

GHC 10

quick start manual



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WARNING: See the *Important Safety and Product Information* guide in the product box for product warnings and other important information.

Introduction

The GHP™ 10/10V autopilot system continuously adjusts the steering of your boat to maintain a constant heading. In addition to the basic heading-hold functionality, the GHP 10/10V autopilot system allows manual steering and several modes of automatic-steering functions and patterns.

Operate the GHP 10/10V autopilot system using the GHC™ 10 control unit. Through the GHC 10 control unit, you engage and steer, set up, and customize the GHP 10/10V autopilot system.

To install the GHP 10/10V autopilot system, including the GHC 10 control unit, use the provided installation instructions.

The GHP 10/10V and the GHC 10 are NMEA 2000®




Warnings

- **You are responsible for the safe and prudent operation of your vessel.** The GHP 10/10V is a tool that will enhance your capability to operate your boat. It does not relieve you from the responsibility of safely operating your boat. Avoid navigational hazards and never leave the helm unattended.
- Always be prepared to promptly regain manual control of your boat.
- Learn to operate the GHP 10/10V on calm and hazard-free open water.
- Use caution when operating the GHP 10/10V at high speeds near hazards in the water, such as docks, pilings, and other boats.

Manual Conventions



In this manual, the GHP 10/10V autopilot system is referred to as the autopilot, and the GHC 10 control unit is referred to as the GHC 10.

When you are instructed to select an item on the GHC 10, use the soft keys () along the bottom of the screen to select each item. Small arrows (>) in the text indicate that you should select each item in order. For example, if you see “select **Menu** > **Setup**,” press the soft key under **Menu**, then press the soft key under **Setup**.

Heading Screen—the main screen of the GHC 10. The Heading screen displays the status of the autopilot and shows your heading.

Menu Screens—screens used to initiate and adjust the steering-pattern options, and to customize the GHC 10.

Tips and Shortcuts

- Press **STBY** from any screen to place the autopilot in standby mode and return to the Heading screen.
- Press and quickly release the  **Power** button to adjust the display settings on the GHC 10 (Backlight and Color mode).
- Press and hold the  **Power** button to turn the autopilot on or off.

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GHC 10 Overview

Use the buttons on the GHC 10 to control the autopilot.



Power—press and hold to power the autopilot on and off. Press and quickly release to adjust the display settings (page 11).

Soft Keys—used to steer the autopilot, navigate the menus, and select items on the GHC 10.

- Press a soft key to perform the action indicated directly above it.
- Typically, you use the left soft key to engage the autopilot or move back one screen, use the right soft key to navigate through menu screens, and use the center soft key to select highlighted items and open the menu.

STBY (Standby)—used to place the autopilot in standby mode. Press **STBY** to stop the autopilot from any menu screen, at any time.



CAUTION: Be ready to regain manual control of the boat when you place the autopilot in standby mode.

Using the GHC 10

Use the GHC 10 to engage and manually steer the autopilot. In addition to steering the autopilot, use the GHC 10 to begin automatic steering functions and to customize the autopilot.

Basic Operation

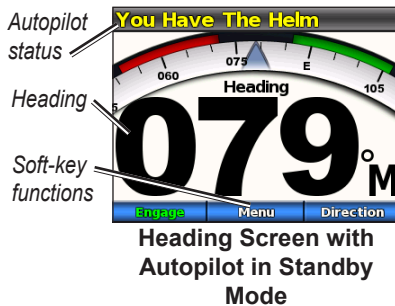
The Heading screen displays the status of the autopilot and the heading. Use the soft keys to engage the autopilot and manually adjust the heading from the Heading screen.

Understanding the Heading Screen with the Autopilot in Standby Mode

When you power the autopilot on, the system starts in standby mode, with the Heading screen displayed on the GHC 10. When in standby mode, the autopilot does not steer the boat—you **are responsible for the helm**. When in standby mode, the top of the Heading

screen displays “You Have The Helm” in yellow, and your heading is shown in the center.

When in standby mode, you can engage the autopilot, adjust the settings from the menu, or specify the transmission direction of your boat (forward or reverse) by using the soft keys.



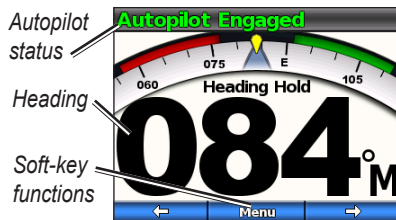
To engage the autopilot:

Press the soft key labeled **Engage**.

Understanding the Heading Screen with the Autopilot Engaged

When you engage the autopilot, the autopilot takes control of the helm and steers the boat to maintain your heading. The top of the Heading screen displays “Autopilot Engaged” in green, and your heading is shown in the center. You can use the soft keys to adjust the autopilot heading manually or to adjust the settings from the menu.

You can steer the boat manually from the helm while the autopilot is engaged. The autopilot does not steer the boat while you have the helm, and the message “You Have the Helm” flashes at the top of the screen in yellow. If you manually maintain a specific heading for a few seconds, the autopilot resumes control of the new heading, and the message “Autopilot Engaged” is displayed at the top of the screen.



Heading Screen with Autopilot Engaged

Notes:

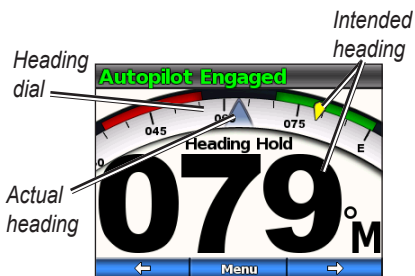
- When the autopilot is steering a pattern ([page 7](#)), the shape and range of the pattern is shown on the right side of the Heading screen.
- Some soft keys may appear differently if you have step turning enabled. For more information on step turning, see [page 11](#).

To place the autopilot in standby mode:

Press the **STBY** (standby) button on the GHC 10.

Manually Adjusting the Heading

When the autopilot is engaged, use the left (←) and right (→) soft keys to manually adjust the heading. When you manually adjust the heading, the heading dial on the Heading screen displays your actual heading while the autopilot steers the boat to the intended heading. The intended heading is indicated by a yellow marker on the heading dial and is displayed numerically in the center of the Heading screen.



Manually Adjusting the Heading



NOTE: If the autopilot is steering a pattern (page 7), manually adjusting the heading cancels the pattern.

Opening the Menu

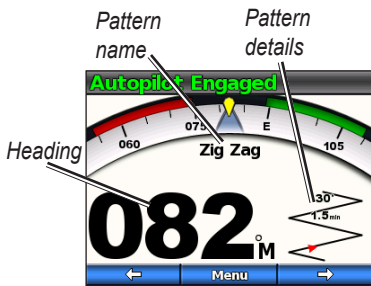
From the Heading screen, the center soft key opens the menu where you can start pattern steering, customize the GHC 10, and configure the autopilot.

When you select **Menu** from the Heading screen, the first option listed depends on the current state of the autopilot:

- If you have the helm or if the autopilot is maintaining the heading, the first menu option becomes a shortcut to re-engage the most recently used pattern.
- If the autopilot is steering a pattern, the first menu option becomes a shortcut to adjust the settings for the current pattern.

Using Pattern Steering

The autopilot can steer the boat in preset patterns for fishing, and can also perform other specialty maneuvers such as U-turns and man-overboard retrieval. Use the GHC 10 to begin pattern steering.



Heading Screen When Using Pattern Steering

Pattern steering is not based on GPS, and can be used without a GPS unit connected to the autopilot.

To cancel the pattern, you can physically steer the boat, use the soft keys to manually adjust the heading, or press the **STBY** button.



CAUTION: You are responsible for the safe operation of your boat. Do not begin a pattern until you are certain that the water is clear of obstacles.

To begin pattern steering:

1. From the Heading screen, select **Menu > Pattern Steering**, and choose a pattern.
2. Select **Engage** to begin the pattern with the default values.

OR

Select **Setup** to adjust the values of the pattern.

3. Choose the direction of the pattern if prompted.



NOTE: If the pattern has only one setting, the setting name appears instead of **Setup**. If no settings are available for the pattern, **Setup** will not be available.

Zigzag

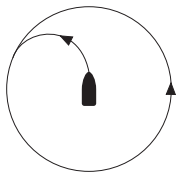


The Zigzag pattern steers the boat from port to starboard and back, over a specified time and angle, across your current heading. The default values are 1.5 minutes and 30°.

Circles



The circle pattern steers the boat in a constant circle, in a specified direction and at a specified time interval. The default value create a circle that takes 5 minutes to complete.



The autopilot positions the boat so that the circle pattern is centered on the point at which you engage the pattern.

U-Turn



The U-turn pattern turns the boat around 180° and maintains the new heading.

Man Overboard



The Man Overboard pattern turns the boat around with the intent of running alongside the point where the Man Overboard pattern was initiated. The boat must be below planing speed when using this pattern.



CAUTION: The Man Overboard pattern is not determined by GPS and is affected by wind, current, and speed. Be ready to adjust the throttle and take the helm to avoid harm to a person in the water.

Using GPS Steering

The autopilot can steer the boat along a route defined by your GPS device, or in preset patterns based on a GPS location (waypoint). To use GPS steering, you must have an optional GPS device connected to the autopilot. For more information on connecting an optional GPS device, see the *GHP 10/10V Installation Instructions*.

The GPS steering patterns are based on a GPS waypoint to which you are actively navigating using your optional GPS unit. This waypoint is called the active waypoint. For example, when you begin a Search GPS pattern, the autopilot first drives your boat to the active waypoint and then circles the active waypoint in a spiral pattern.

To cancel a GPS steering pattern, you can physically steer the boat, use the soft keys to manually adjust the heading, or press the **STBY** button.

To begin a GPS pattern:

1. Begin navigating to a waypoint on your GPS device.
2. From the Heading screen, select **Menu > GPS Steering** and choose a GPS pattern.
3. Select **Engage** to begin the GPS pattern with the default settings.
OR
Select **Setup** to adjust the settings for the GPS pattern (if available).
4. Choose the direction of the pattern if prompted.



NOTE: If the pattern has only one setting, the setting name appears instead of **Setup**. If no settings are available for the pattern, **Setup** will not be available.



CAUTION: You are responsible for the safe operation of your boat. Do not begin a GPS route or a GPS pattern until you are certain that the water is clear of obstacles.

Orbit



The Orbit GPS pattern steers the boat in a continuous circle around the active waypoint.

The size of the circle is defined by your distance from the active waypoint when you begin the Orbit GPS pattern. There are no settings to adjust.

Cloverleaf



The Cloverleaf GPS pattern steers the boat to repeatedly pass over an active waypoint.

When you begin the Cloverleaf pattern, the autopilot drives the boat toward the active waypoint and then begins the Cloverleaf GPS pattern when appropriate. The default settings create a cloverleaf pattern that turns the boat at a range of 300 m from the active waypoint.

Search



The Search GPS pattern steers the boat in increasingly larger circles (a spiral pattern)

outward from the active waypoint. When you begin the Search GPS pattern, the autopilot drives the boat to the active waypoint and then begins the pattern. The default setting spaces the circles 20 m apart.

Route To

The autopilot steers the boat according to a route defined on your Garmin chartplotter or other compatible GPS device.


To follow a GPS route:

1. On your chartplotter or GPS device, create a route and begin navigating the route according to the directions provided with the chartplotter or the GPS device.
2. On the GHC 10, from the Heading screen, select **Menu > GPS Steering > Route To**.

Customizing the GHC 10

You can customize the display settings, the manual steering method, and other system settings.

Changing the Display Settings

To customize the display settings, press and quickly release the  **Power** button

Color Mode—select **Day** or **Night** colors.

Backlight—set the backlight level by using the soft keys to adjust the slider.

Network Sharing—choose to share color mode and backlight settings with other GHC 10 (and GMI™ 10) devices across the NMEA 2000 network.

Changing the Manual Steering Mode

You can manually steer the autopilot in two ways, by rudder or by step. The rudder steering mode (default) turns the

boat in increments of 1° when you press and release the steering soft key, and steers the boat when you hold down the steering soft key. The step steering mode turns the boat in increments of 1° when you press and release the steering soft key, and in specified increments when you hold down the steering soft key.



Rudder Steering Mode



Step Steering Mode

To change the manual steering mode:

1. From the Heading screen, select **Menu > Steering Mode**.
2. Select **Steering Mode** to alternate between **Rudder** and **Step** steering modes.

To adjust the Step steering increments:

1. From the Heading screen, select **Menu > Steering Mode**.
2. Select **Step Turn Size**.

Changing the GHC 10 System Options

To change system options on the GHC 10, from the Heading screen select **Menu > Setup > System**.

Units—set the units of measure used to represent different values displayed on the GHC 10.

- **System Units**—select **Statute** (mi, ft), **Metric** (km, m), or **Nautical** (nm, ft) to define the units of measure.
- **Helm Displacement**—select **Cubic Inches** (cu in) or **Cubic Centimeters** (cc).

Heading—set the reference used in calculating heading information.

- **Magnetic**—sets magnetic north as the heading reference.
- **True**—sets true north as the heading reference.

Variance—only available when the heading is set to **True**. You can adjust the variance from true north.

- **Auto**—automatically sets true north as the heading reference
- **Change Variance**—manually adjust the heading reference.

Beeper—set when the GHC 10 makes audible sounds.

Auto Power—select if the unit powers on with the NMEA 2000 network.

Language—select the on-screen language.

System Information—view unit software information.

Factory Defaults—reset the unit to factory defaults.



NOTE: If the GHC 10 is in demo mode, this setting appears as **End Demo**. Select **End Demo** to access the Factory Defaults setting.

Configuring a GHC 10 Remote Control

To configure an optional remote control on the GHC 10, from the Heading screen, select **Menu > Setup > Remote**.

You can connect one optional GHC 10 remote control to a GHC 10.

Search for Remote—allow the GHC 10 to search for an optional GHC 10 remote control.

Disconnect Remote—(only available when a remote control is connected) disconnect a connected remote control.

Button (1–3) Action—define the functions of the three dynamic buttons on a connected remote control. Choose from the options listed in the Remote Button Action Table.

Button Function	Page Reference
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Circles	Page 8
U-Turn	Page 8
Route To	Page 10
Orbit	Page 10
Cloverleaf	Page 10
Search	Page 10
Transmission Direction	Page 4

Remote Button Action Table

Notes:

- If you assign **Transmission Direction** to a button on the remote control, the autopilot must be in standby mode to change the direction (forward or reverse).
- If you assign a pattern to a button on the remote control, remember that you are responsible for the safe operation of your boat. Do not begin a pattern until you are certain that the water is clear of obstacles.

Configuring the GHC 10 User Settings

Though the autopilot is configured for your boat during installation, you may find it necessary to adjust it slightly depending on sea conditions. You may also disable the Shadow Drive if you prefer.

To access the user autopilot configuration, select **Menu > Setup > User Autopilot Configuration**.

Shadow Drive™—disable or re-enable the Shadow Drive.



CAUTION: On a GHP 10 autopilot system, if you disable the Shadow Drive, you will need to place the autopilot on standby (**STBY**) to manually control the helm. Use caution when disabling the Shadow Drive.

On a GHP 10V autopilot system, if you disable the Shadow Drive, any

adjustment to the helm completely disengages the autopilot.

Shadow Drive Sensitivity—on a GHP 10 autopilot system, adjust this setting if the Shadow Drive is being tripped falsely or not activating properly. If the autopilot disengages while the helm is steady, decreasing this value may help. If the Shadow Drive does not disengage the autopilot correctly when you take the helm, increasing this value may help. This setting does not apply to a GHP 10V autopilot system.

Sea State Filtering—adjust this setting to slow the heading response down and reduce rudder activity. Leave this setting at 0% under normal operating conditions, and increase it when operating the autopilot in choppy seas at low speeds. Increasing the Sea State Filtering setting in choppy conditions will save wear on your autopilot system.

Appendix

Configuring the Autopilot

The autopilot is configured for your boat during the installation process, and the main autopilot configuration settings should rarely need to be adjusted. If the autopilot is not working correctly, contact your installer.

For advanced autopilot configuration, see the GHP 10/10V Installation Instructions.



CAUTION: Changes made to the configuration of the autopilot directly affect the behavior of the autopilot, and should be made by an authorized installer. Unnecessary adjustments of the autopilot configuration may render the autopilot inoperable.

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Declaration of Conformity (DoC)

Hereby, Garmin, declares that this GHP 10/10V autopilot system is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

To view the full Declaration of Conformity, see the Garmin Web site for your Garmin product:

www.garmin.com/products/GHP10/.

Click **Manuals**, and then select the **Declaration of Conformity** link.

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