



Catalogue

Understanding and choosing
handheld GPS units

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Fall 2009

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Background, task & purpose

Handheld GPS units appeal to a wide audience and are used for many different purposes. They are often used *recreationally* by hunters, fishers, and hikers; *professionally* by scientists and engineers, professional climbers and mountaineers; and for *education*.

Background

GPS units vary in both the quantity and quality of features available. Some units are very basic and have a limited capacity for storing waypoints, routes, maps, and downloaded data. Other units are much more specialized and better suited to handle the demands of professional applications. These units can display a variety of maps, including aerial imagery and they have the ability to overlay vector and raster data sets.

Regardless of the kind and level of use, one thing is clear: buying a handheld GPS is a complicated task that requires a basic understanding of how the units work, the terminology, and the features associated with it in order to determine whether or not it suits your needs.

Task & purpose

The task was to compare and analyze existing methods of communicating complex technological concepts and to investigate how design supports a consumer's decision process.

Buyers looking for professional or educational units have an entirely different set of needs and would look for different features. These two groups make up only a small portion of the handheld GPS category, so I chose to focus on handheld units geared primarily toward recreational use.

DISCOVERY

3	Research & analysis
8	Personas
10	Decision models
13	Case studies
16	Summary

This stage focused on researching and getting to know hand-held GPS units by looking at their features, how they're described, where and how they are sold, what buyers look for, and different ways the information about them is organized and displayed.

Analyzing competitors, content structures, and the decision making process helped to identify problems that need to be addressed in order to communicate information clearly and effectively and to support the consumer in their own decision making process.

Research & analysis

Gathering information

I began my research by gathering information about GPS units across different brands. I wanted to be sure I had a solid understanding of where and how the units are used, their features, and functions in order to determine what information to communicate and the most appropriate way to do so.



Research & analysis

Seeing what's out there

education
sport & recreation
professional

	BRAND	MAKE & MODEL				
■ ■ ■	DeLorme	PN-Series 20 30 40				
■ ■ ■	Garmin	Dakota 10 20	Oregon 200 300 400c 400i 400t 550 550t	Colorado 400c 400i 400t	eTrex Legend H Legend HCx Summit HC Venture HC Vista H Vista HCX	GPSMAP 60 60Cx 60CSx 76 76Cx 76SCx
■ ■ ■	Lowrance	Endura Sierra Safari Out & Back	iFinder H2O C H2O GO2 Expedition C Hunt C			
■ ■ ■	Magellan	Triton 2000 1500 1500 AdventurePack 500 400 400 AdventurePack 300 200				

Garmin is the leading brand, offering the widest range of units. Most users begin their product search within the Garmin brand.

These are the major brands of handheld GPS units and the different makes and models offered by four leading manufacturers. Garmin is the leading brand, offering the widest range of units.

Research & analysis

Sorting the features

After identifying the features across different brands, I grouped them into three main categories: *physical*, *navigational*, and *operational*.

Physical

Physical features describe the physical aspects of the unit — its dimensions, how it's made, whether it's waterproof, and the kind of screen it has.

Body

Size (width, height, depth)
Weight
Button size
Antenna (internal/external)

Construction

Frame materials
Rubber grips
Rugged construction: molded nylon on aluminum frame, rubber grips.
Water proof (IPX-7 standard)
Associated with 'ruggedness'; can be fully submerged .
IPX-4 will only resist water

Screen

these features impact visibility in bright sun and dark areas — like in a forest at night

Size
Color (monochrome/color)
Resolution, sharpness, brightness & contrast
Anti-glare and back lighting
Display type (LCD/TFT LCD/Touchscreen)
TFT-LCD is better for high-resolution/high-frequency data; improves image quality, contrast, and response time for refreshing data.

Research & analysis

Sorting the features

Operation

These features have to do with the actual operation of the unit — how it gets power, interfaces with other units, and options for transferring and storing data.

Interface	Wireless USB Serial
Protocols for Data Transfer	NMEA 0183 <i>Protocol used by marine receivers to transmit data. ASCII, comma delimited.</i> Garmin Binary RTCM (Radio Technical Commission for Maritime Services)
Memory	Built-in memory Memory card slots <i>Expandable memory for storing routes, waypoints, and maps.</i>
User Interface	Graphic List
Power	AA Batteries Lithium-ion

Sorting the features

Navigation

Navigation features have to do with the quality of mapping information on the unit, how the unit gets information, and the kinds of information that can be displayed and stored.

Navigation

Waypoints, routes, and tracks

Custom points of interest

Trip computer

Timer, average speed, max speed, distance, sunrise/sunset times.

Compass

Barometric altimeter

Tracks changes in pressure to obtain accurate altitude information.

Turn by turn navigation (for roads)

Receiver

Sensitivity (receiver chips, e.g., SiRFStar III)

Decodes GPS signals at low signal levels, typically 160dBm — allows for differentially corrected positions.

WAAS/EGNOS/MSAS

Channels

12-channels or more to aid reception in wooded or mountainous areas; improves position accuracy.

Mapping

Preloaded Maps (Type, coverage, and detail)

Ability to add maps and downloaded content

Personas & feature lists

Moutaineering, climbing, hunting & fishing Safety



PRIMARY USE
FUNCTION/FOCUS

Mountaineering and climbing
Safety

Hunting and fishing
Safety

FEATURE LISTS

- | | |
|---|---|
| <p><i>desired</i></p> <ul style="list-style-type: none"> • Compass • Barometric altimeter • Light-weight • Waterproof • Rugged • Expandable memory • Long battery life • High-sensitivity receiver (for great accuracy in woods and mountains) • Ability to add maps • Easy to read screen • Custom POIs • Buttons | <p><i>additional</i></p> <ul style="list-style-type: none"> • Wireless data transfer • Portable charger |
|---|---|

- | | |
|---|---|
| <p><i>essential</i></p> <ul style="list-style-type: none"> • Compass • Barometric altimeter • Light-weight • Waterproof • Rugged • Expandable memory • Long battery life • High-sensitivity receiver (for great accuracy in woods and mountains) • Ability to add maps • Easy to read screen • Hunt/fish calendar | <p><i>additional</i></p> <ul style="list-style-type: none"> • Geocaching • Picture/video recorder • Tidal charts • Sun and moon |
|---|---|

A bold listing indicates an absolutely essential feature that the user just can't live without based on their needs and how the unit will be used. Other features might be sacrificed for the existence or quality of these features.

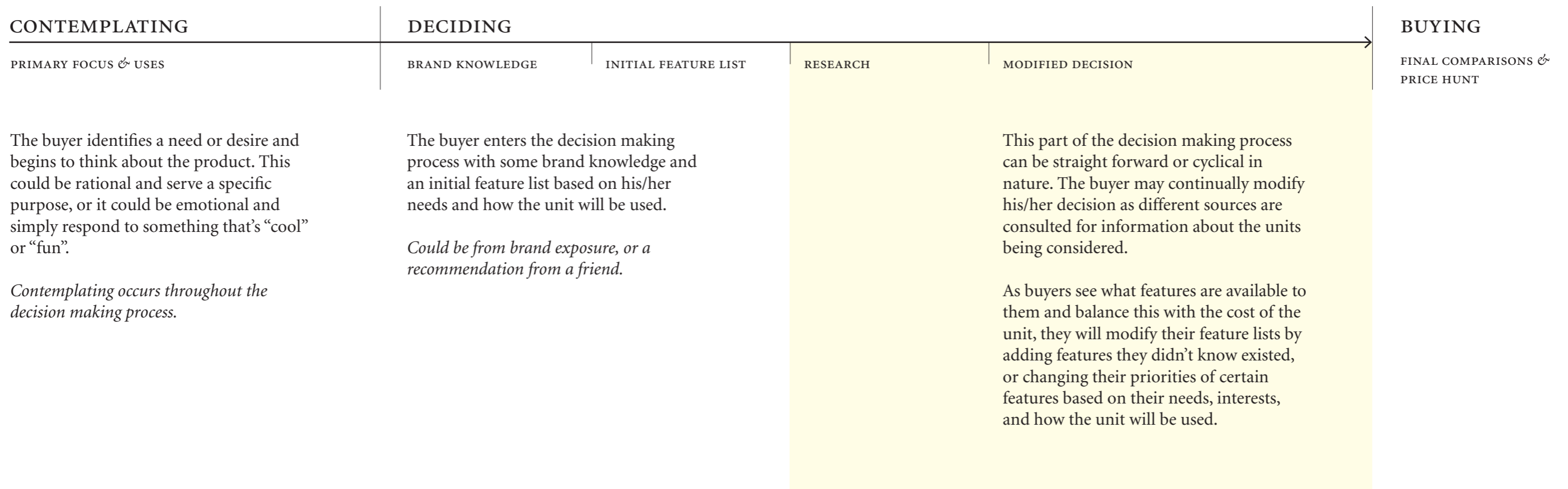
Personas & feature lists

Hiking, photography & geocaching Safety and record keeping | Fun



Decision models

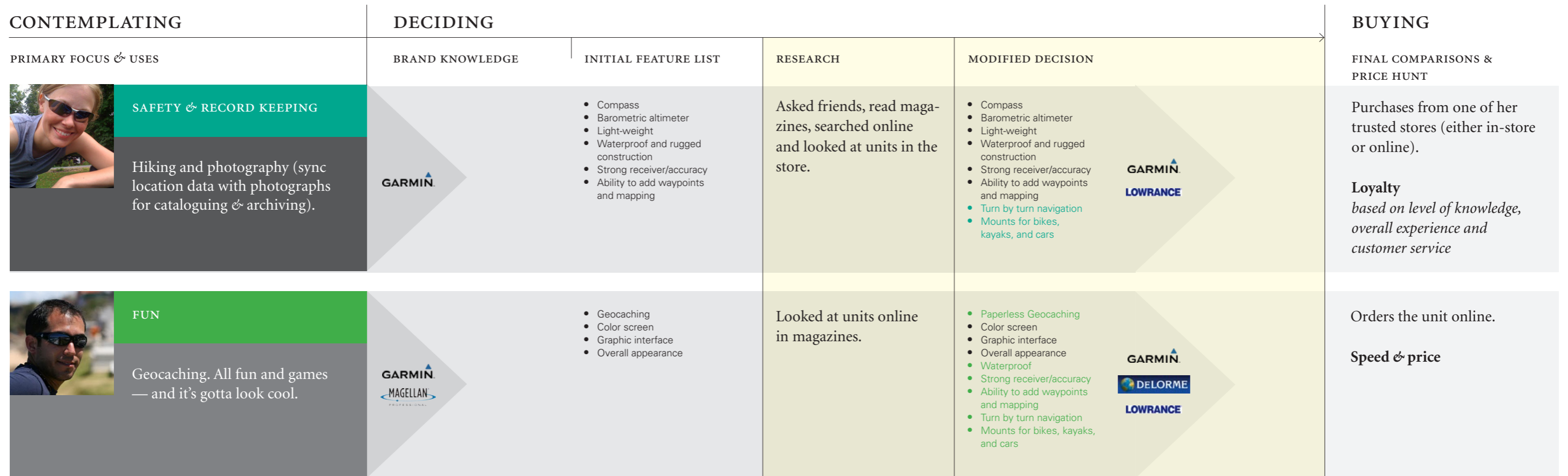
The decision model describes the decision making process for buyers with different focuses and needs.



Decision models



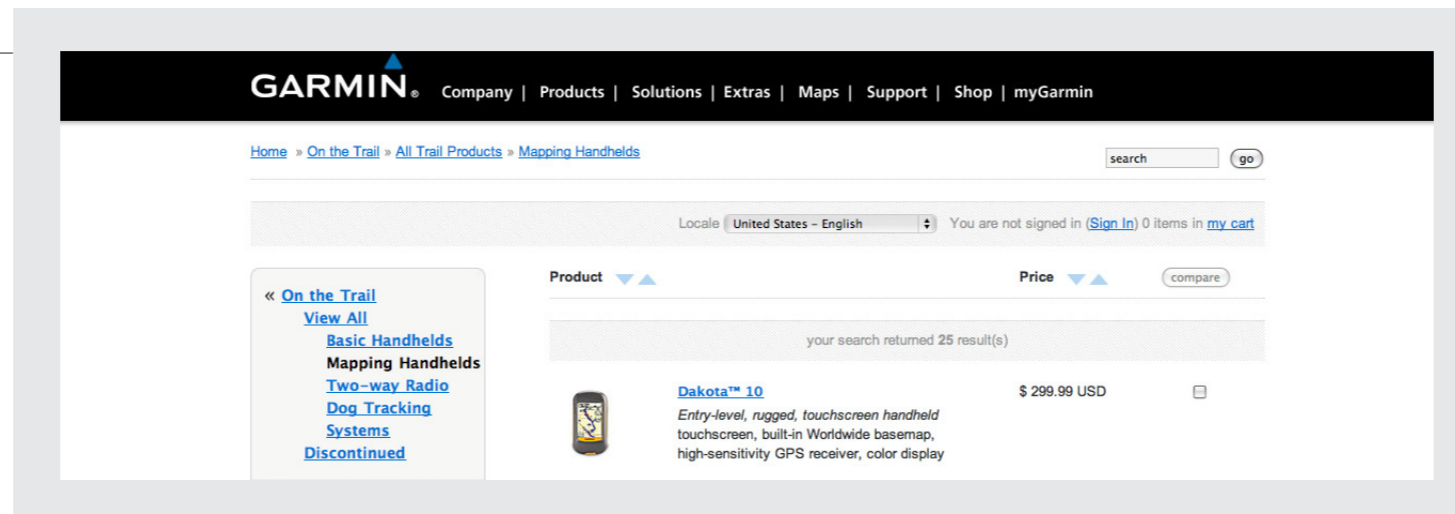
Decision models



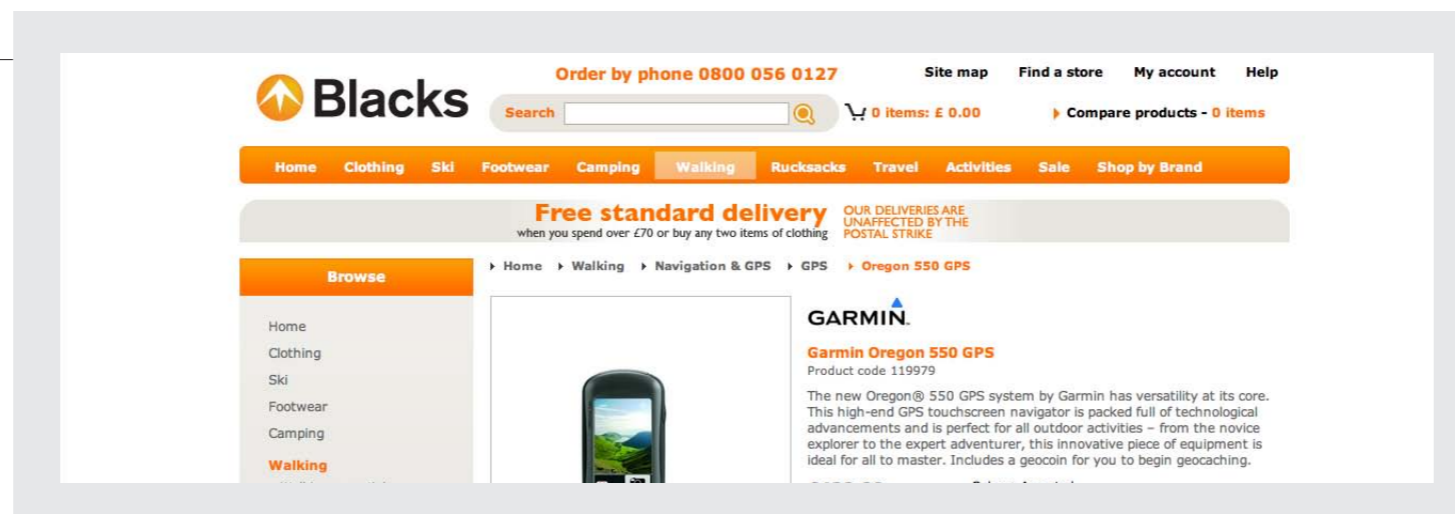
Case studies

The case studies evaluate the overall accessibility of information and identify methods of presentation that are both strong and weak. These case studies focus on two different kinds of online stores: the first study looks at Garmin, a manufacturer web site; while the second looks at Blacks, an outdoor gear store.

CASE STUDY 1



CASE STUDY 2



Case study 1

Garmin | MANUFACTURER WEB SITE *A fine example*

Selective searching

Buyers can put their checklists to work and select to see items based on their preferences. Garmin lets you search within a specific series, user type, and choose the features that you can't live without.

Series

- Oregon™ (2)
- Dakota™ (0)
- Colorado™ (1)
- eTrex® (0)
- GPSMAP 60-series (0)
- GPSMAP 76-series (0)

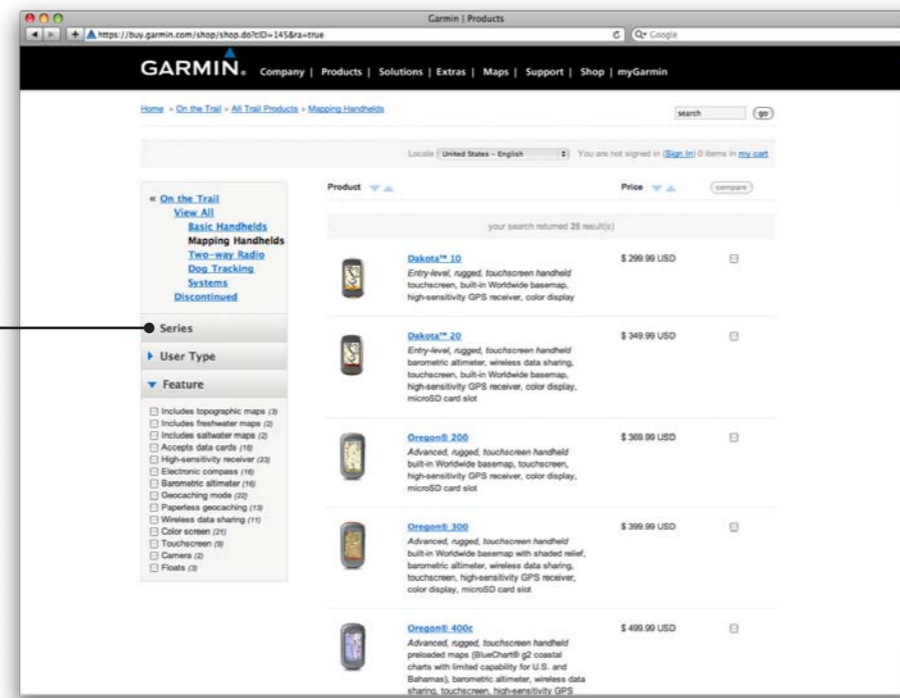
User Type

- Hiker (3)
- Geocacher (3)

Feature Clear

- Includes topographic maps (3)
- Includes freshwater maps (0)
- Includes saltwater maps (0)
- Accepts data cards (3)
- High-sensitivity receiver (3)
- Electronic compass (3)
- Barometric altimeter (3)
- Geocaching mode (3)
- Paperless geocaching (3)
- Wireless data sharing (3)
- Color screen (3)
- Touchscreen (2)
- Camera (1)
- Floats (0)

The results of my search!



Garmin's us site was particularly well done. They've created general categories based on use, making it easy for the buyer to get to the product that's right for them. The titles, like *On the Trail* and *On the Water*, are full of life and connect with the individual user, pulling them into the site.

Physical & Performance:

Unit dimensions, WxHxD:	2.3" x 4.0" x 1.4" (5.8 x 11.4 x 3.5 cm)
Display size, WxH:	1.53"W x 2.50"H (3.8 x 6.3 cm)
Display resolution, WxH:	240 x 400 pixels
Display type:	Transflective colour TFT touch
Weight:	192.7 g (6.8oz) with batteries
Battery:	2 AA batteries (not included); recommended
Battery life:	18 hours
Waterproof:	yes (IPX7)
Floats:	no
High-sensitivity receiver:	yes (IPX7)
Interface:	USB and NMEA 0183 compul
RoHS version available:	yes

Maps & Memory:

Basemap:	yes
Preloaded street maps:	yes (European topographic)
Ability to add maps:	yes
Built-in memory:	850 MB
Accepts data cards:	microSD™ card (not included)
Waypoints/favorites/locations:	1000
Routes:	50
Track log:	10,000 points, 200 saved trac

Features:

Automatic routing (turn by turn routing on roads):	yes (with optional mapping for detailed roads)
Electronic compass:	yes
Touchscreen:	yes
Barometric altimeter:	yes
Geocaching friendly:	yes (paperless)
Outdoor GPS games:	yes (Whereigo only)
Hunt/fish calendar:	yes
Sun and moon information:	yes
Tide tables:	yes
Area calculation:	yes
Custom POIs (ability to add additional points of interest):	yes
Unit-to-unit transfer (shares data wirelessly with similar units):	yes
Picture viewer:	yes

Comparing units
Highlighted rows (shown in gray) quickly show the differences between the units being compared.

Sorting the specs

This is one of the most difficult sections of information to look through. Presented as simple tables, Garmin has separated their specs into groups: *Physical & Performance*, *Maps & Memory* and *Features* making it easier to find the relevant information.

Case study 2

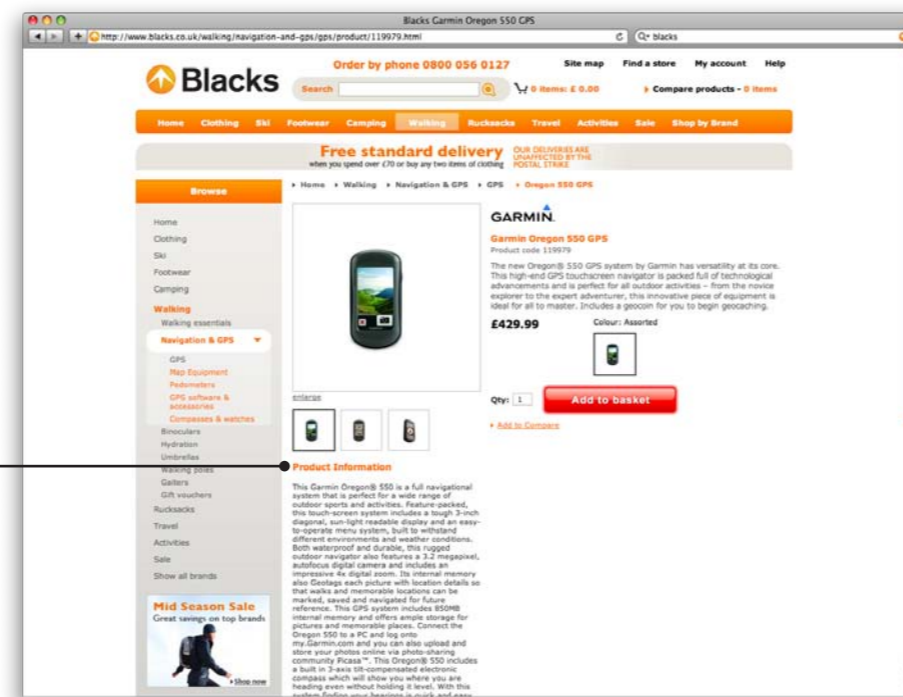
Blacks | OUTDOOR GEAR STORE *A typical approach*

Specs
No specs here. You want specs? Read through the *Product Information* above and figure it out!

Product Information

This Garmin Oregon® 550 is a full navigational system that is perfect for a wide range of outdoor sports and activities. Feature-packed, this touch-screen system includes a tough 3-inch diagonal, sun-light readable display and an easy-to-operate menu system, built to withstand different environments and weather conditions. Both waterproof and durable, this rugged outdoor navigator also features a 3.2 megapixel, autofocus digital camera and includes an impressive 4x digital zoom. Its internal memory also Geotags each picture with location details so that walks and memorable locations can be marked, saved and navigated for future reference. This GPS system includes 850MB internal memory and offers ample storage for pictures and memorable places. Connect the Oregon 550 to a PC and log onto my.Garmin.com and you can also upload and store your photos online via photo-sharing community Picasa™. This Oregon® 550 includes a built in 3-axis tilt-compensated electronic compass which will show you where you are heading even without holding it level. With this system finding your bearings is quick and easy and the inbuilt barometric altimeter will even track changes in air pressure to pinpoint precise altitude. The highly sensitive WAAS-enabled GPS receiver includes HotFix™ satellite prediction which will also locate your position precisely and keep its GPS location. This navigator is compatible with a variety of different systems such as BlueChart® g2 maps for those wanting to get hold of information when heading out on the water and Geocaching – a paperless downloading tool which will provide detailed information on locations, terrains and various other area descriptions. This Oregon® 550 comes preloaded with an in-built basemap and can also be used in connection with TOPO GB DVD and Garmin GB Discoverer™ to get detailed maps and directions when out in the country, on the road or on the water. Compatible with other Garmin products, such as the heart-rate monitor and other sensors, this feature packed system is a fun reference point for using wherever you are heading and for any outdoor activity.

Specification



	Remove	Remove	Remove
	Garmin Dakota 20 GPS	Garmin Oregon 550 GPS	Garmin GPS 60
	£279.99	£429.99	£119.99 Was £149.99, Save up to £30
Product Code	119978	119979	093954
Product Summary	The pocket-sized Garmin Dakota 20 is your "Touch & Go" GPS navigation system for the great outdoors.	The new Oregon® 550 GPS system by Garmin has versatility at its core. This high-end GPS touchscreen navigator is packed full of technological advancements and is perfect for all outdoor activities - from the novice explorer to the expert.	GPS 60 helps you find your position wherever you are, with a large, sunlight readable display that has a large LED backlight for day and night navigation.
	Garmin Dakota 20 GPS	Garmin Oregon 550 GPS	Garmin GPS 60
	£279.99	£429.99	£119.99 Was £149.99, Save up to £30

Comparing units
The only comparison happening here is very minimal. It's not very informative or helpful, even on a very basic level comparing physical features such as weight or dimensions.

Here, I've selected 3 different units. Blacks gives me the image, price, product code and the description for each. I'm left to make the feature comparison on my own by viewing each unit individually and sorting through long lists and columns of text.

This is a pretty typical example of how GPS units are shown by outdoor gear stores and many consumer electronic stores. There isn't much about this approach that works well: all the essential features are stuffed into long sections of text, and when they exist, product comparisons are handled inadequately — rarely showing even the most basic information, such as unit dimensions and weight.

Summary

There are many factors that make choosing a handheld GPS unit a complex, difficult, and time consuming process. The single greatest difficulty that consumers face is the large quantity of information used to describe the units. Thinking about user needs through personas and decision models as well as evaluating case studies provided ways to identify aspects of the buying process that make choosing a unit an easier task. These methods became particularly useful during the transforming stage of the design process where different visual directions were explored.

DESIGN METHODS THAT IMPROVE ACCESSIBILITY

Tables

Structure information and provide a way for buyers to compare different product features.

Categories and groupings

Create groups of related information, making relevant parts easier to find.

Highlighting

To show differences between products, or to emphasize special features.

Product comparisons

Provide a way for buyers to see how different products compare. Helpful across different brands and within a single brand.

Selective searching

Allows buyers to search through products and displays only those that meet their needs and preferences.

Challenges & problems

- Quantity of information
- Technical terms & understanding
- Making trade-offs clear
- Indicating uses: where? for what activities? and addressing multiple uses
- Making comparisons between units and between different brands
- Organizing features
- Pulling out the most essential features
- Deciding where to use icons and how
- Explaining ideas and concepts related to GPS navigation and technology to users with different levels of experience
- Appeal to a wide variety of users

TRANSFORMING

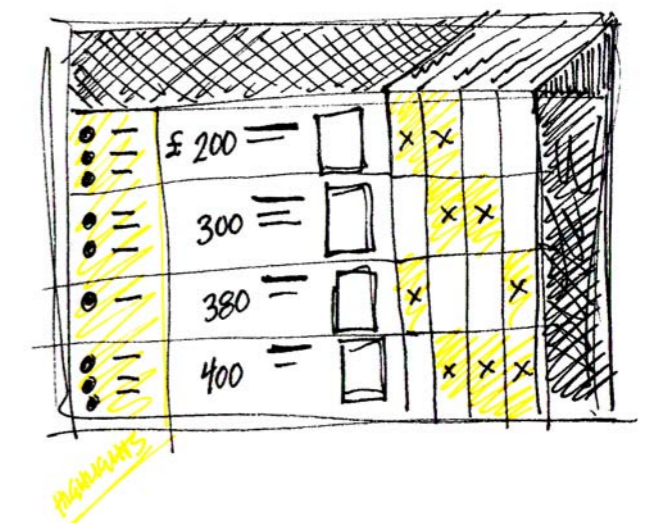
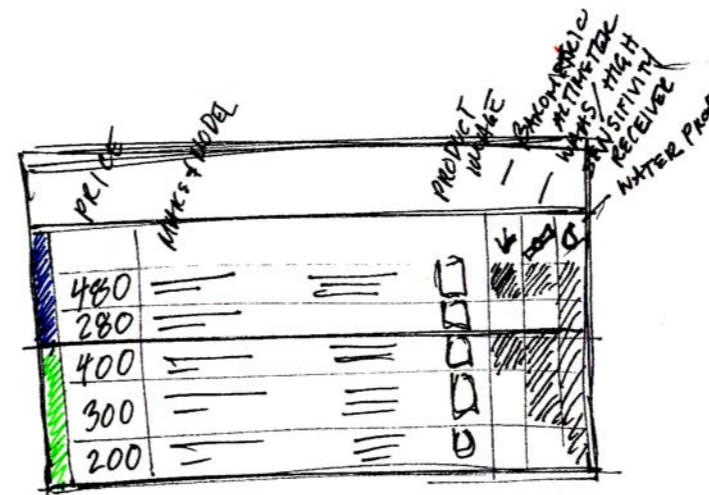
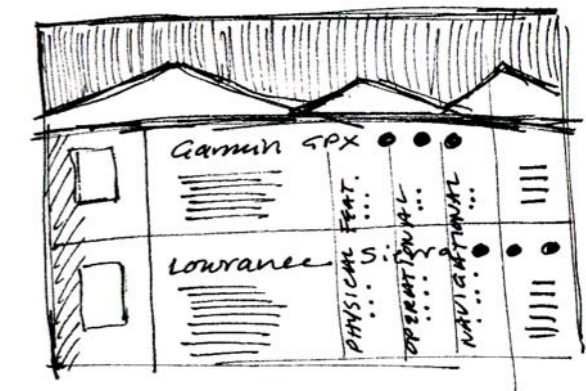
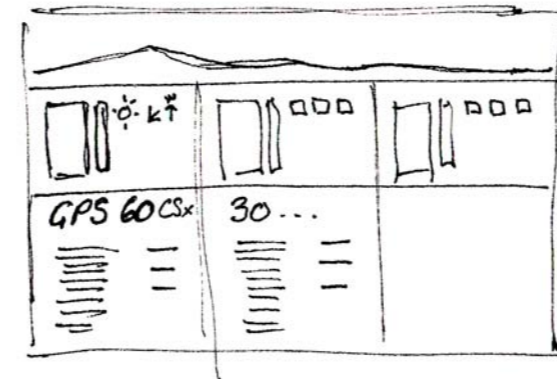
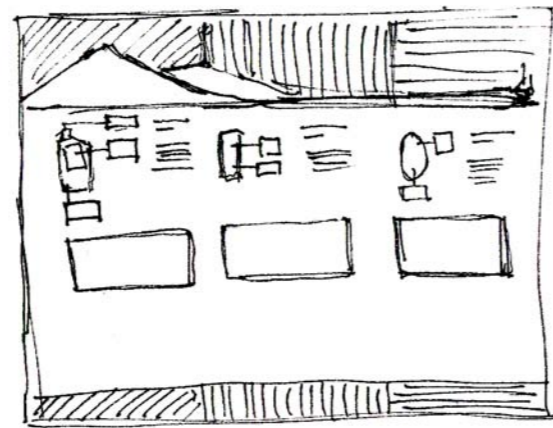
- 18 Sketching
- 20 Developing icons
- 21 Layouts

The work in the transforming stage explored different approaches for organizing and grouping the content in order to find a clear and effective way of communicating the information to the consumer.

Structuring information: matrix layouts

Matrix layouts allow for the comparison of information using both horizontal and vertical axis.

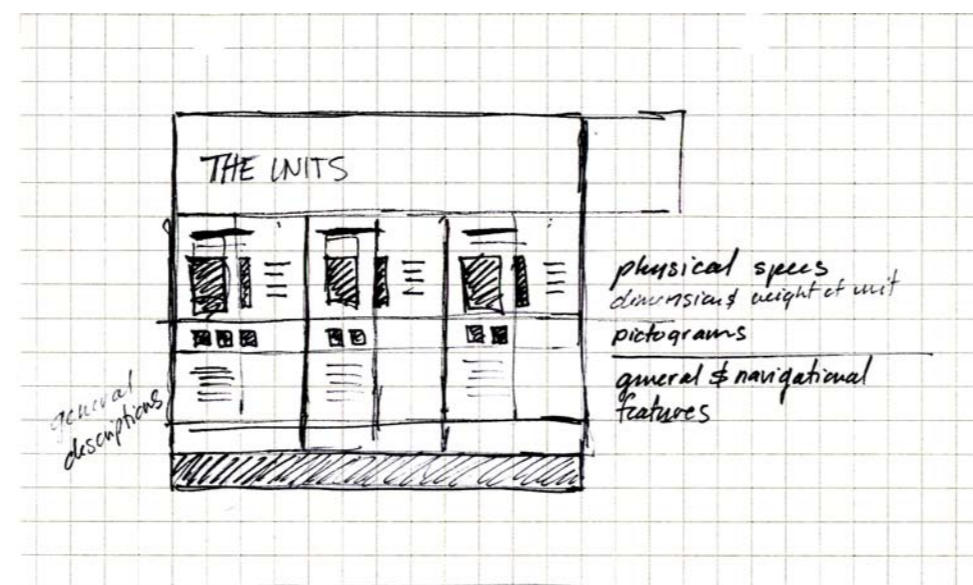
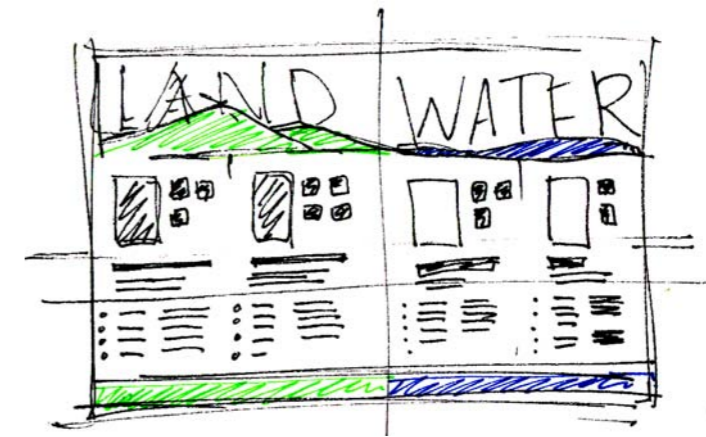
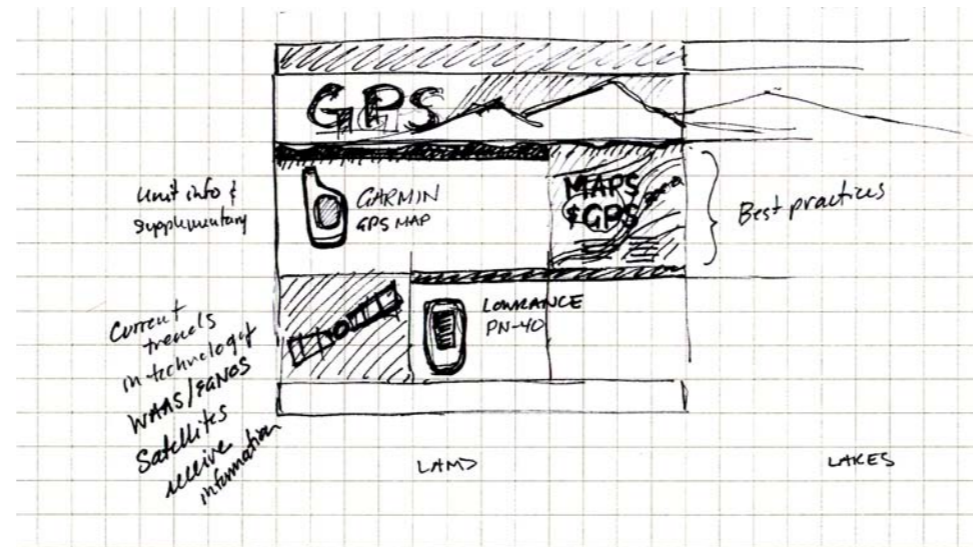
These early sketches explored using tighter table-like layouts that focus primarily on features and price. Also explored was a looser matrix-styled layout to provide space for detailing the units, feature lists, and placing icons.



Structuring information: groupings

Creating groupings by features, use, and activity allowed for comparisons between units that shared a similar purpose, resulting in an easier and more focused product search.

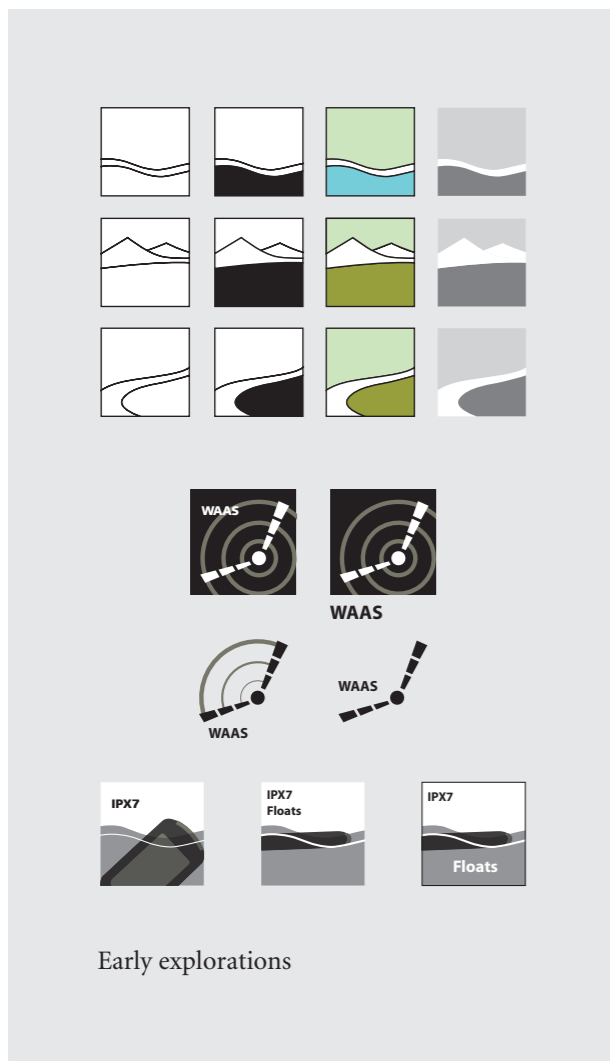
Explored the use of running images to tie together units used in different areas, and looked at color as a way to separate units used for different activities. Also considered working in additional information to describe how the units function and best practices for using them.



Developing icons

thinking about representing concepts visually

One of the challenges with describing GPS units is that there is a lot of information associated with the units. Because of this, it's difficult to choose what information is best communicated with icons. Some concepts are more difficult to show than others, and some information is simply better explained with words.

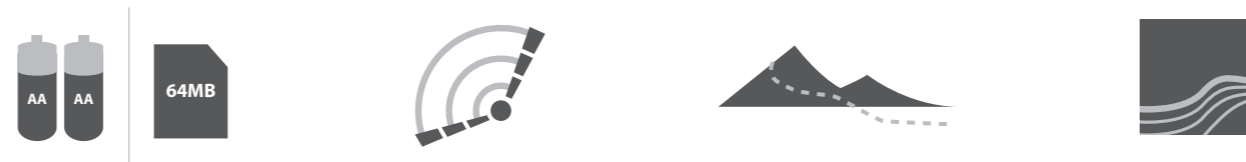


Unit body and display.



Icons for areas of use: *land, water, road.*

The use of icons was explored to call attention to different feature groups and areas of use.



Icons for different feature groups. From the left: *operation and memory, receiver, tracking and logging, and maps.*

Direction 1

Editorial pages focused on sorting units by use, highlighting the best unit in each category.

FORMAT: editorial

PAGE DIMENSIONS: 8 × 10 in

DESIGN FOCUS: use (land and water)

handheld make and model

unit features

product review, source, and rating

Garmin GPSMAP® 60CSx

Operation & Memory
2 AA 1.5 hr
USB & Serial
64 MB microSD card

Screen
3.8" w x 5.6" h cm
160 x 240 pixels
256 Color TFT

Body
6.1" w x 15.5" h x 3.3" d cm
156 g (with batteries)
Waterproof IPX7

Features
Electronic compass
Barometric altimeter
Geocaching
Turn by turn navigation
Custom POIs
Trip computer
Outdoor GPS Games
Hunt/fish calendar
Sun and moon
Tide tables
Area calculation
Picture and video player
Voice recorder

Navigation & Mapping

Receiver
High-sensitivity
12 channels
WAAS/EGNOS enabled
SRF powered

Tracking & Logging
190 waypoints
50 routes
10,000 points, 20 saved tracks

Maps
Preloaded basemap
Ability to add maps
BlueChart compatible

"The unit strikes the perfect balance between compact and capable."
—Outdoor Gear Magazine
★★★★☆

Garmin GPSMAP® 76Cx

Operation & Memory
2 AA 1.5 hr
USB & Serial Connections
128 MB microSD card

Body
6.9" w x 15.7" h x 3.0" d cm
218 g (with batteries)
Waterproof IPX7 Floats

Screen
4.1" w x 5.6" h cm
160 x 240 pixels
256 Color Transflective TFT

Features
Electronic compass
Barometric altimeter
Geocaching
Turn by turn navigation
Custom POIs
Trip computer
Outdoor GPS Games
Hunt/fish calendar
Sun and moon
Tide tables
Area calculation
Picture and video player
Voice recorder

Navigation & Mapping

Receiver
High-sensitivity
12 channels
WAAS/EGNOS enabled
SRF powered

Tracking & Logging
1000 waypoints
50 routes
10,000 points, 20 saved tracks

Maps
Preloaded basemap
Ability to add maps
BlueChart compatible

"For those who want it all, the Garmin GPSMap 76Cx is the premiere marine-friendly handheld."
—EMS
★★★★☆

page heading showing the primary use of the unit

product photo and physical specs

navigation and mapping specs

Direction 2

Editorial spread for an outdoor magazine focused on back country units.

FORMAT: editorial

SPREAD DIMENSIONS: 22 X 10 in

DESIGN FOCUS: back country units within a brand; matrix comparisons

FINDING THE PERFECT HANDHELD GPS FOR YOUR BACK COUNTRY ADVENTURES

In the back country, accuracy and navigation are key. These units from Garmin have high sensitivity receivers and range from units that are fully loaded with features to ones that are affordable and focused on the essentials.

Our picks come equipped with the a compass and barometric altimeter so you can always find your way when you're navigating unfamiliar terrain.

	OREGON 400T	GPSMAP 60CSX	ETREX SUMMIT
Operation & Memory	2 AA (NIMH or Lithium) 16 hrs USB & NMEA 0183 890 MB built-in (accepts microSD card)	2 AA 18 hrs USB & Serial 64 MB microSD card	2 AA 14 hrs USB 24 MB built-in
Receiver	High-sensitivity 12 channels WAAS/EGNOS enabled SIRF powered	High-sensitivity 12 channels WAAS/EGNOS enabled SIRF powered	High-sensitivity 12 channels WAAS/EGNOS enabled
Tracking & Logging	1000 waypoints 50 routes 10,000 points 200 saved tracks	1000 waypoints 50 routes 10,000 points 20 saved tracks	500 waypoints 50 routes 10,000 points 10 saved tracks
Maps	Pre-loaded basemap Ability to add maps BlueChart compatible	Pre-loaded basemap Ability to add maps BlueChart compatible	Pre-loaded basemap Ability to add maps
	HIKING GEOCACHING MULTI-SPORT	HIKING GEOCACHING MULTI-SPORT	HIKING GEOCACHING
	£499.99	£329.99	£199.99

Layouts

Direction 3

GPS product cards that allow for side by side unit comparisons. Units are grouped into one of three levels: basic, intermediate, and advanced.

FORMAT: cards and folder

DIMENSIONS: 4 x 6 in

DESIGN FOCUS: level, use, and feature comparisons



Garmin GPSMAP® 60CSx

Garmin GPSMAP® 60CSx		
Display	3.8w x 5.6h cm 160 x 240 pixels 256 Color TFT	size resolution type
Body	6.1w x 15.5h x 3.3d cm 156g (with batteries) Waterproof IPX7	dimensions weight construction
Operation	2AA 18hrs USB & Serial 64MB microSD card	power interface memory

Features

Navigation & Mapping	
Receiver	High-sensitivity, 12 channels WAAS/EGNOS enabled, SiRF powered
Tracking & Logging	1000 waypoints 50 routes 10,000 points, 20 saved tracks
Maps	Preloaded basemap Ability to add maps

Best uses | Hiking | Geocaching | Multi-sport

£329.99

Advanced

These units are high-performing
and packed full of features.

Garmin eTrex Summit® HC



Physical Specs

Display	3.3w x 4.1h cm 176 x 220 pixels 256 Color TFT	size resolution type
Body	5.6w x 10.7h x 3.0d cm 156g (with batteries) Waterproof IPX7	dimensions weight construction
Operation	2AA 14hrs USB 24MB Built-in	power interface memory



Features

Navigation & Mapping

Receiver	High-sensitivity, 12 channel WAAS/EGNOS enabled
Tracking & Logging	500 waypoints 50 routes 10,000 points, 10 saved tracks
Maps	Preloaded basemap Ability to add maps

Electronic compass
Barometric altimeter
Geocaching
Turn by turn navigation
Custom POIs
Trip computer
Outdoor GPS Games
Hunt/fish calendar
Sun and moon
Tide tables
Area calculation
Picture and video player
Voice recorder

Best uses Hiking | Geocaching

£199.99

Garmin GPSMAP® 76Cx



Physical Specs

Display	4.1w x 5.6h cm 160 x 240 pixels 256 Color Transflective TFT	size resolution type
Body	6.9w x 15.7h x 3.0d cm 218g (with batteries) Waterproof IPX7 Floats	dimensions weight construction
Operation	2AA 18hr USB & Serial 128MB microSD card	power interface memory



Features

Navigation & Mapping

Receiver	High-sensitivity, 12 channels WAAS/EGNOS enabled, SiRF powered
Tracking & Logging	1000 waypoints 50 routes 10,000 points, 20 saved tracks
Maps	Preloaded basemap Ability to add maps BlueChart compatible

Electronic compass
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Geocaching
Turn by turn navigation
Custom POIs
Trip computer
Outdoor GPS Games
Hunt/fish calendar
Sun and moon
Tide tables
Area calculation
Picture and video player
Voice recorder

Best uses Hiking | Geocaching

£259.99

Garmin GPSMAP® 60CSx



Physical Specs

Display	3.8w x 5.6h cm 160 x 240 pixels 256 Color TFT	size resolution type
Body	6.1w x 15.5h x 3.3d cm 156g (with batteries) Waterproof IPX7	dimensions weight construction
Operation	2AA 18hrs USB & Serial 64MB microSD card	power interface memory



Features

Navigation & Mapping

Receiver	High-sensitivity, 12 channels WAAS/EGNOS enabled, SiRF powered
Tracking & Logging	1000 waypoints 50 routes 10,000 points, 20 saved tracks
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Hunt/fish calendar
Sun and moon
Tide tables
Area calculation
Picture and video player
Voice recorder

Best uses Hiking | Geocaching | Multi-sport

£349.99

MAKING

- 26 Design
- 29 Format & structure
- 30 Colors
- 31 Typography & icons
- 32 Design features

The final design was focused on providing buyers with a method of accessing and comparing information about different units within a single brand.

The small format of the cards was chosen to reflect the handheld nature of the units. Natural colors, humanist sans-serif typography, and a strong grid structure present the information in an orderly manner while the front of the card draws the buyer in and gives them a way to connect with the environment where it's used.

The cards were designed to be double-sided so they can be turned over while comparisons are being made between models. This way, the buyer can focus on the information describing the units being considered.

The front of the card shows a close-up view of the unit and highlights key qualities to provide a quick overview of the unit.

The back of the card shows the unit and lists the physical specs, navigation and mapping specs, and features. It also indicates where the unit can be used (land, road, and/or water) and lists the activities the unit is best for. The features list is the same on every card, showing the features the unit has in white. This way it is easy to see which features are gained and lost from unit to unit and how the change affects the price.

Garmin eTrex Summit® HC

Physical Specs

Display	3.3w x 4.1h cm 176 x 220 pixels 256 Color TFT	size resolution type
Body	5.6w x 10.7h x 3.0d cm 156g (with batteries) Waterproof IPX7	dimensions weight construction
Operation	2AA 14hrs USB 24MB Built-in	power interface memory



Land Water Road





Garmin eTrex Summit® HC

INTUITIVE LIGHT-WEIGHT EASY TO USE

Navigation & Mapping

Receiver	High-sensitivity, 12 channels WAAS/EGNOS enabled
Tracking & Logging	500 waypoints 50 routes 10,000 points, 10 saved tracks
Maps	Preloaded basemap Ability to add maps

Features

- Electronic compass
- Barometric altimeter
- Geocaching
- Turn by turn navigation
- Custom POIs
- Trip computer
- Outdoor GPS Games
- Hunt/fish calendar
- Sun and moon
- Tide tables
- Area calculation
- Picture and video player
- Voice recorder

Best uses: Hiking | Geocaching

£199.99

Garmin GPSMAP® 76Cx



Physical Specs

Display	4.1w x 5.6h cm	size
	160 x 240 pixels	resolution
	256 Color Transflective TFT	type
Body	6.9w x 15.7h x 3.0d cm	dimensions
	218g (with batteries)	weight
	Waterproof IPX7 Floats	construction
Operation	2AA 18hr	power
	USB & Serial	interface
	128MB microSD card	memory



Garmin GPSMAP® 76Cx

Navigation & Mapping

Receiver	High-sensitivity, 12 channels
	WAAS/EGNOS enabled, SiRF powered
Tracking & Logging	1000 waypoints
	50 routes
	10,000 points, 20 saved tracks
Maps	Preloaded basemap
	Ability to add maps
	BlueChart compatible

Features

- Electronic compass
- Barometric altimeter
- Geocaching
- Turn by turn navigation
- Custom POIs
- Trip computer
- Outdoor GPS Games
- Hunt/fish calendar
- Sun and moon
- Tide tables
- Area calculation
- Picture and video player
- Voice recorder

MARINE FRIENDLY

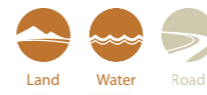
Best uses Hiking | Geocaching | Fishing | Boating

£259.99

Garmin GPSMAP® 60CSx

Physical Specs

Display	3.8w x 5.6h cm	size
	160 x 240 pixels	resolution
	256 Color TFT	type
Body	6.1w x 15.5h x 3.3d cm	dimensions
	156g (with batteries)	weight
	Waterproof IPX7	construction
Operation	2AA 18hrs	power
	USB & Serial	interface
	64MB microSD card	memory



Garmin GPSMAP® 60CSx

Navigation & Mapping

Receiver	High-sensitivity, 12 channels
	WAAS/EGNOS enabled, SiRF powered
Tracking & Logging	1000 waypoints
	50 routes
	10,000 points, 20 saved tracks
Maps	Preloaded basemap
	Ability to add maps
	BlueChart compatible

Features

- Electronic compass
- Barometric altimeter
- Geocaching
- Turn by turn navigation
- Custom POIs
- Trip computer
- Outdoor GPS Games
- Hunt/fish calendar
- Sun and moon
- Tide tables
- Area calculation
- Picture and video player
- Voice recorder

RUGGED
LIGHT-WEIGHT
POWERFUL

Best uses Hiking | Geocaching | Multi-sport

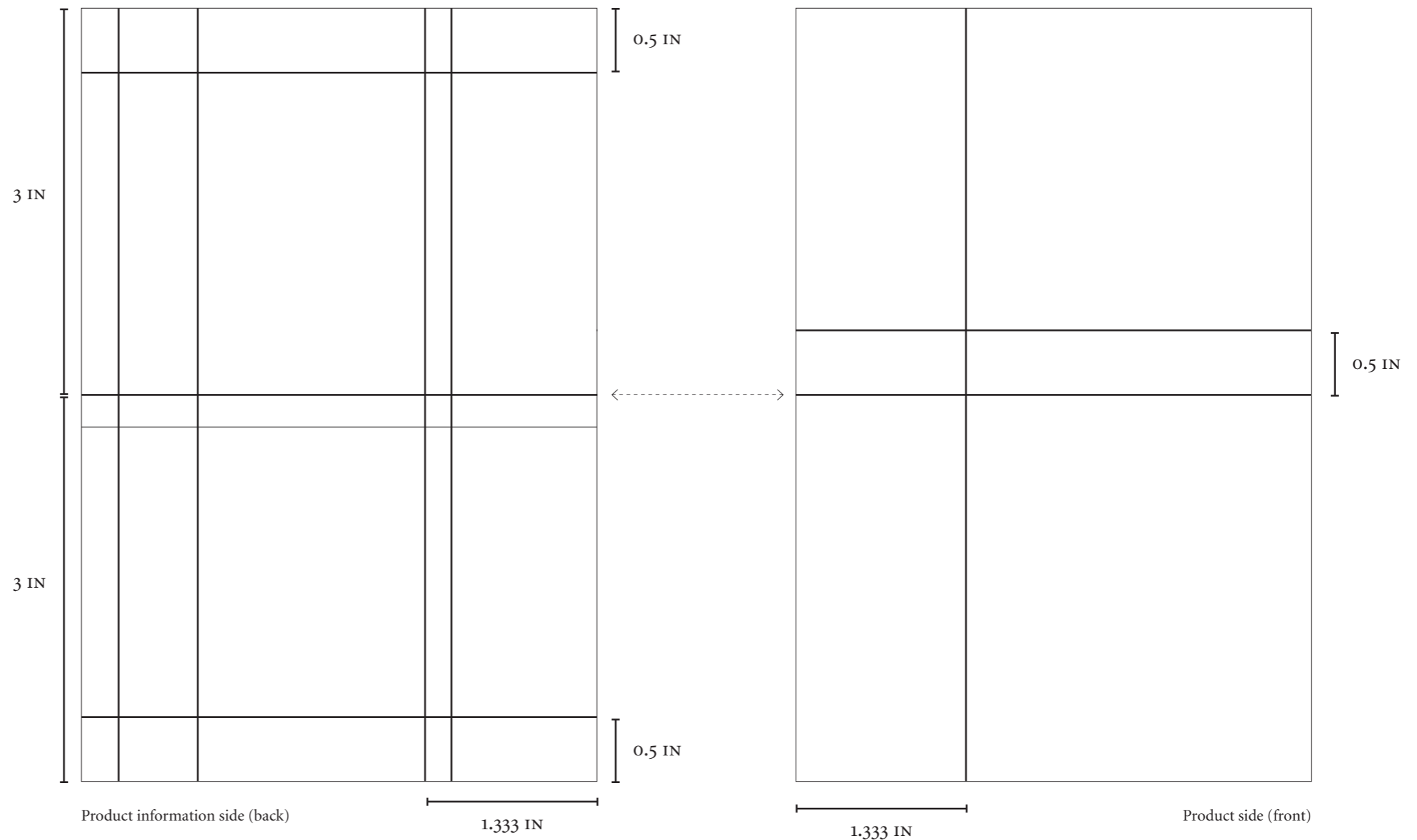
£349.99

Format & structure

Format

Double-sided cards 4 IN. W X 6 IN. H

The final piece was designed to be 4 inches wide by 6 inches high. The back panel of the card was divided in half vertically to create two spaces: one for the physical specs and one for information related to navigation and mapping. The right-hand column was created by dividing the card into thirds horizontally. This structure is carried over to the front of the card providing a space for the unit name, product image, photography, and descriptive text.



Colors & photography



General colors

WHITE

■ C34, M30, Y60, K0

■ C27, M30, Y50, K40

Level of unit

■ C37, M21, Y73, K1

basic

■ C14, M28, Y87, K0

intermediate

■ C28, M62, Y100, K0

advanced

The darker level colors are achieved with a blending mode set to multiply.

Soft, earthy colors and full color photographs of people exploring and enjoying the outdoors describe the environment where handheld units are commonly used to give buyers a way to connect with units. Shades of green, yellow, and orange are used to describe the level of the unit: basic, intermediate, or advanced, respectively.



Typography & icons

The copy is set in **Myriad Pro**, which has a good range of weights, is clear and easy to read, and holds up well at a small size. I wanted a clean typeface with a humanist touch to capture the technical aspects of the units as well as the natural environment where it is used.

Unit name
18 point regular & bold

Section heading
10 point bold

Spec list heading
7/10 point bold

Spec list
7/10 point regular

Best uses
7 point bold & regular

Garmin eTrex Summit® HC

Physical Specs		
Display	3.3w x 4.1h cm 176 x 220 pixels 256 Color TFT	size resolution type
Body	5.6w x 10.7h x 3.0d cm 156g (with batteries) Waterproof IPX7	dimensions weight construction
Operation	2AA 14hrs USB 24MB Built-in	power interface memory

Navigation & Mapping

Receiver	High-sensitivity, 12 channels WAAS/EGNOS enabled
Tracking & Logging	500 waypoints 50 routes 10,000 points, 10 saved tracks
Maps	Preloaded basemap Ability to add maps

Best uses Hiking | Geocaching

Features

- Electronic compass
- Barometric altimeter
- Geocaching
- Turn by turn navigation
- Custom POIs
- Trip computer
- Outdoor GPS Games
- Hunt/fish calendar
- Sun and moon
- Tide tables
- Area calculation
- Picture and video player
- Voice recorder

£199.99

Feature list title
10 point bold

Feature list
6.5 point regular

Price
18 point bold

Icons were used to represent the general areas of use for each unit. From the left: *land*, *water*, and *road*.

Design features

Making comparisons

These product cards allow for side by side unit comparisons.

Garmin eTrex Summit® HC		x	Sx										
<p>Physical Specs</p> <table border="1"> <tr> <td>Display</td> <td>3.3w x 4.1h cm 176 x 220 pixels 256 Color TFT</td> <td>size resolution type</td> </tr> <tr> <td>Body</td> <td>5.6w x 10.7h x 3.0d cm 156g (with batteries) Waterproof IPX7</td> <td>dimensions weight construction</td> </tr> <tr> <td>Operation</td> <td>2AA 14hrs USB 24MB Built-in</td> <td>power interface memory</td> </tr> </table>		Display	3.3w x 4.1h cm 176 x 220 pixels 256 Color TFT	size resolution type	Body	5.6w x 10.7h x 3.0d cm 156g (with batteries) Waterproof IPX7	dimensions weight construction	Operation	2AA 14hrs USB 24MB Built-in	power interface memory			
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<p>Best uses: Hiking Geocaching</p>		<p>£199.99</p>	<p>£259.99</p>	<p>£349.99</p>									

Horizontal comparisons allow the buyer to compare feature lists and evaluate the unit's physical specs as well as those related to navigation and mapping. They also allow for a quick visual evaluation of where the units can be used (land, water, or road).

Design features

Sorting

Cards can be sorted into groups that fit in best with the buyers needs.



This user is looking at units that will function well in the back country and have some advanced features. The GPSMAP 60CSx and 76Cx meet these needs and have been pulled out for further consideration, while the eTrex has been flipped over and set aside.

Garmin GPSMAP® 60CSx





Garmin GPSMAP® 76Cx

Physical Specs		
Display	4.1w x 5.6h cm 160 x 240 pixels 256 Color Transflective TFT	size resolution type
Body	6.9w x 15.7h x 3.0d cm 218g (with batteries) Waterproof IPX7 Floats	dimensions weight construction
Operation	2AA 18hr USB & Serial 128MB microSD card	power interface memory

Features

- Electronic compass
- Barometric altimeter
- Geocaching
- Turn by turn navigation
- Custom POIs
- Trip computer
- Outdoor GPS Games
- Hunt/fish calendar
- Sun and moon
- Tide tables
- Area calculation
- Picture and video player
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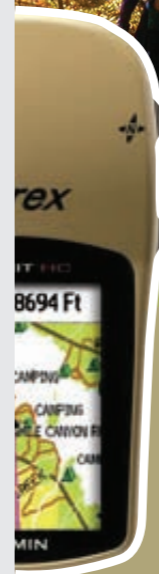
£259.99

Garmin eTrex Summit® HC

INTUITIVE LIGHT-WEIGHT EASY TO USE

£349.99

Best uses | Hiking | Geocaching | Fishing | Boating



INTUITIVE LIGHT-WEIGHT EASY TO USE

UNITS SET ASIDE



Garmin eTrex Summit® HC

**INTUITIVE
LIGHT-WEIGHT
EASY TO USE**



Garmin GPSMAP® 76Cx

**MARINE
FRIENDLY**



Garmin GPSMAP® 60CSx

**RUGGED
LIGHT-WEIGHT
POWERFUL**