



Geko™ 301

Personal Navigator®

owner's
manual
and
reference
guide

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DON'T JUDGE A BOOK BY ITS COVER

Are you familiar with the above phrase? Well, here is a new one: don't judge GPS performance merely by its size. Welcome to the world of the Geko 301, a small, compact Global Positioning System (GPS) with capabilities that far outweigh its size. Soon, you and your Geko 301 will be on new adventures together, and you'll find yourself wondering just what the Geko 301 can do next. If knowledge is power, then the Geko 301 is a powerful navigational tool right at your fingertips!

To get the most out of your new Geko 301, take the time to read through this Owner's Manual to understand the operating features of the unit. This manual has been designed to provide all that you need to know to operate your Geko 301. Let the adventure begin!

PRODUCT REGISTRATION

Help us better support you by completing your on-line registration today!

Connect to our Web Site (www.garmin.com) and look for the Product Registration link on the home page. Your unit's serial number is in the battery compartment.

Thanks for choosing the Garmin Geko 301. If you have any questions or comments regarding the use of the Geko 301 you can visit our Web Site or contact our Customer Service Department M-F, 8:00-5:00 CST (except holidays) at 1-800-800-1020.

Serial Number

Use this area to record the serial number (8-digit number located inside the battery compartment of the unit) in case it is lost, stolen, or needs service. Be sure to keep your original sales receipt in a safe place or attach a photocopy inside the manual.

Serial Number:

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Introduction

Product Registration



Introduction

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FCC Compliance

The Geko 301 complies with Part 15 of the FCC interference limits for Class B digital devices FOR HOME OR OFFICE USE. These limits are designed to provide more reasonable protection against harmful interference in a residential installation, and are more stringent than “outdoor” requirements.

Operation of this device is subject to the following conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The Geko 301 does not contain any user-serviceable parts. Repairs should only be made by an authorized Garmin service center. Unauthorized repairs or modifications could result in permanent damage to the equipment, and void your warranty and your authority to operate this device under Part 15 regulations.



Introduction

Warnings and Cautions



CAUTION: Use the Geko 301 at your own risk. To reduce the risk of unsafe operation, carefully review and understand all aspects of this Owner's Manual—and thoroughly practice operation using the simulator mode prior to actual use. When in actual use, carefully compare indications from the Geko 301 to all available navigation sources, including the information from other NAVAIDs, visual sightings, charts, etc. For safety, always resolve any discrepancies before continuing navigation.

CAUTION: IT IS THE USER'S RESPONSIBILITY TO USE THIS PRODUCT PRUDENTLY. THIS PRODUCT IS INTENDED TO BE USED ONLY AS A NAVIGATIONAL AID AND MUST NOT BE USED FOR ANY PURPOSE REQUIRING PRECISE MEASUREMENT OF DIRECTION, DISTANCE, LOCATION OR TOPOGRAPHY. THIS PRODUCT SHOULD NOT BE USED AS AN AID TO DETERMINE GROUND PROXIMITY FOR AIRCRAFT NAVIGATION.

WARNING: The Global Positioning System (GPS) is operated by the United States government, which is solely responsible for its accuracy and maintenance. The system is subject to changes which could affect the accuracy and performance of all GPS equipment. Although the Garmin GPS receiver is a precision electronic NAVIGATION AID (NAVAID), any NAVAID can be misused or misinterpreted and, therefore, become unsafe.

WARNING: For use in vehicles, it the sole responsibility of the driver of the vehicle to operate the vehicle in a safe manner, maintain full surveillance of all driving conditions at all times, and not become distracted by the Geko 301 to the exclusion of safe driving practices. It is unsafe to operate the controls of the Geko 301 while you are driving. Failure by the driver of a vehicle equipped with a Geko 301 to pay full attention to operation of the vehicle and road conditions while the vehicle is in motion could result in an accident or collision with property damage and personal injury.

WARNING: For use in vehicles, it is the sole responsibility of the owner/operator of the Geko 301 to secure the unit so that it will not interfere with the vehicle's operating controls, obstruct the driver's view of driving conditions, or cause damage or personal injury in the event of an accident. Do not mount the Geko 301 over air bag panels or in the field of air bag deployment. Air bags expand with a rapid force that can propel objects in their path toward the driver or passengers causing possible injury. Refer to air bag safety precautions contained in the vehicle's owner manual. Do not mount the Geko 301 in a place where the driver or passengers are likely to impact it in an accident or collision. The mounting hardware provided by Garmin is not warranted against collision damage or the consequences thereof.

WARNING: This product, its packaging, and its components contain chemicals known to the State of California to cause cancer, birth defects, or reproductive harm. This Notice is being provided in accordance with California's Proposition 65. If you have any questions or would like additional information, please refer to our web site at <http://www.garmin.com/prop65>.

Introduction

Warnings and Cautions



Introduction

LIMITED WARRANTY

This Garmin product is warranted to be free from defects in materials or workmanship for one year from the date of purchase. Within this period, Garmin will at its sole option, repair or replace any components that fail in normal use. Such repairs or replacement will be made at no charge to the customer for parts or labor, provided that the customer shall be responsible for any transportation cost. This warranty does not cover failures due to abuse, misuse, accident or unauthorized alteration or repairs.

THE WARRANTIES AND REMEDIES CONTAINED HEREIN ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED OR STATUTORY, INCLUDING ANY LIABILITY ARISING UNDER ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, STATUTORY OR OTHERWISE. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, WHICH MAY VARY FROM STATE TO STATE.

IN NO EVENT SHALL GARMIN BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM THE USE, MISUSE, OR INABILITY TO USE THIS PRODUCT OR FROM DEFECTS IN THE PRODUCT. Some states do not allow the exclusion of incidental or consequential damages, so the above limitations may not apply to you.

Garmin retains the exclusive right to repair or replace the unit or software or offer a full refund of the purchase price at its sole discretion. SUCH REMEDY SHALL BE YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY BREACH OF WARRANTY.

To obtain warranty service, call your local Garmin authorized dealer. Or call Garmin Customer Service at one of the numbers listed below for shipping instructions and an RMA tracking number. The unit should be securely packed with the tracking number clearly written on the outside of the package. The unit should be sent, freight charges prepaid, to any Garmin warranty service station. A copy of the original sales receipt is required as the proof of purchase for warranty repairs.

Products sold through online auctions are not eligible for rebates or other special offers from Garmin. Online auction confirmations are not accepted for warranty verification. To obtain warranty service, an original or copy of the sales receipt from the original retailer is required. Garmin will not replace missing components from any package purchased through an online auction.

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SOFTWARE LICENSE AGREEMENT

BY USING THE GEKO 301, YOU AGREE TO BE BOUND BY THE TERMS AND CONDITIONS OF THE FOLLOWING SOFTWARE LICENSE AGREEMENT. PLEASE READ THIS AGREEMENT CAREFULLY.

Garmin grants you a limited license to use the software embedded in this device (the “Software”) in binary executable form in the normal operation of the product. Title, ownership rights and intellectual property rights in and to the Software remain in Garmin.

You acknowledge that the Software is the property of Garmin and is protected under the United States of America copyright laws and international copyright treaties. You further acknowledge that the structure, organization and code of the Software are valuable trade secrets of Garmin and that the Software in source code form remains a valuable trade secret of Garmin. You agree not to decompile, disassemble, modify, reverse assemble, reverse engineer or reduce to human readable form the Software of any part thereof or create any derivative works based on the Software. You agree not to export or re-export the Software to any country in violation of the export control laws of the United States of America.

Introduction

Software License Agreement

GPS CLEANING

The Geko 301 is constructed of high quality materials and does not require user maintenance other than cleaning. Clean the unit using a cloth dampened with a mild detergent solution and then wipe dry. Avoid chemical cleaners and solvents that may damage plastic components.

STORAGE

Storing alkaline batteries in the unit for long periods of time is not recommended. In order to reduce the chance for battery leakage in the battery compartment, remove the batteries when storing the unit for more than six months.

Do not store the Geko 301 where prolonged exposure to temperature extremes may occur (such as in the trunk of a car) as permanent damage may result. User information, such as waypoints, routes, etc. will be retained in the unit's memory without the need for external power. It is always a good practice to back up important user data by manually recording it or downloading it to a PC (transferring it to MapSource).

WATER IMMERSION

The Geko 301 is waterproof to IEC Standard 529 IPX7. It can withstand immersion in 1 meter of water for 30 minutes. Prolonged submersion can cause damage to the unit. After submersion, be certain to remove the batteries and dry the compartments before reuse.

To resolve problems that cannot be remedied using this guide, contact Garmin Customer Support in the U.S.A. at 800-800-1020 or Garmin Europe at 44-1794-519944.

INSTALLING THE BATTERIES

The Geko 301 operates on two AAA batteries (not included), installed in the back of the unit. To install the batteries, remove the battery cover by inserting a coin (quarter) in the bottom slot. Twist the coin to lift the cover up and pull away. Insert the batteries, observing proper polarity. Attach the battery cover by inserting the tab end into the back slot at an angle, laying it flat, and then pushing it forward until the clip catches. Alkaline batteries should last as long as 9 hours. Rechargeable Alkaline, NiMH, NiCad or Lithium batteries may be used, but cannot be charged while in the unit.

External power and data connector (under rubber tab)



Battery Compartment



NOTE: If you intend to store your Geko 301 for an extended period of time, remove the batteries. Follow the battery manufacturer's instructions for the proper care and handling of the batteries.

Introduction

Installing Batteries



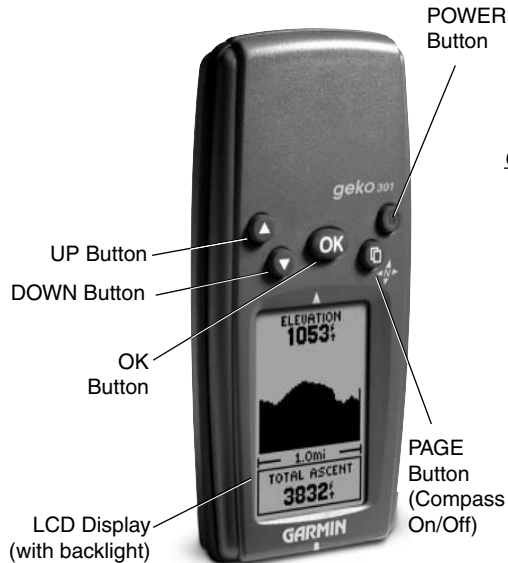
Battery usage icon shows an estimate of battery life left. Four squares with the battery outline indicates a full battery.



Four squares alone indicates the use of an external power source.

Introduction

Features and Buttons



Geko 301 Features:

- 500 alphanumeric waypoints with name selectable icons
- 20 reversible routes with up to 125 waypoints each
- 10,000 Track points
- 10 Saved Tracks with up to 500 points each
- PanTrack feature that allows you to view the bread crumbs (track points) dropped during your hike or drive
- TracBack route feature which allows you to quickly retrace your track log to a starting position
- 5 interactive games based on your real-time position and controlled by your geographical movement
- WAAS enabled for accuracy less than 3 meters, 95% typical
- Trip Computer page with 34 selectable fields

Geko 301 Buttons:

The **POWER** Button:

- Press and hold to turn the unit on and off
- Press and release (with the unit on) to turn the backlight on and off

The **PAGE** Button:

- Press to switch between the Main Pages
- Press and hold to turn Compass on or off

The **OK** Button:

- Press to confirm data entry or menu selection
- Press and hold to Mark your current position and access the Mark Waypoint Page

The **UP/DOWN** Buttons:

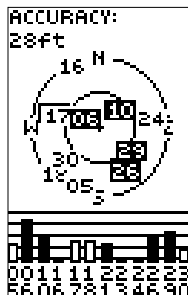
- Press to highlight options on pages and menus
- Press to adjust display contrast on the Satellite Page
- Press to Zoom out (**UP**) and Zoom in (**DOWN**) on the Map Page
- Press to cycle through the data fields on the Navigation Page

MAIN PAGES

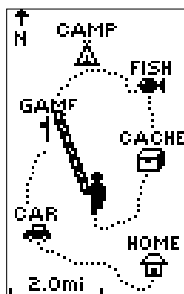
All of the information needed to operate the Geko 301 is found on six main 'pages' (or display screens). These pages are the Satellite, Map, Navigation, Elevation, Trip Computer, and Menu. Press the **PAGE** Button to cycle through the six pages.

Main Pages

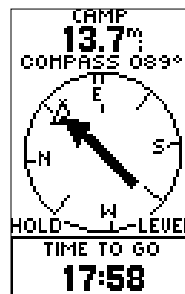
Down to the Basics



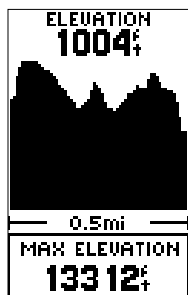
Satellite



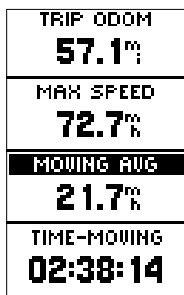
Map



Navigation



Elevation



Trip Computer



Main Menu



Main Pages

Geko 301 Menu Diagram

Satellite Page (p. 3)

1. Display Setup (4)
2. Advanced Skyview (5)
 - 2-A: Display Setup (4)
 - 2-B: Orient Sky Northward/Ahead (6)
 - 2-C: Normal Skyview (6)
 - 2-D: About Geko (6)
3. About Geko (6)

Map Page (p. 7)

1. Pan Track Log (8)
2. Clear Track Log (9)
3. Measure Distance (8)
4. Map Setup (8)
 - 4-A: Orient Map (8)
 - 4-B: Auto Zoom (8)
 - 4-C: Waypoints (8)
 - 4-D: Goto Line (8)

MENU NAVIGATION

Your Geko 301 allows you to navigate through menus quickly and efficiently using a combination of the **PAGE** button, **OK** button, and the **UP** and **DOWN** buttons. The diagram gives you a quick glance of all available options. To read more about a particular menu option, turn to the page number indicated to the right in parentheses.



Satellite Options



Map Options

Navigation Page (p.10)

1. Sight 'N Go (11)
2. Calibrate the compass (13)

Elevation Page (p.14)

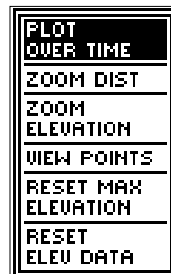
1. Plot Over Time/Distance (15)
2. Zoom Time/Distance (16)
3. Zoom Elevation (16)
4. View Points (17)
5. Reset Max Elevation (17)
6. Reset Elev Data (17)
7. Calibrate Altimeter (17)

Trip Page (p. 19)

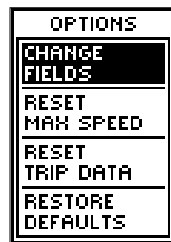
1. Change Fields (19)
2. List of Data Field Options (20)

Main Menu Page (p.21)

See page 21 for the Main Menu's list of options

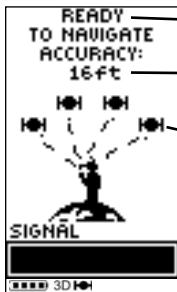


Elevation Options

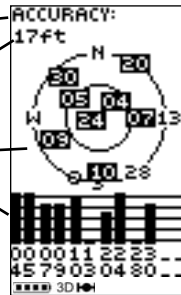


Trip Options

Normal Skyview



Advanced Skyview



Status Message
Location Accuracy (estimated)
Satellites
Satellite Signal Strength Bars (a 'D' stands for differential corrections and denotes a WAAS Satellite)
The '3D' displays when receiving signals from four or more satellites.

The Satellite Page displays the Geko 301 looking for and gathering all the necessary information from satellites in order to give your location. There are two display options on the Satellite Page, Normal Skyview and Advanced Skyview. Normal Skyview shows you (in animation), the satellites, receiving satellite signals, the signal strength, and the Geko 301's estimated location accuracy.

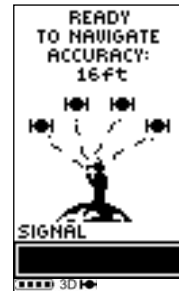
To activate the Advanced Skyview page, press the **OK** Button on the Satellite Page, select 'Advanced Skyview' option and press the **OK** Button again. This page displays the actual numbered satellites in orbit the Geko 301 is using, their proximity to your current position, and their individual strengths. The outer circle of the display represents the horizon and the center represents the sky directly overhead to help you determine the location of the satellites.

When you see the "READY TO NAVIGATE" message, the Geko 301 has found your location and you are ready to go!

Satellite Page

What is the Satellite Page?

A "READY TO NAVIGATE" message must display before you can begin using your Geko 301 to navigate.



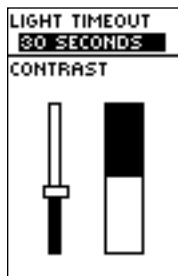
NOTE: When you use the Geko 301 for the first time, allow time for it to track satellites by leaving the Geko 301 outside with a clear view of the sky for 15-30 minutes.

Satellite Page

Normal Skyview



Normal Skyview
Options



Light Timeout
Highlighted



Light Timeout
Options

The Options on the Satellite Page allow you to customize the page in several ways. All options stem from the default Normal Skyview Page. Here are the available options and descriptions:

NORMAL SKYVIEW OPTIONS:

- **Display Setup**
- **Advanced Skyview**
- **About Geko**

Display Setup:

When you select this option you can adjust the backlight timeout and the contrast of the screen.

To adjust the backlight timeout setting:

1. In Normal or Advanced Skyview, press the **OK** Button to access the 'OPTIONS' menu.
2. With 'DISPLAY SETUP' highlighted, press the **OK** Button.
3. With 'LIGHT TIMEOUT' field highlighted, press the **OK** Button.
4. Press the **UP** or **DOWN** Button to highlight the length of time and then press the **OK** Button to return to the 'LIGHT TIMEOUT' field.
5. Press the **PAGE** Button to exit.

To adjust the contrast from the Satellite Page:

1. In Normal or Advanced Skyview, press the **OK** Button to access the 'OPTIONS' menu.
2. With 'DISPLAY SETUP' highlighted, press the **OK** Button.
3. Press the **DOWN** Button to highlight the Contrast slider bar. Press the **OK** Button.
4. Press the **UP** or **DOWN** Button to move the contrast slider. Continue to press **UP** Button to make the screen darker, or press the **DOWN** Button to make the screen lighter.
5. Press the **OK** Button to return to the Contrast Bar.
6. Press the **PAGE** Button to exit.



NOTE: A quick way to adjust the contrast is to press and hold the **UP** or **DOWN** Button while on the Satellite Page.

ADVANCED SKYVIEW OPTIONS:

- **Display Setup**
- **Orient Sky Northward/Sky Ahead**
- **Normal Skyview**
- **About Geko**

Display Setup: See page 4 under Normal Skyview Options.

Orient Sky Northward or Orient Sky Ahead: You have the choice to view the Advanced Skyview two ways, Northward and Ahead.

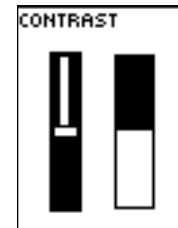
'Orient Northward', displays the satellite positions in a fixed position. North is always pointing up. (Satellite rings do not rotate)

'Orient Ahead', displays the satellite positions relative to where the Geko 301 is pointing. North, South, East, or West can be displayed at the top. (Satellite rings rotate)

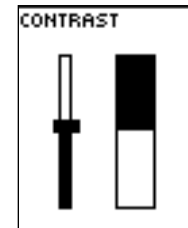
Advanced Skyview



Advanced Skyview Options



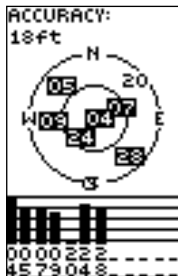
Contrast Bar Highlighted



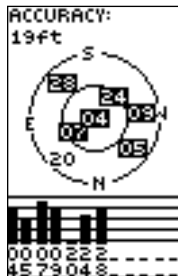
Contrast Bar Selected

Satellite Page

Advanced Skyview



*Orient Sky
Northward*



*Orient Sky
Ahead*



About Geko

To select Orient Sky Northward/Ahead:

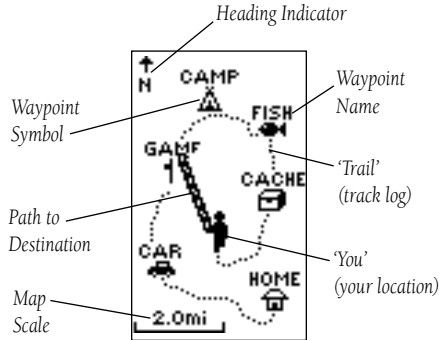
1. In Advanced Skyview, press the **OK** Button to access the 'OPTIONS' menu.
2. Press the **DOWN** Button, to highlight 'ORIENT SKY NORTHWARD' or 'ORIENT SKY AHEAD'.
3. Press the **OK** Button to select the field.
4. Press the **PAGE** Button to exit.

Normal Skyview: Select this option to return to Normal Skyview.

About Geko: This option allows you to see what software version the Geko 301 is currently using. Visit www.garmin.com for the latest software updates. (A PC-compatible computer and Power/Data cable, not included, are required for transfer)

Map Page

What can I find on the Map?



The Map Page shows where you are (the animated figure) and provides a picture of where you are going. As you travel (the animated figure ‘walks’) and leaves a ‘trail’ (track log). Waypoint names and symbols are also shown on the map.

To help you better visualize the ‘real world’, the Geko 301 automatically rotates the map as you move, so that waypoints that are ahead of you are always displayed in front of the animated figure. The Heading Indicator shows the direction you are heading.

To make sure you can see your entire route, you can change the map scale (from 50 feet to 800 miles) by pressing the **UP** Button to view a larger area, and the **DOWN** Button for viewing a smaller area (hold down buttons for a faster zoom).

When on the Map Page, the **UP** and **DOWN** Buttons are used to adjust the map scale from 50 feet to 800 miles.

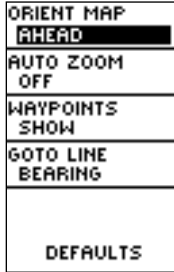


Map Page

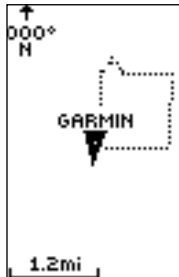
Options



Measure Distance



Map Setup Options



When you select 'Orient Map Northward' the figure icon is replaced by a 'direction' triangle. The tip of the triangle tells you the general direction in which you are moving.

The Options on the Map Page allow you to customize the page in several ways although not all options are visible all the time. The following options are always available:

- **Clear Track Log:** Allows you to clear the track log and immediately start a new one.
- **Measure Distance:** Allows you to choose two waypoints (the default for one is your current position) and your current estimated speed. The distance and estimated time needed to reach that point is calculated automatically.
- **Map Setup:** Allows you to adjust the map settings including:

Orient Map (Ahead or Northward): When 'AHEAD' is selected, the top of the map is oriented in the direction you are currently moving. When 'NORTHWARD' is selected, the map is always oriented to the North.

Auto Zoom (On or Off): When 'AUTO ZOOM' is turned on, the map automatically adjusts its scale to display your entire navigating route until you manually change the zoom level. When it's turned off, you must press the **UP** or **DOWN** Button to select the appropriate map scale.

Waypoints (Show or Hide): Allows you to view the map with or without waypoints.

Goto Line (Bearing or Course): Determines whether the display pointer shows your current bearing or the direction to the next waypoint. A *Bearing Goto line* follows you as you move. A *Course Goto Line* is fixed from your starting location.

Options that do not display until you have a track log or are actively navigating include:

- **Pan Track Log:** Allows you to move the pointer to any point along the track and then start a TRACBACK, a GOTO, MARK a waypoint, or ZOOM In or Out.
- **Stop Navigation:** 'STOP NAVIGATION' stops any active navigation (navigation means there is a destination waypoint).

USING THE TRACK LOG

The Geko 301 draws an electronic breadcrumb trail or 'track log' on the Map Page as you travel. The track log starts recording as soon as the Geko 301 gets a location fix.

To make use of the track log, select the 'PAN TRACK LOG' option to show a pointer which moves along the track log when you press the **UP** or **DOWN** Button. Press the **OK** Button to see the four choices 'TRACBACK', 'GOTO', 'MARK' and 'ZOOM'.

'TRACBACK' will guide you to where you started by following the track log that you left behind, allowing you to return along a traveled path without marking any waypoints. For the best results, clear the track log before you start traveling because when the track log is full, the new track points will overwrite the oldest track points.

'GOTO' guides you from your current location to the waypoint selected while 'MARK' creates a waypoint on the selected track point. 'ZOOM' adjusts the level of viewable map detail.

To clear the track log:

1. From the Map Page, press the **OK** Button to display the Map Page Options menu.
2. Press the **DOWN** Button to highlight 'CLEAR TRACK LOG' and press the **OK** Button.
3. At the message "DO YOU REALLY WANT TO CLEAR THE TRACK LOG?", press the **DOWN** Button to highlight 'YES' and press the **OK** Button to clear the track log and return to the Map Page.

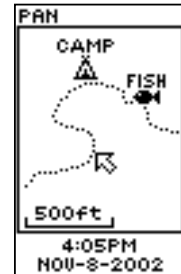
To read more on Tracks and its features, turn to page 26.

Map Page

Options



Selecting 'PAN TRACK LOG' from the Map Page options allows you to move the pointer to any point on the track log and then create a Waypoint or navigate to it.



PanTrack™ mode



'CLEAR' the track log before starting a new trip.

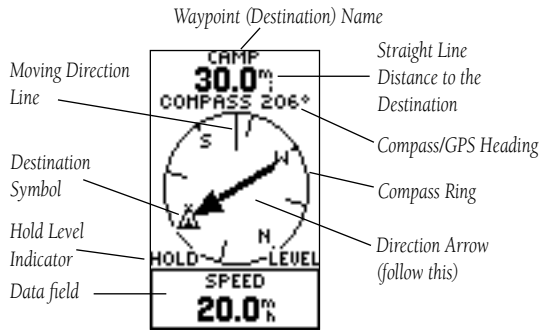
Navigation Page

Show me the way!

The Geko 301 includes an Electronic Compass that is similar to a magnetic compass. It points your heading while standing still.



NOTE: The direction arrow, destination symbol, bearing information, Time To Go, Arrival Time and Final Distance only display when you have started a Goto or a TracBack.



The Navigation Page provides active guidance with a rotating compass ring that shows your course over ground (track) while you're moving and a bearing pointer to indicate the current direction to your destination (bearing) relative to the course over ground.

The Compass Ring works as an electronic compass. When you are stationary, it works as a magnetic compass (which can be turned On or Off). When the Compass is on and you are moving, the heading is controlled by the GPS receiver. The Compass switches to the GPS receiver when your rate of travel reaches a user-defined speed, and comes back on when you have stopped moving after a user-defined period of time. Use the Heading Setup Page to change the user-defined speed and time. (See page 40)

One Data Field is available at the bottom of the screen and you can use the **UP** and **DOWN** Buttons to scroll through the menu choices. A list of the fields can be found on page 13.

The Bent (Bearing) Pointer arrow alerts you to the upcoming turn while you are navigating a route. When you get within 15 seconds of the current point, the pointer "bends" to indicate the direction of the turn to the next point.

When you are not on an active GOTO, Track, or Route (not traveling to a recorded destination), the status at the top of the page displays the status of the GPS Receiver and the approximate accuracy of our current position. The Compass Ring displays your heading while you are moving, but the data field at the bottom of the page will not display any destination related information, such as Estimated Time of Arrival.

Turning the Electronic Compass On and Off:

1. Press and hold the **PAGE** Button to turn the Electronic Compass On or Off.
2. When the Electronic Compass is on, hold the Geko 301 level to get an accurate Compass reading.

To use Sight 'N Go to navigate:

1. On the Navigation Page, with the compass turned on and 'READY TO NAVIGATE', press the **OK** Button and select the option Sight 'N Go by pressing the **OK** Button again. Note that the compass ring with the pointer is in-line with the two sighting marks on the case.
2. Hold the Geko 301 eye-level and line up the two sighting marks with a distant object, press the **OK** Button and select 'SET COURSE' to lock the heading in place.
3. Begin traveling to your destination using the compass pointer as a guide.
4. To view the Sight 'N Go options, press the **OK** Button to 'SET (New) COURSE', 'PROJECT (Waypoint)', and 'RE-SIGHT'.

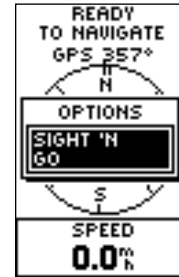
When using a Sight 'N Go, the compass displays a broken course pointer. What this means is as you are moving, if you were to stray left or right of your pre-set course, the middle section of the course pointer moves to the left or right of the center. To get back on course, travel in the direction that moves the middle line back to the center and lines up proper with the pointer. You want to keep the middle line in the center as best as possible when traveling. For an example, look at the picture in the right column.

Navigation Page

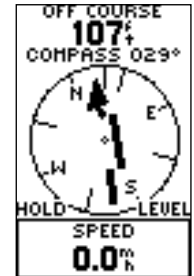
Options



Note: The default setting on the Geko 301 has the Compass turned OFF.



Navigation Options



This user is 107 ft off course to the right or east. To get back on course, the user needs to bear to their left or west.

Navigation Page

Options

On the Navigation Page, the **UP** and **DOWN** Buttons are used to cycle through different trip data.



The Navigation Page allows you to display 11 types of different data, such as 'Elevation', 'Speed', etc.



To Stop Navigation:

1. Press the **OK** Button to open the Options Menu.
2. Press the **Up** Button to highlight the 'STOP NAVIGATION' field and press the **OK** Button to stop navigating.

To change data fields:

1. On the Navigation Page, press the **UP** or **DOWN** Buttons to scroll through the available data fields. Note some are not available unless navigating to a destination.

DATA FIELD OPTIONS

By pressing the **UP** or **DOWN** Button, you can cycle through the Data fields at the bottom of the Navigation Page:

- **Speed**—tells you how fast you are going.
- **Elevation**—the measurement of height above mean sea level.
- **Location**—shows your current location coordinates, UTM, latitude and longitude, etc.
- **Time/Date**—the current time and date based on your Time Zone settings.
- **Trip Odometer**—the total distance you've gone since the last reset.
- **Heading**—the direction you are traveling.

The following fields display only when navigating:

- **Bearing**—the compass direction from your current location to your destination.
- **Course**—the direction from your starting location to a destination.
- **Time To Go**—the estimated time at your current speed to reach your destination.
- **Arrival Time**—the time of your arrival, based on your current speed and distance left.
- **Final Distance**—the route distance left from your current location to your destination.

The Electronic Compass must be calibrated when you first use the Geko 301 and after new batteries have been installed. The accuracy of the Electronic Compass is adversely affected if the unit is not held level or by nearby items that generate magnetic fields, such as cars or buildings, etc.

To Calibrate the Electronic Compass:

1. Press the **PAGE** Button until you arrive at the MENU Page.
2. Press the **UP** or **DOWN** Button to highlight the 'CALIBRATE' option and press the **OK** Button to select it.
3. With the 'COMPASS' option highlighted, press the **OK** Button to select it.
4. The information screen explains: "TO CALIBRATE: SLOWLY TURN TWO FULL CIRCLES IN THE SAME DIRECTION WHILE HOLDING GEKO LEVEL". ***To keep level while rotating, it is recommended to place the Geko 301 on a flat surface , but not necessary.** Press the **OK** Button to begin calibrating the compass.

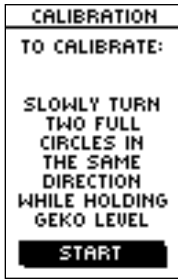
The unit displays a "JUST RIGHT", "TOO FAST", or "TOO SLOW" message for you to adjust your turning speed as needed. The "CALIBRATION COMPLETED SUCCESSFULLY" message displays when finished. If a "CALIBRATION FAIL" message appears, repeat the process.

A 'HOLD LEVEL' reminder displays if you are not holding the Geko 301 level, or if the compass is not properly calibrated. When the compass is turned *Off*, the status at the top of the page displays your GPS heading, and it will stay off until you manually turn it *On*. When the compass in *On*, the status displays your compass heading. Sometimes when the compass is *On*, the Geko 301 bypasses the Compass and uses the GPS receiver to track your heading. The criteria for switching between the Compass and the GPS receiver is customized on the 'HEADING' Setup Page. (See page 40)

Options



Calibration Menu



Start Compass Calibration



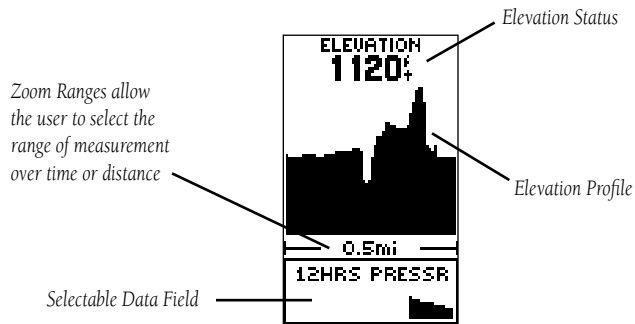
During Compass Calibration



Finish Compass Calibration

Elevation Page

What is my elevation?



The Elevation Page provides the user with the current elevation, rate of ascent/descent, a profile of elevation changes over distance or time, or a profile of pressure changes over time (displayed in the user selectable field). The Elevation Page Options Menu allows you to select from a variety of display options such as plotting over time, plotting over distance, displaying the zoom ranges of measurement, viewing elevation or pressure points, and resetting data displays. A single user-selectable data field allows you to display a variety of current and recorded pressure and elevation-related data.

The Elevation Page provides you with a variety of elevation information: A Status Window that displays current elevation and current rate of ascent/descent, a profile of elevation changes over distance or time, and one user selectable data field.



NOTE: The Altimeter should be calibrated for the greatest accuracy. Refer to page 17 for information on calibrating the Altimeter.

The Status is located at the top of the page and displays the current elevation.

The Profile Field is located in the center of the page and displays elevation plots.

The Data Field at the bottom of the page is user-selectable and displays a variety of recorded or current data.

The Elevation Page Options Menu allows you to select the type of information and how it is to be displayed. Page Options include: 'PLOT OVER TIME/DISTANCE', 'ZOOM TIME/DISTANCE', 'ZOOM ELEVATION', 'VIEW POINTS', 'RESET MAX ELEVATION', and 'RESET ELEV(ATION) DATA'.

You can customize the 'VIEW' option display using the 'ZOOM RANGES' option to determine time, distance, and elevation parameters. Use the 'RESET ELEV DATA' option to clear recorded data from the page and to begin recording new data.

PLOT OVER TIME/DISTANCE

These two measurement options (changes over a set period of time or changes over a set distance) apply only to the Elevation Plot, while the Pressure Plot is measured by time and pressure only. The Pressure Plot is only available as one of the user-selectable fields at the bottom of the screen.

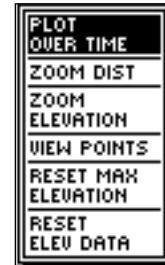
ZOOM RANGES

You can set the Zoom Ranges for elevation, distance, or time when you display the View Elevation Plot. Ranges for vertical distance are: 200, 400, 600, 800, 1,000, 2,500 and 5,000 feet. Ranges for horizontal distance are: 0.2, 0.5, 1, 5, 10, 15, and 25 miles. Ranges for time are: 2, 5, 10, 20 and 30 minutes, 1 and 2 hours. The range for Pressure Plot is fixed at 6.8 millibars and 12 hours and can not zoom in or out.



NOTE: Metric system displays different zoom ranges.

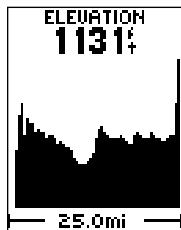
Options



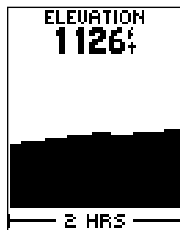
Elevation Page Options

Elevation Page

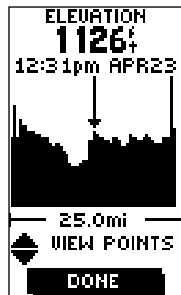
Options



*Elevation Plot by
Distance*



*Elevation Plot by
Time*



'View Points' Option

To adjust zoom ranges:

1. From the Elevation Page, press the **OK** Button to use the Options Menu to choose 'PLOT OVER TIME' or 'PLOT OVER DIST(ANCE)' to display elevation plots over time or over distance.
2. From the Elevation Page, press the **OK** Button to choose 'ZOOM TIME/DISTANCE' to select which zoom level you want by time or by distance. Press the **UP** or **DOWN** Buttons to scroll through the available list. Press the **OK** Button again to select the zoom level.
3. From the Elevation Page, press the **OK** Button to choose 'ZOOM ELEVATION' to select which zoom level you want by elevation. Press the **UP** or **DOWN** Buttons to scroll through the available list. Press the **OK** Button again to select the zoom level.

VIEW POINTS

The 'VIEW POINTS' option allows you to scroll through the stored elevation profile and to view a single point along the profile. When the pointer is stopped at a location along the profile, the display shows the elevation, time of day and date the point was created.

To use the 'VIEW POINTS' option:

1. From the Elevation Page, press the **OK** Button and select the 'VIEW POINTS' option.
2. Use the **UP** or **DOWN** Buttons to move the pointer across the elevation plot to view the elevation plot points. The **UP** Arrow Button moves left to right while the **DOWN** Arrow Button moves right to left across the elevation plot.

As the profile moves past the pointer, the status at the top of page changes to display the altitude, time, and date for the point beneath the pointer.

RESET

You can reset the maximum elevation data and the elevation data by selecting the 'RESET' option from the Elevation Page Options Menu.

To reset the elevation data and max elevation fields:

1. From the Elevation Page, press the **OK** Button to open the Elevation Options Menu.
2. Press the **UP** or **DOWN** Button to highlight the 'RESET MAX ELEVATION' or 'RESET ELEV DATA' field.
3. Once the field is highlighted, press the **OK** Button again to reset the data and start recording new data.

CALIBRATE ALTIMETER

Because the Geko 301 relies on the Barometric pressure to determine the elevation and the pressure at any given elevation can fluctuate, you can calibrate the altimeter to improve its accuracy. You must know the elevation at your current location, information you can obtain from a map or other reliable source.

To manually calibrate the altimeter:

1. Press the **PAGE** Button to access the Main Menu.
2. Press the **UP** or **DOWN** Button to highlight the 'CALIBRATE' option and press the **OK** Button. Select the 'ALTIMETER' option.
3. At the message stating "DO YOU KNOW THE CORRECT ELEVATION?" highlight the on-screen 'YES' button and press the **OK** Button.
4. Use the **UP**, **DOWN**, and **OK** Buttons to enter the new elevation, then highlight the on-screen 'OK' and press the **OK** Button to select the elevation and return to the Elevation Page.

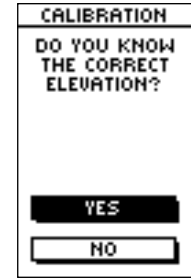


NOTE: The best altimeter calibration to use is 'known altitude'. If you know your Barometric pressure of the area you reside in, you do have the option to calibrate by 'known pressure'.

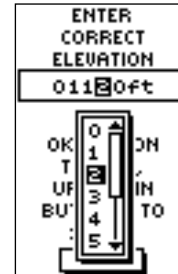
Options



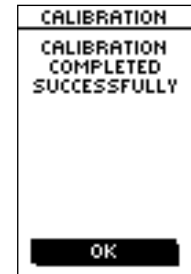
Calibration Menu



'Known Altitude' Calibration



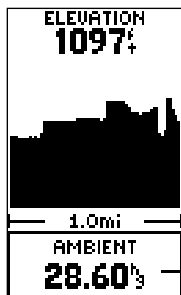
Enter 'Known Altitude'



Calibration Complete

Elevation Page

Options



User-Selectable Data Field

On the Elevation Page, the **UP** and **DOWN** Buttons are used to cycle through different elevation data.



DATA FIELDS

The user-selectable data field found at the bottom of the screen can display different kinds of elevation data. Following are the available data options:

Ambient Pressure - The uncalibrated current pressure.

Normalized Pressure - The pressure at sea level.

Vertical Speed - Your rate of altitude gain/loss over time.

Maxium Descent - The maximum descent rate in feet per minute.

Maximum Ascent - The maximum ascent rate in feet per minute.

Average Descent - The average vertical distance of descents.

Average Ascent - The average vertical distance of ascents.

Total Descent - The total distance descended.

Total Ascent - The total distance ascended.

Vt Spd Dest -(Vertical Speed Destination) The speed at which you are descending to your destination altitude. (Active Navigation Only)

Gld Rt Dest -(Glide Ration Destination) The Glide Ratio required to descend from current location and altitude to the location and altitude of your destination. (Active Navigation Only)

Glide Ratio - The ratio of horizontal distance travelled to vertical descent. For example, a 6:1 glide ratio indicates a 1000' vertical descent for every 6000' horizontal distance travelled.

Minimum Elevation - The lowest elevation reached.

Maximum Elevation - The highest elevation reached.

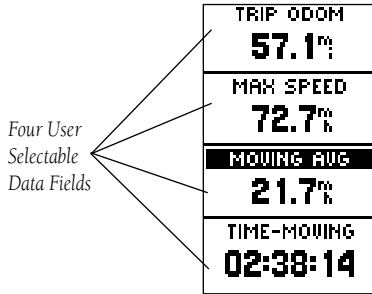
12HRS(Hours) Pressure - A 12 hour graphical representation of the 'pressure plot'

To select a data field:

1. On the Elevation Page, press the **UP** or **DOWN** Button to scroll through the available list of data options.

Trip Computer

Are we there yet?



Four data fields of your choosing display on the Trip Computer Page. The default fields are shown but by selecting the 'CHANGE FIELDS' option you can make your selections from the list of 34 items. Page Options include 'CHANGE FIELDS', 'RESET MAX SPEED', 'RESET TRIP DATA', and 'RESTORE DEFAULTS'.

To change the fields:

1. From the Trip Computer Page, press the **OK** Button to display the Page Options menu.
2. Press the **UP** or **DOWN** Button to highlight 'CHANGE FIELDS' and press the **OK** Button.
3. Press the **UP** or **DOWN** Button to highlight one of the four fields to change and press the **OK** Button to display the data field options.
4. Press the **UP** or **DOWN** Button to scroll through the list, highlight an option and press the **OK** Button to accept that option.
5. Repeat Steps 3 and 4 as necessary. When finished, press the **PAGE** Button to return to the Trip Computer Page.

The complete list of options, including those that display figures only when you are actively navigating, are listed on the next page.

TRIP ODOM
0.12^m
MAX SPEED
20.3^m
MOVING AVG
MOVING AVG ↑
NEXT DEST
NEXT DIST
NEXT ETA ↓

*Change all four fields
to your specifications*

Trip Computer

Data Field Options

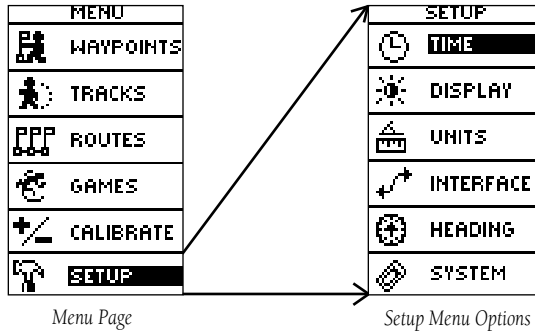
- **Elevation**—the measurement of height above mean sea level.
- **Glide Ratio**—the ratio of horizontal distance travelled to vertical distance travelled. For example, a 6:1 glide ratio indicates a 1000' vertical descent for every 6000' horizontal distance travelled
- **Heading**—the direction you are traveling.
- **Lat/Lon**—(Latitude/Longitude) the current GPS position.
- **Location**—shows your current latitude and longitude.
- **Max Speed**—the maximum speed traveled since last reset.
- **Moving Avg**—(Moving Average) the average speed while the unit is moving.
- **Odometer**—a running tally of distance traveled, based upon the distance between second-by-second position readings.
- **Over'l Spd**—(Overall Speed) the averaged speed since your last reset, including stopped and moving time.
- **Speed**—shows how fast you are going.
- **Sunrise**—the time at which the sun rises on this day at the specified location.
- **Sunset**—the time at which the sun sets on this day at the specified location.
- **Time of Day**—the current time for the selected time zone.
- **Time-Moving**—the time elapsed while the unit is moving since the last trip reset.
- **Time-Stop**—the time elapsed while the unit is not moving since the last trip reset.
- **Time-Total**—the total time you have traveled since the last trip reset.
- **Trip Odom**—(Trip Odometer) the total distance you've gone since the last reset.
- **Vert Speed**—(Vertical Speed) the rate of altitude gain/loss over time.

The following fields display figures only when navigating:

- **Bearing**—the compass direction from your location to your destination.
- **Course**—the direction from your starting location to a destination.
- **Final Dest**—(Final Destination) the last waypoint on your route.
- **Final Distance**—the distance from your current location to your destination.
- **Final ETA**—the estimated time you will arrive at your destination.
- **Final ETE**—the estimated total time left until you reach your destination.
- **Gld Rt Dest**—(Glide Ratio Destination) the glide ratio required to descend from current location and altitude to the location and altitude of your destination
- **Next Dest**—(Next Destination) the next waypoint on your route.
- **Next Dist**—(Next Distance) the distance between your current location and the next waypoint.
- **Next ETA**—the estimated time you will arrive at the next waypoint.
- **Next ETE**—the estimated total time left until you reach the next waypoint.
- **Off Course**—the distance you are off a desired course in either direction, left or right.
- **To Course**—the compass direction you must go to get back to the original course.
- **Turn**—the angle difference (in degrees) from the bearing to your destination and your current line of travel. 'L' means turn Left, 'R' means turn Right.
- **Vmg**—(Velocity Made Good) the speed you are closing in on a destination along a desired course. Also referred to as the 'vector velocity' to your destination.
- **Vt Spd Dest**—(Vertical Speed Destination) the speed at which you are descending to your destination altitude

Menu Page

What can the Main Menu show me?



With the Menu Page you can manage Waypoints, Tracks and Routes, play Games, Calibrate the compass or altimeter, or access the System Setup features. Below is a menu diagram that lists all the options of the Main Menu and Setup Menu. It is designed to help navigate through the Menu System. When you locate a certain feature you want to read about, turn to the page indicated in parenthesis.

Main Menu Page (p.21)

1. Waypoints

- 1-A: Mark (22)
- 1-B: List All (22)
- 1-C: Nearest (23)
- 1-D: Delete All (23)

2. Tracks (26)

3. Routes (29)

4. Games (32)

- 4-A: Gekoids (32)
- 4-B: Geko Smak (32)

4-C: Memory Race (33)

4-D: Nibbons (33)

4-E: Virtua Maze (33)

5. Calibrate

5-A: Compass (13)

5-B: Altimeter (17)

6. Setup (34)

1: Time (34)

1-A: Time Format (34)

1-B: Time Zone (34)

1-C: UTC Offset (34)

1-D: Daylight Saving (35)

2: Display (36)

3: Units (37)

3-A: Position Format (37)

3-B: Map Datum (37)

3-C: Distance/Spd (38)

3-D: Elevation (38)

3-E: Pressure (38)

3-F: VSPD (38)

3-G: Defaults (38)

4: Interface (39)

5: Heading (40)

6: System (42)

6-A: GPS Mode (42)

6-B: Compass (43)

6-C: Altimeter (43)

6-D: Battery (43)

6-E: Language (44)

6-F: Owner Info (44)

6-G: Defaults

Menu Page

Waypoints



The Mark Waypoint Page allows you to change the symbol for the waypoint.



The EDIT LOCATION Page displays on-screen instructions explaining how to edit the waypoint location.

The Waypoint options marks your current location or another location as a waypoint. You can then change the waypoint symbol, name, elevation and location (latitude and longitude) using the Review Waypoint Page. It also organizes all of your waypoints alphabetically in a list for easy selection by name or by proximity (nearest), or, if you choose, allows you to delete all waypoints. The ability to enter a known location, then saving it as a Waypoint, works well for the popular Geocaching activity.

To mark a new waypoint and/or change the position data, if needed:

1. From the MENU Page press the **UP** or **DOWN** Button to highlight 'WAYPOINTS' then press the **OK** Button. With 'MARK' highlighted, press the **OK** Button to display the MARK Page. With 'OK' highlighted, press the **OK** Button again to accept the waypoint.
2. To change the position data, press the **UP** or **DOWN** Button and highlight the 'POSITION DATA' field and press the **OK** Button to display the EDIT LOCATION Page.
3. Scroll through the position coordinate places using the **UP** or **DOWN** Button (**UP** Button to move right to left, **DOWN** Button to move left to right). When you reach the position place you want to change, press the **OK** Button.

Use the **UP** or **DOWN** Button to scroll through the choices and highlight one. Press the **OK** Button and the position place changes. Repeat to finish making changes.

4. Press the **UP** or **DOWN** Button to highlight the 'OK' field and press the **OK** Button to return to the MARK Page.
5. Press the **UP** or **DOWN** Button to highlight the 'OK' field and press the **OK** Button to store your location's position coordinates in memory.

To change the elevation:

1. From the MENU Page press the **UP** or **DOWN** Button to highlight 'MARK'. Press the **OK** Button to display the MARK Page.

Menu Page

2. Press the **UP** or **DOWN** Button to highlight the 'ELEV' field and press the **OK** Button to display the ENTER CORRECT ELEVATION Page.
3. Use the **UP** or **DOWN** Button to highlight the desired digit and press the **OK** Button to display a selection window. Press the **UP** or **DOWN** Button to highlight a new number and press the **OK** Button. Repeat to finish making changes.
4. Press the **UP** or **DOWN** Button to highlight the 'OK' field and press the **OK** Button to display the MARK Page with the corrected elevation.

To select a waypoint:

1. From the MENU Page press the **UP** or **DOWN** Button to highlight 'WAYPOINTS', then press the **OK** Button.
2. Select 'LIST ALL' and press the **OK** Button to see an alphabetical listing of all Waypoints.
3. Press the **UP** or **DOWN** Button to highlight the alphabetical tab containing the desired waypoint, then press the **OK** Button to display waypoints for that tab.
4. Press the **UP** or **DOWN** Button to highlight the waypoint on the list and press the **OK** Button to display the REVIEW WAYPOINT Page.

To view the NEAREST waypoints page:

1. From the MENU Page press the **UP** or **DOWN** Button to highlight 'WAYPOINTS', then press the **OK** Button.
2. Select 'NEAREST' and press the **OK** Button to see a listing of the nine closest waypoints by name and distance from your location.
3. Press the **UP** or **DOWN** Button to highlight the waypoint and press the **OK** Button to display the REVIEW WAYPOINT Page.

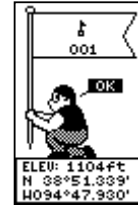
To delete all waypoints:

1. From the MENU Page press the **UP** or **DOWN** Button to highlight 'WAYPOINTS', then press the **OK** Button. (continued on next page)

Waypoints



Press and Hold



NOTE: Press and hold the **OK** Button on any Page to display the MARK WAYPOINT Page and mark your current location.

NEAREST WAYPOINTS	
001 NH	162ft
FISH NE	700ft
CAR S	1.7mi
GAME S	2.5mi
RIDGE SW	10.5mi

The nine closest waypoints appear in a list showing their name and distance from your location (the slider at the side of the page indicates that there are additional waypoints.)

Menu Page

Waypoints



You can start a GOTO from the REVIEW WAYPOINT Page.

The REVIEW WAYPOINT Page allows you to delete a waypoint.



2. Select 'DELETE ALL' and press the **OK** Button. A confirmation message box displays asking if you really want to delete all waypoints. Press the **UP** or **DOWN** Button to highlight the correct choice and press the **OK** Button to complete the action.

Review Waypoint Page

The Review Waypoint Page allows you to change the waypoint symbol, name, elevation and location (just as on the Mark Page). You can also delete the waypoint, display the waypoint on the Map Page, start a Goto and Project a waypoint.

To delete a waypoint:

1. From the REVIEW WAYPOINT Page, press the **UP** or **DOWN** Button to highlight 'DELETE'.
2. Press the **OK** Button.

A confirmation message box displays asking if you really want to delete the waypoint. If you do, press the **UP** or **DOWN** Button to highlight 'YES' and press **OK**.

If you do not want to delete the waypoint, press the **UP** or **DOWN** Button to highlight 'NO' and press the **OK** Button.

To start a Goto:

1. From the REVIEW WAYPOINT Page, press the **UP** or **DOWN** Button to highlight 'GOTO'.
2. Press the **OK** Button to activate the 'Goto' with the selected waypoint as the destination.

To view the selected waypoint on the Map Page:

1. From the REVIEW WAYPOINT Page, press the **UP** or **DOWN** Button to highlight 'MAP'.
2. Press the **OK** Button to display the waypoint on a map with bearing and distance. You can use the **UP** or **DOWN** Button to zoom in and out on the map.
3. Press the **PAGE** Button to return to the REVIEW WAYPOINT Page.

The Geko 301's Project waypoint feature can create a waypoint at a specified distance and bearing using either your current position or an existing waypoint as reference.

To Project a waypoint:

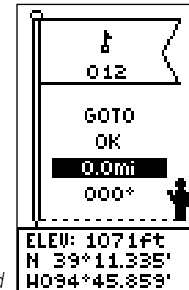
1. To project from where you are, Mark your current position as explained on Page 22 and then select this "NEAREST" waypoint from the Waypoints list. Press the **OK** Button to display the REVIEW WAYPOINT Page.
- Or**, To project from an existing waypoint within your route, select a waypoint from the list and press the **OK** Button to display the REVIEW WAYPOINT Page.
2. Use the **UP** or **DOWN** Button to highlight the 'PROJECT' field and press the **OK** Button to display the PROJECT WAYPOINT Page which shows the numeric name assigned to the new waypoint and with the distance field highlighted.
3. Press the **OK** Button to display the EDIT NUMBER Page.
4. Press the **DOWN** Button to move to the next number in the field. Select the digit you wish to change and press the **OK** Button to display the drop-down number list.
5. Press the **UP** or **DOWN** Button to highlight the correct number and press the **OK** Button. When all numbers are entered correctly, highlight 'OK' and press the **OK** Button.
6. Use the **DOWN** Button to highlight the bearing field and press the **OK** Button to display the EDIT ANGLE Page.
7. Press the **DOWN** Button to highlight the next number in the field. Select the digit you wish to change and press the **OK** Button to display the drop-down number list.
8. Use the **UP** or **DOWN** Button to highlight the correct number and press the **OK** Button. When all numbers are entered correctly, highlight 'OK' and press the **OK** Button.
9. When all changes (including name, symbol and elevation) have been made, highlight 'OK' and press the **OK** Button to save the waypoint changes.
10. Highlight 'GOTO' and press the **OK** Button to begin direct navigation to the waypoint.

Menu Page

Waypoints



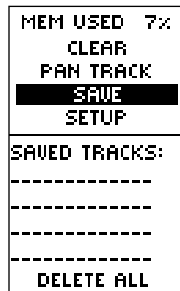
The 'PROJECT WAYPOINT' option



The 'EDIT NUMBER' field

Menu Page

Tracks



The Geko 301 draws an electronic breadcrumb trail or ‘track log’ on the Map Page as you travel. The track log starts recording as soon as the Geko 301 gets a location fix. If you want to keep a record of a certain track log before deleting it, go ahead and save it. You can save a total of 10 tracks in the Geko 301. Saved tracks can be used for navigation later. After a track log is saved, the saved track will have a beginning (BEGIN) and ending (END) point. This simply shows the “when/where” of the starting and ending points of the saved track.

When you are ready to return to where you started, the Geko 301 will take you back by following the track log that you left behind. ‘TracBack’ allows you to return along a traveled path without marking any waypoints. If you want to keep a record of a certain track log or use the ‘TracBack’ feature, it is recommended that you clear the track log before you start traveling.

The percentage of memory used by the current track log is displayed at the top of the page. After the track log is ‘CLEARED’, it will show zero percent. When the display shows 99%, the most recent track points will start overwriting the earliest track points. Thus, in order to avoid losing any track points, you should save the track log before it reaches 99% of memory usage.

To clear the current track log:

1. From the ‘MENU’ Page, press the **UP** or **DOWN** Button to highlight ‘TRACKS’ and press the **OK** Button to display the ‘TRACK LOG’ Page.
2. Highlight ‘CLEAR’ and press the **OK** Button to display the confirmation window asking ‘DO YOU REALLY WANT TO CLEAR THE TRACK LOG?’
3. Use the **UP** or **DOWN** Button to highlight ‘YES’ and press the **OK** Button to clear the current track log.

To save a track for navigation later:

1. From the 'MENU' Page, press the **UP** or **DOWN** Button to highlight 'TRACKS' and then press the **OK** Button to display the 'TRACK LOG' Page.
2. Press the **UP** or **DOWN** Button to highlight 'SAVE' and press the **OK** Button to display the track log.
3. Press the **UP** or **DOWN** Button to pick a 'begin' point and press the **OK** Button to save that point.
4. Press the **UP** or **DOWN** Button to pick an 'end' point and press the **OK** Button to save that point and display the saved track.

The track is now saved and is in the 'SAVED TRACKS' list on the 'TRACK LOG' Page.

5. From this page, press the **UP** or **DOWN** Button to highlight:
 - The saved track name and then press the **OK Button** to rename the saved track.
 - 'DELETE' and then press the **OK** Button to delete this track.
 - 'NAVIGATE' and then press the **OK** Button to begin navigation from either point.

To rename a saved track log:

1. From the 'MENU' Page, highlight 'TRACKS' and press the **OK** Button to display the 'TRACK LOG' Page.
2. Press the **UP** or **DOWN** Button to highlight a saved track and press the **OK** Button to display the track on a map.
3. Press the **UP** or **DOWN** Button (as needed) to highlight the default name at the top of the map and then press the **OK** Button to display the 'EDIT TRACK NAME' Page.
4. On the 'EDIT TRACK NAME' Page, pressing the **DOWN** Button will move the highlight to the next place in the name field. When the desired place is highlighted, press the **OK** Button to activate the drop-down alphanumeric list. (continued on next page)

Tracks

RECORDING ON
RECORD INTERVAL AUTO
RESOLUTION MEDIUM
WRAP WHEN FULL YES
DEFAULTS

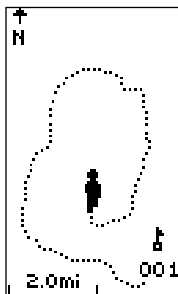
Tracks Setup



NOTE: Saving a Track Log does not remove those points from the active memory.

Menu Page

Tracks



Track on Map Page

5. Press the **UP** or **DOWN** Button, to highlight the correct character and press the **OK** Button to accept that character.
6. Continue until the name is entered correctly, then highlight 'OK' at the bottom of the screen and press the **OK** Button to save the new name.

To delete a saved track:

1. From the 'TRACK LOG' Page, press the **UP** or **DOWN** Button to highlight the track that you want to delete from the 'SAVED TRACKS' list and press the **OK** Button to display the saved track.
2. Press the **UP** or **DOWN** Button to highlight 'DELETE' and press the **OK** Button to display a confirmation window asking you if you really want to delete the saved track.
3. Press the **UP** or **DOWN** Button to highlight 'YES' and press the **OK** Button to complete the process.

If you change your mind, press the **UP** or **DOWN** Button to highlight 'NO' and press the **OK** Button to keep the tracks in memory or press **PAGE** to exit at any time.

To start TracBack navigation:

1. On the 'TRACK LOG' Page, press the **UP** or **DOWN** Button and highlight the saved track from the 'SAVED TRACKS' that you want to travel. Press the **OK** Button to display the track.
2. Press the **UP** or **DOWN** Button to highlight 'TRACBACK' and press the **OK** Button.
The direction window asks you if you want the destination to be at the beginning of the track or the end of the track. Press the **UP** or **DOWN** Button and highlight the desired destination point. The 'POINTER' Page displays to guide you to the destination you selected.

Menu Page

The Geko 301 allows you to navigate using one of three methods: Goto, TracBack and Route. The Goto method of navigation was briefly discussed on page 24 and TracBack is discussed on pages 26 and 28.

A route is at least two waypoints that describe the path you are going to travel. The route feature is very convenient because it allows the Geko 301 to guide you from the first waypoint in the route, to each successive waypoint until you reach your final destination. The route feature and the Goto feature are comparable in that they both guide you to destination waypoints.

However, the route feature is more powerful because it is more automatic. When you reach one waypoint, the Geko 301 automatically guides you to the next waypoint on the route without needing to touch any button. When you use the 'Goto' feature you have to stop and select the next waypoint before you start moving. When you plan a trip, you can select waypoints from a waypoint list and put them into the Geko 301's memory. At least two waypoints (up to a maximum of 125) are linked together to form a route.

When you start your trip, you activate the route feature and the receiver points the way you should travel to get from the first waypoint to the second. You can then use the pointer page to give you steering guidance.

There are two ways to create a route:

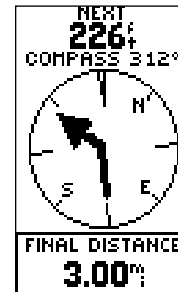
- Use existing waypoints that reside in the Geko 301. (Follow the instructions below to insert a waypoint into a route.)
- Plan a 'ROUTE' in Garmin MapSource® on your PC, and upload the 'ROUTE' to the Geko 301. See your Garmin Dealer for more information about MapSource (MapSource is an optional accessory, and is not included with the Geko 301).

Routes

MENU	
	WAYPOINTS
	TRACKS
	ROUTES
	GAMES
	CALIBRATE
	SETUP

ROUTES	
AVAILABLE	19
USED	1
HOME-GARMIN	

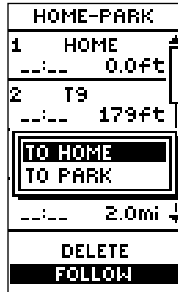
NEW ROUTE	
DELETE ALL	



"Navigation" Page's pointer becomes a "bent pointer" as you approach a waypoint within the route. Turn in the direction of the pointer arrow to continue the route.

Menu Page

Routes



"FOLLOW" choice list

In either case, you can navigate to a destination using 'ROUTE' if a route has more than two waypoints. A single waypoint route is only a normal waypoint, not a route, so the on-screen 'FOLLOW' Button cannot be selected if there is only one waypoint in the route. When you select the 'FOLLOW' Button, a list with two items is displayed letting you choose where to go. The list always shows the FIRST (BEGIN) and the LAST (END) waypoint in the route. The Geko 301 guides you following each waypoint in the route.

There are two ways to insert a waypoint into a route. One way is to insert the waypoint before an existing waypoint in a route. The other way is to insert the waypoint at the end of the waypoint list in a route.

To insert a waypoint into a route:

1. From the 'MENU' Page, press the **UP** or **DOWN** Button to highlight 'ROUTES' and press the **OK** Button to display the 'ROUTES' Page.
2. Press the **OK** Button to create a 'New Route'. If there is no information in the route area, press the **OK** Button to display the 'ADD WAYPOINT TO ROUTE' Page.
3. Press the **UP** or **DOWN** Button to highlight the waypoint of your choice and press the **OK** Button to place the waypoint in the first field on the 'ROUTES' Page.
4. Repeat Step 3 until all of the waypoints you want are entered into the route list and then press the **PAGE** button to get back to the page of your choice.

To activate a route:

1. From the 'MENU' Page, press the **UP** or **DOWN** Button to highlight 'ROUTES' and press the **OK** Button to display the 'ROUTES' Page.
2. Press the **UP** or **DOWN** Button to highlight 'FOLLOW' and press the **OK** Button to display the choices from the first (beginning) waypoint and the last (end) waypoint.
3. Press the **UP** or **DOWN** Button to highlight the desired waypoint and then press the **OK** Button to display the 'NAVIGATION' Page for guidance to the destination waypoint.

To remove a waypoint from the 'ROUTES' list:

1. From the 'MENU' Page, press the **UP** or **DOWN** Button to highlight 'ROUTES' and press the **OK** Button to display the 'ROUTES' Page.
2. Press the **UP** or **DOWN** Button to highlight the route that includes the waypoint you want to remove and press the **OK** Button to display the route's waypoints.
3. Press the **UP** or **DOWN** Button to highlight the waypoint and press the **OK** Button to display the 'INSERT/REMOVE' window.
4. Press the **UP** or **DOWN** Button to highlight 'REMOVE' and press the **OK** Button to remove the waypoint from the list.

To clear all route waypoints:

1. From the 'MENU' Page, press the **UP** or **DOWN** Button to highlight 'ROUTES' and press the **OK** Button to display the 'ROUTES' Page.
2. Press the **UP** or **DOWN** Button to highlight 'DELETE ALL' and press the **OK** Button to display the confirmation window asking you if you really want to clear all of the route waypoints. If you do, press the **UP** or **DOWN** Button to highlight 'YES' and press the **OK** Button to complete the process.

If you change your mind, press the **UP** or **DOWN** Button to highlight 'NO' and press the **OK** Button to keep the waypoints in the route list.

Routes



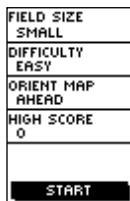
"Navigation" Page's pointer aimed at the "NEXT" waypoint in the route, 3.00 miles away.

Menu Page

Games



Gekoids



Setup Choices for Geko Smak



Move to the Gekos and press the OK button to "smak" and earn points

The Geko 301 offers five games with you, the user, as the key participant. The Games Page shows the listing, which includes: Gekoids, Geko Smak, Memory Race, Nibbons and Virtua Maze. Highlight the appropriate game and then press the **OK** Button to play. Brief instructions display when you start each game.

Gekoids

This game is all about blasting gekoids. The catch is you are the ship and you must survive by not getting hit. Before you begin to play, make sure to calibrate the compass. Playing Indoors, your ship's direction is determined by the direction the electronic compass is pointing. Press the **OK** Button to blast away! Orient Map 'Northwards' rotates your ship in the center of the map. The map is stationary and north is always up. Orient Map 'Ship Up' rotates the virtual world around your ship. Your ship always points up.

Geko Smak

Geko Smak features you as the triangular-shaped player. In measured rhythm Gekos will appear on the screen. Before the Geko disappears, move toward the Geko and press the **OK** Button to smack the Geko. If you get the Geko, an '!' displays above the hammer; otherwise just a hammer displays momentarily.

Field size choices are small, medium, and large with small fields being roughly 20 yards by 30 yards and large fields being 60 yards by 90 yards (about the size of an American football field).

The difficulty levels, Easy, Normal, and Hard, determine how often Gekos appear on the screen. The pace of the game quickens and point values vary as the difficulty levels increase.



WARNING: Do not attempt to play these games while driving a motor vehicle or in an area of heavy traffic.

Memory Race

To win the Memory Race, remember which square has which symbol then clear the board by matching all of the two symbol sets together. Travel to each square, highlight “Open” at the bottom of the screen and press the **OK** Button to view the symbol. Adjust the size of the square for easier viewing. Press the **PAGE** Button to quit at any time.

Play Memory Race by yourself or challenge others Head-to-Head to see who can clear the board first. To play Head-to-Head, one player starts the game and all other players must start Memory Race within the first 60 seconds of the initial start.

To adjust the Grid or Square Size in custom mode:

1. Highlight the ‘Grid Size’ or ‘Square Size’ field and press the **OK** Button.
2. Choose the desired size and press the **OK** Button.
3. Highlight ‘Start’ and press the **OK** Button to begin the game.

Nibbons

In this game, you must walk around the board collecting the numbers as they appear. Through time, your “tail” will grow. You may travel anywhere on the screen but you cannot walk into your tail, or you will lose a life.

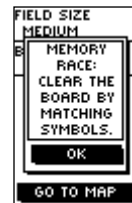
Virtua Maze

This game creates a virtual maze on the screen. You are placed at a central position in the maze and must explore the maze collecting flags. The lower right corner of the game screen tells you how many flags remain. The lower left corner is a timer telling how much time has passed so far. Difficulty level determines how much of the maze you see at a time. Seeing less of the maze makes exploring much more difficult.

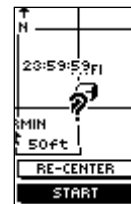
HINT: Pressing the **OK** Button and selecting “Cheat On” will enable a “cheat mode.” Enabling this cheat mode penalizes your timer by five minutes and count seconds by 10 instead of 1. Turn the cheat mode off pressing the **OK** Button.

Menu Page

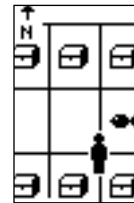
Games



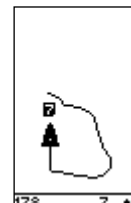
Memory Race instructions



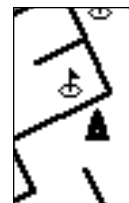
Ready to start Memory Race



Can you remember?



Nibbons Playing Field



Don't get lost in the Virtua Maze!

NOTE: Just as in Memory Race, you can play Head-to-Head on Virtua Maze. All parties need to start the game within 60 seconds of each other. Who can beat the clock first?

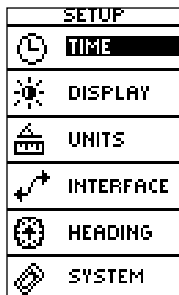
Setup Page

The Setup Page allows you to customize the Geko 301. On the Setup Page you can change coordinate systems, map datums, and distance units. You can also change the time format, north reference, operating mode, display contrast, and back light timeout setting.

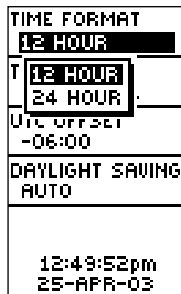
Time Page



Setup Menu



Time Menu



Time Format Menu



Time Zone Menu

Time Page

The Time Page allows you to select a 12 hour or 24 hour time format, enter the proper time zone, and choose Daylight Savings Time. When you select 12 hour time formatting, the clock will read like a standard clock with 12 hour AM and 12 hour PM cycles. The 24 hour option sets the Geko 301 to display a 24 hour cycle (Military Time).

To change the time format:

1. From the MENU Page press the **UP** or **DOWN** Button to highlight 'TIME' and press the **OK** Button to display the TIME Page.
2. Press the **UP** or **DOWN** Button to highlight the 'TIME FORMAT' field and press the **OK** Button.
3. Press the **UP** or **DOWN** Button to highlight 12 or 24 hour and press the **OK** Button.
4. Press the **PAGE** Button to return to the page of your choice.

Time Zone

The time zone can be set to any one of the pre-programmed zones or by selecting 'OTHER' and then entering the UTC Time Offset value in the UTC offset field.

To change the time zone:

1. From the MENU Page press the **UP** or **DOWN** Button to highlight 'TIME' and press the **OK** Button to display the TIME Page.
2. Press the **UP** or **DOWN** Button and highlight the 'TIME ZONE' field and press the **OK** Button.

3. Press the **UP** or **DOWN** Button to scroll through the selections and press the **OK** Button when you have found the correct Time Zone.
4. Press the **PAGE** Button to return to the page of your choice.

Daylight Savings Time

Daylight savings time can be set to 'Automatic' (using the built-in almanac to automatically change the clock settings when daylight savings goes into or out of effect). You can choose 'Yes' to manually add daylight savings or 'No' to remain on standard time.

To change the daylight saving field:

1. Press the **PAGE** Button and switch to the MENU Page. Press the **UP** or **DOWN** Button to highlight 'TIME' and press the **OK** Button to display the TIME Page.
2. Press the **UP** or **DOWN** Button to highlight the 'DAYLIGHT SAVING' field and press the **OK** Button.
3. Press the **UP** or **DOWN** Button, highlight 'AUTO', 'YES', or 'NO' and press **OK**. Press the **PAGE** Button to return to the page of your choice.



NOTE: If you select 'Other' for the Time Zone choice, you must enter the UTC offset for your location and the Daylight Savings time option is not available.

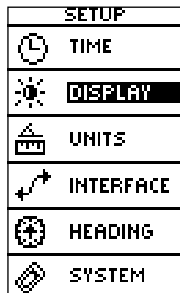
Time Page

TIME FORMAT 12 HOUR
TIME ZONE US CENTRAL
UTC OFFSET -06:00
DAYLIGHT SAVING AUTO
YES NO AUTO :58pm R-03

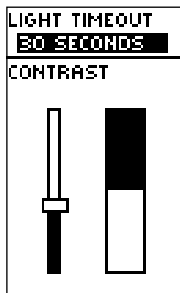
The Daylight Savings time options.

Setup Page

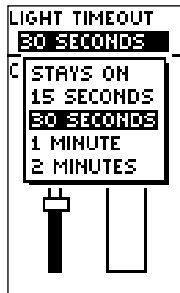
Display



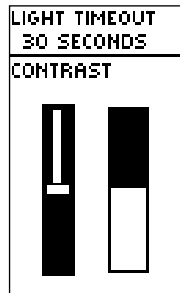
Display Option



Backlight Field



Backlight Settings



Adjust Contrast
Bar UP or DOWN

Light Timeout

The 'LIGHT TIMEOUT' option allows you to set the display backlight timeout (STAYS ON, 15 or 30 seconds, and 1 or 2 minutes). Monitor your battery life if set to STAYS ON.

To change the light timeout:

1. From the SETUP Page press the **UP** or **DOWN** Button to highlight 'DISPLAY'. Press the **OK** Button to display the DISPLAY Page.
2. Press the **UP** or **DOWN** Button and highlight the 'LIGHT TIMEOUT' field and press the **OK** Button.
3. Press the **UP** or **DOWN** Button and highlight your selection and press the **OK** Button.
4. Press the **PAGE** Button to return to the SETUP Page.

Contrast

The 'CONTRAST' option allows you to adjust the display contrast.

To adjust the Display contrast:

1. From the SETUP Page press the **UP** or **DOWN** Button to highlight 'DISPLAY'. Press the **OK** Button to display the DISPLAY Page.
2. Press the **UP** or **DOWN** Button to highlight the 'CONTRAST' Slider and press the **OK** Button.
3. Press the **UP** or **DOWN** Button to adjust the contrast.
4. Press the **PAGE** Button twice to return to the SETUP Page.

Setup Page

Using the Geko 301 with a paper map increases the navigation capabilities of each. To use a map in conjunction with the Geko 301, you must select the position format, map datum, map units, and north reference to match the map. The Geko 301 supports both the UTM/UPS and latitude/longitude grids, which define position location for the entire globe.

Position Format

The default position format (and the one most commonly used) for the Geko 301 is latitude and longitude in degrees and minutes (hddd° mm.mmm'). Choose from 11 other position formats or choose the 'User' position format to approximate custom-designed grids. For more information on map datum and grids we recommend you visit the National Imagery and Mapping Agency at <http://www.nima.mil>.

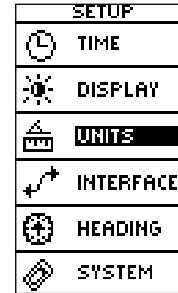
To change the Position Format (grid):

1. From the UNITS Page press the **UP** or **DOWN** Button to highlight the 'POSITION FRMT' field and press the **OK** Button.
2. Press the **UP** or **DOWN** Button to highlight the desired format and press the **OK** Button.
3. Press the **PAGE** Button to return to the MENU Page.

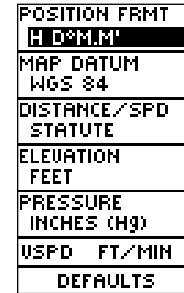
Map Datums

A map datum is a reference model of the Earth's shape. Every map uses a map datum which is usually listed in the title block of the map. The default datum in the Geko 301 is WGS 84 (World Geodetic Survey, 1984). You should only change the datum if you are using maps or charts that specify a different datum. Choose the 'User' datum if using a map with custom-designed grids. Using this setting requires an advanced knowledge of map datums.

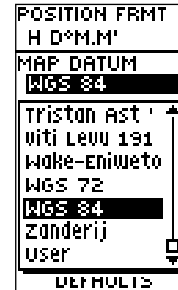
Units



Units Option



Units Menu



The default datum is WGS 84 although Data Entry Pages exist for the User Grid Position Format and the User Map Datum Setup.

Setup Page

Units

POSITION FRMT H D°M.M'
MAP DATUM WGS 84
DISTANCE/SPD STATUTE
E NAUTICAL STATUTE
F METRIC
USPD FT/MIN
DEFAULTS

Distance/Spd Units

POSITION FRMT H D°M.M'
MAP DATUM WGS 84
DISTANCE/SPD STATUTE
ELEVATION FEET
F FEET METERS
USPD FT/MIN
DEFAULTS

Elevation Units

POSITION FRMT H D°M.M'
MAP DATUM WGS 84
DISTANCE/SPD STATUTE
E INCHES (Hq)
F MILLIBARS
INCHES (Hq)
USPD FT/MIN
DEFAULTS

Pressure Units

POSITION FRMT H D°M.M'
MAP DATUM WGS 84
DISTANCE/SPD STATUTE
ELEVATION FEET
PRESSURE INCHES (Hq)
USPD FT/MIN
DEFAULTS

Use 'Defaults' to
return to original
settings

To change the Map Datum:

1. From the MENU Page press the **UP** or **DOWN** Button to highlight 'UNITS'. Press the **OK** Button to display the UNITS Page.
2. Press the **UP** or **DOWN** Button to highlight the 'MAP DATUM' field and press the **OK** Button.
3. Press the **UP** or **DOWN** Button to highlight the desired datum and press the **OK** Button.
4. Press the **PAGE** Button to return to the MENU Page.

Units of Measure

The Geko 301 allows you to select statute (the default setting), nautical, or metric units of measure for all speed and distance readouts, feet and meters for elevation readouts, inches (Hg) or millibars for pressure, and feet per minute, meters per minute, or meters per second for vertical speed (VSPD).

To change the Units of Distance, Speed, Elevation, Pressure, or Vertical Speed:

1. From the MENU Page press the **UP** or **DOWN** Button to highlight the 'UNITS' field and then press the **OK** Button to display the UNITS Page.
2. Press the **UP** or **DOWN** Button to highlight the fields of either 'DISTANCE/SPD', 'ELEVATION', 'PRESSURE' or 'VSPD', and press the **OK** Button.
3. Press the **UP** or **DOWN** Button to highlight the specific unit and press the **OK** Button.
4. Press the **PAGE** Button to return to the MENU Page.

Interface Settings (Input/Output)

The 'INTERFACE' Settings Page allows you to use your Geko 301 with external NMEA devices, DGPS beacon receivers, a personal computer, etc. You can choose from seven different input/output serial data formats, or none at all. Below is a description of each format:

- **GARMIN** - default setting that allows you to update software and communicate with MapSource (transfer waypoints, routes, and tracks).
- **GARMIN DGPS** - allows DGPS input using a Garmin beacon receiver and a standard RTCM SC-104 format and DGPS tuning.
- **NMEA** - supports the output of standard NMEA 0183 version 3.0 data.
- **TEXT OUT** - supports the output of ASCII text location and velocity information.
- **RTCM IN** - allows DGPS input using a standard RTCM SC-104 format without any output capabilities.
- **RTCM/TEXT** - allows DGPS input using a standard RTCM SC-104 format and simple ASCII text output of location and velocity information.
- **NONE** - provides no interfacing capabilities.

If 'GARMIN DGPS' or 'RTCM In/NMEA Out' format is selected, additional fields are provided to control a Garmin differential beacon receiver (e.g. GBR 21 & GBR 23) directly from your unit. Tuning is automatic with 'Scan' or you can enter the beacon frequency and bit rate when you select 'User' from the Beacon list to manually tune the receiver. Refer to the beacon receiver instructions.

To select an I/O Format:

1. From the 'SETUP' Page, press the **UP** or **DOWN** Button to highlight the 'INTERFACE' field and press **the OK Button** to display the INTERFACE Page.
2. Press **the OK Button** on the 'I/O FORMAT' field to display the format options.
3. Press the **UP** or **DOWN** Button to highlight the desired format, then press **the OK Button**.
4. Press the **PAGE** Button to return to the SETUP Page.

Setup Page

Interface



Interface Option



Interface Menu

Setup Page

Heading

HEADING
ANGLE: DEGREE
USE GPS WHEN EXCEEDING 2mh
USE COMPASS WHEN BELOW 2mh FOR OVER 90 SECONDS
NORTH REF MAG 003°E
DEFAULTS

Heading Page

HEADING
ANGLE: DEGREE
USE GPS EXCEEDING DEGREES MILS
USE COMPASS WHEN BELOW 2mh FOR OVER 90 SECONDS
NORTH REF MAG 003°E
DEFAULTS

Degrees or Mils?

EDIT NUMBER
02mh
USE OK BUTTON TO EDIT, UP/DOWN BUTTONS TO SELECT
OK

Edit Speed used for
GPS heading

DING
15
30
45
60
90
120
180
USE GPS WHEN EXCEEDING 2mh
USE COMPASS WHEN BELOW 2mh FOR OVER 90 SECONDS
NORTH REF MAG 003°E
DEFAULTS

Edit time used for
Compass Heading

Heading Page

The Heading Page allows you to change the heading angle to degrees or mils (default is degrees), your desired speed the Geko 301 changes to GPS heading instead of the Compass heading, your desired time (5, 15, 30, 45, 60, 90, 120, and 180 seconds) the Geko 301 changes to the Compass heading instead of the GPS heading, and 'NORTH REFERENCE' to 'TRUE NORTH', 'MAGNETIC NORTH', 'GRID', or 'USER'.

To change the Angle or Time used for Compass Heading:

1. From the SETUP Page press the **UP** or **DOWN** Button to highlight the 'HEADING' field and then press the **OK** Button to display the HEADING Page.
2. Press the **UP** or **DOWN** Button to highlight either the 'ANGLE' field or the 'TIME' field, and press the **OK** Button.
3. Press the **UP** or **DOWN** Button to highlight the specific unit and press the **OK** Button.
4. Press the **PAGE** Button to return to the SETUP Page.

To change the Speed used for GPS Heading:

1. From the SETUP Page press the **UP** or **DOWN** Button to highlight the 'HEADING' field and then press the **OK** Button to display the HEADING Page.
2. Press the **UP** or **DOWN** Button to highlight the 'SPEED' field, and press the **OK** Button.
3. From the EDIT NUMBER page, use the **UP**, **DOWN**, and **OK** Buttons to select the speed you want the Geko 301 to use GPS heading. Highlight the 'OK' at the bottom of the page and press the **OK** Button to accept the new speed.
4. Press the **PAGE** Button to return to the SETUP Page.

North Reference

'REFERENCE' refers to the orientation of a map's grid. Map makers try to align the vertical lines on a map with **True North**. True North is the direction from any location on the earth's surface to the 'north pole'.

Because a compass points to Magnetic North, not True North, maps indicate the difference between True and Magnetic North with a measurement called 'declination'. The amount of declination changes as you move around the earth. **Magnetic North** is the direction in which a compass needle points. When the Geko 301 has your position (i.e. "Ready to Navigate"), it corrects for declination when set to 'TRUE NORTH'.

The Geko 301 bearings will correspond to the compass if the Geko 301 is set to magnetic north. Due to errors introduced when map makers flatten the earth's sphere onto paper, not all of the grid lines drawn on the map point exactly to the north pole, so the north indicated by the grid lines is called **Grid North**. The difference, however, is usually small enough that 'Grid' north can be considered the same as True North for traveling on land. If necessary, manually correct for the difference between Grid North and True North. If you select **User** for North Reference, the 'VARIATION' field is highlighted for you to edit the declination. The declination of the Geko 301's compass is shown to the right of North Reference.

To change the North Reference:

1. From the MENU Page press the **UP** or **DOWN** Button to highlight 'UNITS' and then press the **OK** Button to display the UNITS Page.
2. Press the **UP** or **DOWN** Button to highlight the 'NORTH REF' field and press the **OK** Button.
3. Press the **UP** or **DOWN** Button to highlight your selection and then press the **OK** Button.
4. Press the **PAGE** Button to return to the MENU Page.

When you select the 'DEFAULTS' field and press the **OK** Button to return the UNITS Page to the factory settings.

Heading

HEADING	
ANGLE: DEGREE	
USE GPS WHEN EXCEEDING 2mh	
TRUE	PASS
MAG	LOW
GRID	R OVER
USER	ONDS
MAG	EF
MAG 003°E	
DEFAULTS	

'MAGNETIC' north is the default north reference setting.

HEADING	
ANGLE: DEGREE	
USE GPS WHEN EXCEEDING 1mh	
USE COMPASS WHEN BELOW 1mh FOR OVER 90 SECONDS	
NORTH REF	
MAG 003°E	
DEFAULTS	

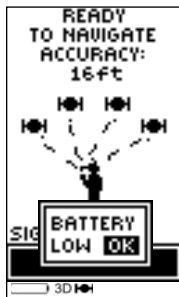
Use 'Defaults' to return to original factory settings

Setup Page

System

SETUP	GPS MODE
⌚ TIME	NORMAL
☀️ DISPLAY	COMPASS ON
🏠 UNITS	ALTIMETER AUTO CAL ON
↔️ INTERFACE	BATTERY ALKALINE
🧭 HEADING	LANGUAGE English
🔋 SYSTEM	OWNER INFO DEFAULTS

The SYSTEM Page allows you to change the GPS Mode, turn compass on and off, turn auto calculate altimeter on or off, change battery type, the language, and owner information.



A 'BATTERY LOW' message displays at the bottom of every page when there are approximately ten minutes of battery life left (when using Alkaline batteries).

The System Page allows you to choose from four modes of GPS operation (Normal, WAAS, Battery Save, Demo), to turn the Electronic Compass on or off, to turn the altimeter auto-calibration on or off, to choose a battery type, to change the language display, includes owner information, and to default back to the original factory settings.

GPS Mode

The GPS receiver is always 'ON' when it's in 'NORMAL' mode. The normal mode is more responsive to sudden turns or change of speed/acceleration.

When the Geko 301 is in 'BATTERY SAVE' mode, the GPS receiver turns on and off alternatively to conserve power and the WAAS function is turned off.

WAAS stands for Wide Area Augmentation System. This setting is capable of producing a more accurate position fix. When enabled, this feature searches for a WAAS satellite near your location and then receives data for correcting differentials in the GPS satellite signals. The WAAS Satellite is number 33 or higher on the 'Advanced Skyview' Satellite Page. To learn more about WAAS System, access the Federal Aviation Administration's web site (<http://gps.faa.gov/>).

The 'DEMO' mode is designed for dealers to show the features and functions of the Geko 301 to potential customers inside a closed building where satellite reception is not possible. There is no navigation possible in 'DEMO' mode. If you select the 'DEMO' mode, a window displays at the bottom of the screen asking you to verify that you want to turn the GPS off (the unit will stop tracking satellites, but not power off).

To change the GPS mode:

1. From the MENU Page press the **UP** or **DOWN** Button to highlight the 'SYSTEM' field. Press the **OK** Button to display the SYSTEM Page.
2. Press the **UP** or **DOWN** Button to highlight 'GPS MODE' field and press the **OK** Button.
3. Press the **UP** or **DOWN** Button to highlight your selection and press the **OK** Button.
4. Press the **PAGE** Button to return to the SYSTEM Page.

Compass Setting

Turns the Electronic Compass on or off. You can also turn the Electronic Compass on or off by holding down the **PAGE** Button until the message appears on screen.

Altimeter Setting

Turns the Automatic Calibration for the Altimeter on or off. Selecting 'Auto Cal On' for the Altimeter allows the unit to provide a fairly accurate reading within minutes of obtaining a 3D fix without requiring you to remain stationary. The accuracy improves over time as the barometric pressure is compared to GPS information.

Battery Setting

The battery type choice can affect battery life; choose between 'ALKALINE' and 'NIMH (Nickel Metal Hydride)' depending upon the type you are using. The battery life for rechargeable NiMH will be significantly lower than Alkaline. For maximum battery life, it is recommended to use Alkaline batteries.

Setup Page

System

GPS MODE NORMAL
COMPASS ON
A <input type="checkbox"/> ON <input type="checkbox"/> OFF TER CAL ON
BATTERY ALKALINE
LANGUAGE English
OWNER INFO DEFAULTS

Compass Setting

GPS MODE NORMAL
COMPASS ON
ALTIMETER AUTO CAL ON
E <input type="checkbox"/> AUTO CAL ON <input type="checkbox"/> AUTO CAL OFF
Language English
OWNER INFO DEFAULTS

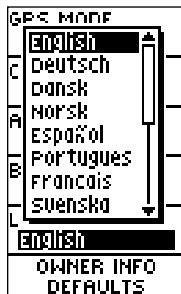
Altimeter Setting

GPS MODE NORMAL
COMPASS ON
ALTIMETER AUTO CAL ON
BATTERY ALKALINE
L <input type="checkbox"/> ALKALINE <input type="checkbox"/> NIMH
OWNER INFO DEFAULTS

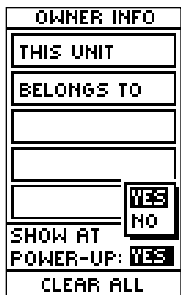
Battery Setting

Setup Page

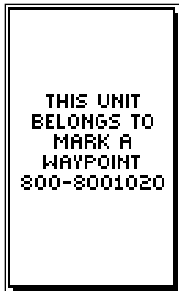
System



The Geko 301 offers a choice of 16 display languages.



Edit Owner's Info to display upon power-up



Owner's Info at power-up

Language

The Geko 301 offers 16 different languages in which to view the information.

To change the language:

1. From the MENU Page press the **UP** or **DOWN** Button to highlight the 'SYSTEM' field. Press the **OK** Button to display the SYSTEM Page.
2. Press the **UP** or **DOWN** Button to highlight 'LANGUAGE' field and press the **OK** Button.
3. Press the **UP** or **DOWN** Button to highlight your selection and press the **OK** Button.
4. Press the **PAGE** Button to return to the SYSTEM Page.

Owner Info

The Geko 301 can display information about the owner during the power-up sequence. You can press the Page Button to display the Satellite Page, or after 20 seconds the page automatically changes. Follow the steps listed to edit the information.

To change the owner information:

1. From the MENU Page press the **UP** or **DOWN** Button to highlight the 'SYSTEM' field. Press the **OK** Button to display the SYSTEM Page.
2. Press the **UP** or **DOWN** Button to highlight 'OWNER INFO' field and press the **OK** Button.
3. Press the **UP** or **DOWN** Button to move from one character to the next. To change that character, press the **OK** Button.
4. Press the **UP** or **DOWN** Button to highlight the desired character and then press the **OK** Button to accept it.
5. Repeat steps 3 and 4 until your message is complete.
6. Press the **PAGE** Button to return to the SYSTEM Page.

Physical

Case:	Fully-gasketed, high-impact plastic alloy, waterproof to IPX7 standards (waterproof to 1 meter for 30 minutes)
Size:	1.9"W x 3.9"H x .96"D (48.3 x 99.1 x 24.4 mm)
Weight:	Approx. 3.4 ounces (96g) w/batteries
Temperature Range:	5° to 158°F (-15° to 70°C) ³ (operating)

Performance

Receiver:	Differential-ready, 12 parallel channel
Acquisition time:	Approx. 15 seconds (warm start) Approx. 45 seconds (cold start) Approx. 5 minutes (First Time/AutoLocate™)
Update Rate:	1/second, continuous
GPS Accuracy:	<15 meters (49 ft) RMS ¹
DGPS (USCG) Accuracy:	1-5 meters (3-15 ft) with DGPS corrections ²
DGPS (WAAS) Accuracy:	3 meters (10ft) 95% typical with DGPS corrections
Velocity Accuracy:	0.1 knot RMS steady state
Dynamics:	Performs to specifications to 6 g's
Interfaces:	NMEA 0183, RTCM SC-104 (for DGPS corrections) and RS-232 for PC interface
Antenna:	Built-In

Power

Input:	Two 1.5-volt AAA batteries ³
Battery Life:	9 hours, typical use with alkaline batteries ⁴

Specifications subject to change without notice.

¹Subject to accuracy degradation to 100m 2DRMS under the U.S. DoD-imposed Selective Availability program.

²With optional Garmin Differential Beacon Receiver Input (such as Garmin GBR 21 or 23).

³The temperature rating for the Geko 301 may exceed the usable range of some batteries. Alkaline batteries can rupture at high temperatures. External power can only be applied using the Garmin Auto Power Adapter or PC Interface Cable with Auto Power Adapter. These cables contain a 12 Vdc to 3 Vdc voltage regulator. Modifications or other applications void the product warranty.

⁴Alkaline batteries lose a significant amount of their capacity as temperature decreases. Use Lithium batteries when operating the Geko 301 in below-freezing conditions. Extensive use of screen backlighting significantly reduces battery life. Different brands of batteries vary in performance.

Appendix B

Accessories



Back attachment screws into the Geko 301 for use with any mounting kit.



Bicycle Mounting Kit



Vehicle Mounting Kit



Suction Cup Mounting Kit



Marine Mounting Kit

Standard Accessories

Owner's Manual and Reference Guide

Quick Start Guide

Optional Accessories

Belt Clip

Attaches to the back of the unit for convenient carrying.

Bicycle Mounting Kit

Allows the Geko 301 to be mounted on bicycle handle bars.

Carrying Case

Protects the Geko 301 when not in use.

Lanyard

Attaches to the back of the unit for convenient carrying.

Marine Mounting Kit

Allows the Geko 301 to be mounted on any flat surface.

Power/Data Cable

Provides power from an automobile cigarette lighter and allows for serial data transfer from a PC.

Suction Cup Mounting Kit

Allows the Geko 301 to be mounted on a windshield

Training Video, NTSC

Vehicle Mounting Kit

Allows the Geko 301 to be mounted on the dashboard.

Wiring Diagram

Interface formats are selected from the SETUP Page. The input/output lines on your Geko 301 are RS-232 compatible, allowing an interface to a wide range of external devices, including PCs, differential beacon receivers, marine autopilots and/or a second GPS receiver.

The NMEA 0183 version 3.0 interface format is supported by the Geko 301 and enables the unit to drive up to three NMEA devices.

NMEA 0183 Version 3.0 Approved Sentences:

GPGGA, GPGLL, GPGSA, GPGSV, GPRMB, GPRMC, GPRTE, GPVTG, GPWPL, GPBOD

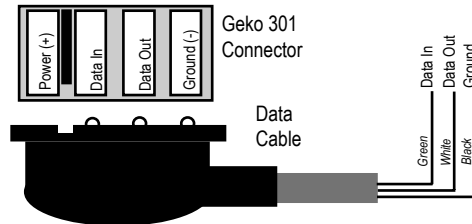
Garmin Proprietary Sentences:

PGRME (estimated error), PGRMM (map datum), PGRMZ (altitude), PSLIB (beacon receiver control)

DGPS (Differential GPS) corrections are accepted in RTCM SC-104 version 2.0 format through the 'Data In' line. Other beacon receivers with the correct RTCM format may be used, but may not correctly display status or allow tuning control from the GPS unit.

The Geko 301 may be hard-wired to a serial connector using the Data Cable. Refer to the wiring diagram and the Geko unit data connection (illustrated below).

The optional PC Interface Cable allows you to connect your Geko 301 to a computer's serial port.



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Notes

**For the latest free software updates (excluding map data)
throughout the life of your Garmin products, visit the
Garmin web site at www.garmin.com.**



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