Garmin 400-Series Overview – www.GPS430.com

The Garmin 400-series of GPS receivers includes variants of the 400, 420, and 430 models. Taken together, they have become the most popular panel-mounted GPS in aviation. In this document, when we speak of the 430, we are really speaking generically of the entire 400-series line.

The Garmin 430 (400-series) has become so wildly popular with pilots primarily due to the clarity of its display screen and its well-designed user interface. The button functions have become standard across the 400-series, 500-series, and even into the revolutionary G1000 system. Pilots who learn the buttonology and chapter/page layout of the 430 will find transitioning to the 530 or G1000 systems to be very easy.

WAAS capability was first introduced into the 430 in 2006. Making this capability more obvious, Garmin upgraded the name of the unit from GNS 430 to GNS 430W. Earlier units are software upgradeable for WAAS support. For more information on WAAS, see “What’s WAAS?” in the Resources web page.

The GNS 430 is a three part avionics package that includes a communication radio, a navigation radio (referred to as VLOC), and a GPS receiver. The database is updated by Jeppesen every 28 days and resides on a slide-in RAM card in the unit’s left side.

Controls on the unit’s left side are used to operate the radios. Controls on the right side (and the buttons below the screen) are used to operate the GPS functions.

The 430 displays dozens of screens. New users may become disoriented until they get comfortable navigating through them. The maze of display screens are best thought of in terms of a book containing chapters and pages within the chapters. Thus, each screen that is shown is a page in a particular chapter.

There are four basic chapters: NAV, WPT, AUX, and NRST. The name of the current chapter is shown in each screen at the bottom right. Adjacent to it will be a series of boxes. These indicate how many pages exist in the current chapter. One box will be white. This indicates which page of the chapter is currently shown. In the image above, the third page of the NAV chapter is
displayed. Understanding this layout and being able to instantly know “where” you are (in terms of chapter/page) is crucial to the use of the Garmin 430.

**Concentric Knobs**

At the bottom left and right of the unit are two pairs of concentric knobs. These can also be a source of frustration for new users until they learn which knobs do what. The knobs on the left are used to tune the radios and the knobs on the right are used in a wide variety of GPS functions. It is easy to learn the left from the right – the confusion comes in when a choice must be made between the outer or inner concentric knobs.

First, think of the knobs not as outer or inner, but as large or small. Next, consider that the large knob makes relatively large changes and the smaller knob makes smaller changes.

In terms of the left-hand radio knobs, the large knob changes the frequency numbers to the left of the decimal. The small knob changes the numbers to the right of the decimal. Thus, the large knob changes the (larger) whole numbers and the small knob changes the (smaller) decimal fractions.

The right-hand knobs control a lot more options. One of their main functions is to dial in the letters in airport and other waypoint names. Since the 430 does not have an alphabetic keyboard, the knobs are used to select letters and numbers. In this type of operation, the large knob moves the cursor and the small knob rotates through the alphabet allowing you to select a letter or number.

**Customizing the Screen**

During flight, most of your time will be spent in the first two pages of the NAV chapter. We’ll refer to these as NAV/1 (CDI) and NAV/2 (moving map).

The six fields shown below the CDI in NAV/1 can be changed from their defaults by pressing the MENU button. The default layout, however, is a good choice.

In the NAV/2 page, there are several ways you can change what you see.

1. Declutter the map through four stages with the CLR button.
2. Toggle the fields on the right on/off using the MENU button, “Data Fields” option.
3. Change the fields on the right using the MENU button, “Change Fields” option.
4. Change the data that is displayed in the map based on how it is zoomed with the RNG button. You will want to do this. Use the MENU button, “Setup Map” option.