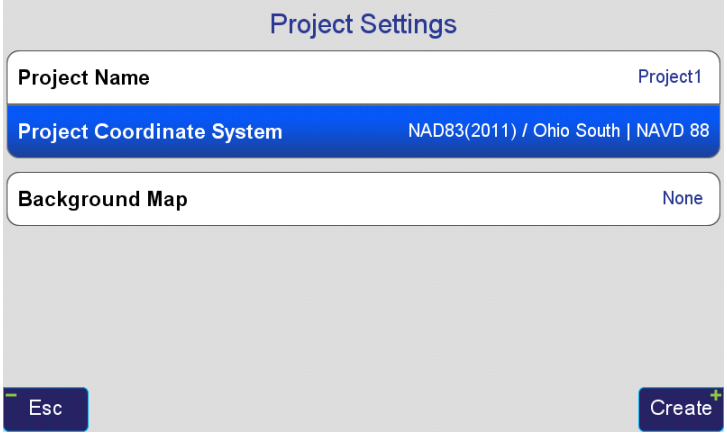
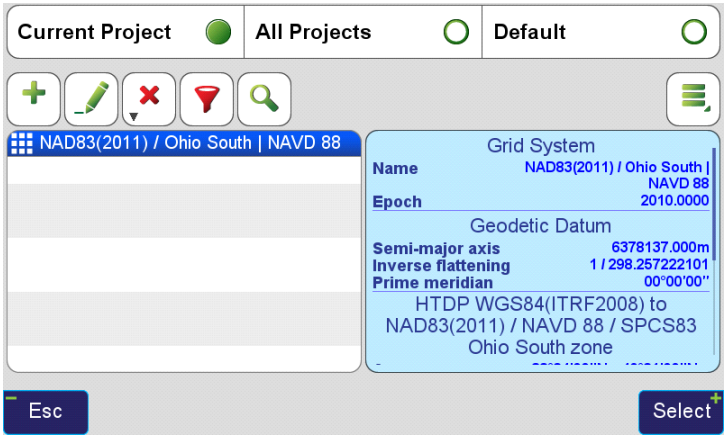
Creating a State Plane Coordinate System with a Grid-to-Ground Scale Factor in J-Field

A new project is created by selecting Collect>Project>Create New Project.

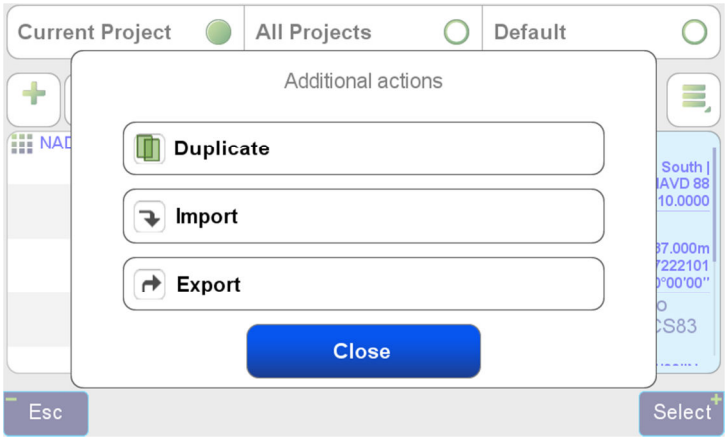


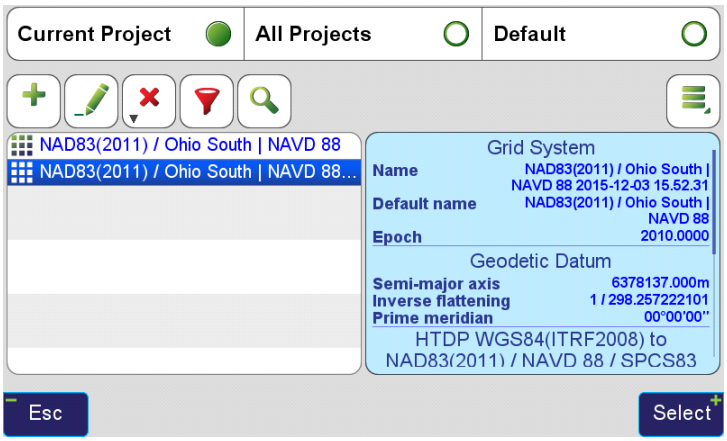
The Project Coordinate System is set as your state plane coordinate system.

To view the coordinate systems in this project, choose Coordinate System from the Collect Prepare or Stake Prepare screen and toggle the top setting to Current Project.

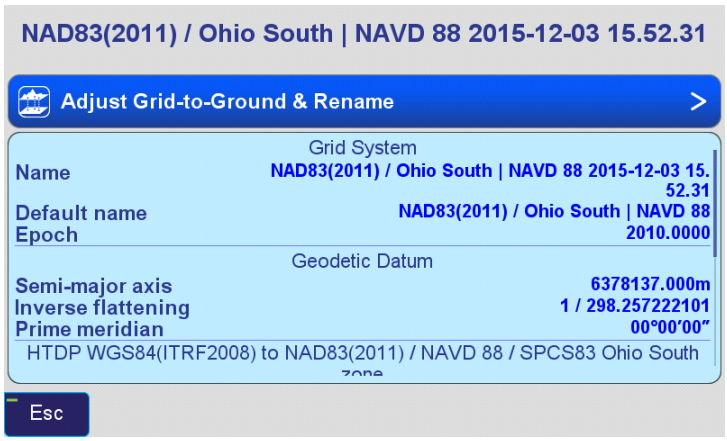


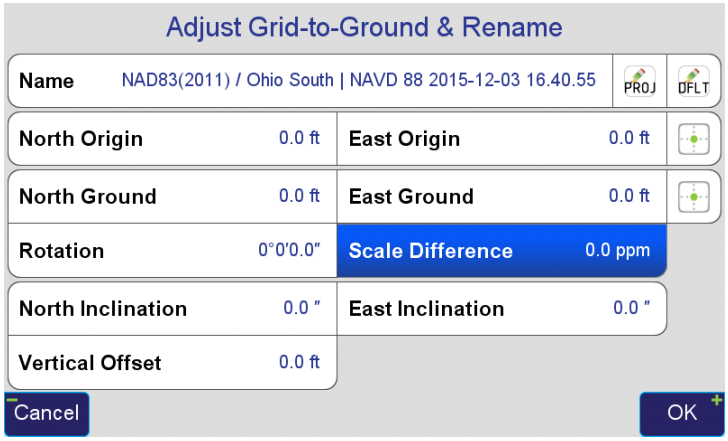
Click the Additional Actions icon  and tap Duplicate to create a copy of this coordinate system. The duplicated system will be created with the date appended to the end of its name.



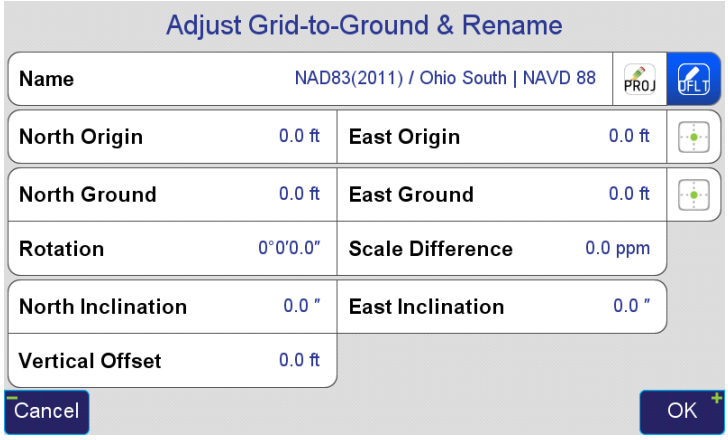


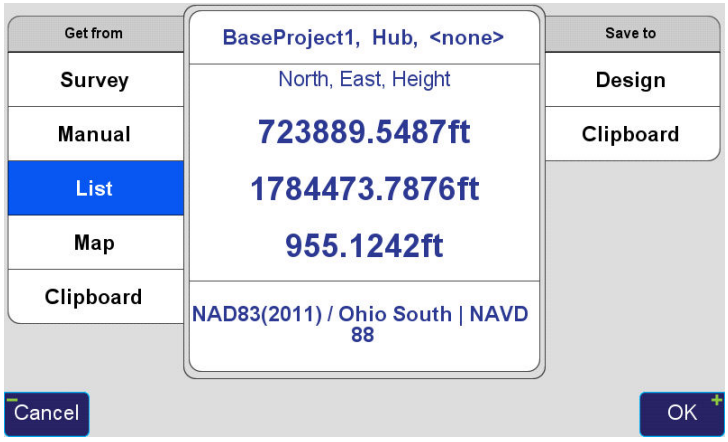
Now highlight the duplicated system and tap the edit icon  and choose Adjust Grid-to-Ground & Rename.





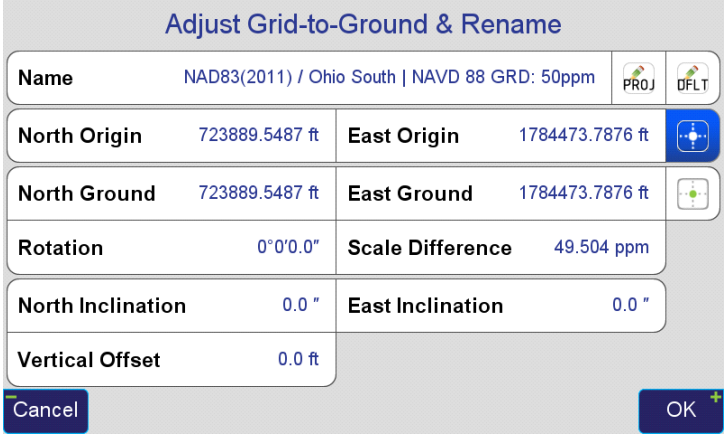
Tap the Default button  to change the coordinate system name to the default name. Tap the position icon  beside East Origin to set origin point in the grid system for the transformation. Here the base station coordinate is chosen from the points List.

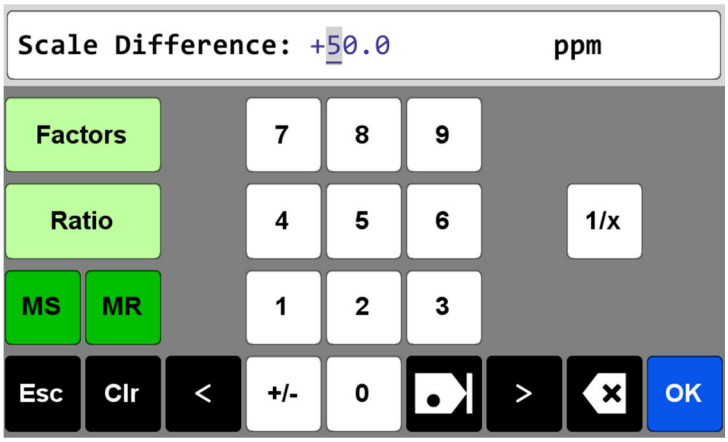




By default the ground origin point will be populated with the same coordinate and the Scale Difference is populated with the grid-to-ground scale factor calculated from that point. The scale factor rounded to the nearest part-per-million (ppm) is automatically appended to the coordinate system name. You may also wish to round the scale difference to the nearest ppm by taping its button and entering that value. In this screen options exist to

enter a new factor as a Ratio or Ppm. The Factors button will allow you to use the CoGo Scale Factor function to calculate a new scale factor if desired.

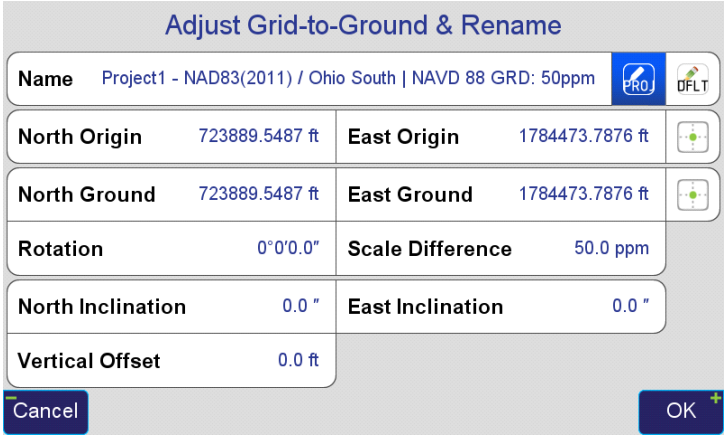




These settings will create an adjusted state plane coordinate system scaled around the base station. The base station coordinate will not change. This is useful for projects that have ground distances as would be measured with a total station and state plane coordinate system bearings since the rotation is set to 0. The coordinates will be very close to the real state plane system so that orthographic imagery and state plane referenced contours or elevation models can be loaded into your CAD drawings. You should be cautious when giving these coordinates to others as they may confuse them for real state plane coordinates. To solve this problem you may wish to subtract 100,000 from the North and East Ground coordinate values to create a (100,000 100,000) offset from the real state plane system. This can be done by tapping the North Ground and East Ground boxes.

Tap the 

button to add the current project's name to the beginning of the coordinate system name.



Press OK and then Apply to create this coordinate system. You can now use this coordinate system as the Project Coordinate System or just for some pages if you choose.