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GEOSPATIAL

ORIGIN FIELD SOFTWARE TUTORIALS



Creating a Feature Code Library



About this Tutorial

In this tutorial, you will learn to create a feature code library in Spectra Geospatial® Origin field software. The tutorial will walk you through importing a job file (in the downloaded folder), containing points from a parking lot survey. This tutorial does not involve a lot of technical procedure (setting up a survey), it will just walk you through how to create a feature code library in Origin. You will learn how to do the following:

- Upload a job file
- Create a feature code library in Origin and assign it to the job
- Change, edit, and make notes on points with codes.
- Key in points, using the feature codes

This tutorial will take approximately 15-20 minutes to complete.

Understanding Feature Codes in Origin

A feature code library is a text file that contains the definitions of features, attributes, linework, and control codes. When measuring a point in the field, you can assign it a feature code to define what that point represents.

You can download or create a feature code library prior to field work. Typically, it is best practice to create a feature code library in the office and to have a standard process for coding points consistently. If you do not have one, Origin has a tool to create these libraries on the fly or add codes to the library if you find there are codes missing. Users can configure a very limited set of properties in Origin; however, using the feature definition manager allows for more configuration.





What You Will Need

- **Origin Field Software:** Origin LT, Origin Max, Origin GNSS, or Origin Total Station
- **Device:** computer or data collector
- **Data:** Ensure the jobXML file, downloaded in the **Creating a Feature Code Library** folder, is located on your device.





Step 1: Create a Project and Job

1. In the **Projects** screen, tap **New**.
2. Fill in the project details:
Name the project "*Feature Codes*"
(Optional) Provide a **Description** "*learning to create feature codes*"
3. Tap **Enter** and **Create**
4. In the **New job** screen, select **Create from JobXML or DC file** and change the settings to the following
Name the job "*Create a Feature Code Library*"
For **File format**, select **JobXML**
For **From file**:
Browse to the downloaded **CreatingFeatureCodeLibrary.jxl** file and select.
Tap **Enter**.
5. A pop-up box will appear showing **Transfer complete**.
6. The properties page will appear, there will be no changes made to the job right now.





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Step 1. Create a Project and Job

Job path: ...\Projects\Origin Tutorial\Create a Feature Code Library.job

Properties	
Coord. sys.	Colorado North 0501 (United States/State Plane 1983)
Units (Dist.)	Meters
Layer manager	None
Feature library	None
Cogo settings	Ground
Additional settings	Off
Media file	Previous point
Reference	?
Description	?
Operator	?
Notes	?

Buttons: Esc, Accept

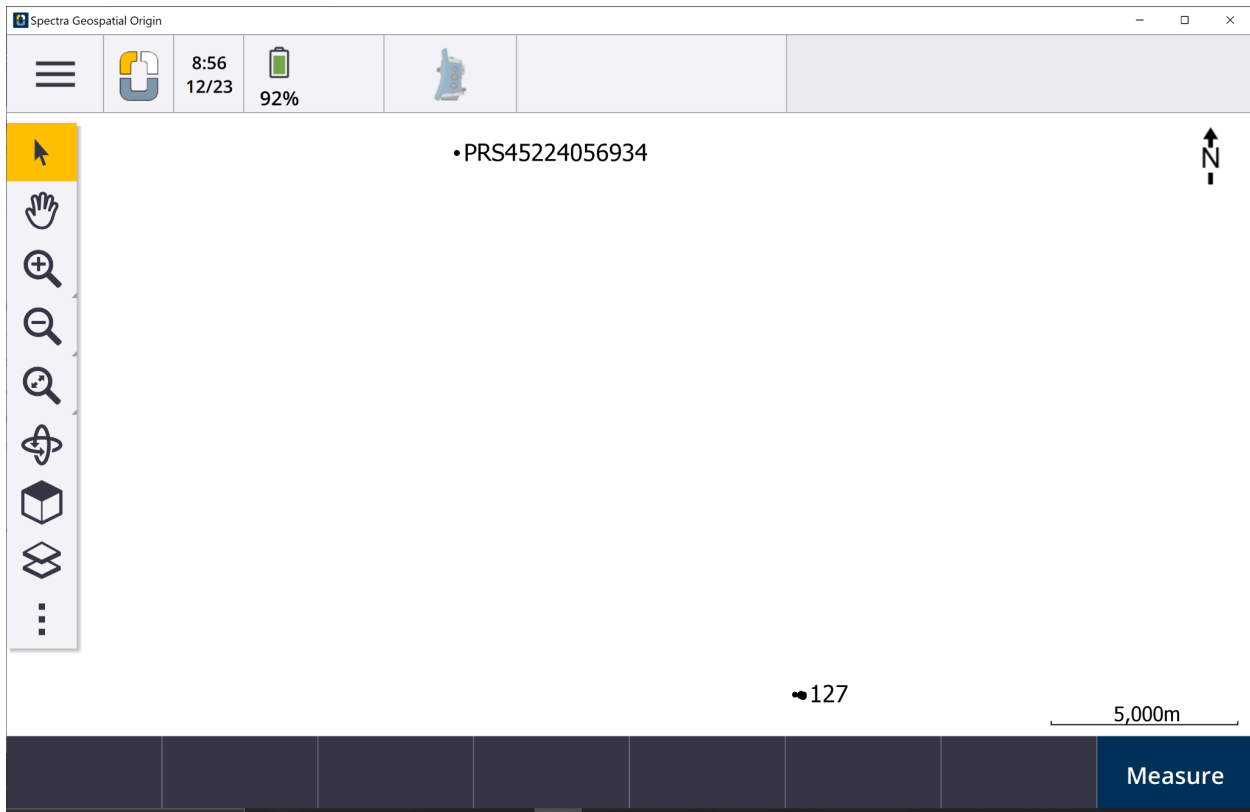
7. Tap **Accept** and the **Map** screen will appear with the data.





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Step 1. Create a Project and Job



8. Tap and hold the **Zoom In** toolbar for 3 seconds, tap in the map multiple times to zoom in on point **127**.

Additionally, you can tap **Zoom in** and drap a box around point **127**.

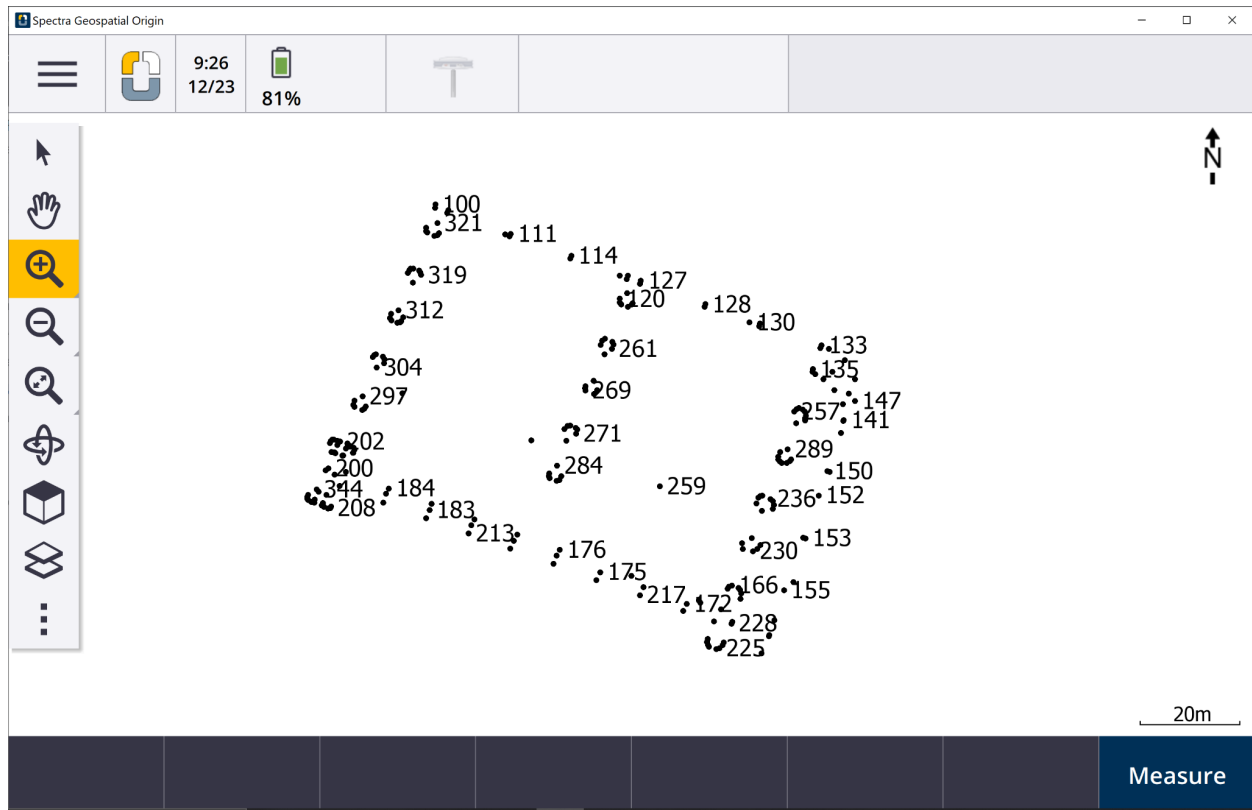
9. There are several data points collected from a parking lot survey.





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Step 1. Create a Project and Job




10. This job contains many points, lines, and polygons. However, there is not a feature library assigned so the codes have no definitions.

The following tutorial steps will make the feature library for this data set and give the points their definitions.





Step 2: Creating a New Feature Code Library

1. Tap  .
2. Tap **Settings** and **Feature libraries**.
You will see the **GlobalFeatures** already listed. This is a default feature code library.
3. Tap **New** and in the **Feature library details** page, give the name "*WCO Parking Lot*".
Tap **Enter** and **Accept**.
4. Back on the **Feature Libraries** page, select the **WCO Parking Lot** and you will be brought to the feature list.
Since you have not added any features, it will say **No features exist**.
5. On the bottom of the screen, tap **Add**. You will be adding in points, lines, and polygons.
6. On the **Enter feature code** screen. Fill in the following information:
Feature code: *BOC*
Description: *Back of Curb*
Feature Type: *Line*
Layer: *0*
Line Style: *Solid Line*
Line Color: *Orange*
Tap **Accept** and the new feature code is added to the list.
7. Tap **Add** and repeat Step 6 for the following feature codes:






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Step 2. Creating a New Feature Code Library

Feature Code	Description	Feature Type	Layer	Detail: (Line Style, Line/Border Color, Control code action)
LP	Light Pole	Point	0	N/A
WALL	Wall	Line	0	Solid lines Red
CNTL	Control Point	Point	0	N/A
TREE	Tree	Point	0	N/A
SW	Sidewalks	Line	0	Solid Lines Yellow
LND	Landscape	Polygon	0	Solid Lines Green
S	Start Line	Control code	0	Start join sequence
E	End Line	Control code	0	End join sequence

8. Tap **Store** and **Back**. You will be brought to the **Map** screen.
9. Tap  .
10. Tap the **Job: Creating a Feature Code Library**.
11. You should be on the **Origin Tutorial** project page, tap the **Creating a Feature Code Library** job.

Tap **Properties**.

12. You can see there is no **Feature Library** assigned for the project.

Tap the box and you will see the "WCO Parking Lot" library.





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Step 2. Creating a New Feature Code Library

Job path: ...\\Projects\\Origin Tutorial\\Create a Feature Code Library.job

Properties	
Coord. sys.	Colorado North 0501 (United States/State Plane 1983)
Units (Dist.)	Meters
Layer manager	None
Feature library	WCO Parking Lot
Cogo settings	Ground
Additional settings	Off
Media file	Previous point
Reference	?
Description	?
Operator	?
Notes	?

Buttons: Esc, Accept

13. Tap **Accept**.

14. You have assigned the new Feature Library to the job.

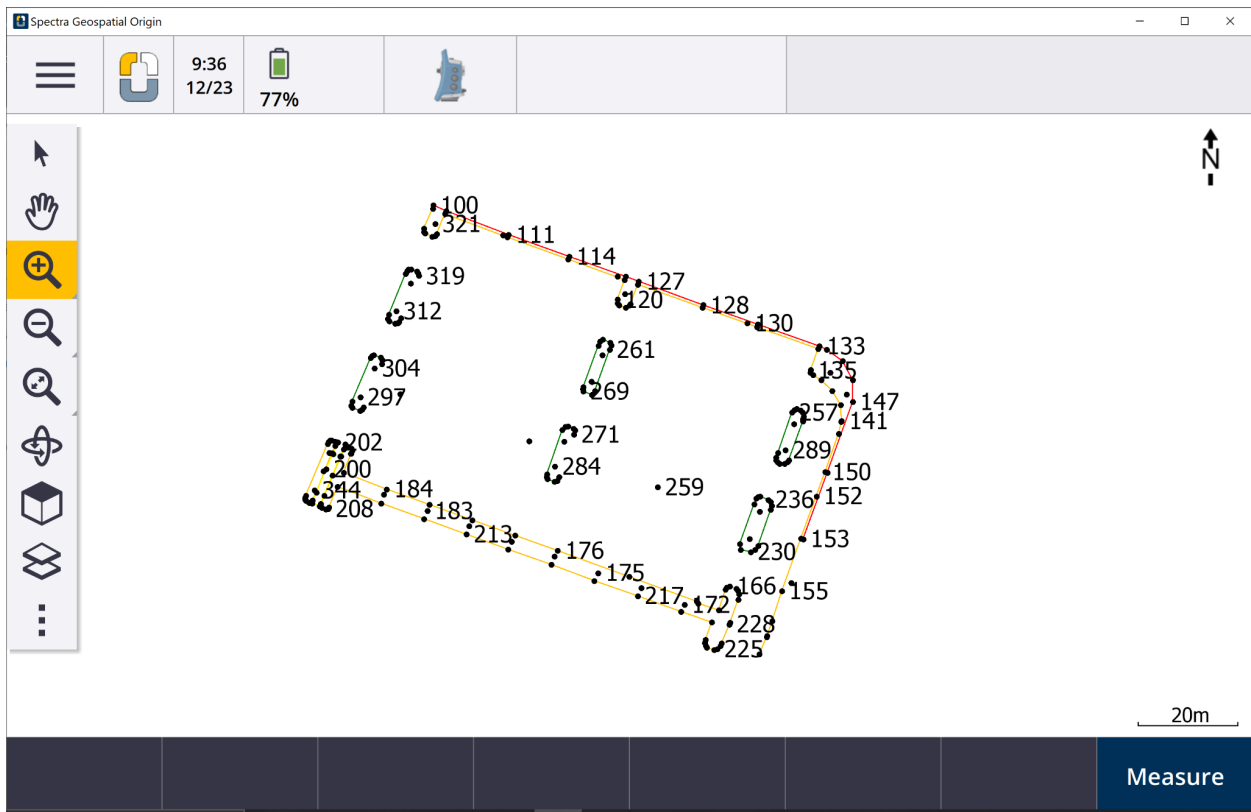
15. Navigate to the Map and you will see the points with the outlined definitions.





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Step 2. Creating a New Feature Code Library



16. To see the linework, tap the **Layer manager** button in the side map controls.
17. Select the **Filter** tab.
18. Uncheck the **Keyed in points (normal)** and you will be able to see the highlighted features.





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Step 2. Creating a New Feature Code Library

The screenshot displays the Spectra Geospatial Origin software interface. The main map area shows a field layout with a yellow boundary and several green rectangular features. A scale bar indicates 20m. The top status bar shows the time as 3:45 on 01/06 and a battery level of 73%. The left sidebar contains navigation tools, with the zoom-in tool highlighted. The right sidebar is the 'Layer manager' panel, which is currently set to 'Filter'. The 'Features' tab is active, showing a list of feature codes with checkboxes and expand/collapse icons. The 'Keyed in points (normal)' feature code is selected and highlighted. The bottom status bar includes buttons for 'Esc', 'All', 'None', a filter icon, 'Auto update' (checked), and 'Accept'.

Layer manager

- × Topo points (GNSS)
- × F1 Topo points (Conv.)
- × F2 Topo points (Conv.)
- ∨ Mean turned angle
- As-staked points
 - Keyed in points (normal)
- ▲ Keyed in points (control)
- ☒ Calibration points
- Cogo points (computed)
 - Construction points
- ◎ Observed control points
- ▲ FastStatic points

Auto update Accept





Step 3: Changing Point Codes

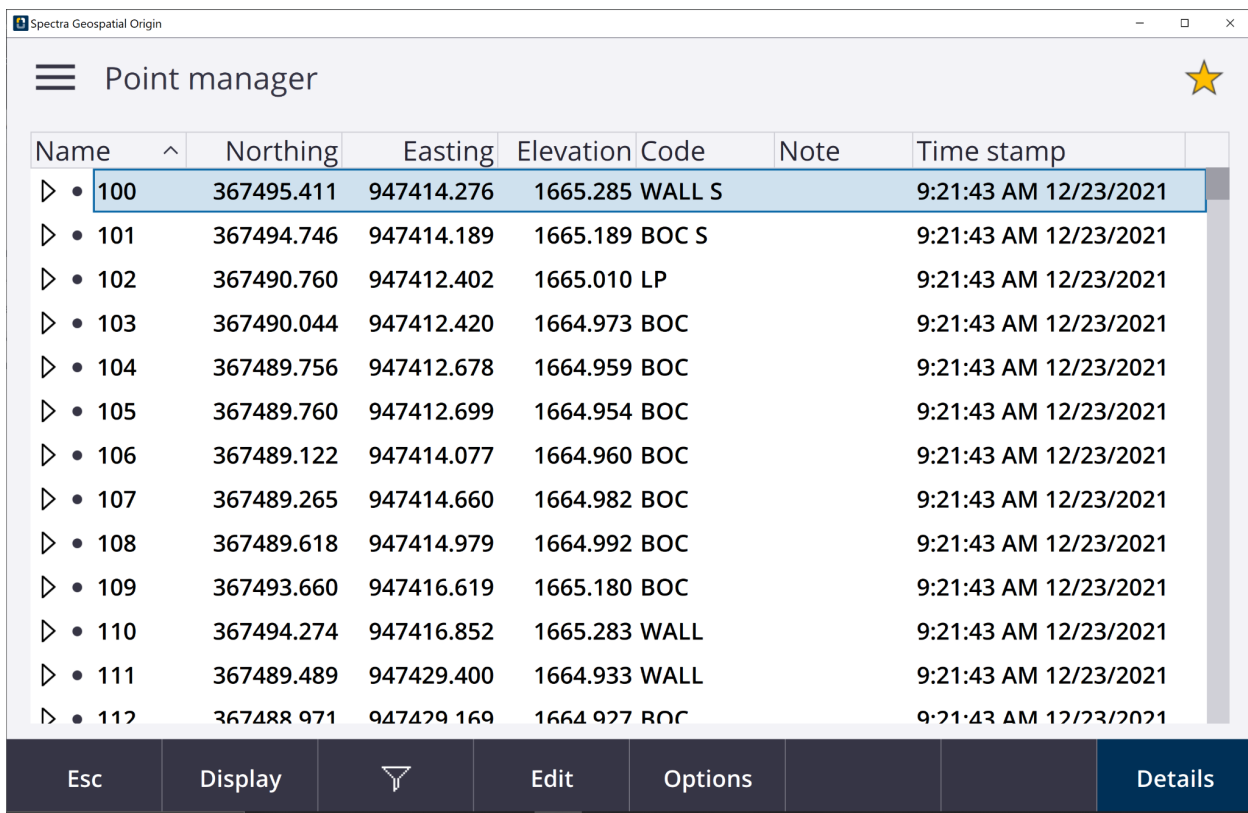
1. Origin allows for users to change the code for a point that has already been measured.

Tap  .

2. In the **Favorites** tab, select **Point manager**.

Alternatively, tap **Job data** and **Point manager**

3. All points, from 100 to 344, are listed in the **Point manager** screen.



Name	^	Northing	Easting	Elevation	Code	Note	Time stamp
▷ • 100		367495.411	947414.276	1665.285	WALL S		9:21:43 AM 12/23/2021
▷ • 101		367494.746	947414.189	1665.189	BOC S		9:21:43 AM 12/23/2021
▷ • 102		367490.760	947412.402	1665.010	LP		9:21:43 AM 12/23/2021
▷ • 103		367490.044	947412.420	1664.973	BOC		9:21:43 AM 12/23/2021
▷ • 104		367489.756	947412.678	1664.959	BOC		9:21:43 AM 12/23/2021
▷ • 105		367489.760	947412.699	1664.954	BOC		9:21:43 AM 12/23/2021
▷ • 106		367489.122	947414.077	1664.960	BOC		9:21:43 AM 12/23/2021
▷ • 107		367489.265	947414.660	1664.982	BOC		9:21:43 AM 12/23/2021
▷ • 108		367489.618	947414.979	1664.992	BOC		9:21:43 AM 12/23/2021
▷ • 109		367493.660	947416.619	1665.180	BOC		9:21:43 AM 12/23/2021
▷ • 110		367494.274	947416.852	1665.283	WALL		9:21:43 AM 12/23/2021
▷ • 111		367489.489	947429.400	1664.933	WALL		9:21:43 AM 12/23/2021
▷ • 112		367488.971	947429.169	1664.977	BOC		9:21:43 AM 12/23/2021

4. Look at point **102**, it has a code of **LP**, indicating it is a light pole. This should have the code **BOC**.

For point **102**, tap directly into the **Code** field to change.

5. Clear the search bar and type **BOC**.

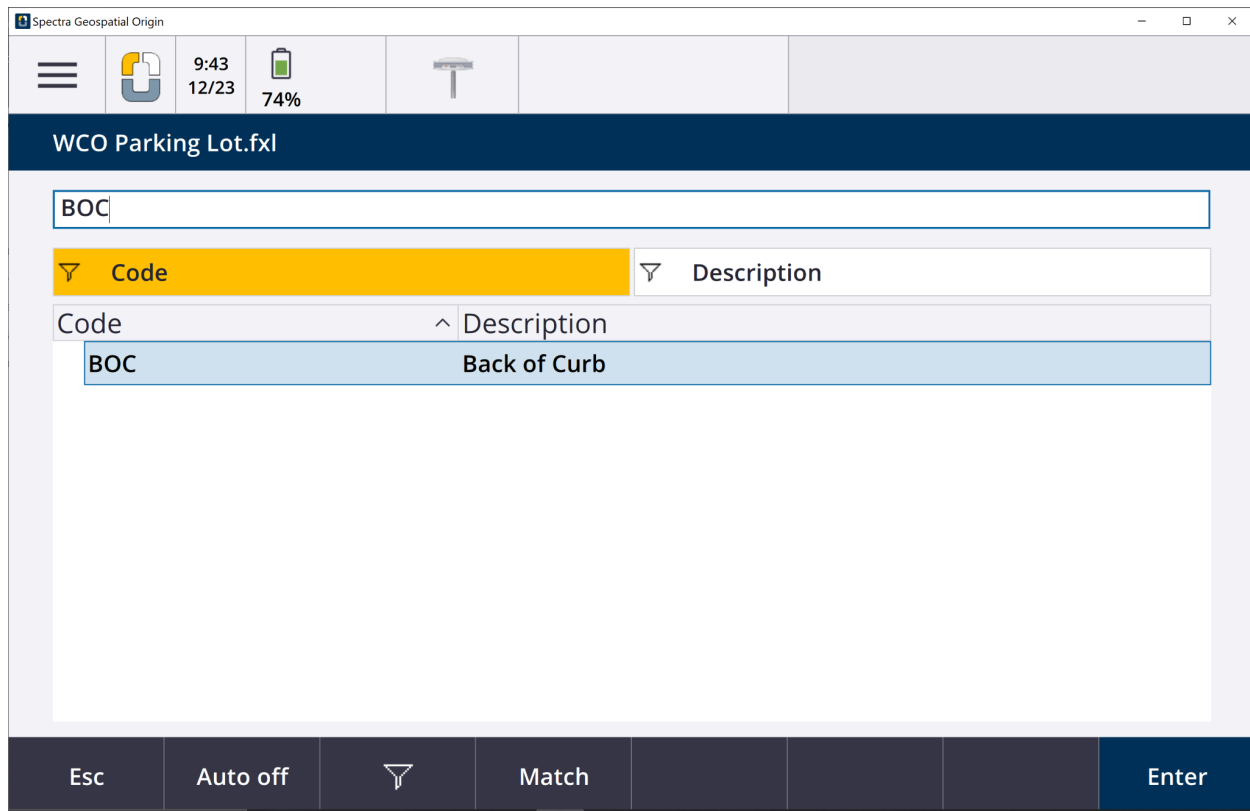




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Step 3. Changing Point Codes

Tap **Enter** to change the code name.



6. Tap **Enter**. Point 102 now has a note that shows it was modified.
Extend the **Notes** column and it says **Modified, Time, and Date**.
7. In the **Point manager** page, select point **100**.
Tap **Edit** and then tap **Notes**.
8. In the **Notes** screen, type *Beginning of wall on the edge of the parking lot*.
Tap **Enter**.
9. Tap **Esc**. to go back to the menu.





Step 4: Key-in Points

Now that you have assigned the feature library and uploaded the data, you will key-in points to use the codes. The Key In tool allows for creating points/lines/polygons and entering coordinates of them.

1. Tap  and tap **Key in** and select **Points**.

2. For **Point name** type **345**

For **Code** select **TREE**

Tap the screen near point **321** to automatically fill in the Northing and Easting boxes.

Type the elevation at **1,524m**.

Tap **Store**.





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Step 4. Key-in Points

You have completed this tutorial.

