add** again.
   i. Walk back to the location of your first point.
   j. Tap **Save**. The system will automatically “close” the polygon for you.
   k. Tap **Close**.
7. **<u>To draw a Polygon on the map manually (without GPS):</u>**
   a. Make sure GPS is highlighted is NOT orange (black, at bottom of screen)
   b. Tap **Add**. This creates your Start point. You will finish this process here.
   c. Tap the map at the first corner of the area.
   d. Tap **Add** again.
   e. Tap the map at the second corner of the area.
   f. Tap **Add** again.
   g. Tap the map at the third corner of the area.

h. Tap **Add** again.
i. Tap the map as close to the first point as possible.
j. Tap **Save**. The system will automatically “close” the polygon for you.
k. Tap **Close**.

Performing a Locate Process

This topic outlines the process of collecting and registering data related to utility and pipeline infrastructure using PointMan. The process includes: Identifying the ticket, driving to the dig site, confirming that the excavation meets the One Call Ticket requirements, performing the locate, documenting the locate with an electronic form containing the locate details, photographs, sketches and notes, and emailing the form to the recipient(s).

Perform the Locate

1. Log into PointMan using your User Name and Password.
2. Determine the ticket location as identified in the One Call ticket.
    a. Search for the one call ticket using the Search functions.
    b. Once you locate the One Call Ticket, tap **MapIt**. You will see the One Call ticket highlighted on the map.
3. Drive to the site.
4. Confirm the ground disturbance details with the contractor.
5. Set up the transmitter and perform the initial physical locate (with mark-outs) to ensure that the layout is understood.
6. Ensure that the GPS unit and locate tool are connected via Bluetooth to the mobile device.
7. Open PointMan and select the ticket boundary so that it is highlighted and then select Folder.
    a. Decide which feature to record first, and then access the **System/Component** menu to initiate the registration of that feature.
    b. Selecting the **New** menu item at the top of the screen in PointMan gives the user access to the **New Place Mark** dialogue box.
    This dialog box contains all of the objects that can be created and are organized by **System** (generally the type of product carried by the system) and the major components and objects that you wish to associate with that feature. The Systems available are selected from the drop down list in the **New Place Mark** dialogue box. Each system has a color code associated with it automatically so that when the object is logged, it is displayed in the correct color designation. Selecting a System filters the list of Components available so that only those appropriate for that particular system are available for selection. In addition, each component and/or object is automatically associated to its geometric shape (point, line, polygon).
8. Log the position of the first oil line in the one call ticket area:
    . Select **New**
    a. Select **Oil** (or **Gas**) as the **System** and **Line** as the **Component**
    b. Select **OK**
    The system responds with "**Obtaining GPS fix**" and a short section of line

appears on the map with a blinking cursor at one end. Ensure that the GPS and Locate Tool indicators are both visible in the upper right of the display. The GPS will show the current accuracy and the Locate tool should say "**on**".

9. Log the start point of the line:
    a. Move to the start point of the pipeline and trigger the logging of the point from the locate tool by taking a depth reading. A "plink" will be heard from the tablet confirming that the data has been collected.
    The system records the start point of the line and moves the end point to your current location.
10. Continue walking the line, and record the next point on the line:
    a. Move to the next point on the line and again trigger the logging of the point from the locate tool by taking a depth reading. Repeat until the end of the line is logged and select **Close** in the PointMan menu.
    The system records the located segment of oil pipeline in the system.
11. Log the position of the next oil line in the one call ticket area:
    a. Select **New**
    b. Select **Oil** (or **Gas**) as the **System** and **Line** as the **Component**
    c. Select **OK**
    The system responds with "**Obtaining GPS fix**" and a short section of line appears on the map with a blinking cursor at one end.
12. Log the start point of the line:
    a. Move to the start point of the pipeline and trigger the logging of the point from the locate tool.
    The system records the start point of the line and moves the end point to your current location.
13. Record the next point on the line:
14. Move to the next point on the line and log the point from the locate tool. Repeat until the end of the line is logged and select **Close** in the PointMan menu.
    The system records the located segment of oil pipeline in the system and the object appears in the Drop Tools folder.

Document the Locate by completing a locate form.
Prior to creating the form, ensure that you are standing within the confines of the One Call Ticket boundary, or that the center of the map display is within the boundary of the One Call Ticket area.

1. Create a locate eForm (Note: due to limitations on creating a sketch in the form, the view that is desired in the sketch must be in the background when you initiate the form function):
    a. Select **New**
    b. Select:
        i. System = **Form**
        ii. Component = **Document**
    c. Select **OK.**
    d. Select the Locate eform.

e. Select **OK**
The **Locate eForm** opens ready for input by the user. Note that certain elements of this form are intended to be auto-populated from the information contained in the One Call ticket.

2. **Locate form general information** (pages 1-2): Complete the entries in the form relating to the one-call ticket information, the locate details, and the results of the locate.
3. **Locate Sketches** (page 3): Take a screen shot of the map area and save it into the form as a Sketch.
   a. Select the blank space for the photo in the Sketches section by tapping **Add Sketch**.
   b. Select **Insert Map.**
   A screen shot of the current map will be placed in the Locate Sketches section.
      i. If desired, complete markups on the map sketch.
      For instructions marking up sketches, see Photos and Mark Up Tools help topics.
      ii. Repeat steps 3a-3c in the second Sketch field on the Sketches page.
      iii. Tap inside the **Sketch Notes** field to add any notes for the sketch.

1. **Locate form Photos** (page 4): Take a photo and save it into the form.
   a. Select the blank space for a Photo by tapping **Add Photo**.
   b. Select **Take Photo**.
   The tablet camera is activated.
   c. Point the camera at the photo subject, and tap Photo (bottom right of screen).
   For instructions marking up Photos, see Photos and Mark Up Tools help topics.
   d. Tap inside the **Photo Notes** field to add any notes related to the Photo(s).

2. Review the form prior to closing it to ensure accuracy of information, then select **Close**.
   You will be returned to the main map display, and your eForm will be saved as a point on the screen.
3. To review the eForm, see the Creating and Editing eForms topic.

PointMan GPS Integration

Couple a mobile device running PointMan via Bluetooth to a precision GPS Receiver.

1. Power up GPS Receiver.
2. Tap the **PointMan** icon to launch PointMan on the Mobile Device.
3. Enter **User ID** and **Password** to log into PointMan.
4. Change the Bluetooth settings in PointMan on the mobile device to enable Bluetooth communications:
    a. Go to: **Settings** > **Devices** > and click the **Configure Bluetooth** button.
    The device name and a list of paired devices appear on screen.
    b. Tap: **Only visible to paired devices** to allow the Locate Tool recognize the mobile device.
    A message appears stating **Visible to all nearby Bluetooth devices (4:59)** and a countdown message display.
    c. Enable a Bluetooth “Handshake” on the mobile device.
    Ensure that the device is set to "**Visible to other devices**" and select **“Scan”** or “**Search for Devices**".
    The GPS receiver appears in the list of available devices.
    d. Pair the GPS Receiver to the Mobile Device: Select the device to pair.
    e. If prompted enter the PIN Number: **12345678** and select **OK**.
    The GPS Receiver shows as being paired with the mobile device.
5. Change the default GPS setting in PointMan.
6. **GPS**: Access the menu to select the desired device in the list of values.
    The name of the GPS receiver is in the list of available devices.
    Change the default to the newly paired GPS Receiver.
    GPS: Select the desired device from the list of values.
    The name of the GPS receiver now appears in the GPS device field.
7. Exit the Settings screen by tapping **Settings** menu item in the top left of the screen.
    The user is returned to the map view.
8. Tap the **New** button (upper right corner) to open the New Place Mark dialog box.
    The **New Place Mark** dialogue box opens.
9. Choose the appropriate **System** and **Component**.
10. Tap **Save**.
    The system responds with “Obtaining GPS fix” a blinking cursor appears on the map and the accuracy of the GPS is displayed in the upper right corner of the screen.

    a. To save the point, line or polygon's location using the GPS readings, make sure that the GPS tab is highlighted orange (bottom right of screen).
    b. To save the point, line or polygon's location by manually placement, make sure that the GPS tab is black (not highlighted), tap the specific location on the map.

11. Tap **Save**.
    The system records the component in the system, and the Selection dialog box displays the new feature you just created.
12. To review the details of the feature you just created, tap **Details**.
13. To close the Selection dialog box, tap **Close**.
14. To log out of PointMan, press the Return button/icon twice.

PointMan Vivax Metrotech Locate Tool Bluetooth Communication Function

Couple a mobile device running PointMan via Bluetooth to a Vivax Metrotech Locate Tool, and capture points along an underground line.

1. Access the User Menu on the locate tool.
    a. Power up the locate tool and press the "**i**" button for approximately two seconds.
    The device menu displays.
2. Ensure that the Bluetooth search is enabled on the locate tool.
    a. Press the "**+**" button until the **"Bluetooth Search"** menu item appears and ensure that it is enabled.
3. Enable the Bluetooth Search function if "Disabled".
    a. Click on the "**M**" button immediately to the right of the "**+**" button.
    The device responds with "Bluetooth Search Enabled".

4. Change the Bluetooth settings in PointMan on the mobile device to enable Bluetooth communications.
    a. Log into PointMan and follow the menu path: **Settings** > **Connections**, and click the Bluetooth switch, if not already activated.
    b. Tap on the area surrounding the Bluetooth switch to view the Bluetooth settings.
    The device name and a list of paired devices appear on screen.
5. Make mobile device visible to Locate Tool.
    a. Click "**Only visible to paired devices**".
    A message appears stating "Visible to all nearby Bluetooth devices (4:59)" and a countdown message displays.
6. Search for the Locate tool using the Mobile device.
    a. Wait while the mobile device scans for other nearby devices.
    vLocPro will appear in the list of Available Devices.
7. Pair the Mobile Device to the Locate Tool.
    a. Select **VLocPro** from the list of Available Devices.
    A dialog box displays requesting you to enter the devices PIN (Note: if a message displays stating: "Unable to communicate with VLocPro", click VLocPro to try again. repeat until PIN prompt appears).
    b. Satisfy the device PIN request.
    c. Enter "**0000**" and select **OK**.
    vLocPro displays under the Paired Devices section.
8. Find the new Locator in PointMan.
    a. Tap the **Menu** icon in PointMan, then tap **Settings**.
    b. Scroll to the **Locator** menu to see the vLocPro in the list of values.
    c. Change the default to the newly paired Locate Tool.
    d. From the Locate Device drop-down, select the **vLocPro** from the list of values.
    The vLocPro should now display in the Locate Device field.
9. Change the Locator Type to **Vivax**.
    a. In the **Locator Type** field, select **Vivax** from the list of values.
10. Exit the **Settings** screen.
11. Tap the **Settings** icon in the top left of the screen.
    User returns to the map view.
12. Begin the process of collecting points for the locate line.
    a. Tap the **New** button (upper right corner).\
    b. From the **System** drop-down, select a Line feature (**Gas**, **Pipeline**, **Oil, Electrical, Water, etc...**)
    c. From the **Component** drop-down, select: **Pipeline**
    d. Tap **OK**.\
    The system displays the map and an "Obtaining GPS fix" message.
    A blinking cursor point displays on the map.
    In the upper right corner, a dialog box displays: Accuracy of the GPS, and the message: vLocPro: On".
13. Log the first point of the line.

   a. On the locate tool, click the "**i**" button.
      The locate tool screen displays the depth, the current, a log number, and the message: "**Press + to log**".
   b. Press the **+** button to log the first point.
      You will hear a "plink" sound from the PointMan tool, the point will be saved on the screen, with a line attached to one end.
14. Walk further down the line and log the second point of the line.
   a. On the locate tool, click the "**i**" button.
      The locate tool screen displays the depth, current, a log number, and the message: "**Press + to log**".
   b. Press the **+** button to log the second point.
      You will hear a "plink" sound from the PointMan tool, the point will be saved on the screen, with a line attached to one end.
15. Continue walking the line and taking points for the length of the line you want to locate.
16. When you take your last point, tap **Save** in the lower right corner of the PointMan application.
    The line will save and display on the map, and it will be highlighted in blue.
17. Close the Selection menu by tapping the small x in the upper right corner, or tap **Close** at the bottom of the PointMan screen.

PointMan Fuji Locate Tool Bluetooth Function

Condition: A mobile device running PointMan needs to be coupled via Bluetooth to a Fuji Telcom Locate Tool.
Script Comments: The Bluetooth communication is active whenever the Fuji device is powered up.

1. Change the Bluetooth settings in PointMan on the mobile device to enable Bluetooth communications.
    a. Action: Login to PointMan and follow the menu path > Settings > Devices > and click on the “Configure Bluetooth” button
    b. Expected Results: The device name and a list of paired devices appears on screen.
2. Make mobile device visible to Locate Tool
    a. Action: Click on “Only visible to paired devices”
    b. Expected Results: A message appears stating “Visible to all nearby Bluetooth devices (1:59)” and a countdown message is displayed.
3. Search for the Bluetooth device
    a. Action: Click on “Search for Devices”
    b. Expected Results: The Locate Tool shows as being paired with the mobile device
4. Pair the Mobile Device with the Locate Tool
    a. Action: Select the device to pair
    b. Expected Results: A dialogue box may appear requesting you to enter the device’s PIN
5. Satisfy the device PIN request
    a. Data Fields to be Populated: PIN
    b. Action: Enter “1234” and select “OK”
    c. Expected Results: The Locate Tool shows as being paired with the mobile device
6. Change the default GPS setting in PointMan.
    a. Data Fields to be Populated: Locator:
    b. Action: Access the menu to select the desired device in the list of values
    c. Expected Results: The name of the Locate Tool is in the list of available devices
7. Change the default to the newly paired Locate Tool
    a. Data Fields to be Populated: Locator:
    b. Action: Select the desired device from the list of values
    c. Expected Results: The name of the Locate Tool now appears in the Locate device field
8. Exit the Setting Screen
    a. Action: Click on the “Settings” menu item in the top left of the screen
    b. Expected Results: The user is returned to the map view
9. Open Project

   a. Action: Select Project
   b. Expected Result: PointMan opens the project and it is displayed to the user
10. Access the System/Component menu.
   a. Action: Click on the "+" Icon to access the System/Component menu
   b. Expected Results: The “New Place Mark” dialogue box opens with menu items for “System” and “Component”
11. Select a feature to record in the system.
   a. Data Fields to be Populated: Choose a system and component
   b. Action: Select "OK”
   c. Expected Results: The system responds with “Obtaining GPS fix” a blinking cursor appears on the map, the accuracy of the GPS, and the message “FDT01: on” is displayed in the upper right corner of the screen.
12. Save the record in the system
   a. Action: Press the “Depth” button on the locate tool
   b. Expected Result: The locate tool processes the request and then tells the operator to “Pull Up”
13. Task Description: Save the record in the system
   a. Action: Pull up the locate tool to the end of the extension
   b. Expected Result: The locate tool calculates the depth, displays it to the user and logs the entries in PointMan.
14. Repeat steps 11 and 12 until the data collection for that object is completed.
   a. Action: After the last point has been logged, select “Close” in PointMan.
   b. Expected Result: The system records the component in the system where you are able to display the details of the record including the details on each point that was logged.
15. Double-Click on the return icon to logout.

PointMan RD Locate Tool Bluetooth Communication Function

Condition Description: A mobile device running PointMan needs to be coupled via Bluetooth to a Radio Detection Locate Tool.

1. Access the Bluetooth settings in PointMan on the mobile device to enable Bluetooth communications.
    a. Action Login to PointMan and follow the menu path > Settings > Devices > and click on the “Configure Bluetooth” button
    b. Expected Results: The device name and a list of paired devices appear on screen.
2. Make mobile device visible to Locate Tool
    a. Action: Click on “Only visible to paired devices”
    b. Expected Results: A message appears stating “Visible to all nearby Bluetooth devices (4:59)” and a countdown message are displayed.
3. Access the user menu on the locate tool
    a. Action: Power up the locate tool and press the Power button twice
    b. Expected Results: The device menu shows “VOL” in the lower left corner of the display
4. Access the Bluetooth functions on the locate tool
    a. Action: Press the button with the “up arrow” or “down arrow” until “BT” shows in the lower left corner of the display
    b. Expected Results: The user is able to access the Bluetooth functions
5. Access the Bluetooth settings
    a. Action: Click on the “right arrow” button
    b. Expected Results: The device responds with “ON” showing in the lower left corner of the display
6. Access the Bluetooth protocol settings
    a. Action: Click on the “up arrow” or “down arrow” until “PROT” shows in the lower left corner of the display
    b. Expected Results: The user is able to select the “PROT" setting
7. View the Bluetooth protocol setting
    a. Action: Click on the “right arrow” button
    b. Expected Results: The device responds with “PPP” showing in the lower left corner of the display
8. Change the Bluetooth protocol settings
    a. Action: Click on the “up arrow” or “down arrow” until “ASCII” shows in the lower left corner of the display
    b. Expected Results: The user is able to select the “ASCII" setting
9. Access the Bluetooth pairing function
    a. Action: Click on the “left arrow” button
    b. Expected Results: The device responds with “PROT” showing in the lower left corner of the display

10. Pair the Locate tool and Mobile Device
    a. Action: Click on the “up arrow” or “down arrow” until “PAIR” shows in the lower left corner of the display
    b. Expected Results: The user is able to select “PAIR”
11. Access the device type settings
    a. Action: Click on the “left arrow” button
    b. Expected Results: The device responds with “PROT” showing in the lower left corner of the display
12. Select the device type
    a. Action: Click on the “up arrow” or “down arrow” until “BT--PC” shows in the lower left corner of the
    b. Expected Results: The user is able to select “BT--PC”
13. Pair the Mobile Device to the Locate Tool
    a. Action: Click on the “left arrow” button
    b. Expected Results: The Bluetooth icon on the locate tool will start to flash
14. Ensure that the mobile device is still visible to Locate Tool
    a. Action: Click on “Only visible to paired devices” if it has timed out
    b. Expected Results: The locate tool will appear in the list of available devices
15. Pair the Mobile Device with the Locate Tool
    a. Action: Select the device to pair
    b. Expected Results: A dialogue box may appear requesting you to enter the device’s PIN
16. Satisfy the device PIN request
    a. Action: Enter “1234” and select “OK”
    b. Expected Results: The Locate Tool shows as being paired with the mobile device
17. Return to the PointMan menu.
    a. Action: Select the “Back” arrow at the bottom of the screen
    b. Expected Results: The user is returned to the Bluetooth menu in PointMan
18. Change the default Locate tool setting in PointMan.
    a. Action: Access the “Locator” drop down menu to select the desired device in the list of values
    b. Expected Results: The name of the Locate Tool is in the list of available devices
19. Change the default to the newly paired Locate Tool
    a. Data Fields to be Populated: Locator:
    b. Action: Select the desired device from the list of values
    c. Expected Results: The name of the Locate Tool now appears in the Locate device field
20. Identify the Manufacturer of the newly paired Locate Tool
    a. Action: Select the manufacturer from the list of values
    b. Expected Results: The user is able to identify the name of the manufacturer. This is important as this determines the protocol for the Bluetooth pairing

21. Exit the Setting Screen
    a. Action: Click on the “Settings” menu item in the top left of the screen
    b. Expected Results: The user is returned to the map view
22. Open Project
    a. Action: Select Project
    b. Expected Result: PointMan opens the project and it is displayed to the user
23. Access the System/Component menu.
    a. Action: Click on the "+" Icon to access the System/Component menu
    b. Expected Results: The “New Place Mark” dialogue box opens with menu items for “System” and “Component”
24. Select a feature to record in the system.
    a. Fields to be Populated: Choose a system and component
    b. Action: Select "Save”
    c. Expected Results: The system responds with “Obtaining GPS fix” a blinking cursor appears on the map, the accuracy of the GPS, and the message “RD8K_nnnn: on” is displayed in the upper right corner of the screen.
25. Log the record in the system.
    a. Action: On the locate tool and click the “graph” button (lower right of the display)
    b. Expected Result: The system records the component in the system where you are able to display the details of the record. Note that if you are recording a line feature or a polygon, the line will be extended each time you click on the “graph” button to log a point. When the last point has been logged, select “Close” in the PointMan menu at the bottom of the screen.
26. Task Description: Double-Click on the return icon to logout of PointMan.

PointMan and EOS Tools Pro Connection

Using the EOS Tools Pro application allows users to have a comprehensive view of the Satellite system being used to collect precise GIS data. The EOS Tools Pro app is NOT sending data to PointMan. It is an extra display attached to the BlueStar GPS to show additional details about your connection, as well as a few extra tools you can use.

1. Download EOS Tools Pro.
    a. Locate the **Google Play Store** icon on your mobile device.
    b. Open the app search for: **EOS Tools Pro** and install the app.
    c. Once installed, tap the icon to start the application.

2. Connect to the BlueStar GPS receiver.
    a. Log into the PointMan app using your credentials.
    b. Tap the **Menu** icon in the upper left corner of the screen.
    c. Tap **Settings**.
    d. Under **"Devices"** tap the "**Configure Bluetooth**" button.
    e. Turn the Bluetooth switch **On** if it is off.
    f. Tap the area around the Bluetooth button to show the Bluetooth menu.

g. Tap **“Scan”** in the upper right corner of the screen and connect to the BlueStar GPS receiver (make sure the BlueStar GPS receiver is turned on).
h. Press the back (return) button on the mobile device to return to the PointMan app.
i. Inside **“Devices”** tap the **GPS** drop-down menu and select **“BlueStar GPS”**.
   Make sure you select the **generic** option that has no numbers with it.

3. Connect to the Locate Tool.
   a. Log into the PointMan app using your credentials.
   b. Tap the **Menu** icon in the upper left corner of the screen.
   c. Tap **Settings**.
   d. Under **“Devices”** tap the **“Configure Bluetooth”** button.
   e. Turn the Bluetooth switch **On** if it is off.
   f. Tap the area around the Bluetooth button to show the Bluetooth menu.
   g. Tap **“Scan”** in the upper right hand corner of the screen and connect to the Locator Tool you are using. (If prompted for a **PIN**, try **0000**.)
   h. Press the back (return) button on your mobile device to return to the PointMan app.
   i. Inside **“Devices”** tap the **Locator** drop-down menu and select your locate tool.
   j. Tap the **Locator** type drop-down menu and select the type that corresponds to your Locate tool.

4. Using the EOS Tools Pro app.
   a. Press the **Home** button on your mobile device, and tap the **EOS Tools Pro** icon to re-enter the EOS Tools Pro app.
   b. Tap the three dots '**...**' in the upper right hand corner to access the **Menu**.
   c. Tap “**Select GPS Device**” and select the BlueStar GPS you paired with in step 2g.
   d. Tap the three dots '**...**' in the upper right hand corner to access the **Menu**.
   e. Tap “**Enable Mock Location**” and then tap “**Start GPS**”.
   f. Wait approximately 30 seconds and the **POSITION** tab on the EOS app will begin displaying data.
      ****NOTE****: The EOS Tools Pro app is NOT sending data to PointMan. It is displaying additional details about the satellite constellation connected to your GPS receiver and some additional tools to use.

KML Data Integration to External GIS Systems

This topic provides information on KML data integration from PointMan to external GIS systems.

Geodetic Reference Systems in Google's KML File Format

KML (and Google Maps) use's plain un-projected WGS84 (EPSG 4326) decimal Lat/Long coordinates. For its reference system, KML uses 3D geographic coordinates: longitude, latitude and altitude, in that order, with negative values for west, south and below mean sea level if the altitude data is available. The longitude, latitude components (decimal degrees) are as defined by the World Geodetic System of 1984 (WGS84). The vertical component (altitude) is measured in meters from the WGS84 EGM96 Geoid vertical datum. If altitude is omitted from a coordinate string, e.g. (-77.03647, 38.89763) then the default value of 0 (approximately sea level) is assumed for the altitude component, i.e. (-77.03647, 38.89763, 0).

PointMan Output KML File Integration with External GIS Systems

Open source and commercial GIS software converting KML to shapefiles will assume KML data's source coordinates to be in WGS 84 (EPSG 4326). As such, the KML conversion to shapefile will be generated in the WGS84 coordinate system. This implies that regardless to what coordinates/datum is used to collect and store data in KML format, converting it to shapefiles will result the output to be in WGS84 coordinate system.

Integration of KML File from PointMan with External GIS Systems

Data Collected in PointMan does not undergo any coordinate transformation. The coordinate system/datum utilized for data collection is stored as-is and exported as-is to KML file. For example, data collected in ITRF2008 datum is stored as-is in PointMan and exported as-is to KML. However, due to KML's limitations to support coordinate/datum definitions other than WGS84, while converting KML to shapefile GIS software will treat this data to be in WGS84. To get the data back to ITRF2008 (or any user defined coordinate reference), users need to redefine coordinate system definition back to ITRF2008. The steps for redefining the coordinates is using ESRI ArcMap is outlined below.

Defining a Projection/Coordinate System in ArcGIS using ArcToolbox

To define a projection for a shape file, users shall use Arc Toolbox. Users also need to have write permission to the file to do this. The process described below will add/modify a new or existing file with the extension .prj to the GIS data layer that must accompany the rest of the files that go into a shape file. The Define Projection tool works both from the ArcCatalog and the ArcMap interface. Users can have the file open in ArcMap while using the tool in ArcMap. However, users CANNOT have the file open in ArcMap while using the tool in ArcCatalog. Use one interface or the other, but cannot have the file open in both!

1. Open **Arc Toolbox** (in ArcMap or ArcCatalog, choose Window – **ArcToolbox** or click on the red **Toolbox** icon).

2. Go to **Data Management Tools** – **Projections and Transformations** and click **Define Projection**.

3. In the **Define Projection** dialog box under Input **Dataset or Feature Class**, click the folder icon to navigate to the folder where your shape file is located. Once located, click **Add**.
   Iif you are in ArcMap and the shape file is already displayed, you can simply click on the little arrow and choose the open file.

4. In the **Coordinate System** box, click on the icon to the right.
   The **Spatial Properties** dialog box displays.

5. There are two common methods for selecting a coordinate system:

   a. If you have other files on the computer with the target coordinate system already defined, you can click on the **Import** button, navigate to the defined shape file and have it use that same coordinate system for the undefined shape file as well (find it and click **Add**).
   b. Or press **Select**..., and choose the coordinate system to apply.
      For example, we would choose Geographic Coordinate System - GCS_ITRF_2008, WKID: 104257 Authority: ESRI- ITRF 2008..., then click on Add.

6. Users will see a yellow warning icon that the layer already has a projection defined. This is expected
   Click **OK**.
   Remember we are redefining the projection from KML's incorrect WGS84 to the right user defined IRTF2008.

7. Wait for the process to finish.
   GIS data layer will be re-defined with the right coordinate reference system and the data from KML is integrated with correct coordinate reference system within GIS.