I'm not a robot

Posted on February 13, 2023 (Updated on July 10, 2025)Hiking & ActivitiesHow do you convert GPS coordinates to state plane?Change the coordinate system of the data frame to the desired State Plane system. Right-click the added layer and navigate to Data > Export Data. Select the Use the same coordinate system as: the data frame option, and select the output location. Click OK.How do you convert state plane coordinates from meters to feet?Common Foot vs. Metric. The Mass State Plane coordinate system is metric but may be converted to U.S. survey feet by multiplying meters by the fraction 3937/1200 (not 3.28084).How do you convert latitude and longitude to grid reference?So to convert a (WGS84) latitude/longitude point to an OS grid reference, it must first be converted from the WGS84 datum to the OSGB36 datum, then have the transverse Mercator projection applied to transform it from a curved surface to a flat one.What are GPS state plane coordinates?The State Plane Coordinate System (SPCS), which is only used in the United States, is a plane coordinate system (north-south and east-west lines are perpendicular) in which each individual state has between one to six zones, depending on the states size and shape.How do I convert GPS coordinates to shapefile?How do I create a shapefile from Latitute/Longitude Coordinates?Open ArcMap.Open the Catalog Pane* and navigate to your file (can be a .Right click on your file and hover over Create Feature Class, then select From XY TableIn the pop-up window, the X Field should be Longitude and the Y Field should be Latitude.What is WGS84 coordinates?The World Geodetic System 1984 (WGS84) is a datum featuring coordinates that change with time. WGS84 is defined and maintained by the United States National Geospatial-Intelligence Agency (NGA). It is consistent, to about 1cm, with the International Terrestrial Reference Frame (ITRF).Are State Plane Coordinates in meters?Units of Length. The foot and meter are the two different units of length when using the State Plane Coordinate System. The standard measure for SPCS 27 is the U.S survey foot and the more commonly used meter is the standard measurement for SPCS 83.How do you convert latitude and longitude to meters?Multiply the degrees of separation of longitude and latitude by 111,139 to get the corresponding linear distances in meters.Is easting and northing the same as longitude and latitude? Quote from video: How do you state coordinates?An ordered pair contains the coordinates of one point in the coordinate system. A point is named by its ordered pair of the form of (x, y). The first number corresponds to the x-coordinate and the second to the y-coordinate. To graph a point, you draw a dot at the coordinates that corresponds to the ordered pair.How do I enter GPS coordinates into Msfs? Quote from video: So all i do is pop in the gps coordinates that jepson has given me click on custom. Set as departure. I click fly. It's that easy. How do you simplify GPS coordinates?The method is as follows: Subtract the whole number portion of the coordinate, leaving the fractional part. The whole number is the number of degrees. In the example of -79.982195: -79 degrees.You may also like Instructions provided describe how to convert Global Positioning System (GPS) coordinates to a State Plane coordinate system. Create a table in a file geodatabase with the field names Latitude and Longitude, with Long Integer as the data type.Edit the table and enter in the points in decimal degrees.Note:Manually convert the degrees-minutes-seconds to decimal degree values using the Field Calculator in ArcMap. Follow the instructions in the following ArcGIS Help document: Converting degrees-minutes-seconds values to decimal degree valuesOnce the coordinates are entered, navigate to the Table of Contents and right-click the table > Display XY Data.Select the X Field as Longitude and the Y Field as Latitude from the dropdown menu. Click the Edit button to select the appropriate geographic coordinate system (WGS 1984 is used for most GPS points), and click OK. This adds a layer to the map named ' Events'.Change the coordinate system of the data frame to the desired State Plane system.Right-click the added layer and navigate to Data > Export Data.Select the 'Use the same coordinate system as: the data frame' option, and select the output location. Click OK. The new feature class is added to the map.Open the attribute table of this new feature class and add a new text field.Right-click the new field and navigate to Calculate Geometry. If prompted about being outside of an edit session, feel free to proceed or begin an edit session. In the Calculate Geometry window, select the 'X Coordinate of Point' property, and 'Use the coordinate system of the data source' option. Click OK.The State Plane X-coordinates are now in that field.Repeat Steps 9 and 10 for the Y coordinates. ExpertGPS isn't just a mapping tool and a GPS data manager, it's a powerful coordinate converter that can instantly convert between any coordinate format or datum. Whether you need to convert lat/lon coordinates to UTM or US state plane coordinates, convert NAD27 data to NAD83 or WGS84 datum, or reproject shapefile data to match the native projection of your GIS imagery or layers, ExpertGPS can accomplish the task - quickly, easily, and accurately. The Home Edition of ExpertGPS supports dozens of geographic coordinate formats, and dozens of datums. ExpertGPS Pro was designed for professional users who work with GIS shapefiles and CAD DXF drawings, or who need to convert US State Plane Coordinates. ExpertGPS converts to and from any coordinate format or grid: latitude/longitude decimal degrees degrees and minutes (deg min.min / DMM) degrees, minutes, and seconds (deg min sec / DMS) Universal Transverse Mercator (UTM) US State Plane Coordinates (requires ExpertGPS Pro) US National Grid (ideal for first responders and emergency personnel) Military Grid Reference System (MGRS) British National Grid (BNG) and Irish Grid Canada Grids (ATS, CSRS) Australia Grids (VICGRID, GDA, AGD) plus dozens more national grids and coordinate systems, for every country on Earth WGS84 and WGS74 NAD83 and NAD27 ETRF 1989, Ordnance Survey 1936 and European 1950 and hundreds of other datums used in Canada, Australia, Europe, and throughout the world To add a coordinate format in ExpertGPS, click Preferences on the Edit menu, and click on the My Coordinate Formats tab. Click Add. The Add Coordinate Format dialog will appear. On the left is an expandable list of all of the continents, countries, and US states. As you expand the location tree, ExpertGPS will show the coordinate formats used in that region on the right side of the dialog. Drill-down in the location side as far as you need to go to see the coordinate format for your location. Select the coordinate format, and then choose the appropriate datum from the list below. Step 2: Add or import your data You can add waypoints by hand, draw waypoints or tracks on the map, receive data from your GPS, or import it into ExpertGPS from KML, CSV, a shapefile, CAD drawing, or other mapping format. Step 3: Select your output coordinate format As soon as you switch to your output coordinate format by selecting it from the My Coordinate Formats list, ExpertGPS will reproject all of your data to the new format and datum. Your data is converted, and ready for use. You can export it to another mapping, CAD, or GIS program, or copy and paste it into Excel. Three easy steps, and your coordinates have been converted ExpertGPS makes coordinate conversion quick, easy, and accurate Download now and start your free trial of ExpertGPS 9.18 New features were added to ExpertGPS on June 18, 2025 ExpertGPS runs on Windows 11 and Windows 10. Solutions to Common Coordinate Conversion Problems Most problems involving GPS and map coordinate mis-matches are due to choosing the incorrect coordinate format and datum at some point in the process. If you are entering GPS coordinates by hand into ExpertGPS from a book or a Web page, you need to ensure that you've selected the same coordinate format and datum that the source's author used, or position errors will occur. There are four main types of coordinate formats used throughout the world today: lat/lon, UTM, US State Plane, and National Grids. Lat/lon coordinates: There are three different ways to express latitude and longitude: 1. decimal degrees. (42.12345N, -71.23456W) Note that there are no spaces in these coordinates. 2. degrees and minutes (42 23.456'N, -71 43.632'W) Marine, aviation, and geocaching coordinates are usually given in deg min.min format. Note that there is a space between the degrees () and the minutes (') part of the coordinates. 3. degrees, minutes, and seconds. (42 34' 54.234"N, -71 24' 14.234"W) Civil survey and some marine waypoints are given in this format. Note that there are three parts to each coordinate, separated by spaces, and that three symbols are used to show the degrees, minutes, and seconds (' "). UTM coordinates Universal Transverse Mercator (UTM) coordinates are used worldwide. Unlike lat/lon, which is a spherical coordinate system based on angles, UTM, state plane, and national grid coordinates are rectangular grid systems where coordinates are expressed as Northings and Eastings from a fixed reference point. Rectangular grids make it much easier to calculate distances and to plot locations on a rectangular map. UTM coordinates look like this: 2346212N, 12343523E, 18T. The first value is the Northing. The second is the Easting. The third value (always a number between 1 and 60 followed by a single letter) is the UTM zone identifier. If your data is in UTM coordinates, it is very likely in NAD27 datum or WGS84 datum (see below). The vast majority of UTM data is expressed in meters. If you are using UTM data collected prior to 1983 by a US state entity, there's a chance that it uses US Survey Feet rather than meters as the base unit. ExpertGPS Pro provides an option for UTM coordinates in feet. US State Plane Coordinates Almost all of the data available from US state government Web sites is expressed in the US State Plane Coordinate System. US SPCS coordinates have two values, a Northing and an Easting. Some US states have only a single SPCS zone. Other states have a handful, broken down by county. You'll need to know which zone is in use, and select the correct one in ExpertGPS Pro. This Web page lists the counties in every US state, and the appropriate SPCS zone to use: Converting and Using US State Plane Coordinates with ExpertGPS Pro National Grids Outside of the United States, many countries have their own National Grid coordinate systems. Many of these use the same Northing, Easting format described above. ExpertGPS lists the national grids for each country in the Add Coordinate Format dialog. To add a coordinate format in ExpertGPS, click Preferences on the Edit menu, and click on the My Coordinate Formats tab. Click Add. The Add Coordinate Format dialog will appear. On the left is an expandable list of all of the continents, countries, and US states. As you expand the location tree, ExpertGPS will show the coordinate formats used in that region on the right side of the dialog. Drill-down in the location side as far as you need to go to see the coordinate format for your location. Select the coordinate format, and then choose the appropriate datum from the list below. In the United States, you have two main datum choices: NAD27, and NAD83/WGS84. NAD27 was used from 1927 up until 1983, when it was replaced by NAD83 and WGS84. You can consider NAD83 and WGS84 to be identical in the 50 United States. For other areas of the world, ExpertGPS will display the datums used in that region. Select the correct datum from the list. You can add many different coordinate formats to ExpertGPS, and switch between them at any time to enter data or convert data to another format. ExpertGPS Pro users should keep in mind that the currently-active coordinate format is used whenever you import and export data. Help with Coordinate and Datum Conversion For more information on datums and coordinate formats in ExpertGPS, visit these Web pages: Download now and start your free trial of ExpertGPS 9.18 New features were added to ExpertGPS on June 18, 2025 ExpertGPS runs on Windows 11 and Windows 10. Online converter for lat & long coordinates, geodetic datums and projected systems Online converter Not selected Change Unit: Area of use: Accuracy: More details Share copy and redistribute the material in any medium or format for any purpose, even commercially. Adapt remix, transform, and build upon the material for any purpose, even commercially. The licensor cannot revoke these freedoms as long as you follow the license terms. Attribution You must give appropriate credit , provide a link to the license, and indicate if changes were made . You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. ShareAlike If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original. No additional restrictions You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits. You do not have to comply with the license for elements of the material in the public domain or where your use is permitted by an applicable exception or limitation . No warranties are given. The license may not give you all of the permissions necessary for your intended use. For example, other rights such as publicity, privacy, or moral rights may limit how you use the material. data-mc-breadcrumbs-count=3 data-mc-toc=True>Topic path: State of Oregon State Plane Coordinate System of 1983 Projection for Oregon North Zone The State Plane Coordinate System (SPCS) divides the United States into a number of zones, and defines a different projection for each zone such that a suitable map of any given zone is plotted. SPCS is used mainly for intrastate views such as county or parish maps. Unlike most forms of projection where the datum may be specified separately, the SPCS is tied to a specific datum. There are two State Plane Coordinate Systems commonly used. The State Plane Coordinate System of 1927 uses the North American Datum 1927 (NAD27), while the State Plane Coordinate System of 1983 uses the North American Datum 1983 (NAD83). Projection Parameters Parameter Description Zone Specifies which one of the predefined zone projections to use for this coordinate system. Feet or Meters Most SPCS have both a meters and feet option available in the predefined list. Map Coordinate Systems Overview Introduction to Map Projections Source Coordinate System - Map Layer Target Coordinate System - Map Types of Projection Characteristics of Projections Datums Ellipsoids Projection References The following example was provided by a GeogTools user. To check the accuracy of GeogTools State Plane conversion, the user compared the conversion of the following State Plane coordinates from western Missouri (state code 2403):Easting: 853372.6 ftNorthing: 107266.2 ftThese coordinates are known to correspond to:Latitude: 37.13333353Longitude: -94.46202253To check the accuracy of GeogTools State Plane conversion, we use the StatePlane to LatLon function: This function requires that the State Plane coordinates be in units of meters (following the official policy of the National Geodetic Survey). Converting from feet to meters using the standard SI conversion (1 ft = 0.3048 m) and then using the converted State Plane coordinates with the "StatePlane to LatLon" command gives the following: The converted latitude and longitude are very close to the known coordinates, differing only in 4th decimal place, in this case corresponding to a distance of a few meters. In many cases, this is sufficient. But in some cases greater accuracy is required.The discrepancy betweenthe converted and known coordinates is not due to an inaccuracy in GeogTools, but rather due to the conversion from feet to meters. This is because State Plane coordinates are often in U.S. survey feet (3937 yards = 3600 meters) rather than international feet (1 ft = 0.3048 m).Reconverting the State Plane coordinates into meters using the U.S. survey feet conversion and then converting to latitude and longitude using theStatePlane to LatLon command gives This time we see that the conversion is, for practical purposes, effectively exact. The difference between the U.S. survey foot andinternational foot is very small. In most cases the difference will not matter. Butthis small difference can cause problems in some cases, so it's advisable to always know which units are being used. State Plane and the Technological advancements of the last 50 years have led to improvements in the ment of s, angles, and the earth's size and .[ ] State Plane Coordinate Systems and the U.S. FootThere is a unit of measure called the "U.S. Survey Foot." It is almost exactly equal to a standard foot, but it's definition is slightly different:standard (or "international") foot: .3048 meters U.S. survey foot: 1200/3937 meters ...[ ]State Plane and As noted previously, appropriate s have been adopted for each , yielding "Earth" s with s based on and , the universal .[ ]State Plane Coordinate (system(s))SPC RESurvey Production Centre, Royal Engineers (U.K.) ...[ ]This is a popular projection used in defining the Universal Transverse Mercator () and coordinate systems. The UTM PCS s the entire and is a popular in the US.[ ] Coordinates (SPCS): The Coordinate System is not a projection; rather it is a system for specifying s of stations using plane rectangular coordinates. This coordinate system divides all fifty states of the United States, Puerto Rico and the U.S.[ ] Coordinate System (SPCS).The SPCS is primarily used in engineering applications by utility companies and local governments for doing accurate surveys. The SPCS is based on Mercator or Lambert with in feet.[ ] It also provides of Coordinate System. It is ed with *.txt, *.ps and word or files as well as manuals. It was available via ftp from: nmdpow9.er.usgs.gov as file public/amdahl/gctpv2.dat. This was not ing at last try but: ...[ ]The State Plane Coordinate System (SPCS) is a that divides the U.S. and its possessions into over 120 zones (see Figure 3.6). Some smaller states use a single zone while larger states divided into several zones. California has six zones (see in lower-left corner of Figure 3.6).[ ]The Coordinate System and the system of latitude and longitude used on the Earth's are common examples. Data A collection of facts, concepts or instructions in a formalized manner suitable for communication or processing by human or automatic means.[ ]Tics allow all s to be ed in a common coordinate system (e.g., Universal Transverse Mercator [UTM] meters or State Plane feet). Tics are used to s when they are mounted on a and to the coordinates of a coverage (e.g.[ ]National Geodetic Survey's " Coordinate System of 1983" uses the Lambert conformal to define the - used in several states, primarily those that are elongated west to east such as Tennessee.[ ]In South Carolina, the more common map projections are Universal Transverse Mercator (UTM), State Plane, and . The data provided on this CD-ROM are in UTM coordinates, with the North American Datum of 1927 ().[ ] coordinate system: Coordinate systems established by the U.S. Coast and Geodetic Survey (now the National Ocean Survey), usually one for each state, for use in defining positions of points in terms of plane rectangular (x,y) coordinates.[ ]For small maps, it is inconvenient and unnecessary to deal with the complex mathematics of curved surfaces, because in this case we are dealing with small s of the earth's surface that appear to us small humans as a plane (thus the existence of and other essentially 2D coordinate ...[ ]To create a , that is, to convert the x,y coordinate system into a standard coordinate system (for example, the UTM coordinate system or the coordinate system), points from a map having the standard coordinates must be associated with the same points on the image to be rectified.[ ]As noted in Part 1, the data we downloaded is in 83 Meters MA . What if we needed the data in NAD 83 feet. To accomplish this, we would need to transform our to the new coordinate system with the transform function.[ ]Coordinate System - A fixed reference superimposed onto the surface of an to designate the position of a point within it by using x and y coordinates. The Coordinate System and the system of latitude and longitude used on the Earth's surface are common examples.[ ] coordinate systemA group of s based on the division of the United States into more than 130 zones to minimize caused by map projections. Each zone has its own map projection and parameters and uses either the NAD27 or NAD83 .[ ] Describe the general properties of the following projections: Universe Transverse Mercator (UTM), system, and Robinson projection. What are the scale, projection, and of the that you downloaded for your of residence?[ ]We will create a new for our with CRS () NC Meters with EPSG code 3358. Open Location Wizard with button New in the left part of the welcome screen. Select a name for the new location, select EPSG and code 3358.[ ]State Plane Coordinates: [coordinate system] State Plane Coordinates is a standardized system in the United States based on Lambert conformal and s.[ ] Coordinate SystemShown below is the southwest corner of a 1:24,000-scale topographic map published by the (USGS). Note that the (40 45 N latitude, 77 52 30" W longitude) of the corner are specified.[ ]Step 2. Enter your State Plane coordinates in the Northing and boxes. State Plane coordinates are in meters.Step 3. Click the 'SPL to LL' button to do the conversion. The calculated coordinates are displayed in the latitude and longitude boxes. Latitude and longitude are in decimal degrees.[ ]The system includes different projections for each state, and frequently different projections for different areas within each state. The system was developed in the 1930s to simplify and codify the different coordinate and projection systems for different states within the USA.[ ] State Plane Coordinate System - Explanation of this United States based coordinate system.Programming in ...[ ]Two examples are the Coordinate System in the United States and the Great Britain for the United Kingdom. For s not covered by a national coordinate system, the Universal Transverse Mercator system (UTM) or Gauss-Krger (GK) is commonly used for large-scale maps.[ ]standard- See: adjustment, standard-accuracy coordinate system Coordinate systems established by the U.S. Coast and Geodetic Survey (now the National Ocean Survey), usually one for each state, for use in defining positions of points in terms of plane rectangular (x,y) coordinates.[ ] How This Tool Works The Coordinate System Converter Tool is designed to facilitate the conversion of geospatial data between different coordinate systems, such as UTM, State Plane, and Latitude-Longitude. This tool is essential for land surveyors, GIS professionals, and others working in geodesy, as it allows them to seamlessly translate coordinates from one system to another, ensuring accuracy and consistency across different mapping and analysis platforms.Input FieldsFrom Coordinate System:A dropdown menu where the user selects the coordinate system of the input data. Options include UTM, State Plane, and Latitude-Longitude.To Coordinate System:A dropdown menu where the user selects the target coordinate system they wish to convert the data into. The same options are available as in the "From Coordinate System" field.Coordinates:A textarea where the user inputs the coordinates that need to be converted. Users can enter multiple sets of coordinates, each on a new line. The format of the coordinates should match the selected "From Coordinate System."Conversion ProcessInput Validation:Before performing the conversion, the tool checks the input coordinates to ensure they are correctly formatted for the selected coordinate system. This validation helps prevent errors during the conversion process.API Request:The tool sends a request to an external geocoding API that handles the conversion of coordinates. The API receives the input coordinates, converts them based on the specified systems, and returns the results in the target coordinate system.Loading Indicator:While the conversion is being processed, a loading spinner is displayed to inform the user that the conversion is in progress.Display of Results:Once the conversion is complete, the results are displayed in the "Conversion Result" section. The converted coordinates are shown in a readable format, allowing the user to easily interpret and apply the data.Map Visualization:The tool also includes an interactive map that visually displays the location of the converted coordinates. This feature helps users confirm the accuracy of the conversion by comparing the map location with their expectations.Additional FeaturesBatch Conversion:Users can input multiple sets of coordinates at once, making the tool efficient for processing large datasets. The results for each coordinate set are displayed together, making it easy to review and analyze the data.Copy to Clipboard:Users can copy the conversion results to their clipboard with a single click, enabling quick transfer of data to other applications or documents.Download Result:The tool allows users to download the conversion results as a JSON file. This feature is particularly useful for users who need to save their work or import the data into GIS software for further analysis.Expanded Coordinate System Support:The tool is designed to be extensible, allowing for additional coordinate systems to be added as needed. This flexibility ensures that the tool can adapt to various geospatial projects and user requirements.Example Cases Where This Tool Would Be HandyIntegrating Diverse Survey Data:Surveyors often receive data from different sources, which may use different coordinate systems. This tool allows them to convert all data into a common system, making it easier to integrate and analyze the information.Mapping and GIS Projects:GIS professionals working on mapping projects may need to convert data into the coordinate system used by their GIS software. This tool simplifies that process, ensuring that all data is correctly aligned and projected for accurate mapping.Preparing Reports for Clients:Clients may require survey data in specific coordinate systems. This tool allows surveyors to convert their data into the required format before delivering the final report, ensuring the data is accurate and usable.Fieldwork and Site Analysis:During fieldwork, surveyors may need to convert real-time GPS data into a different coordinate system for immediate use or analysis. This tool provides a quick and reliable way to perform such conversions on the go.Important Note: Tool as a Checker, Not a WorkerWhile the Coordinate System Converter Tool is a powerful resource for converting coordinates, it should be used as a supplementary tool. Surveyors and GIS professionals should still verify the accuracy of the conversions, particularly when dealing with critical projects or legally binding data. Double-checking the results against manual calculations or alternative methods is always recommended to ensure the highest level of precision and reliability.By integrating this tool into your workflow, you can streamline the conversion process, save time, and reduce errors. However, the foundation of reliable surveying and geospatial analysis still relies on the professional's expertise and careful attention to detail.

How to enter state plane coordinates in google earth. State plane coordinates grid to ground. How to read state plane coordinates. Convert coordinates from state plane to latitude and longitude. How to find state plane coordinates. Convert utm coordinates to state plane. How to write state plane coordinates. Convert geographic coordinates to state plane. How to set state plane coordinates in autocad. State plane coordinate system example. Convert coordinates to state plane.