Components of the HSI (Horizontal Situation Indicator)

The HSI overlays GPS and VOR/LOC courses onto a heading indicator. It functions as a standard HSI.

Vertical Compass Presentation- Presents all 360° with your aircraft in the center. Automatically sets correct magnetic heading before flight using magnetometer information.

Heading- The present magnetic heading is displayed in large numbers at the top.
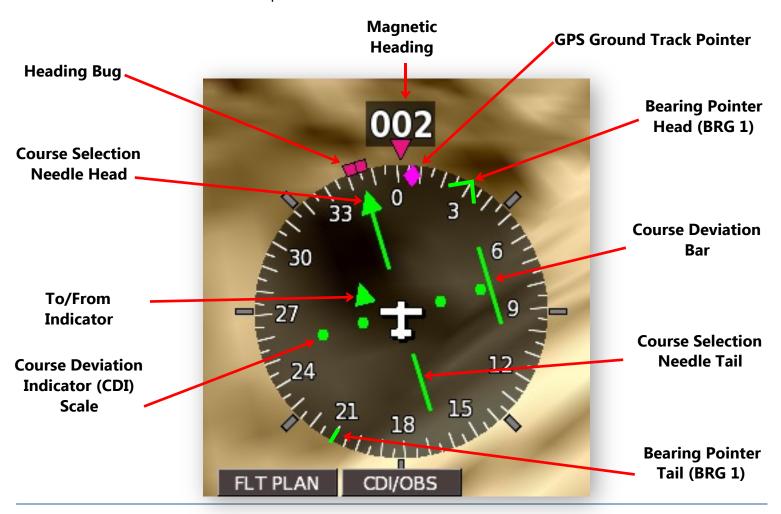
Heading Bug- Small rectangle, either white or dark magenta, used as a reminder and to control the lateral autopilot in heading mode. Controlled by the Left Knob.

Track Pointer- Small magenta diamond that points in the direction of the current ground track.

Bearing Pointers- Independent of the course pointer and always point at their corresponding nav source. BRG 1 has a solid head and single tail/shaft. BRG 2 has a split head and double tail/shaft.

Course Selection Needle- Represents active nav course. The center segment of the GPS or VOR/LOC course needle, or Course Deviation Bar, moves along a CDI scale when in range.

To/From Indicator: Green triangle appears when tracking a VOR radial; TO points toward Course Selection Pointer head; From points toward Course Selection Pointer tail.

Setting and Using the HSI

Press OBS/CDI softkey to access Navigation Source softkeys, shown here.

The **BRG softkeys** display GPS and VOR/LOC (NAV) choices based on installed navigation equipment. The bearing pointers simply point to the selected navaid or waypoint programmed into the navigation equipment. BRG 1 is a single shafted arrow and BRG 2 is displayed as a double-shafted arrow. Primary VOR/LOC (NAV1) needles are white and GPS needles are green. If two navigation radios are installed, NAV2 is cyan.

Select the OBS course for a NAV needle using the OBS selector knob (Right Knob).

The GPS and NAV softkeys are important. They select the active **Navigation Source**. GPS is self-explanatory and NAV is a VOR/LOC receiver that is wired to the EFIS system via serial link. If an aircraft has two GPS or nav radio units wired to the EFIS, there will be one softkey for each (GPS1 and GPS2, NAV1 and NAV2). **The active Navigation Source is underlined in green, appears as a Course Selection Needle on the HSI, and drives the autopilot in ENAV or GNAV mode.** In the screenshot above, GPS is selected and the course selection needle is displayed on the HSI, showing the aircraft slightly right of course but on a nice shallow intercept angle. Note that the selected course of each Nav Source is displayed on top of the softkey label. Paying attention to this course helps avoid "surprise" turns when the nav source is selected to drive the autopilot.

This photo shows how the HSI and ILS needles work together. The white HSI Course Needle is the Localizer, also displayed as a yellow vertical needle nearly centered on the crosshairs. The green Bearing Pointer points to the GPS waypoint, which in this case is the airport.