ORIGIN FIELD SOFTWARE TUTORIALS

Using Measure Codes

About this Tutorial

In this tutorial, you will learn how to use the measure codes feature, including:

- Create measure code groups

- Arrange the code display

- Measure and code observations

- Use the multicode function to assign multiple codes to a point/line

- Use the +/- feature to measure multiple lines with the same code

This tutorial will take about 20-40 minutes to complete.

Measure Codes in Origin

Conventional or GNSS observations can be simultaneously measured and coded using the Measure Codes form in Spectra Geospatial® Origin field software. To use this, the desired codes must be selected from the feature library to show them in the form. The groups of codes used can be configured in the feature code library.

What You Will Need

- **Origin Field Software:** Origin LT, Origin Max, Origin GNSS, or Origin Total Station

- **Device**: computer or data collector

- **Survey:** You will need to start a survey to use measure codes. Please refer to the tutorials for setting up a new survey, if needed.

- **Feature code library**: This tutorial uses the feature code library made in the Creating a Feature Code tutorial. If you do not have this, follow these steps:

  1. Download and copy WCOParkingLot.fxl file to data collector

  2. Open the Spectra Geospatial Origin folder (or Spectra Geospatial Emulator for a desktop)

3. Open Spectra Geospatial Data folder

4. Open System Files folder and paste WCOParkingLot.fxl file

Step 1: Open a Project and Job

Note: If you have a project folder in Trimble Connect, open the project and create a new job.

1. In Origin, you will be brought to the **Projects** page. Tap **New** in the top left hand corner of the screen.

   The **New project** screen will display.

2. In the **New project** screen, fill in the project details (not all of the details are required).

   Name the project "*Measure Codes*"

   (Optional) Provide a **Description** *"learning to use measure codes"*

   (Optional) Include a **Location** *"Westminster, CO"*

3. Tap **Enter** and **Create**

4. In the **New job** screen, fill in the following details for the job:

   Job name - *"Measure Codes"*

   Template - *Metric Scale Only*

   Tap **Coord. Sys.**

   > Tap **Select from library**
   >
   > **System** - *United States/State Plane 1983*
   >
   > **Zone** - *Colorado North 0501*
   >
   > **Project height** - *1524m*; **Tip:** If you know the project height in US Feet, type height XX sft, and it will automatically adjust to meters.

   Units (Dist.) - *Meters*

   Feature library - *Global Features*

   Leave all of the other properties to the default (or empty) value.

   Tap **Enter**.

Step 2: Start a Survey Style

1. Set up the survey style you would like to use.

2. If you need assistance, navigate to the Origin Tutorial Page to see:

   - Setting up a Radio RTK Survey

   - Setting up a VRS Now RTK Survey

3. This survey will be using a Network RTK survey style.

Step 3: Measure Codes: Editing and Creating Groups
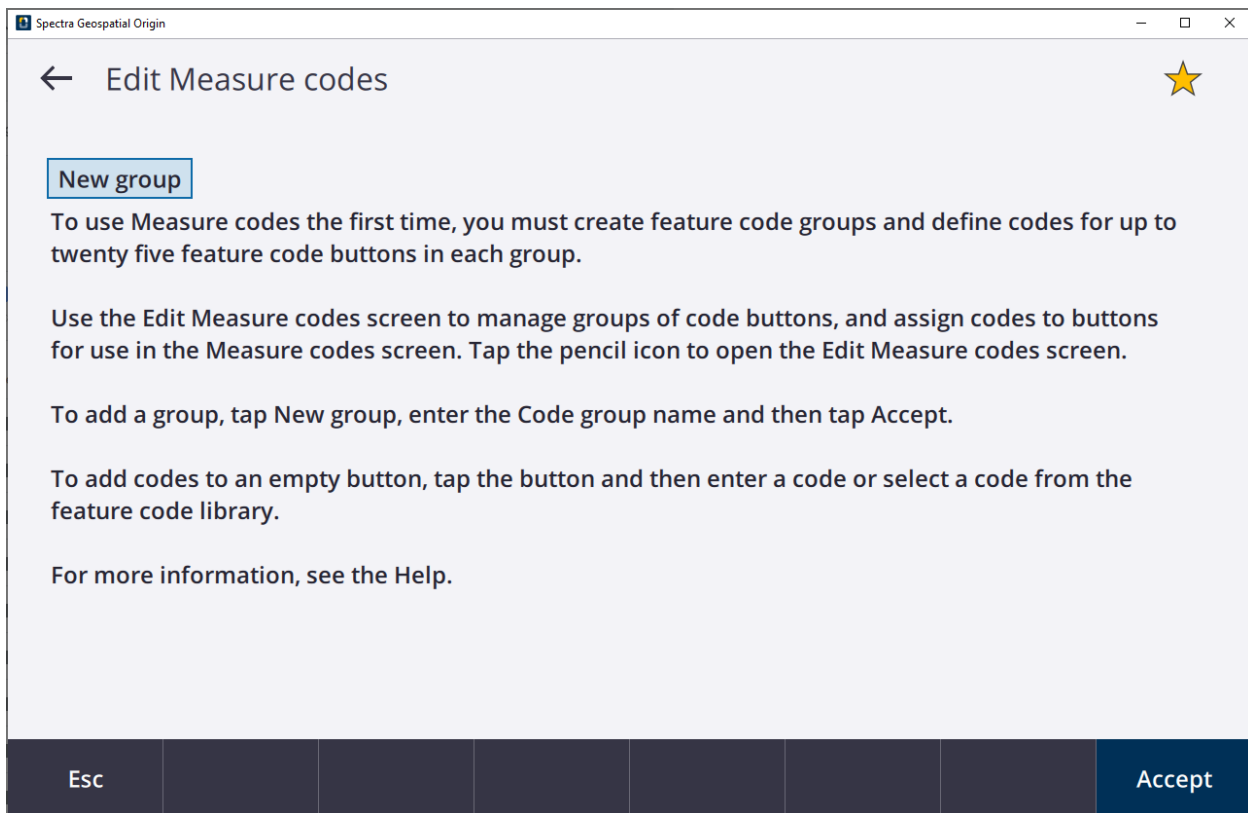
1. Tap ☰ .

1. Tap **Measure** and **Measure codes**.

   If this is your first time using measure codes, a message will appear explaining how to manage and create groups of codes.

2. Tap the drop down menu to view the different groups. If this is your first time, there will be no list.

   Now, you will create a new feature group.

3. Tap the pen in the upper right corner to configure **Measure codes**. The same message will appear if it is your first time using measure codes.

Spectra Geospatial Origin — ☐ ✕

← **Edit Measure codes** ⭐

New group

To use Measure codes the first time, you must create feature code groups and define codes for up to twenty five feature code buttons in each group.

Use the Edit Measure codes screen to manage groups of code buttons, and assign codes to buttons for use in the Measure codes screen. Tap the pencil icon to open the Edit Measure codes screen.

To add a group, tap New group, enter the Code group name and then tap Accept.

To add codes to an empty button, tap the button and then enter a code or select a code from the feature code library.

For more information, see the Help.

Esc | Accept

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4. In the **Edit Measure codes** screen, tap **New group**

5. Name the group **Tutorial Measure codes** in the **Code group name** space.

   Tap **Enter**

6. The **Edit Measure codes** screen will appear.
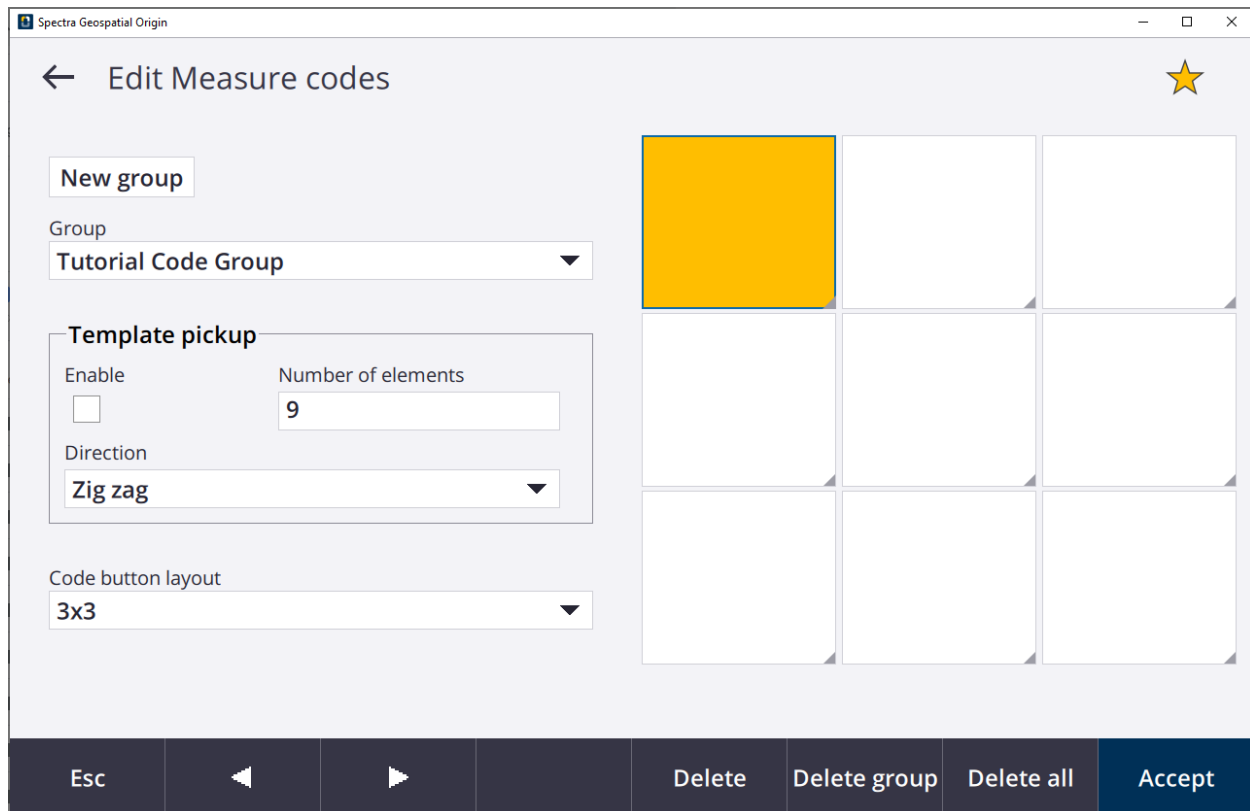
7. Tap a blank (or highlighted) code button to assign a code.

8. The feature code library connected to your job defines your codes and how they are grouped together. This job is defined with the **Tutorial Code Group** feature codes.

Note: You can search through the list based on either the **Code** or **Description.**

9. Tap the search bar and type **BC** (BackCurb) and tap **Enter** in the bottom right corner.

10. Repeat steps 8 and 9 to assign the following codes:

    BC, SW, LP, LSE, LSE S, LSE E, BC S, BC E, ATA

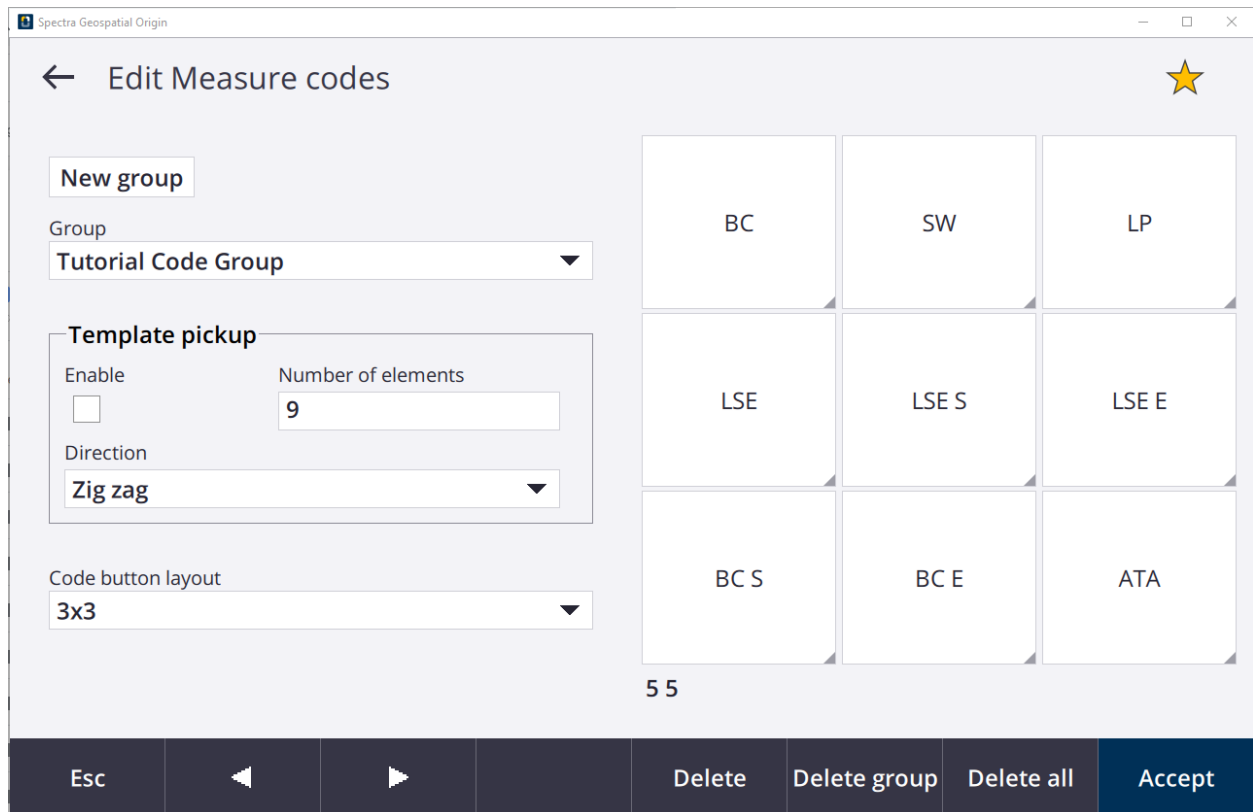   For the feature codes with added control codes (S or E):

Step 3. Measure Codes: Editing and Creating Groups

Type the feature code (ex. BC), **space**, control code (ex. **S**)

11. The measure codes can be reorganized using the arrow keys at the bottom of the screen.

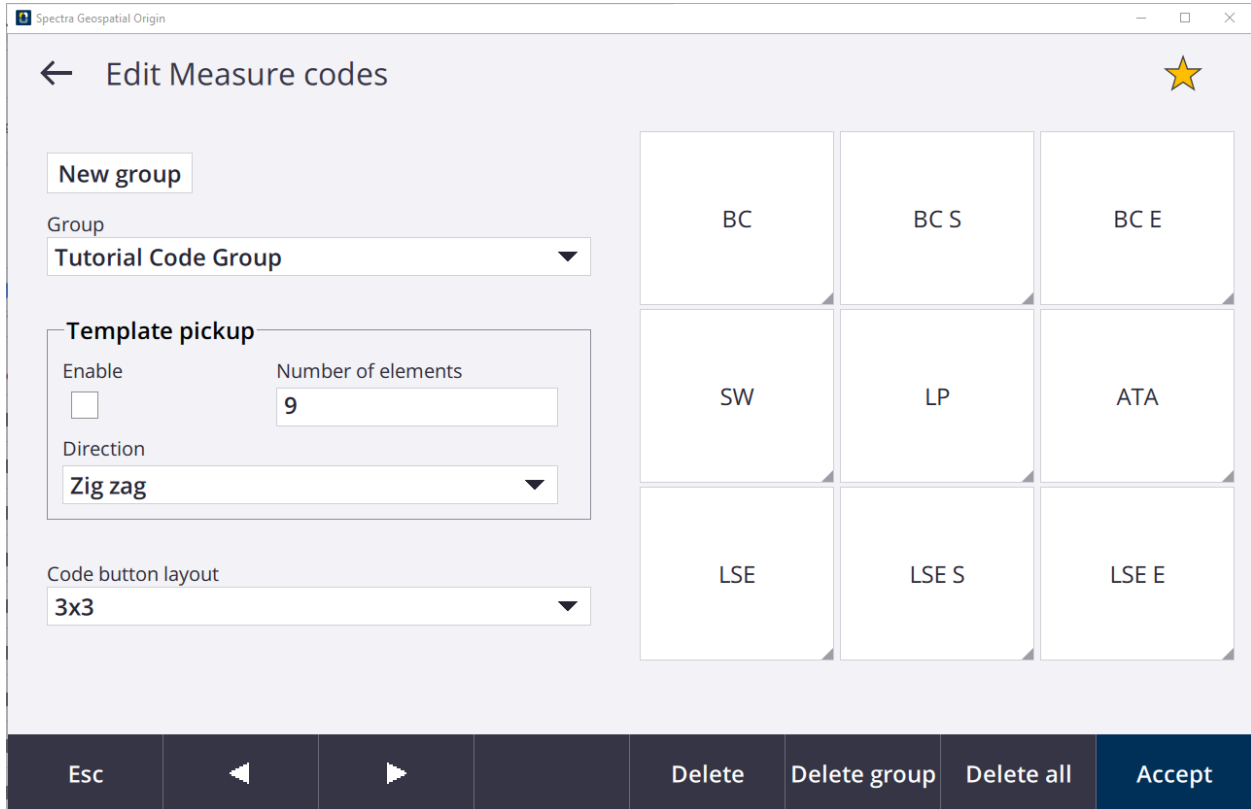   Tap **BC S** and move it to the top middle box, using the arrows.

12. Repeat step 12 to organize the measure codes in this order:

13. Tap **Accept**.

Step 4: Survey with Measure Codes

Here you will use measure codes to survey. You can follow along or take any measurements you would like.

1. Go back to the **Map** screen now that the **Measure codes** toolbar is set up.

2. Tap the menu bars, then **Measure**, tap **Measure codes**.

    Origin will connect to the Instrument or GNSS receiver saved in the Survey Style. Once connected then the Measure Codes screen will open.

3. Tap **Options** at the bottom of the screen to bring up the **Measure Code Options** screen.

4. When you are ready to take the first measurement, tap BC. This will automatically measure and code the observation.

5. Continue to take measurements with the group of codes.

6. Tap the **Multicode** button in the bottom left corner of the measure codes screen

    Tap **SW** and **LP** to assign multiple codes to the single point.

7. If you have two lines that have the same code, you can use the **+/-** buttons at the bottom of the screen to measure multiple lines with the same code.

    Tap **BC S** to start a new line.

8. Next, tap **+** and the measure codes box will change to **BC S +1**, which will start a separate line with the same code.

9. Highlight **BC** and tap **+** to show **BC+1**. Take two more measurements with the **BC+1** code.

10. Tap the **-** button to take a measurement on the **BC** line.

11. End both of the lines.

You have completed this tutorial.