Using a GPSMap 60CSx
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Contents

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1.0 Preliminary Setup

1.1 Units Setup

Main Menu/Setup/Entr/Units/Entr

- Position Format – hddd mm.mmm
- Map Datum – NAD27 CONUS (for use with printed maps) or WGS84 (for use with the website)
- Distance/Speed – Statute
- Elevation – Feet (ft/min)
- Depth – Feet
- Temperature – Fahrenheit
- Pressure – Millibars

1.2 System Setup

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Main Menu/Setup/Entr/System/Entr/ Highlight the item/Entr/Highlight the dropdown selection/Entr

- GPS -- Normal
- WAAS – Enabled
- Battery Type – Highlight/Entr/Highlight Akaline or NiMH/Entr
- Text Language – English
- External Power Lost – Stay On
- Proximity Alarms - On

1.3 Restore Defaults

Only restore the factory defaults if there is a problem that you can't solve with the GPS, if you restore the defaults then some of the setups that have been done will be changed. Menu/Menu/Setup/Entr/System/Entr/Menu/Highlight Restore Defaults/Entr

1.4 Card Information

To check the memory card status press Menu/Menu/Setup/Entr/System/Entr/Menu/Highlight Card Info/Entr.

1.5 Software Version

To check the GPS 60CSx Unit software version press Menu/Menu/Setup/Entr/System/Entr/Menu/Highlight Software Version/Entr.

Every two months, LC on WebUpdater on the desktop, LC Next and follow the instructions to update the software in the GPSMap 60CSx unit.

1.6 Welcome Page

When the GPS 60CSx Unit is turned on, a welcome page is displayed. To display your name and phone number, etc: Press Menu/Menu/Setup/Entr/Welcome/Entr and spell the message that you want to be displayed at power turn on.

1.7 Tracks Page

(1) Go to the Tracks Page.
(2) Press Setup
(3) Check Wrap When Full
(4) Select Auto for the Record Method and set the Interval as Normal.
(5) Set the Color of the recorded track (some like Red).
(6) If you want to save your track log on the data card, press Data Card Setup and check Log Track to Data Card.

1.8 Map Page

(1) Go to the Map Page and press Menu/Setup Map/Entr, a row of icons will be displayed on the top.
(2) Highlight the icon you want to setup and press Entr/Highlight the item in the display that you want to change/Entr/Highlight the selection in the dropdown/Entr.

Note: If you press Menu while you are in any of the highlighted items, a Restore Defaults list will dropdown, press Entr if you want to restore the system defaults for the selected item.

1.8.1 General

The first icon on the left sets up the map.

- Orientation - Defines how the map is shown, North Up always show north at the top of the page. Track Up shows your current track toward the top of the page. Select North Up and press Entr.
- Auto Zoom – Zooms the map scale to include the beginning and ending points of a route. Select On and press Entr.
- Detail – Selects the degree of map detail shown. Select Most and press Entr.
- Lock on Road – Locks the current position pointer to show on the nearest road, compensating for variances in map position. Select Off and press Entr. NOTE: This is the best selection for hiking because you don't want the position pointer locked on a road when there isn't one near.

1.8.2 Tracks

The second icon from the left sets up how tracks are saved.

- Saved Tracks – Sets the maximum zoom range at which saved tracks are shown on the map. Select Auto and press Entr.
- Track Log – Sets the maximum zoom range at which active track logs are shown. Select Auto and press Entr.
- Track Points – Sets the maximum number of track points used to record a track to 3000 and press Entr. Note: The GPS 60CSx is limited to a total of 20 tracks and a total of 10,000 points. If you set the number of track points per track too high, the unit will automatically start erasing the earliest tracks as it generates new ones. This could be detrimental for long multiday trips.
- Go to Line- Selects either a bearing or a course line for navigating a track. Select Bearing and press Entr.

1.8.3 Points

The third icon from the left sets the map scale at which Map Points, User Waypoints, Street Label, and Land Cover appear on the Map Page. Select Auto and press Entr for each item.

1.8.4 Text

The fourth icon from the left selects the text size for descriptions of map item on the Map Page. Select Small for Map Points and Medium for all other items and press Entr.

1.8.5 Information

The fifth icon from the left selects the map to be used in the GPS Unit. Press Menu and a list of maps that are loaded into the GPS Unit. Highlight the map to be used and press Entr. When hiking, select Topo U.S. 24K Southwest, Arizona Topo, New Mexico Topo, or other.

1.9 Compass Page

1.9.1 Bearing Pointer

Always follow the Bearing Pointer or the red arrow; do not use the course pointer. Go to the Compass Page, press Menu/Select Course Pointer/Entr to select the bearing pointer for use.

Note: when the course pointer is shown, the bearing pointer is active and vice versa. If the bearing pointer is shown in the above step then the bearing pointer is already selected.

1.9.2 Compass Data Fields

(1) Go to the Compass Page, press Menu/Select Data Fields/Select the number of data fields you want/Entr. The options are 2, 3, or 4 data fields.
(2) Press Menu/Change Data Fields/Entr and the first data field will be highlighted.
(3) Press Entr/select the type from the list/Entr.
(4) Use the rocker to highlight the next field and repeat step 3.

The data fields may be chosen from the following: accuracy of GPS, bearing, course, depth, distance to destination, distance to next, ETA at destination, ETA at next, elevation, glide ratio, glide ratio to dest., heading, odometer, off course, pointer, speed, speed - maximum, speed - moving avg., speed - overall avg., sunrise, sunset, time to destination, time to next, time of day, to course, trip odometer, trip time - moving, trip time - stopped, trip time - total, turn, velocity

mode good, vertical speed, vertical speed to dest., water speed, water temperature, waypoint at dest., waypoint at next.

The default fields are speed, dist. to next, ETA at dest., and time to next.

1.9.3 Calibrate Compass

Go to the Compass Page, press Menu/Calibrate Compass/Entr, then follow directions on the screen.

1.10 Trip Computer Page

1.10.1 Trip Computer Data Fields

(1) Go to the Trip Computer Page, press Menu/Change Data Fields/Entr and the first data field will be highlighted. There are 8 data fields.
(2) Press Entr/select the type from the list/Entr.
(3) Use the rocker to highlight the next field and repeat step 3.

The options for data fields are the same as for the Compass page: accuracy of GPS, bearing, course, depth, distance to destination, distance to next, ETA at destination, ETA at next, elevation, glide ratio, glide ratio to dest., heading, odometer, off course, pointer, speed, speed - maximum, speed - moving avg., speed - overall avg., sunrise, sunset, time to destination, time to next, time of day, to course, trip odometer, trip time - moving, trip time - stopped, trip time - total, turn, velocity mode good, vertical speed, vertical speed to dest., water speed, water temperature, waypoint at dest., waypoint at next.

The default fields are trip odometer, speed - maximum, time - moving, speed - moving avg., trip time - stopped, speed - overall avg., elevation, and odometer.

1.11 Altimeter Page

The Altimeter Page shows profile of elevation versus distance. The status at the bottom shows the current elevation and your current rate of ascent or descent when moving.

1.11.1 Plot Over Time vs. Plot Over Distance

Press Menu/Highlight Plot over Distance/Entr. Note that when the Altimeter is in the Plot over Distance mode, Plot over Time will be displayed and vice versa. If Plot over Time is displayed, the altimeter is in the Plot over Distance mode.

1.11.2 Changing Altimeter Data Fields

(1) Press Menu/change Data Fields/Entr. There are 2 data fields.
(2) The first data field will be highlighted, press Entr/Select the field.

(3) Highlight the second data field; press Entr/Select the second field.

The options are ambient pressure, ascent - average, ascent - maximum, ascent - total, barometer, descent - average, descent - maximum, descent - total, elevation, elevation - maximum, elevation - minimum, glide ratio, glide ratio to dest., vertical speed, vertical speed to dest.

The defaults fields are ascent - total and elevation - maximum.

2.0 Before a Hike

2.1 At Home

2.1.1 Reset the Trip Computer

(1) Press Page multiple times until the Trip Computer screen is displayed.
(2) To clear all history from the GPS Unit, including all waypoints and tracks from previous hikes, highlight Select All/Entr/highlight Apply/Entr.

2.1.2 Download Today's Hike

(1) Download the hike waytrack file from the website. See downloading instructions for your mapping software or for EasyGPS (for PCs).
(2) On the Tracks page, select the downloaded track, and press Enter
(3) Select Color, and set it to something other than the color for the recorded track as well as something that will stand out from the background.
(4) Make sure Show On Map is checked (otherwise, you won't see the track).

2.2 At the Trailhead

2.2.1 Obtain New Location

When you have moved long distances since the Unit was last turned on, press Menu/Select New Location/Entr. This lets the unit know to look for a different set of satellites.

2.2.2 Calibrate the Altimeter

Caution: The Unit will remember the last elevation that was displayed when the unit was turned off. The altimeter must be calibrated every time you start a hike at a different altitude or it will show the elevation profile from the last altitude where the unit was turned off instead of the elevation profile from where you started the current hike.

(1) Press Page multiple times until the Altimeter pages is displayed.

(2) Press Menu/ Highlight Calibrate Altimeter/Entr/Correct Elevation? Highlight No/Entr/Correct Pressure? Highlight No/Entr/Do you want to use the current GPS Altitude? Highlight Yes/Entr/OK.

2.2.3 Calibrate the Compass

Calibrate the compass whenever you move more than 100 miles or when you install new batteries.

(1) Press Page until the Compass page is displayed, press Menu/Highlight Calibrate Compass/Entr.
(2) The Start button will be highlighted/Entr and follow the on-screen directions for holding and turning the unit. A "Just Right", "Too Fast", or "Too Slow" message appears notifying you to adjust your turning speed, as needed. Hold the unit level while turning. A "Calibration Successful" message appears when finished.
(3) If a "Calibration Failed" message appears repeat the process.
(4) Press Entr to return to the Compass Page.

2.2.4 Turn off the Electronic Compass

(1) Go to the Compass Page, press and hold the Page button
(2) "Compass Turned Off" or "Compass Turned On" will appear at the bottom of the screen.
(3) Press and hold the Page button again if you want to reverse the selection.

Note: During regular use the Electronic Compass should be turned off to save battery power. Also turn off the Electronic Compass if you want to follow a track that you have loaded into the GPS. Turn the Electronic Compass on if you want to be able to know the direction while not moving.

2.2.5 Turn on the Track Log (or breadcrumbs)

In order for the GPS Unit to make an active track the Track Log at the top of the Track screen must be turned on. Press Menu/Menu/Select Tracks/Entr/highlight Track Log On/Entr.

3.0 During a Hike

3.1 Tracks

3.1.1 View a Track

Main Menu/Tracks/Entr/Highlight the track you want to view/Entr/Highlight Map/Entr.

3.1.2 Delete a Single Track

Main Menu/Tracks/Entr/Highlight the track you want to delete/Entr/Highlight Delete/Entr/Yes/Entr

3.1.3 TracBack

TracBack makes its own waypoints from the track that was generated when you traveled; you have no control over the Waypoints.

(1) To use TracBack, press Menu/Menu/Tracks/Highlight TracBack/Entr. The map with that track will be displayed.
(2) Select a Waypoint that you want to TracBack to and press Entr.
(3) Go to the Compass page and it will show the mileage to that Waypoint with the Compass pointer pointing in the direction that you must travel to get to the Waypoint.
(4) After you reach that point, the unit will display the next generated Waypoint and will show the mileage to that Waypoint with the Compass pointer pointing in the direction that you must travel to get to the Waypoint.

3.2 Waypoints

3.2.1 Create Waypoints

3.2.1.1 Mark your Current Location

(1) Press and hold Mark until the Waypoint page appears. A three digit default name is assigned.
(2) Accept the default waypoint by highlighting OK/Entr.
(3) You can change the default name by highlighting the name/Entr/Spell the new name/OK in the text box/Highlight OK/Entr.

It's good practice to always mark your starting location.

3.2.1.2 Create a Waypoint Using the Map Page

(1) Open the Map Page, move the pointer to the point on the map where you want to place a waypoint/Entr.
(2) Select Point that you want the waypoint to be named/Entr.
(3) Highlight Save/Entr.
(4) Change the default name of the waypoint if desired, the name will be automatically saved, you don't need to press Entr.

3.2.1.3 Create a Waypoint Using Coordinates

(1) Press and hold Mark until the Waypoint page appears. A three digit default name is assigned.
(2) Highlight the location field/Entr.
(3) Enter new location coordinates.
(4) Highlight OK/Entr.

3.2.2 View a Waypoint on the Map

3.2.2.1 View Waypoints Near Your Current Location

Press Find/Highlight Waypoints/Entr/Highlight the waypoint you want to view/Entr/Highlight Map/Entr

3.2.2.2 View Waypoints Not Near Your Current Location

(1) Press Menu/highlight "Change Reference"/Entr and the map page will be displayed with the cursor at your current location.
(2) Move the cursor to the area on the map where the desired waypoint is located/Entr and the waypoints in that map segment will be displayed.
(3) Highlight the desired waypoint/Entr.

You may need to change the map scale several times during this process to move the cursor on the map long distances and then zoom in when the area of the desired waypoints is reached.

3.2.3 Delete a Waypoint

Press Find/Highlight Waypoints/Entr/Highlight the waypoint you want to view/Entr/Highlight Delete/Entr

3.2.4 Go To a Waypoint

(1) Press Find/Highlight Waypoints/Entr/Quit/Highlight the waypoint you want to Go To/Entr/Highlight Go To/Entr. The waypoint will be shown on the map along with a straight line to the waypoint.
(2) Go to the Compass Page and the straight line Distance to the waypoint will be shown along with Speed, ETA at Destination and Time to Next. Follow the Red Arrow or the Bearing arrow to the selected waypoint.
(3) To Stop Navigation to the waypoint, go to the Compass Page/Highlight Stop Navigation/Entr.

The Compass Page is active when you have selected a waypoint to **Go To** from the Find Menu or when you have selected a point to travel to by moving the pointer to a location on the map, marking a waypoint and then using the Find Menu to select the new waypoint.

3.3 Elevations

3.3.1 Change the Elevation Plot Zoom

(1) While the elevation plot is displayed, press the Rocker up arrow and change the vertical scale, press the horizontal rocker and change the distance scale. Note that you must press the Rocker Up arrow first, not the Rocker horizontal arrows or the viewing mode will be displayed.
(2) Press Entr to lock in the selected scales.

3.3.2 Display the Profile and Location

(1) While the elevation plot is displayed, press either Rocker horizontal arrow and a cursor will move along the profile. The elevation, date and time at that point will be displayed.
(2) Press Entr at any point on the profile and location of that point will be displayed on the map.

3.4 Views

3.4.1 Use the Find Menu

(1) Press Find/Entr/Highlight the category that you want to find/Entr.
(2) If the item that you want to find doesn't appear, press Menu/Spell the name of the item that you want until there is a match on the screen/Highlight OK on the speller/Entr/Highlight the city/Entr.
(3) Press Go To.

3.4.2 Switching Between Position Mode and Pan Mode

3.4.2.1 Position Mode

The Position Mode keeps your present location in the display area with the black arrow at your present position as the breadcrumbs are dropped on the map if Track Log is turned on. This is the mode in which you normally want to be operating and the unit will automatically put you in this mode when the power is turned on.

3.4.2.2 Pan Mode

When you are in the Position Mode and want to look at a different position on the map, press the ROCKER and the unit enters the Pan Mode which moves the map to keep the white arrow (map pointer) within the display area. Once you are in this mode the black arrow and the breadcrumbs will no longer be displayed as you move over the terrain. The only way to get out of the Pan Mode is to turn the unit power off and back on again. You can do this without

saving the data from the hike as discussed in paragraph 4.0 because the active track log will still be on and the active track will just continue when the power is turned on again.

4.0 After a Hike

4.1 Track and Waypoints

4.1.1 Save the Track on the GPS

(1) To save the track, press Menu/Menu/Tracks/Entr/Highlight Save/Entr/Yes/OK at the bottom.
(2) A new screen will appear and the new track will be named with the present date, subsequent saved tracks on the same day will have the numbers 2, 3, 4, etc after the date.
(3) Highlight Track Log "Off" and press Entr to stop the active log from accumulating more data unless you want to start a new track immediately.

4.1.2 Save the Track and Waypoints on Your Computer

Download the contents of the GPS to your hard drive.

4.1.3 Clear the Track Log

On the Tracks page, highlight "Clear" and press Entr which will clear the track log.

4.2 Elevations

4.2.1 Determine Elevation Information

If you have a GPS with an altimeter, you can determine the total gain (total vertical) and the maximum and minimum elevations.

4.2.1 Determine Distance of Each Waypoint from the Start

If you have zeroed out the odometer at the PARK location and take notes as you do the hike, you can either save the track at each waypoint or record the odometer at each waypoint to establish the distances between waypoints along the track. The values from saved tracks are probably going to be closer to the values you'd get from mapping software than the odometer values.

5.0 Reference Information

5.1 Map Scale Types

5.1.1 Heading Degrees Decimal Minutes (h ddd mm.mmm)

This is the best scale to use on the GPS Unit because a 7.5 quad is labeled this way, therefore the latitude and longitude positions on the GPS Unit will be the same as the quad map.

Where:
- h is heading
- ddd is degrees
- mm is minutes
- .mmm is thousandths of a minute

For example: N 3547.541 W10631.983

Note: One hour equals 15 degrees per time zone, 360 degrees divided by 24 hours per day.

5.1.2 Heading Decimal Degrees (h ddd.ddddd)

Where :

- h is heading
- ddd is degrees
- .ddddd is decimal parts of a degree

5.1.3 Heading Degrees Minutes Seconds (h ddd mm ss.s)

Where:

- h is heading
- ddd is degrees
- mm is minutes
- ss is seconds
- .s is tenths of a second

5.1.4 UTM

UTM (Universal Transverse Mercator) is a math model of the earth, it is distance based, it is metric and has 3 parts, Z +E + N .

Where:

- Z is the zone that the world is cut into from west to east like orange slices. (There are 60 zones; each zone is 6 degrees wide.)
- E is how many meters east of a particular zone.
- N is how many meters north of the equator

New Mexico is zone 12 in the west and zone 13 in the east.

On a 7.5 quad the numbers on the vertical are upper case followed by lower case. For the Cochiti Dam 7.5 quad, the number 3943 means that it is 3,943,000 meters north of the equator. The numbers on the horizontal are upper case followed by lower case. For the Cochiti Dam 7.5 quad the number 384 means that it is 384,000 meters from the left edge of zone 13.

5.2 Abbreviations/Definitions

- CONUS – Contiguous United States
- GMT – Greenwich Mean Time which is 0 degrees on a map of the world.
- Latitude – degrees north or south of the equator
- Longitude – degrees east or west of GMT
- Magnetic North – The direction that a compass needle will point to as attracted by the magnetic attraction of the earth. Magnetic North changes with time.
- Magnetic inclination - the difference between True North and magnetic north
- NAD27 CONUS – North American Datum 27 CONUS
- Quad

  A 7.5 Quad is 7 minutes 30 seconds from the bottom to the top and from the east to the west. The map is divided into 9 equal squares (not shown on the map unless you draw in the dividing lines). If you add 2 min 30 sec to the latitude shown on the bottom right corner and go up the right side of the map 1/3 the total height of the map you will see the answer in minutes and seconds only at that point. If you add another 2.5 minutes to that number and go up the map another 1/3 the total height you will see the answer in minutes and seconds only at that point. The degrees are shown only at the four corners of the map.

  For example, the Cochiti Dam, NM quad:
  The latitude in the lower right corner says 35d37m30s
  Add   2m30s
  Sum   40m is shown 1/3 of the way up the map
  Add   2m30s
  Sum   42m30s is shown 2/3 of the way up the map
  And:
  The longitude in the lower right corner says 106d15m

Add	2m30s
Sum	17m30s is shown 1/3 of the way to the left
Add	2m30s
Sum	20m is shown 2/3 of the way to the left

- TracBack – A GPS Unit will follow a track backwards giving you the distance and direction to the next trackpoint from the track that is being followed.
- Trackpoint – A point (or breadcrumb) generated by the GPS to mark where you have been. Trackpoints make up the track.
- True North – North as defined by the North Pole and the North Star.
- UTM – Universal Transverse Mercator
- WAAS – Wide Area Augmentation System (you can turn WAAS on and off in the unit).