Bushnell®

Grayscale Display   *Color Display*

ONIX 200 / 200CR
GPS RECEIVER
Quick Start Guide

Model #s: 362000/362005   ENGLISH   Lit# 98-0908/07-07

Thank you for purchasing the Bushnell ONIX Series! The ONIX has been designed to be much simpler to operate than other handheld GPS receivers, while offering exclusive and unique features such as the ability to layer satellite photos or topographic maps (downloaded from BushnellGPS.com) right over your trail map screen, providing a "real world" frame of reference that other GPS units lack. Just press the "hot" button on the top of the ONIX to quickly see your current location relative to the other map elements. Easily create and store user profiles that let you store your most frequently used personal setups, including satellite photos of your favorite camping or hunting area. Bushnell's exclusive SafeTrack™ battery conservation feature extends your battery life while maintaining GPS contact, so you can check your current location anytime without the restart delay typical of other GPS receivers. You will find your ONIX to be an invaluable companion for all your outdoor adventures.

Before using your new ONIX, please read the instructions contained in this manual and take time to familiarize yourself with the unit's operation and many great features. You may want to start indoors, by turning on the ONIX, then pressing the Page View button to run through the four basic screens (SATellite, MAP, NAVigation, and SET up) while reading the manual section for each. After that, practice using the "hot" button and 5-way switch to see and select from a menu of options, perhaps on the SET screen by setting a few personal preferences for information displays. Once you begin feeling more comfortable with the controls and screens, the best way to really learn to use your ONIX is to take it outside (right in your own neighborhood or a local park), and let it lock onto the GPS satellite signals as you watch the SAT page (be patient, this can take 3 or 4 minutes the first time you use it-make sure you have a clear view of the sky and are not right next to a large building for best results), then take a short walk and finish by using the ONIX to guide you back to your starting point (you can either mark a waypoint at the start by clicking the center of the 5-way button twice, or just begin walking, later following the dotted "breadcrumb" trail back). After that, you might try downloading a satellite photo of this local area, layer it on top of the map screen, and try walking the same trail again, setting a few waypoints as you go. Continue referring to this manual and practicing as often as necessary until you master the basics, before heading out on a hike of any major length or attempting to navigate an unfamiliar area.

ONIX 200 Model #36-2000 FEATURES	
• 20 Channel GPS Receiver	• Download Topographic Maps
• WAAS Enabled	• Download Satellite Photographs
• Heads-Up Compass	• Built-In SiRF Technology
• Built-In Base Maps (North America)	• Waterproof
• Stores Up to 500 Waypoints & 20 Routes	• Durable Rubber Armoring
• Save & Load Waypoints, Trails, Routes	• SafeTrack™ battery saving mode
• 16-level Grayscale LCD Display	

ONIX 200CR Model #36-2005 FEATURES
Same as ONIX 200 Model #36-2000 above, Except:
• Full Color LCD Display with 64K Colors for Optimum Viewing Detail

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Warnings and Notices

GPS System & Map Data Accuracy Notice:
The Global Positioning System (GPS) is operated by the government of the United States, 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.

All map data sources contain some level of inaccuracies or incomplete data. Bushnell strives to provide the most recent map information at a reasonable cost.

Warning:
This device is intended as a supplemental handheld navigation aide only. The user assumes all responsibility associated with the use of this product. It must not be used for any purpose requiring precise measurement of location, direction, distance, velocity or topography. This device should not be used for any aircraft navigation applications.

Warning:
Do not use this device with any batteries that have broken or cracked casings. Always use fresh, high quality batteries. Check the battery compartment after the unit has had any prolonged exposure to significant amounts of water (rain, snow, etc).

Vehicular Use Notice:
Bushnell is committed to the safe and responsible enjoyment of the outdoors.
Do not use this product while driving. An accident can result in property damage, injury or death if the operator fails to practice prudent driving practices. It is the sole responsibility of the driver of any vehicle to operate the motor vehicle in a safe manner. Information from the GPS unit can distract the operator of a motor vehicle. It is unsafe to operate the controls of the GPS unit while operating a motor vehicle. If used in a motor vehicle, it must not be used by the operator of the motor vehicle. If it is used in a motor vehicle it must be mounted in a manner such that it does not distract the operator, does not interfere with the operator's field of view, and does not block or interfere with the air bags or other safety mechanisms of the motor vehicle.

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How Does "GPS" Work?

GPS stands for "Global Positioning System". Launched by the United States Department of Defense, GPS consists of a constellation of 24 satellites orbiting the earth at nearly 11,000 miles. These satellites are traveling at a speed that allows them to circle the earth twice each day while emitting a very low power signal. The signals are timed by clocks that are highly accurate and are received by one of 5 ground stations. These ground stations use the precisely timed signal to determine each satellite's exact position in orbit. Your GPS receiver can "hear" the signal sent by the satellite. By calculating the position and distance of at least 4 satellites, accurate latitude, longitude and altitude location information can be determined. WAAS adds to your GPS's accuracy. WAAS stands for Wide Area Augmentation System. WAAS was designed by the United States Federal Aviation Administration, primarily to add in the accuracy of GPS for planes. WAAS consists of the group of additional ground stations placed at known and precisely located spots. These ground stations then work with a master station to correct the satellite signals improving accuracy to within nearly 3 meters. WAAS reception may be turned on in the SET page menu-however, the default setting is "Off" due to the additional battery drain it causes.

Software License Agreement

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

Bushnell 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 with Bushnell.
You acknowledge that the Software is the property of Bushnell 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 Bushnell and that the Software in source code form remains a valuable trade secret of Bushnell. You agree not to decompile, disassemble, modify, reverse assemble, reverse engineer or reduce to human readable form the Software or 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.

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Table of Contents

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Included In The Package

- ONIX GPS Receiver
- USB Cable
- Quick Start Guide
- CD-ROM with:
    - –An Interactive Tour of the ONIX
    - –Software for managing & saving your topo map and satellite photo downloads, and planning your next outdoor excursion

## Battery Installation, Cleaning and Maintenance Notes

Unscrew the battery compartment fastening screw (see next page), and install 2 AA alkaline, lithium or NiMh rechargeable batteries. Lithium batteries are recommended for cold weather conditions and longer battery life before replacement. Refer to the polarity markings inside the battery compartment to ensure the batteries are positioned correctly. When removing or replacing batteries, be sure the ONIX has been powered off first. To reduce the chance for damage from battery leakage, remove the batteries when storing the unit for periods over six months.

The ONIX is designed to be waterproof to a depth of 1 meter (IPX7 rating), however it is recommended that the user opens and checks the battery compartment following any submersion or prolonged exposure to rain, snow, etc. Any moisture observed inside the battery compartment or on the exterior of the batteries should be dried off immediately and completely. Prolonged submersion (over 30 minutes) and/or to water depths greater than 1 meter can cause damage to the unit.

If the ONIX exterior becomes dirty, clean it with a soft cloth dampened with a mild detergent solution, then wipe dry. To avoid possible scratches, a (dry) micro fiber cloth is ideal for cleaning the display screen. Do not use chemical solvents or cleaners of any type on the ONIX unit's exterior, battery compartment, or display, as these may damage plastic components.

ONIX Parts Identification/Overview

"Hot" Button: controls all actions (navigation, initiate "Where Am I" feature, activate SafeTrack, etc.)

**SafeTrack/GPS Signal Indicator Light (pg.18)**
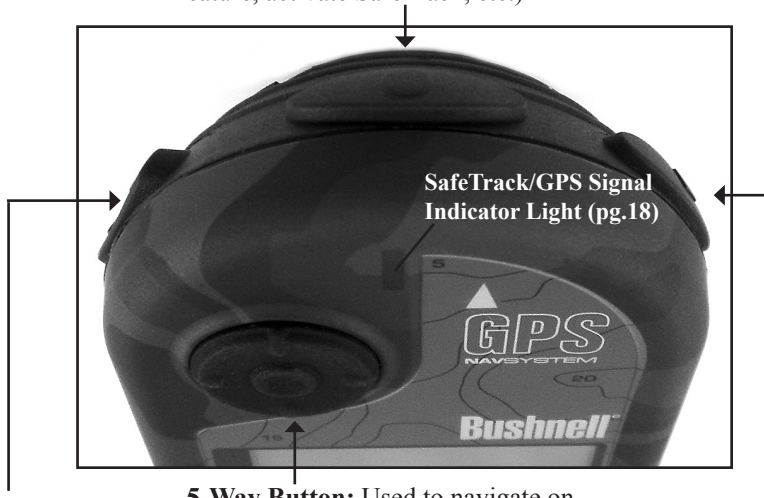
Zoom Button: Zoom the view closer in or further out on maps and photos by pressing the top or bottom part of the zoom control button.

5-Way Button: Used to navigate on screen, select from menu options, and create waypoints. Press up/down arrows to select items in a menu, right arrow to view submenus (if available), left arrow to exit the menu. Press the "OK" center button to confirm a menu selection or turn an option on or off. Press the center "OK" button to set a waypoint.

Page View Button: Flips through the 4 basic screens (SAT, MAP, NAV, SET). Hold down to see display options in MAP & NAV screens

Power Button: located on right side of ONIX. Push to turn on. Once the unit is on, pressing the power button again will turn the backlight on and off. Push & hold button for 2 sec to turn power off.

Accessory Socket

Battery Compartment
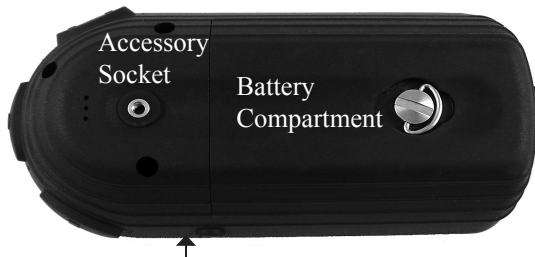
USB Port: connect to PC with supplied cable

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The Four Main Pages (Overview)

There are 4 different "pages" you can select from to view on the display screen. To cycle through these pages in their order as shown below, press the Page View button on the top right of the ONIX. The pages and their function are:
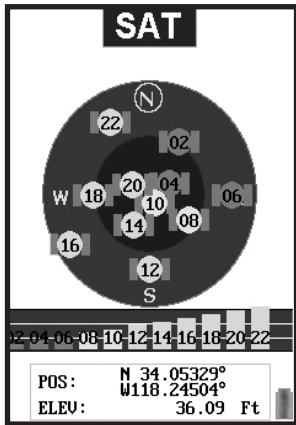
1. SAT Page

1. The SAT (Satellite) Page

The purpose of this page is to enable the user to view information related to the reception of GPS satellite signals by the ONIX. You can see how many satellites are providing location data to the ONIX, the unique ID # of each satellite, how strong the signal is from each one (bar graph at bottom), and the accuracy of the location data the ONIX is providing, based on the quality/quantity of satellite signals currently available. This page is useful for trouble shooting, if the GPS does not seem to be working as it should.
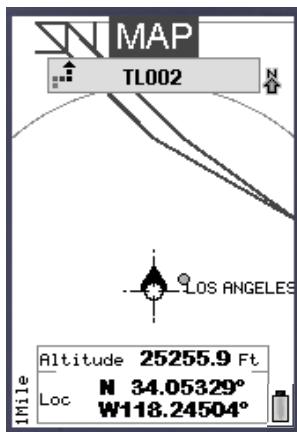

2. MAP Page

2. The MAP Page

You will spend the majority of your time on this page once you are setup and actually using your GPS to navigate. Your current position is shown on a "base map" (like a simple road map) using one of 3 kinds of cursors, along with any or all of the other items you may choose to display, such as satellite (aerial) photos or topo maps, a compass, special "points of interest", and other data you may want to see. These additional items may all be viewed together, as "layers" on top of the base map.

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The Four Main Pages (Overview)

3. The NAV (Navigation) Page

The NAV page provides a standard compass display, with arrows to indicate your last heading and/or current bearing, along with magnetic or true north indication and other optional navigation related data, depending on the display preferences the user has set up. This page is especially useful if you do not choose to see a compass image layered on top of the MAP page-you may switch over to it at any time, then return to MAP page just as you left it. Note that the compass readings are based on your position relative to the GPS satellites, and can therefore only show your "direction" when you are moving, unlike magnetic compasses.
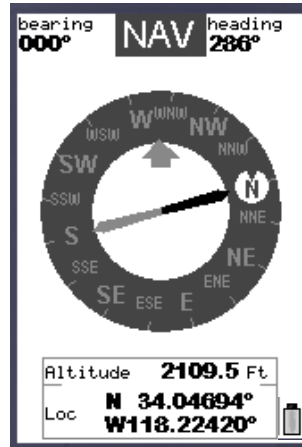

3. NAV Page

4. The SET (Set Up) Page

The SET page is used to personalize how the Onix displays information to suit your needs and preferences. Many of the items on the SET menu are options you may set once when you first turn on your ONIX, even before you begin using it to navigate, and will probably leave on that setting for the rest of the time you use your GPS.

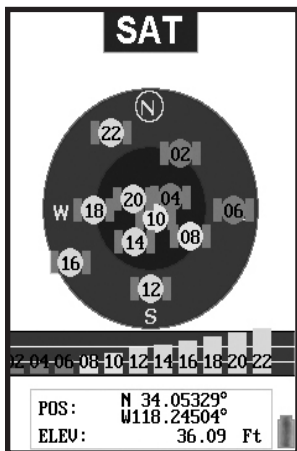The other pages have their own set of menus that allow you to select options that affect what types of information are displayed, change their appearance, and recall or delete previously stored map points, photos, etc.
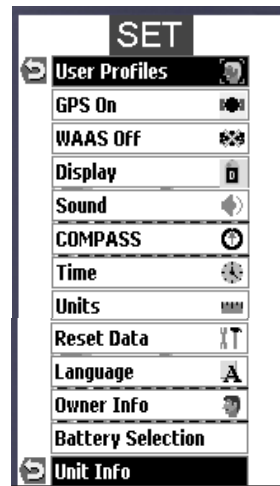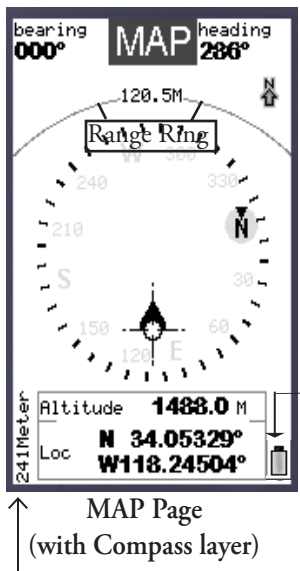

4. SET Page-Full Menu

Pressing the Page View button after you are on the SET page will go back to the SAT page-the button continues to "cycle" through the pages in order.

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SAT

POS: N 34.05329°
W118.24504°
ELEV: 36.09 Ft

SAT Page

bearing MAP heading
000° 286°

120.5M

Range Ring

Altitude **1488.0** M

Loc N 34.05329°
W118.24504°

MAP Page
(with Compass layer)

Page View Details

1. SAT Page View *(Fig. 1)*

The SAT page view is used to identify the quality or strength of the satellite signals being received by the unit. Navigation data boxes on the satellite page are used to identify your location, shown as POSition (latitude, longitude) and ELEVation (altitude above sea level). The items displayed on the satellite page view are fixed, and cannot be changed by the user.

Note: initial satellite contact may take 3-4 minutes, but will be faster on next power-up in the same area. If the unit has been moved over 300 miles since was last used, resetting this startup location data by enabling a "cold start" initial power on can provide faster lock times (see "Reset Data" on pg 14 for details).

2. MAP Page View *(Fig. 2)*

The MAP page view is the primary page you will use to navigate with the ONIX-. Using Bushnell's exclusive screen layering, this page shows all navigational information in a single view, on one display "page". The following items are always displayed on this page:

•Base Map-primary streets and location, similar to a basic road map (also see "My Map Data", pg.11).

•Cursor-shows your location and direction. The cursor can assume one of three shapes:

 -a "bearing arrow" that shows your navigation direction when you are moving (or heading when you are not actively navigating)

-a circle-"you are here locator" to display your current location relative to the map

-a "crosshairs" cursor that allows you to pan the map, check position of waypoints or POI when moved over them, use as a distance measuring tool, or create routes. If you know the latitude/longitude (or other coordinates as selected in the SET menu under "Units") of a location, you can move the crosshairs cursor on the map with the 5-way pad until the coordinates shown in the Nav data box match the location, then save it as a waypoint by pressing the OK button twice.

Page View Details

•Battery Indicator-shows battery condition or indicated USB power when connected to a PC

•Zoom Display Level-scale or actual distance represented by height of current display (e.g. "241 Meters" span from top to bottom of screen).

Screen Layering Options (User Selected)

You may choose to add other items to your view of the MAP page. To select these items, hold down the PAGE button for 2 seconds-you will see a map page display options screen *(Fig. 3)*. Use the 5-way button to move up and down the options, press the center button to select (check) or deselect (uncheck) the items you with to include in your view.

Your map layer options are:

•Compass-indicates your current direction.

•Topo-the topographic map you choose from files you download and store in the ONIX will be layered over the base map

•North UP-arrow which points to North (true or magnetic, user selectable). Will always (automatically) be shown when satellite photos or topo maps are layered

•Range Ring-visual tool that represents distance on your map or photo within a circle. The distance shown is the radius of the circle. This radius is half the zoom level.

• Photos (Satellite) -superimposed over Base Map if desired. You do not need to manually select the right photo (or topo map) to use, as these downloaded files are "geo referenced", enabling your ONIX to choose the correct photo automatically, based on your current location and zoom level. Note that while both types of images can be stored at the same time on your ONIX, only one of them (photo or topo map) can be layered over the base map at a time, not both at once.

•My Map Data-turns on/off display of roads and places on the base map

•BreadCrumbs-a dotted line on the display showing the simple path you've traveled. Breadcrumbs are automatically stored, but only displayed if this option is selected.

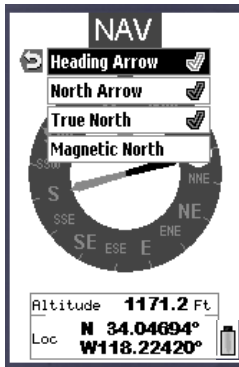Upper Navigation Data Box

Fig. 3

MAP Page Display Options
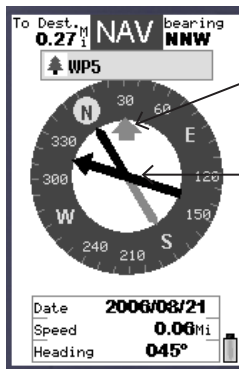
Lower Navigation Data Box

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Fig. 4
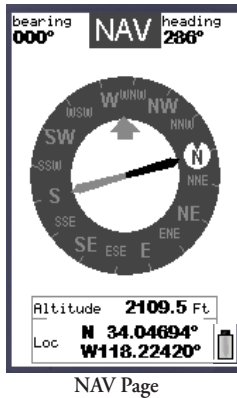
NAV Page

Fig. 5

NAV Page View Options

Fig. 6

Bearing Arrow
(Active Navigation)

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•POI-points of interest from a pre-programmed, saved list (airports, hospitals, etc)

•Navigation Data Fields-these sections of the map page display user-selected navigation information. To access and select the lower "Nav" data boxes (fields), arrow down below "Point Of Interest" to highlight each of the 3 available Nav data fields. Press the center OK button to see the list of Nav data-any 3 of the 20 types on the list can be displayed. When you select a new one, it replaces a previous data display, but always shows 3 at a time. For each given field, click OK to view the available options. Note that "LOC" which is your global position (Lat + Long), takes up 2 fields (Latitude is the top field). When using the position selector, the ONIX will display 4 fields.

There are another 2 Nav data boxes at the upper left and right of the screen. From the display options, press the up arrow while on "Compass"-this will highlight the upper left box. Press OK to see list of available display options. Make a selection and confirm it by pressing OK, then use the right arrow to move over to the right Nav data box. Make a selection and confirm as you did in the left box. You may then use the down arrow to return to the list of display options ("Compass", etc). Press the left arrow to exit the map layer display options.

3. NAV Page View *(Fig. 4)*
The NAV page provides a compass-only display. The view options of the NAV page include *(Fig. 5)*:

Heading Arrow-if user selected. Small arrow "head" only. Indicates the direction you are <u>actually</u> moving in.

Bearing Arrow *(Fig. 6)*-only appears during active navigation. This will be seen as a long black line with an arrow head. It indicates where you <u>should go</u> to get to your navigation destination.

North Arrow-if user selected-points to true or magnetic north (user options). Identified by "N" circle at head of arrow.

NAV data boxes as described previously in the MAP Page View section.

Page View Details

The user selected options are accessed by holding down the PAGE view button for 2 seconds, then using the 5-way button to select and confirm the desired option.

4. SET Page View

The SET page user options (Fig. 7) span two menu screens, and include all the following:

•**User Profiles** *(Fig. 8)*-select to customize and set various display options. You can save different sets of screen configurations that are best suited to your different activities.

 To save a profile, select an activity from the list (hiking/camping, etc), then press the right arrow to save your current display configuration under that name. The checkmark indicates the current active profile. One "custom" user profile may bet setup and selected in addition to the other five pre-named profiles for common activities.

•**GPS On**-select "on" to navigate and locate GPS signal, select "off" when using GPS indoors to extend battery life, for example during basic setup operations.

•**WASS** (Wide Area Augmentation System) On/Off-turning WASS on will provide slightly better GPS accuracy in the United States. As this significantly decreases battery life, you may want to keep it turned off for most normal navigation activities.

•**Display** *(Fig.9)*-allows adjustment of display contrast*, and daytime or nighttime viewing mode (Night reverses screen for improved viewing at night *(Fig. 10)*). Increasing contrast* darkens text and images, decreasing contrast lightens them.

•**Sound**-allows selecting mute, volume control, key beep, distance and warning sound.

•**COMPASS**-display options (defaults are true north and numerical degrees)

•**Time**-sets time format: 12 or 24 hr, AM/PM, time zone, daylight savings option.

•**Units**-selecting distance units, speed and elevation, GPS position format, and datum (default for North America is WGS84-see the glossary for more info.)

> ** Note: the ONIX 200CR has a display "Brightness" adjustment instead of "Contrast" as on the ONIX200*

Fig. 7
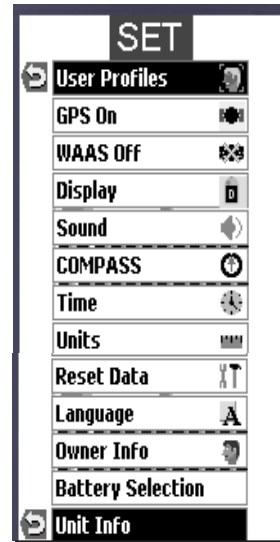
SET Page-2 Menu screens (press down arrow to see items on second screen)

Fig. 8

SET Page-User Profiles

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Fig. 9

SET Page-Display Options

Display "Brightness" on ONIX 200CR

Fig. 10

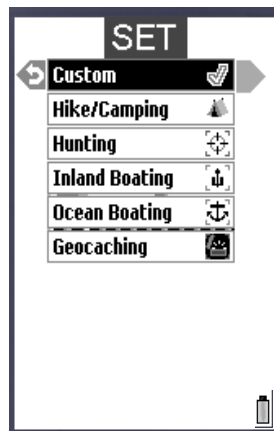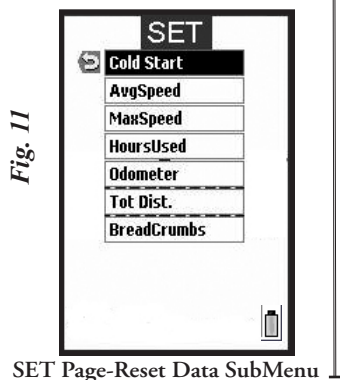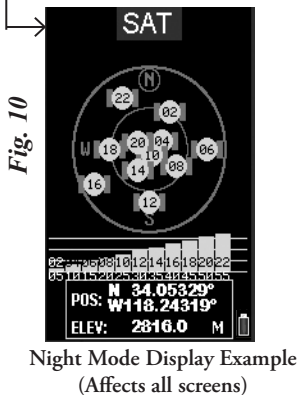Night Mode Display Example
(Affects all screens)

Fig. 11

SET Page-Reset Data SubMenu
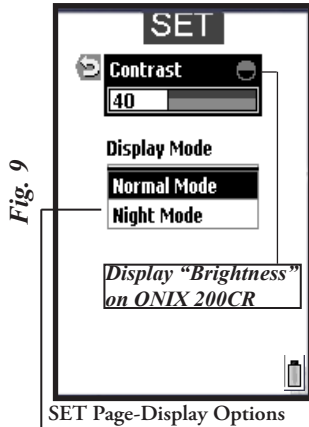
Page View Details

•**Reset Data** *(Fig. 11)*-allows you to reset (clear) existing data in the selected category, most commonly to clear old "breadcrumb" trail marks from a past trip to the area. One category in the Reset Data submenu is "Cold Start", which will force the ONIX to clear the satellite "almanac" information which is stored automatically during the first power-on to speed up the process of choosing the best GPS satellites for your usual starting area. If this almanac data is no longer valid, it will cause longer startup times. Enabling a cold start is recommended if you have re-located to a new area that is over 300 miles away from your last power-on position.To enable Cold Start:

  1) Turn the unit on
  2) Go to the SET page
  3) Select RESET DATA and click OK
  4) Select COLD START and click OK

Note that this will only take effect the next time the unit is powered on-there is no advantage or reason to enable Cold Start if the unit has already locked onto satellites in a reasonable amount of time, and are still within about a 300-mile radius of the location where you first powered up the ONIX.

•**Language**-selects language used for all display menus and option screens

• **Owner Info**-allows you to input personal information for identification shown at startup (if desired). Please refer to "Text Entry" section of this manual for details on entering letters and numerals (*Figs. 25 & 26*).

• **Battery selection**-choice of alkaline or rechargeable NiMh-set to match the type you are using to ensure the battery indicator is accurate. If using lithium batteries, and a "Lithium" setting is not available on your ONIX model, select the NiMh setting.

• **Unit Info**-provides hardware/software version numbers and serial number.

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Using Your ONIX GPS

When the unit is first powered on, you will see the default SAT screen. It may take <u>up to 3 or 4 minutes</u> for the unit to scan and lock on to the GPS satellites <u>during the first power up</u> in a new area-but will be faster when it is powered on again later in the same area. (*See "Reset Data" on pg 14 if you later relocate more than 300 miles away from this initial area*). Once it has locked into the satellites, the satellite position icons will stop blinking and "go dark", you are ready to begin using the ONIX. The next step is your choice-you may go to the NAV or SET page to select options or make personal settings first, or begin navigating by going directly to the MAP page.

The simplest GPS function is to mark your present location. Any location that you choose to mark is called a "waypoint". Setting a waypoint with your ONIX is as easy as clicking the "OK" key (center of the 5-way switch) twice. The 1st click calls up the Waypoint Edit Options, along with the Set Waypoint Selection *(Fig. 12)*. At this point, you can confirm you want to set the waypoint by clicking "OK" again, and it will be set. You also have the options to arrow up to edit the waypoint name, select its icon, or set an alarm when the waypoint is reached. You can go back and edit these options at anytime even after you have clicked twice to set the waypoint. If you choose not to set the waypoint, or you want to delete the waypoint, select the left arrow and go to the delete options *(Fig. 13)*.

To edit the text, arrow up to the waypoint name *(Fig. 12)*, then click OK and use the keypad screen you will see to create a name to replace it (see pg. 19 for details on using the text tool for naming). You can also move down to select the icon, and again press OK and choose from the available different icons (see pg. 19). Move down to the alarm icon in the popup window and press OK to turn on the alarm for that waypoint. The last item in the popup allows you to delete the waypoint (you will be asked if you are sure, to prevent accidental deletions).
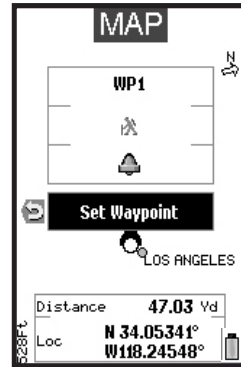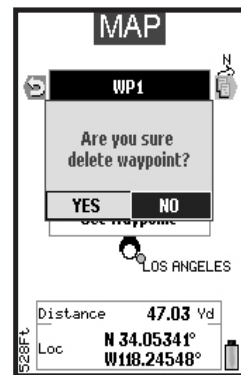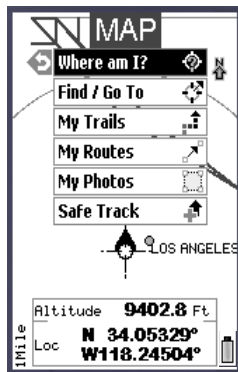

Fig. 12

Set A Waypoint

Fig. 13

Edit Waypoint Menu
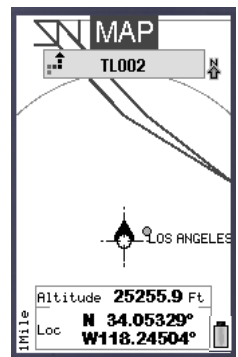
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Fig. 14

MAP

⟵	Where am I?	⊕
	Find / Go To	✛
	My Trails	▪▫
	My Routes	↗
	My Photos	▫
	Safe Track	✛

LOS ANGELES

Altitude	**9402.8** Ft
Loc	**N 34.05329°**
	W118.24504°

1Mile

Hot Button Menu 1

Fig. 15

MAP

⟵	Nearest Waypoint	
	All Waypoint	
	P O I	◈
	Places	⊙
	My Trails	▪▫
	My Routes	↗
	My Photos	▫ ELES
	Location	✿

Altitude	**10387.1** Ft
Loc	**N 34.05329°**
	W118.24504°

1Mile

Find/GoTo SubMenu

Fig. 16

MAP

▪▫	TL002

LOS ANGELES

Altitude	**25255.9** Ft
Loc	**N 34.05329°**
	W118.24504°

1Mile

Navigating to closest point
on a saved trail (TraiL #002)

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Using Your ONIX GPS / The HOT Button

There are several methods that can be used to manually enter the coordinates (latitude and longitude) for a location into your ONIX GPS unit:

•Enter the coordinates using the PC Companion software, then transfer them to an ONIX connected to your PC via USB.

•Go to the MAP page and press the HOT button. Then select "Find/Go To", and select "Location". You can then enter the coordinates for the location using the type tool. Select "OK" when finished-this will display the location on the MAP page, allowing you to press and hold the "OK" button again to mark the location as a waypoint.

•A third option is to select "Position" as a data field on the MAP page, then scroll the crosshair cursor to the location (using the 5-way switchpad) and mark a waypoint.

THE HOT BUTTON

Once you go to the MAP page, all your navigation actions are easily controlled by Bushnell's exclusive "HOT button". From the MAP page, click the HOT button to view its menu, then arrow down to select an item *(Fig. 14)*.

The first highlighted item is always "**Where Am I**?", press OK to see your current location on the map display. This function lines up the GPS position icon ("You Are Here) with the crosshair pointer icon.

The next HOT button menu item is: **Find/Go To**. Click OK or right arrow(on 5-way button) to find or go to any of the listed items *(Fig. 15)* (*note that you can only select from previously stored items, not create a new one, when using the Find/GoTo feature*). Selecting any of the items (by clicking "OK") will activate navigation. The title of the selected item will show on the screen, and the bearing arrow will point in the correct direction to take you to it. To stop this navigation activity, press the HOT button again-you will see the option to stop. Press OK to confirm you want to stop navigating, and you will be returned back to the MAP page screen, but without the bearing arrow pointing the way to a specific destination.

The available Find/GoTo items you can choose to navigate to are:
  • Nearest Waypoint
  • All Waypoints-pick from list of all (closest to furthest order)
  • POI (Point of Interest)-gas stations, hospitals, etc.
  • Places-built into the base map-city names, etc.
  • My Trails-pick from list of saved Trails (see next section). The
    ONIX will start pointing you to the closest point on that trail
    (Fig. 16).

The HOT Button *(cont.)*

A trail is a previously walked path, for example a trail that you took back to your campsite that wound around trees and past the edge of a pond.

• My Routes-pick from your list of saved routes (point to point navigation)

• My Photos (or Topos)-after you pick a photo or topo from the list (*Fig.20*) (arrow down to it) and press OK to confirm you wish to navigate towards that area, the ONIX will begin to point you towards that area. (Note that you must have selected photos or topos as a screen layer in your MAP options as described earlier on page 11 if you want to see it while navigating.) Alternatively, instead of pressing OK, you can right arrow from the name on the list and go to the "eyeball" icon, then press OK to just view the photo or topo without starting navigation. To exit this "view only" mode, press OK again to return to the list.

• Location-manually enter a known latitude and longitude coordinate

Following **Find/GoTo**, the next HOT button menu item is: **My Trails**.

A trail is a path or course that been previously traveled by the user. Press OK or the right arrow. The three options are (*Fig. 17*):

1) Start New Trail-press OK-you are now ready to build a new trail, from your current starting point. To end or reverse an active trail, press the Hot button once. Go back into the "My Trails" menu, press OK and you will see the menu shown in *Fig. 18*, with the following choices:

a) End Trail: selecting this will prompt you to confirm you want to stop the trail.

b) Reverse Trail: select this to reverse a trail (return to the starting point) of a trail that has not yet been ended. Also see "Navigate Trail" below.

c) Manage Trail: shows a list of previously stored trails and allows you to edit, name, view, or delete the trail.

2) Navigate Trail: navigate an existing trail. This helps you navigate a trail that was previously saved. You may also reverse this previous trail by then pressing the HOT button to return to the My Trails menu, then choose Reverse Trail.

3) Manage Trails: allows you to view (right arrow to "eyeball" icon), delete or edit the details (name, etc) of a previous trail.
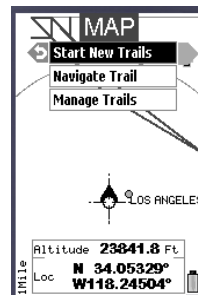
Hot Button-My Trails Menu
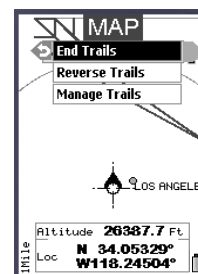
End Trail Menu

My Routes Menu

Satellite Photos List

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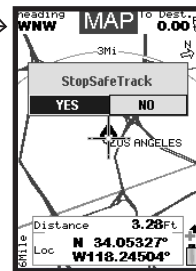
The remaining HOT button menu items are:

My Routes (*Fig.19*) (same 3 options as listed above for "My Trails")-a Route is the most direct or shortest path between two points-"routes"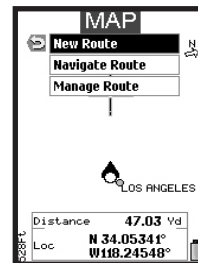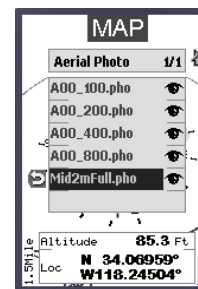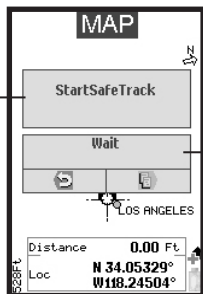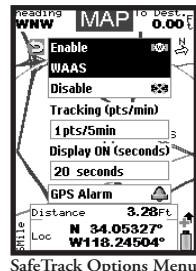 are more often used for water based navigation (due to the reduced number of natural obstacles), whereas "trails" are more useful on land.

My Photos -you have the options here to navigate towards a stored satellite photo (*Fig. 20*) or topo map, and to manage them (photos & maps are downloaded, not user created).

SafeTrack™ Battery Conservation Mode

SafeTrack mode should be set whenever you are using your GPS, extending your battery life, without the wait to re-establish satellite contact you would have after a full power off. SafeTrack mode can be started in either of two ways. The first way is to hold the hot button for 2 seconds (make sure you have exited any page menu first). The SafeTrack Selected screen will be displayed (*Fig. 21*), the unit will automatically go into SafeTrack, and the red indicator light at the top center of the ONIX will come on as you enter SafeTrack (then change to blinking green). The second way to enter SafeTrack mode is by selecting "SafeTrack" from the hot button menu, as shown on page 16 (*Fig. 14*). Arrow down to "Start SafeTrack" and press OK to enter and start SafeTrack automatically.

When you are in SafeTrack mode, the display screen is off, but the green indicator light will blink periodically.
To return to screen viewing and active navigation, hold the hot button for 2 seconds.

Note that as long as you are actively using the GPS and pressing buttons (within time limit set in SafeTrack options), the screen display will stay active-but the unit is still in SafeTrack mode.

After a period of inactivity (length of time selectable in SafeTrack options menu), the Start SafeTrack screen (*Fig. 22*) will appear. You can also get the Start SafeTrack screen by selecting "SafeTrack" from the HOT button menu.

Fig. 21

SafeTrack Selected Screen

Fig. 22

(Left Arrow)   (Right Arrow)

SafeTrack-Start Up Options

Fig. 23

SafeTrack Options Menu

Fig. 24

SafeTrack-Exit Option
(Left Arrow or 2 Sec. Hold)

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SafeTrack *(cont.)* / Text Tool / Waypoint Icons

If you want to return to SafeTrack mode, simply do nothing-the unit will automatically re-enter SafeTrack. If you do not want to return to SafeTrack, but wish to remain in the SafeTrack active mode, arrow down to the "Wait" option.

At the Start SafeTrack screen, you also have the option to view and change your SafeTrack Options (display inactivity time, alarm, tracking point frequency, etc). To view the SafeTrack Options screen (*Fig. 23*), press the Right arrow from the Start SafeTrack screen.

To fully exit SafeTrack, press the Left arrow from the Start SafeTrack screen to get the "Stop SafeTrack" screen (*Fig. 24*), then select "Yes" to return to normal operation.

Using The Text Tool -Procedure for Editing Names of Waypoints, Trails and other items

Anytime a name field is highlighted, click OK to bring up the text entry tool (*Fig.25*). This is a multi-function tool that is controlled by the 5-way button. Your current selection is always highlighted. Move left/right or up/down to select letters and numbers, then press OK to enter your selection. To add a space or backspace, press and hold the down arrow button-then highlight either "Back" or "Space". To move from the letter field to the number field press and hold the right arrow. To access symbols, press and hold the left arrow. Hold the up arrow to access the Shift (for upper case letters, etc) and Done (when you are finished and ready to exit the text entry procedure) functions. *Fig. 26* shows an example of using the text tool to enter the owner's information on the SET page.

Selecting Waypoint Icons

After the waypoint icon is selected (highlight and press "OK") in the "Edit Waypoint" menu of the MAP page (see pg. 15), the display will show a menu of icons (*Fig 27*), or common symbols, that you may choose to represent your waypoint on the map. If you have previously set up a user profile for a particular type of activity (for example, camping), the group of icons that appears in the icon selection menu will be the ones most related to that activity.

Fig. 25

Text Entry Tool

Fig. 26

SET Page-Owner Info

Fig. 27

Icon Selection Menu

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Downloading, Uploading and Storing Satellite (Aerial) Photos or Topo Maps With Your ONIX

Now that you are familiar with your Bushnell ONIX series GPS, you are ready to take advantage of many of the easy to use exclusive Bushnell features. In conjunction with your Bushnell GPS unit, you have two additional tools that make your ONIX the most functional GPS for your next outdoor excursion – BushnellGPS.com and the Bushnell ONIX CD with the interactive user's manual and PC program.

<u>The BushnellGPS.com Website</u>

Go to Bushnell's exclusive GPS website (you can also access through www.bushnell.com) to view and download Satellite photos onto your ONIX.
BushnellGPS.com enables you to plan your next adventure by searching and viewing photos and Topographic maps. Here's how to get started:
• Log onto www.bushnellgps.com
• Click on Download Photos & Maps
• As a first time user, set up a User ID and Password
• Connect your ONIX GPS to your computer via the included USB cable
• Start browsing the website for additional information on how to search, purchase and download your images
• Once you establish your login ID, bushnellGPS.com saves your images in your folders on our safe and secure server so that you can access them at any time.
• After you complete an outdoor excursion, BushnellGPS.com also enables you to upload all of your trip's navigation information into your account folders to review, and analyze, and save for the next return trip.
• BushnellGPS.com also provides detailed GPS product features and specifications, an Interactive User's Manual, Software Update Downloads, Troubleshooting and Frequently Asked Questions, and the Bushnell Shopping Cart to purchase accessories, Photo/Map downloads, and printable Photos/Maps.
So log on, log in, and start downloading to experience a whole new world of GPS functionality.

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The Bushnell GPS ONIX CD-ROM

Your CD contains two software files to help you get the most out of the ONIX GPS:

1. Interactive User's Manual – Click to start this program to get an graphic, interactive simulation that takes you through the basic features and functions of your Bushnell GPS. This simulation gives you an informative tour of the ONIX features and allows you to practice real world navigation from the comfort of your own computer.

2. ONIX GPS PC Companion program – Click to install the GPS PC Companion file onto your PC. The PC Companion enables you to plan and save your GPS trips on your PC. Similar to the website, you can upload and save waypoints, trails, routes, photos and maps between your GPS and PC, so you can trip plan even when you are not connected to the internet and BushnellGPS.com. Take your PC along on your next adventure and the GPS PC Companion provides the perfect tool for storing and analyzing all of your GPS information.

Check out http://www.bushnellgps.com for the latest versions of the GPS PC Companion. You can download the newest versions right from the website to any PC. Just click the "Product Support" tab at the top of the main page, then "Software Updates" in the left frame.

Visit BushnellGPS.com for a detailed GPS glossary, frequently asked questions (FAQ), and other useful information related to the ONIX series GPS receivers.

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TROUBLESHOOTING

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
No Power On	1. Batteries are low or dead 2. Power button was not pressed for 1-2 sec. 3. Batteries not making good contact 4. Battery quality issues	1. Use fresh batteries in the unit. Avoid excessive use of the backlight, which may shorten battery life. 2. Press power button until LCD comes on 3. Reseat batteries 4. Use good quality batteries that do not have broken or cracked casings
Unit does not detect GPS satellites	1. GPS reception is turned off in SET page 2. Insufficient time allowed for satellite acquisition 3. Unit does not have unobstructed view of the sky	1. Make sure GPS is turned ON in the SET Page. The center circle of the SAT page should be circling. If not, turn GPS ON in the SET page. 2. After the unit has been off for an extended time it may take longer for it to acquire GPS satellites. Check the SAT page for progress. 3. For fastest acquisition times make sure the unit has a clear view of the sky. Avoid areas of heavy brush and areas next to large buildings or cliffs. Keep unit out of backpacks and concealed areas in order to maintain consistent GPS signals. Try holding the unit further away from your body.
Unit loses Waypoint/ Trail Data	1. Sudden loss of power if batteries were removed without first turning off the power button	1. Removing the batteries without properly powering down the unit will cause loss of recent waypoint and trail data. The unit has been specially designed to provide a defined, programmed power down sequence when the unit is shut down from the power button, or when the batteries reach their cutoff low voltage level. Removing the batteries when the unit is powered on will not allow the unit to go through the full power down sequence and will result in the loss of navigation data.
Unit "freezes" or "locks up"-unable to turn off normally	1. Processing malfunction or similar cause	1. If holding the power button for 2 sec. has no effect, remove and reinstall batteries to reset the unit. Check website for latest software update (your software version # is found in the "Unit Info" on SET page).
Downloaded photos or maps are not found or cannot be used	1. USB cable was disconnected or power was shut off before download was completed 2. Unit was used immediately after download without restarting (power off then on again)	1. When downloading information from the PC program or Web, please wait until the download has been completed. Disconnecting the unit prior to completion of download will result in incomplete data download and loss of data. 2. After a download, the unit must be powered off and then powered back on for it to recognize the data.

Note: The unit is waterproof to 1 meter. The battery compartment is water resistant. If dropped in water simply open and dry the battery compartment and the USB connection area and the unit should operate.

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Glossary

•Accuracy: A measure of how close an estimate of a GPS position is to the true location.

•Acquisition Time: The time it takes a GPS receiver to acquire satellite signals and determine the initial position.

•Active Leg: The segment of a route currently being traveled. A "segment" is that portion of a route between any two waypoints in the route.

•Altimeter: An instrument for determining elevation.

•Altitude: The current elevation above sea level.

•Atomic Clock: A very precise clock that operates using the elements cesium or rubidium. A cesium clock has an error of one second per million years. GPS satellites contain multiple cesium and rubidium clocks.

•Basemap: Built-in basemaps, which typically include coverage of oceans, rivers, and lakes; principal cities, smaller cities, and towns; interstates, highways, and local thoroughfares; and railroads, airports, and political boundaries. Basemaps are available in a variety of global coverage areas, depending on the user's needs.

•Bearing: The compass direction from a position to a destination, measured to the nearest degree (also call an azimuth). In a GPS receiver, bearing usually refers to the direction to a waypoint.

•Cold Start: The power-on sequence where the GPS receiver downloads almanac data before establishing a position fix.

•Coordinates: A set of numbers that describes your location on or above the earth. Coordinates are typically based on latitude/longitude lines of reference or a global/regional grid projection (e.g., UTM, MGRS, Maidenhead).

•Coordinated Universal Time (UTC): Replaced Greenwich Mean Time (GMT) as the world standard for time in 1986. UTC uses atomic clock measurements to add or omit leap seconds each year to compensate for changes in the rotation of the earth.

•Heads Up Orientation: Fixes the GPS receiver's map display so the direction of navigation is always "up."

•Datum: A math model which depicts a part of the surface of the earth. Latitude and longitude lines on a paper map are referenced to a specific map datum. The map datum selected on a GPS receiver needs to match the datum listed on the corresponding paper map in order for position readings to match.

•Distance: The length (in feet, meters, miles, etc.) between two waypoints or from your current position to a destination waypoint. This length can be measured in straight-line (rhumb line) or great-circle (over the earth) terms. GPS normally uses great circle calculations for distance and desired track.

•Geocaching: A high-tech version of hide-and-seek. Geocachers seek out hidden treasures utilizing GPS coordinates posted on the Internet by those hiding the cache.

•Geodetic Datum: A math model representing the size and shape of the earth (or a portion of it).

•Geographic Information System (GIS): A computer system or software capable of assembling, storing, manipulating, and displaying geographically referenced information

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Glossary

(i.e., data identified according to their location). In practical use, GIS often refers to the computer system, software, and the data collection equipment, personnel, and actual data.

•Global Positioning System (GPS): A global navigation system based on 24 or more satellites orbiting the earth at an altitude of 12,000 statue miles and providing very precise, worldwide positioning and navigation information 24 hours a day, in any weather. Also called the NAVSTAR system.

•GoTo: A route consisting of one leg, with your present position being the start of the route and a single defined waypoint as the destination.

•Greenwich Mean Time (GMT): The mean solar time for Greenwich, England, which is located on the Prime Meridian (zero longitude). Based on the rotation of the earth, GMT is used as the basis for calculating standard time throughout most of the world.

•Grid: A pattern of regularly spaced horizontal and vertical lines forming square zones on a map used as a reference for establishing points. Grid examples are UTM, MGRS, and Maidenhead.

•Heading: The direction in which a vehicle is moving. For air and sea operations, this may differ from actual Course Over Ground (COG) due to winds, currents, etc.

•Initialization: The first time a GPS receiver orients itself to its current location and collects almanac data. After initialization has occurred, the receiver remembers its location and acquires a position more quickly because it knows which satellites to look for.

•Latitude: A position's distance north or south of the equator, measured by degrees from zero to 90.One minute of latitude equals one nautical mile..

•Leg: A portion of a route consisting of a starting (from) waypoint and a destination (to) waypoint. A route that is comprised of waypoints A, B, C, and D would contain three legs. The route legs would be from A to B, from B to C, and from C to D.

•Longitude: The distance east or west of the prime meridian (measured in degrees). The prime   meridian runs from the north to south pole through Greenwich, England.

•Magnetic North: Represents the direction of the north magnetic pole from the observer's position. The direction a compass points.

•Map Display: A graphic representation of a geographic area and its features.

•Nautical Mile: A unit of length used in sea and air navigation, based on the length of one minute of arc of a great circle, especially an international and U.S. unit equal to 1,852 meters   (about 6,076 feet).

•Navigation: The act of determining the course or heading of movement. This movement could be for a plane, ship, automobile, person on foot, or any other similar means.

•North Up Orientation: Fixes the GPS receiver's map display so north is always fixed at the top of the screen.

•Position: An exact, unique location based on a geographic coordinate system.

•Position Fix: The GPS receiver's computed position coordinates.

•Position Format: The way in which the GPS receiver's position will be displayed on the screen. Commonly displayed as latitude/longitude in degrees and minutes, with options for degrees, minutes and seconds, degrees only, or one of several grid formats.

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Glossary

•Route: A group of waypoints entered into the GPS receiver in the sequence you desire to navigate them.

•Statute Mile: A unit of length equal to 5,280 feet or 1,760 yards (1,609 meters) used in the U.S. and some other English-speaking countries.

•Time To First Fix (TTFF): If you have not used your GPS unit for several months, the almanac data for the satellites may be out of date. The unit is capable of recollecting this information on its own, but the process can take several minutes. Time to First Fix (TTFF) is the time it takes a GPS receiver to find satellites after the user first turns it on (when the GPS receiver has lost memory or has been moved over 300 miles from its last location).

Track Up Orientation: Fixes the GPS receiver's map display so the current track heading is at the top of the screen.

•Trail: The actual course that has been traveled, composed of a series of trail points.

•True North: The direction of the north pole from your current position. Magnetic compasses indicate north differently due to the variation between true north and magnetic north. A GPS receiver can display headings referenced to true north or magnetic north.

•Universal Transverse Mercator (UTM): A nearly worldwide coordinate projection system using north and east distance measurements from reference point(s). UTM is the primary coordinate system used on U.S. Geological Survey topographic maps.

•User Segment: The segment of the complete GPS system that includes the GPS receiver and operator.

•UTC: See Coordinated Universal Time.

•UTM: See Universal Transverse Mercator.

•Waterproof: An IPX7 designation means the GPS case can withstand accidental immersion in one meter of water for up to 30 minutes.

•Waypoints: Waypoints are locations or landmarks worth recording and storing in your GPS. These are locations you may later want to return to. They may be check points on a route or significant ground features. (e.g., camp, the truck, a fork in a trail, or a favorite fishing spot). Waypoints may be defined and stored in the unit manually by taking coordinates for the waypoint from a map or other reference. This can be done before ever leaving home. Or more usually, waypoints may be entered directly by taking a reading with the unit at the location itself, giving it a name, and then saving the point. Waypoints may also be put into the unit by referencing another waypoint already stored, giving the reference waypoint, and entering the distance and compass bearing to the new waypoint.

•Wide Area Augmentation System (WAAS): A system of satellites and ground stations that provide GPS signal corrections for better   position accuracy. A WAAS-capable receiver can give you a position accuracy of better than three meters, 95 percent of the time. (At this time, the system is still in the development stage and is not fully operational.) WAAS consists of approximately 25 ground reference stations positioned across the United States that monitor GPS satellite data. Two master stations, located on either coast, collect data from the reference stations and create a GPS correction message.

•WGS-84: World Geodetic System, 1984. The primary map datum used by GPS. Secondary datums are computed as differences from the WGS 84 standard.

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FCC Compliance Statement

The ONIX 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 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 or more of the following measures:

· Reorient or relocate the receiving antenna.

· Increase the separation between the equipment and 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 ONIX does not contain any user-serviceable parts. Repairs should only be made by an Authorized Bushnell repair center. Unauthorized repairs or modifications could result in permanent damage to the equipment, and will void your warranty and your authority to operate this device under Part 15 regulations.

The shielded interface cable which is provided must be used with the equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

Specifications and designs are subject to change without any notice or obligation on the part of the manufacturer.

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ONE YEAR LIMITED WARRANTY

Your Bushnell product is warranted to be free of defects in materials and workmanship for one year after the date of purchase. In the event of a defect under this warranty, we will, at our option, repair or replace the product, provided that you return the product postage prepaid. This warranty does not cover damages caused by misuse, improper handling, installation, or maintenance provided by someone other than a Bushnell Authorized Service Department.

Any return made under this warranty must be accompanied by the items listed below:

1) A check/money order in the amount of $10.00 to cover the cost of postage and handling
2) Name and address for product return
3) An explanation of the defect
4) Proof of Date Purchased
5) Product should be well packed in a sturdy outside shipping carton, to prevent damage in transit, with return postage prepaid to the address listed below:

IN U.S.A. Send To:
Bushnell Outdoor Products
Attn.: Repairs
8500 Marshall Drive
Lenexa, Kansas 66214

IN CANADA Send To:
Bushnell Performance Optics
Attn.: Repairs
25A East Pearce Street, Unit 1
Richmond Hill, Ontario L4B 2M9

For products purchased outside the United States or Canada please contact your local dealer for applicable warranty information. In Europe you may also contact Bushnell at:

BUSHNELL Performance Optics Gmbh
European Service Centre
MORSESTRASSE 4
D- 50769 KÖLN
GERMANY
Tél: +49 (0) 221 709 939 3
Fax: +49 (0) 221 709 939 8

This warranty gives you specific legal rights.
You may have other rights which vary from country to country.
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IN NO EVENT SHALL BUSHNELL 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.

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