

**FASTER, CLEARER, AND
WITH NEW TOOLS!**

ENDURA®

1.5 Software Enhancement!

for OUT&BACK, SAFARI and Sierra models



**New Improvements in Endura GPS
Performance, Graphics, Features and Tools from the
NEW 1.5 Software**

LOWRANCE®

Outline

- Performance Improvements
- Graphic's Updates
- New Features





Performance Improvements



PERFORMANCE

Boot Time Reduction:

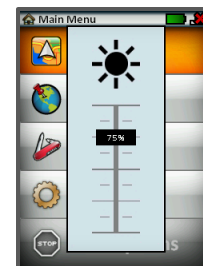
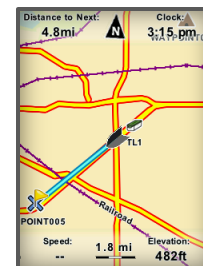
- We have made a ~10sec reduction in Start Up Boot Time (with no loaded GPX content)

O&B = **36** to **~26**sec -28-30%
Sierra= **65** to **~55**sec -15%
- Additional improvements on GPX file management explained on later page.



Easier and Faster Operation:

- Cities now appear at higher Zoom levels to aid navigation.
- Turn-By-Turn – Stability improvements make use smoother and more reliable.
- Trail – Memory management improvements provide faster operation.
- Better, more responsive operation using buttons (less key presses required) through optimization of default button selection.
- Default Backlight setting reduced to 75% to improve battery life.





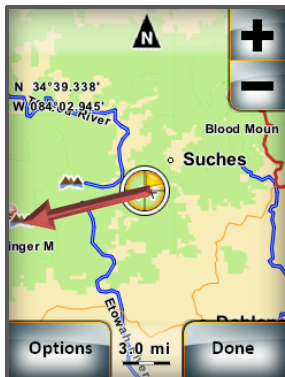
PERFORMANCE

Zoom Improvements

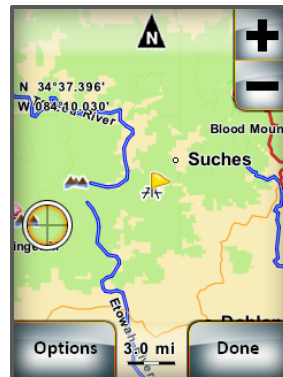
- With the past v1.4 software, Endura would redraw the entire map for every Zoom Key press. Now, we have changed v1.5 such that the user can select a 'Target Zoom' level from new Scale graphic & Map will be redrawn at selected level.



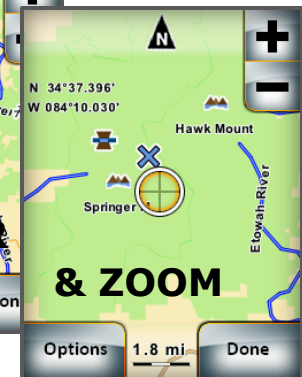
- The Zoom behavior has been further improved such that if you pan to an area on interest & press Zoom, the Map will zoom to the location & snap to centre of the screen.



Move cursor cross hairs to area to focus on (to the left and down) and hit "+" button



Endura recenters the map to that location and zooms in with that single button press.



- The Zoom Level setting has now also been made persistent.



PERFORMANCE

Panning Improvements

- Panning has been significantly improved, The new approach on panning action is that the Map will not be redrawn until the Hard Key has been released, which produces a much smoother panning action & user experience. This eliminates the time needed to redraw the map with each move off screen.
- In addition to above, we have added a scrolling acceleration logic that increases cursor movement speed the longer the directional arrow button is held down.
- These changes are complimented well with Zoom & Snap to location changes shown on previous page.





PERFORMANCE

GPX File handling

- v1.4 has a GPX file size limitation of **3Mb**, & can only handle a total of **~500** Geocaches (with full attributes).
- v1.5 has an increased GPX file size support of up to **40Mb** & can now handle up to **4,000** (with full attributes)

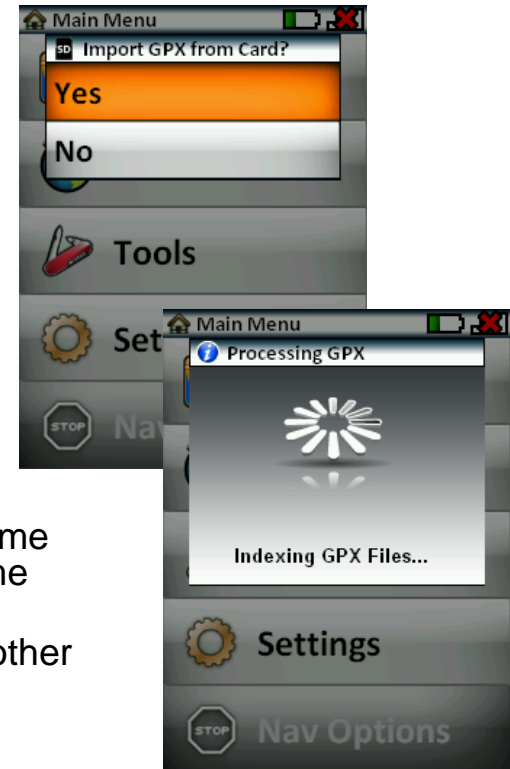
In addition to this, the GPX processor (parser) has improved intelligence such that if two pocket query files contain the same geocache entry, then duplicates will automatically be discarded.

There is a significant GPX file speed increase

v1.4 ~500 Geocaches = ~**60**sec to import & ~**10**sec increase to boot time

v1.5 ~1,000 Geocaches = ~**20**sec to import & ~**4**sec increase to boot time

This will be of particular interest to Geocachers & also bring benefits to other GPX file users





PERFORMANCE

Other Performance Improvements

- In v1.4, 1st Hard Key press was ignored & only turns-on backlight, which give the user a feeling of unresponsive behaviour.
For v1.5 , 1st Hard key request & turns on backlight & performs action,
(Touch screen still requires Tap to turn on BL).
-
- Selected Navigation Mode is now persistent even when a TBT card is installed.
- Improved Distance Remaining Formatting :
 - Metric**
 - <1 km = Meters
 - 10-99 km should = xx.x km
 - 100 km> = xxx km
 - Statute/Nautical.**
 - <0.1mi = Feet
 - 0.1-1mi = x.xx mi
 - 1-99 = xx.x mi
 - 100 mi> = xxx



PERFORMANCE

Other Performance Improvements (cont..)

- Additional setting persistency.
- Enhanced support for External POI's.
- FYI, Long press on 'Mark' key anywhere in menu will drop a waypoint @ current location.
- Current Trail 10,000pt limit reached warning added.



Note: It is also possible to use customised Splash Screens, visible for the 1st ~15sec of boot, which is then followed by our standard Splash Screen:

1. Create a 320x240 BMP file.
2. Rename to 'splash.bpx'.
3. Hold down Power Key & connect Battery or External Power.
4. When prompted either press 'Yes' on touch screen or press power button again to accept.






Graphic's Updates



GRAPHICS

Graphics Updates

- New sharper high contrast 'Glass' Skins, Yellow & Blue removed from pallet.
- Semi Transparent bands added to improve Data Item contrast.
- New 3D position indicator. 
- New Target cursor. 
- New 'No GPS' position indicator. ?
- New Higher contrast Backgrounds.
- New Zoom Level indicator. 

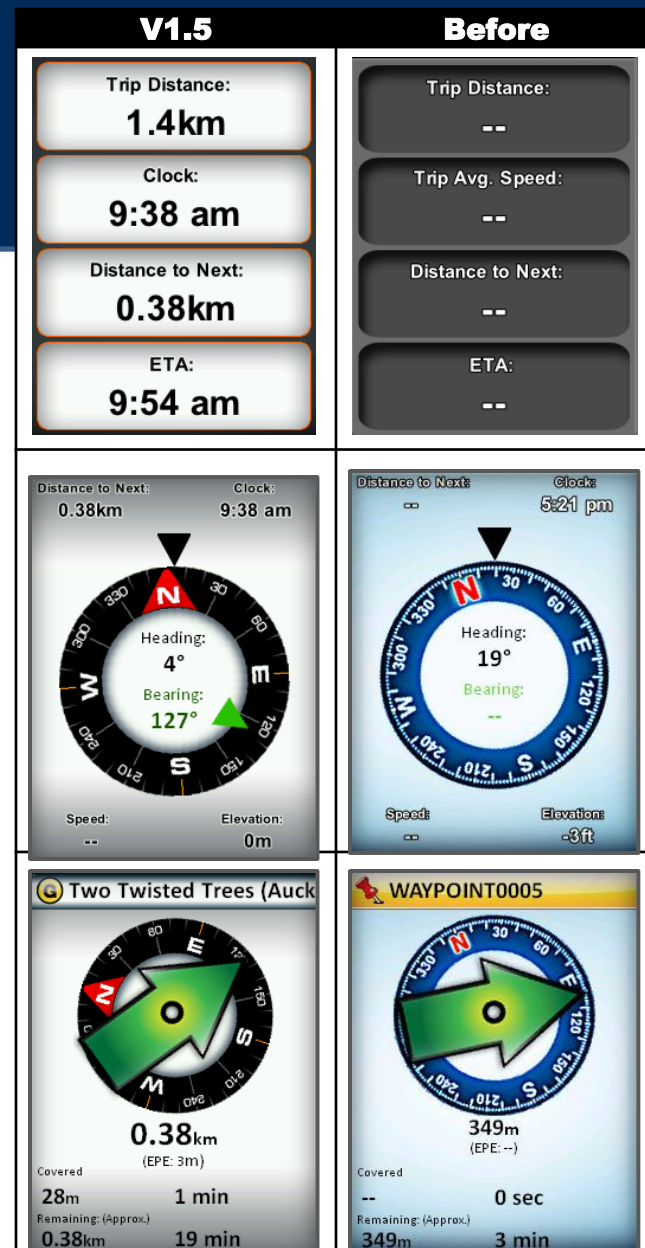




GRAPHICS

Graphics Updates

- Revised Trip Computer for improved Outdoor performance. (Trip Computer theme also carried through on WP averaging & Area Calculator)
- Improved Compass ring with added Shading.
- Bearing text is now darker for improved contrast.
- Distance Remaining text size increased.
- Graphics/Styles are now consistent throughout.





GRAPHICS

Graphics Updates

- New 3D Satellite page style.
- Consistent Data item colour.
- Map Text changed from White to Black for improved contrast.
- High contrast Button's Orange/Red from Blue/Yellow.
- Revised Backgrounds.

V1.5	Before
<p>Show On Map Goto</p> <p>Two Twisted Trees (Auckland)</p> <p>SE 0.54km (EPE: 5m)</p> <p>GC1T4PG by Jackles S 36°42.246' E 174°45.102'</p> <p>Size: Other Difficulty: 2.5 Type: Traditional Cache Terrain: 2</p> <p>Description</p> <p>Recent Logs</p> <p>More Options Back</p>	<p>Show On Map Goto</p> <p>Name: WAYPOINT0004</p> <p>Location: (Click for Coordinates) S 252m (EPE:—m)</p> <p>Blue X Elevation: -1m</p> <p>Description</p> <p>Voice Note</p> <p>More Options Back</p>
<p>3D GPS Fix</p> <p>S 36°42.011' E 174°44.942'</p> <p>Elev: 28m EPE: 3m PDOP: 1.6</p>	<p>3D GPS Fix</p> <p>S 36°41.939' E 174°44.868'</p> <p>Elev: 12m EPE: 6m PDOP: 1.8</p>
<p>Elevation: 17m Clock: 9:48 am</p> <p>Speed: 5.0km/h Vertical Speed: -0.11m/s</p>	<p>Elevation: -3ft Clock: 5:22 pm</p> <p>Speed: ∞ Vertical Speed: ∞</p>



New Features



NEW FEATURES

Area Calculator:

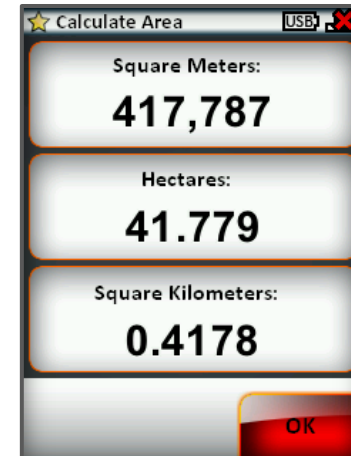
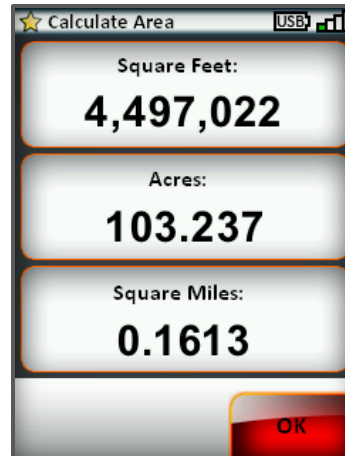
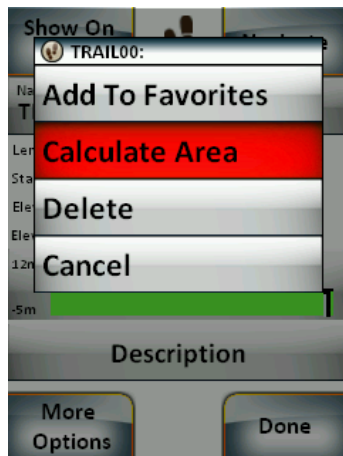
This new feature allows the user to calculate an Area based on a Trail.

Default Units are taken speed/distance preference 'Statue/Metric/Nautical'

To use this feature you create the required Trail, then calculate afterwards,
Note this works for both Endura created & imported trails.

Feature can be found:

FIND > Trail > 'Select Trail' > More Options > Calculate Area





NEW FEATURES

Waypoint Averaging:

We have added a waypoint averaging feature to allow users to improve the precision of a waypoint location based on an average number of readings over time.

Latitude, Longitude & Elevation (using GPS), are dynamically updated every second.

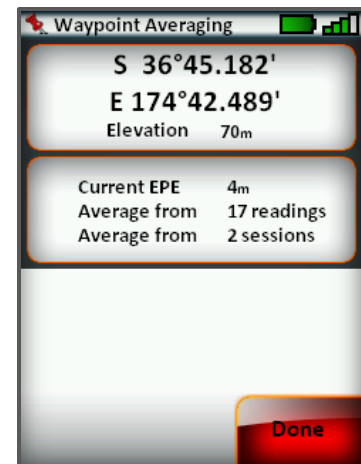
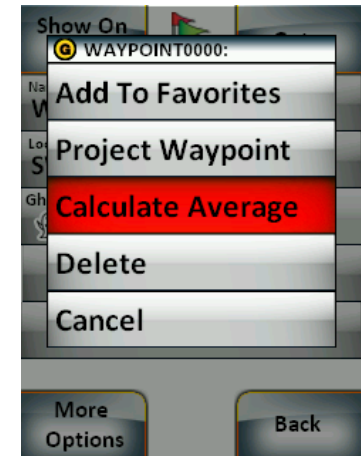
We also support multi-session so the Waypoint can be re-visited to increase location precision.

In order to further improve precision we apply the following filters, Any position that exceeds either of the following thresholds will be ignored:

- a) PDOP > 3.0 (poor quality GPS fix).
- b) Velocity > 5km/hr (averaging assumes the device is not moving).
- c) For Multi-session: If the current position is more than 50m away from the previous average position
then the new values are ignored until the current position is within a 150 ft or 50m radius.
- d) Elevation measurements without a 3D fix

Feature can be found:

FIND > Waypoint > 'Select Waypoint' > More Options > Calculate Average





NEW FEATURES

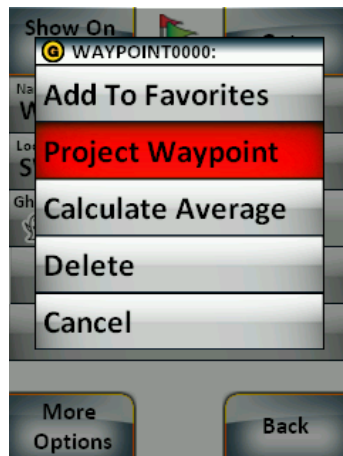
Waypoint Projection:

Allows the user to calculate a waypoint by entering in an offset from another waypoint. The offset is entered as a distance and a bearing value (from 0° to 360°)

Default Units are taken speed/distance preference 'Statue/Metric/Nautical'

Setting can be found:

FIND > Waypoints > 'Select Waypoint' > More Options > [Project Waypoint](#)





NEW FEATURES

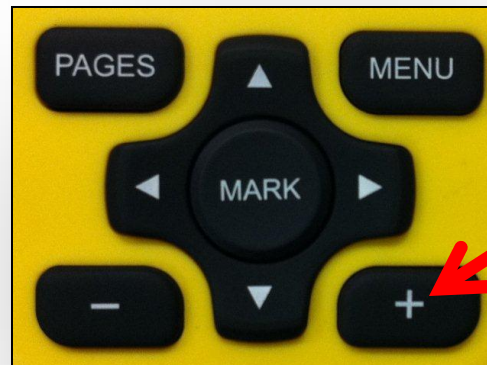
Screen Capture:

This feature allows the user to capture any Endura application screen,

To capture screen PRESS & HOLD' the '+' button for 5sec, you will hear a sound to confirm.

To retrieve the image, connect to a PC & the file will be saved in '**Screen Shots**' Folder'

Images will be in .png format



PRESS & HOLD

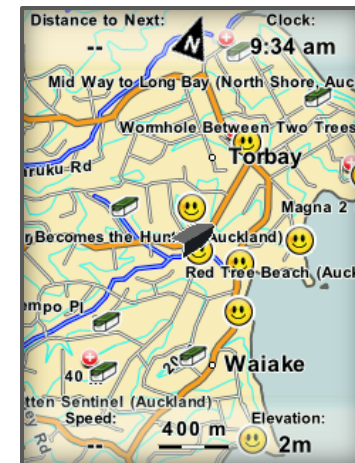
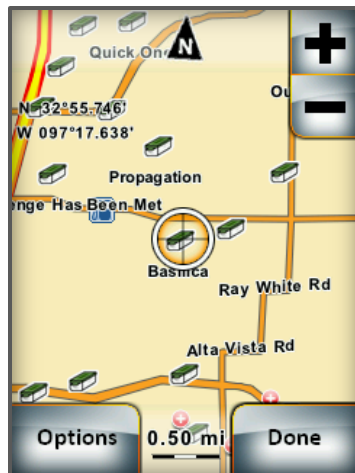


NEW FEATURES

Display Found Geocaches:

This new feature allows Endura to display either or distinguish between found and not found Geocaches

- Found Geocaches are indicated on the Map with Smiley Face (as used by Ground Speak)
- This logic applies to both Geocaches found using Endura (Paper Less Feature) & 'Imported' from external databases.





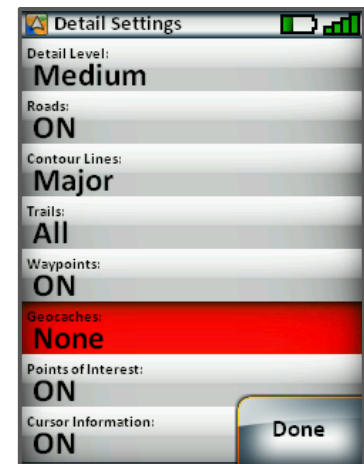
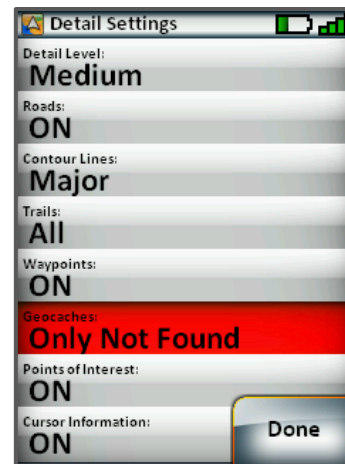
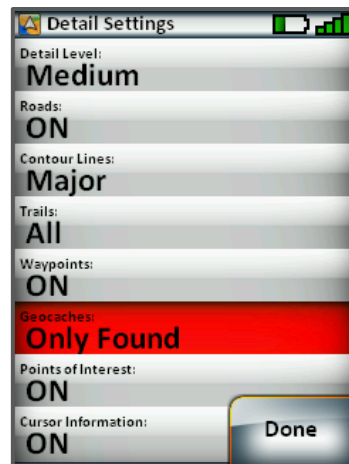
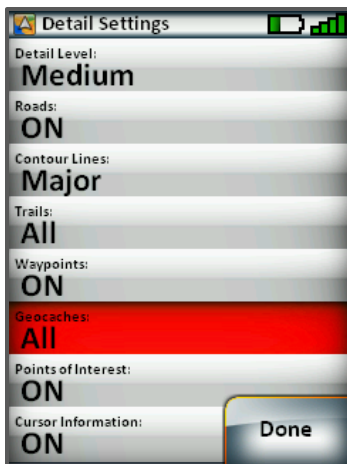
NEW FEATURES

Map Geocache Icon Options:

Ability to selectively view Geocaches on Map,
This will makes the UI more consistent

Setting can be found:

MAP > Detail Settings > Geocaches > All, Only Found, Only Not Found, None





NEW FEATURES

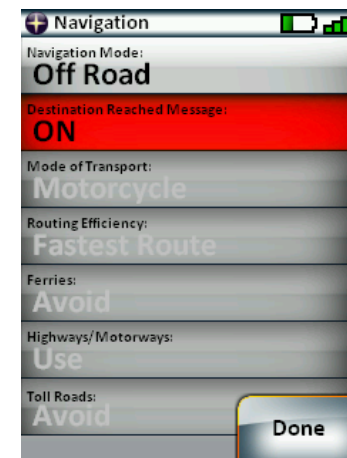
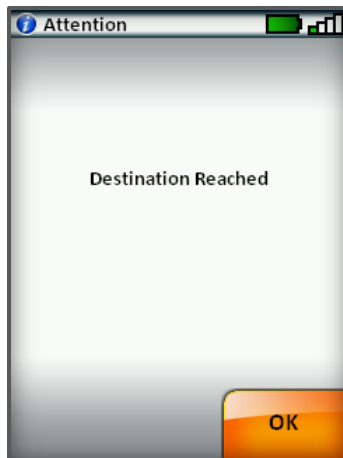
Option to disable 'Destination Reached message'

The user can now choose to disable the "Destination Reached" message for all 'Off-Road' navigation types; Waypoints, Geocaches, Trails, Routes, POI.

This setting is persistent & only valid in *Off Road* Navigation Mode.

Setting can be found:

SETTINGS > Navigation > Destination Reached Message > On/OFF





NEW FEATURES

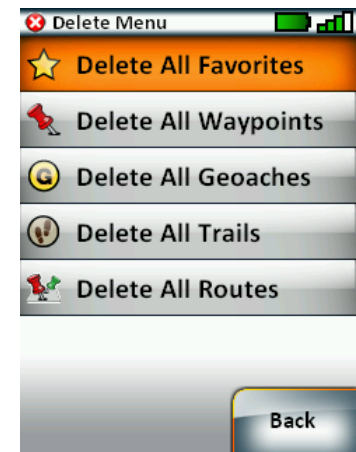
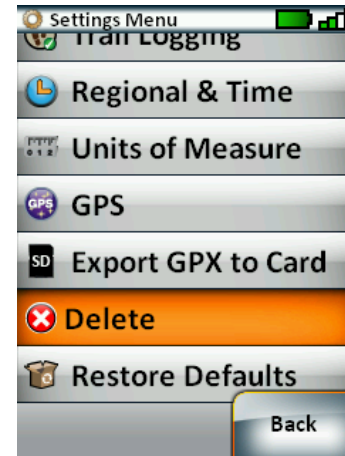
Delete ALL Option:

This new feature allows the user to selectively Delete ALL:

- Favorites
- Waypoints
- Geocaches
- Trails
- Routes

Feature can be found:

SETTINGS > Delete > As below





NEW FEATURES

Additional Language Support:

- Polish & Finnish Languages have now been supported.
- Plus a number of other Translation improvements.

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For more information, go to:
www.lowrance.com/endura

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