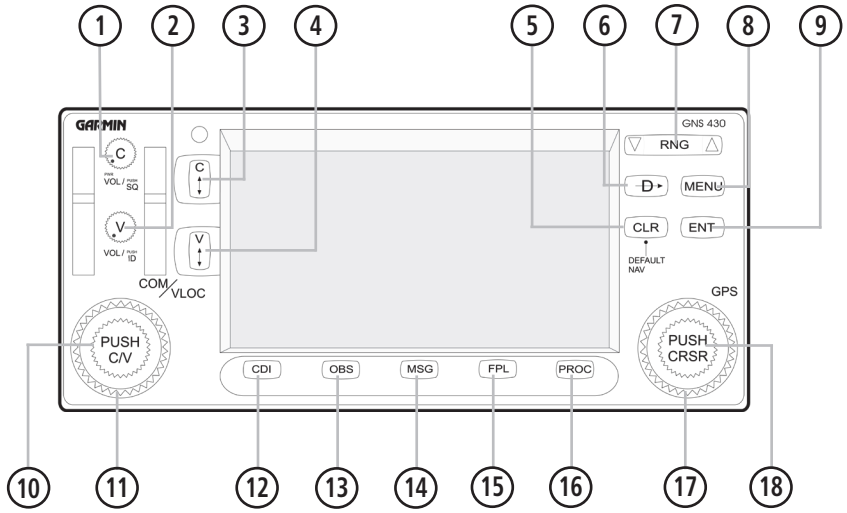
GARMIN

GNS 430/430A

Quick Reference



1	COM Power/Volume	7	RNG (map range)	13	OBS
2	VLOC Volume	8	MENU	14	MSG (message)
3	COM Flip-flop	9	ENT (enter)	15	FPL (flight plan)
4	VLOC Flip-flop	10	Small left knob	16	PROC (procedures)
5	CLR (clear)	11	Large left knob	17	Large right knob
6	Direct-to	12	CDI	18	Small right knob

LEFT-HAND KEYS AND KNOBS

The **COM Power/Volume** Knob controls unit power and communications radio volume. Press momentarily to disable automatic squelch control.

The **VLOC Volume** Knob controls audio volume for the selected VOR/Localizer frequency. Press momentarily to enable/disable the ident tone.

The large **left** knob is used to tune the megahertz (MHz) value of the standby frequency for the COM transceiver or the VLOC receiver, whichever is currently selected by the tuning cursor.

The small **left** knob is used to tune the kilohertz (kHz) value of the standby frequency for the COM transceiver or the VLOC receiver, whichever is currently selected by the tuning cursor. Press this knob momentarily to toggle the tuning cursor between the COM and VLOC frequency fields.

The **COM Flip-flop** Key is used to swap the active and standby COM frequencies. Press and hold to select emergency channel (121.500 MHz).

The **VLOC Flip-flop** Key is used to swap the active and standby VLOC frequencies (i.e., make the selected standby frequency active).

RIGHT-HAND KEYS AND KNOBS

The **RNG** Key allows the pilot to select the desired map range. Use the up arrow of the key to zoom out to a larger area, or the down arrow to zoom in to a smaller area.

The **Direct-to** Key provides access to the direct-to function, which allows the pilot to enter a destination waypoint and establishes a direct course to the selected destination.

The **MENU** Key displays a context-sensitive list of options. This options list allows the pilot to access additional features or make settings changes which relate to the currently displayed page.

The **CLR** Key is used to erase information, remove map detail, or to cancel an entry. Press and hold the **CLR** key to immediately display the Default NAV Page.

The **ENT** Key is used to approve an operation or complete data entry. It is also used to confirm information, such as during power on.

The large **right** knob is used to select between the various page groups: NAV, WPT, AUX, or NRST. With the on-screen cursor enabled, the large **right** knob allows the pilot to move the cursor about the page. The large **right** knob is also used to move the target pointer right (turn clockwise) or left (counterclockwise) when the map panning function is active.

The small **right** knob is used to select between the various pages within one of the groups listed above. Press this knob momentarily to display the on-screen cursor. The cursor allows the pilot to enter data and/or make a selection from a list of options. The small **right** knob is also used to move the target pointer up (turn clockwise) or down (counterclockwise) when the map panning function is active.

BOTTOM ROW KEYS

The **CDI** Key is used to toggle which navigation source (GPS or VLOC) provides output to an external HSI or CDI.

The **OBS** Key is used to select manual or automatic sequencing of waypoints. Pressing the **OBS** Key selects OBS mode, which retains the current 'active to' waypoint as the navigation reference even after passing the waypoint (i.e., prevents sequencing to the next waypoint). Pressing the **OBS** Key again returns the unit to normal operation, with automatic sequencing of waypoints. When OBS mode is selected, the pilot may set the desired course to/from a waypoint using the 'Select OBS Course' pop-up window, or an external OBS selector on the HSI or CDI.

The **MSG** Key is used to view system messages and to alert the pilot to important warnings and requirements.

The **FPL** Key allows the pilot to create, edit, activate, and invert flight plans, as well as access approaches, departures, and arrivals. A closest point to flight plan feature is also available from the **FPL** Key.

The **PROC** Key allows the pilot to select and remove approaches, departures, and arrivals from the flight plan. When using a flight plan, available procedures for the departure and/or arrival airport are offered automatically. Otherwise, the pilot may select the desired airport, then the desired procedure.

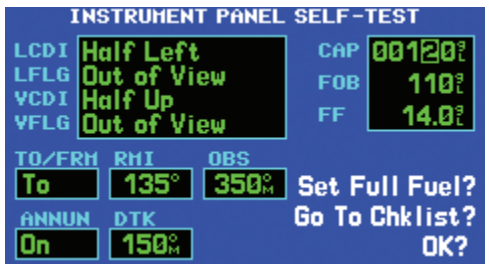
TO POWER ON THE GNS 430

1) Turn the **COM Power/Volume** Knob clockwise to turn the unit power on and set the desired radio volume.
2) A welcome page appears briefly while the unit performs a self test, followed sequentially by the Unit Type Page and the Software Versions Page. Then (depending on configuration) the Weather Page, the Traffic Page, the Aviation Data Page, the Land/Terrain/Obstacles Database Page, and the Situational Awareness Page are sequentially displayed.

3) Once the self-test concludes, the Database Confirmation Page is displayed, showing the effective and expiration dates of the Jeppesen database on the NavData® card. Press the **ENT** Key to acknowledge the Database Page and proceed to the Instrument Panel Self-test Page.

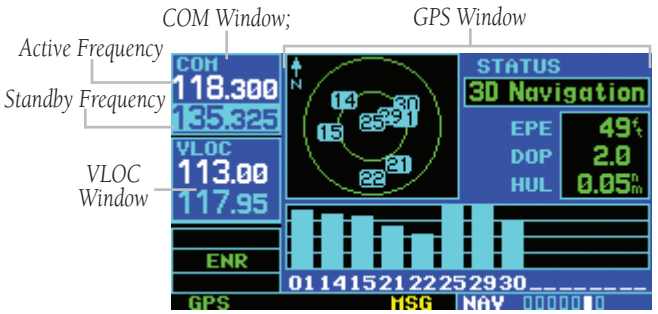


4) The Instrument Panel Self-test Page allows the pilot to verify that the GNS 430 is communicating properly with in-panel instruments. Compare on-screen indications with the information depicted on connected instruments, such as the CDI, HSI, RMI, and/or external annunciators. After verifying proper operation, press the **ENT** Key to display the Satellite Status Page.



SCREEN LAYOUT (WINDOWS)

The GNS 430's display is divided into three separate 'windows' (or screen areas). The left 1/4 of the display provides a COM window (top two lines) and a VLOC window (bottom two lines). The right 3/4 of the display consists of a GPS window, which shows the various navigation, waypoint information and settings 'pages'.



Each unique screen of information is referred to as a page. Pages are typically selected using the small and large right knobs, with the cursor removed from the GPS Window. See pages 6 and 7 for details on arrangement of the GNS 430's main pages.

CURSORS

There are two separate cursors: a tuning cursor and a GPS window cursor. The tuning cursor is used to select the standby COM or VLOC frequency. If desired, press the small **left** knob to move the tuning cursor to VLOC Window. Then, use the small and large **left** knobs to select the desired frequency. The **COM Flip-flop** and **VLOC Flip-flop** keys are used to activate the selected frequency.

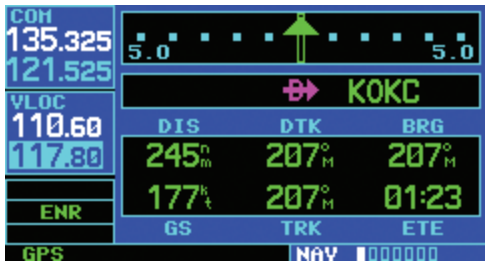
FREQUENCY SELECTION

1) If the tuning cursor is not currently in the desired window (COM or VLOC), press the small **left** knob momentarily.

2) Turn the large **left** knob to select the desired megahertz (MHz) value. For example, the '117' portion of the frequency '117.80'.



3) Turn the small **left** knob to select the desired kilohertz (kHz) value. For example, the '.80' portion of the frequency '117.80'.



4) To activate the selected frequency, press the **COM Flip-flop** Key for COM frequencies, or the **VLOC Flip-flop** Key for VLOC frequencies.

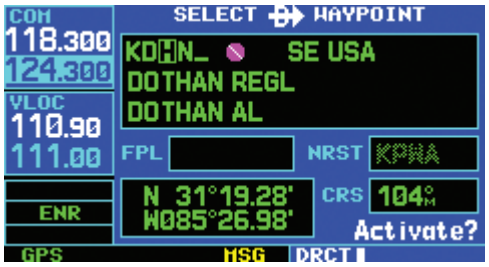


TO QUICKLY TUNE AND ACTIVATE THE 121.500 EMERGENCY CHANNEL

Press and hold the **COM Flip-flop** Key for approximately two seconds.

DATA ENTRY

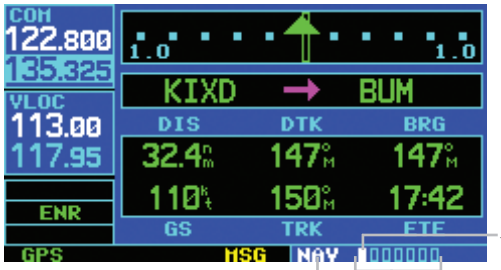
Data is entered in the GPS Window using the large and small **right** knobs. The large **right** knob is used to move the cursor about the page. The small **right** knob is used to select individual characters for the highlighted cursor location.



MAIN PAGE GROUPS

The GNS 430's main pages are divided into 4 separate page groups: NAV, WPT, AUX, and NRST. Each page group is comprised of multiple pages. The *page groups* are selected using the large **right** knob. The individual *pages* are selected using the small **right** knob.

Page Groups			
NAV Group	WPT Group	AUX Group	NRST Group
7 NAV Pages	10 WPT Pages	4 AUX Pages	8 NRST Pages



The bottom right corner of the screen indicates which page group is currently being displayed (e.g., NAV, WPT, AUX, or NRST), the number of screens available within that group (indicated by the square icons), and the placement of the current screen within that group (indicated by a highlighted square icon).

TO SELECT THE DESIRED PAGE GROUP

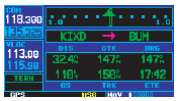
Press and hold the **CLR** Key to select the Default NAV Page. Turn the large **right** knob to select the desired Page Group.

TO SELECT THE DESIRED PAGE

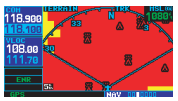
Turn the small **right** knob to select the desired page.

NAV PAGE GROUP

The NAV Page Group includes seven pages.

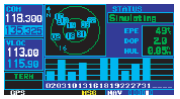

Default NAV


Map


TERRAIN
(if configured)


NAV/COM


Position

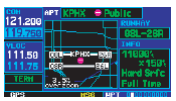

Satellite Status

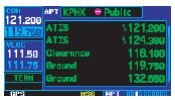

VNAV

WPT PAGE GROUP

The WPT Page Group includes ten pages.


Airport Location


Airport Runway


Airport Frequency


Airport Approach


Airport Arrival


Airport Departure


Intersection

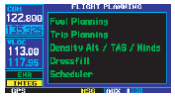

NDB


VOR

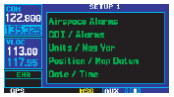

User Waypoint

AUX PAGE GROUP

The AUX Page Group includes four pages.


Flight Planning


Utility


Setup 1


Setup 2

NRST PAGE GROUP

The NRST Page Group includes eight pages.


NRST Airport


NRST Intersection


NRST NDB


NRST VOR


NRST User


NRST Center


NRST Flight Service


NRST Airspace

*NOTE: The flight plan pages are selected by pressing the **FPL** Key and using the small **right** knob to select the desired page.*

TO SELECT A DIRECT-TO DESTINATION

1) Press the **Direct-to** Key. The Select Direct-to Waypoint Page appears, with the waypoint identifier field highlighted.



2) Use the small and large **right** knobs to enter the identifier of the desired destination waypoint.



3) Press the **ENT** Key to confirm the selected waypoint, and press the **ENT** Key again to activate the direct-to function.



TO SELECT A DIRECT-TO DESTINATION FROM THE MAP PAGE

1) Select the Map Page from the NAV Page Group.
2) Press the small **right** knob to display a panning pointer.
3) Turn the small and large **right** knobs to place the panning pointer at the desired destination location.



4) If the panning pointer is placed on an existing airport, navaid, or user waypoint, the waypoint name is highlighted. Press the **Direct-to** Key and the **ENT** Key twice to navigate to the waypoint.
5) If the panning pointer is placed on an open location, press the **Direct-to** Key then press the **ENT** Key twice to create a '+MAP' waypoint and navigate to it.

TO SELECT A DIRECT-TO DESTINATION BY FACILITY NAME OR CITY

1) Press the **Direct-to** Key. The Select Direct-to Waypoint Page appears, with the waypoint identifier field highlighted.
2) Turn the large **right** knob to highlight the facility name (second line) or the city (third line) field.
3) Use the small and large **right** knobs to enter the facility name or city location of the desired destination waypoint. When spelling the facility name or city, the GNS 430's Spell'N'Find feature selects the first entry in the database based upon the characters the pilot has entered up to that point.



4) Continue turning the small **right** knob to scroll through any additional database listings for the selected facility name or city. If needed, use the small **right** knob to scroll backwards.
5) Press the **ENT** Key to confirm the selected waypoint, and press the **ENT** Key again to activate the direct-to function.

TO SELECT A NEARBY AIRPORT OR A FLIGHT PLAN WAYPOINT AS A DIRECT-TO DESTINATION

1) Press the **Direct-to** Key.
2) Turn the large **right** knob to highlight the nearest airport (NRST) or flight plan (FPL) field.
3) Turn the small **right** knob to display a window listing nearby airports or all waypoints in the active flight plan.



4) Continue turning the small **right** knob to scroll through the list and highlight the desired airport.
5) Press the **ENT** Key to confirm the selected waypoint, and press the **ENT** Key again to activate the direct-to function.

TO VIEW AIRPORT INFORMATION

1) Turn the large **right** knob to select the WPT Page Group. 'WPT' appears in the lower right corner of the screen.
2) Turn the small **right** knob to select the desired WPT page. Airport information is displayed on the first six WPT pages: airport location, airport runway, airport frequency, airport approach, airport arrival, and airport departure.
3) Press the small **right** knob to activate the cursor.
4) Use the small and large **right** knobs to enter the identifier of the desired airport.
5) Once the identifier is entered, the information for that airport appears on the page. Press the **ENT** Key to accept the selected identifier.



6) To view the other airport information pages, press the small **right** knob to remove the flashing cursor and turn the small **right** knob to select the desired page.

TO VIEW AIRPORT INFORMATION BY FACILITY NAME OR CITY

1) Select the Airport Location Page (see page 6).
2) Press the small **right** knob to activate the cursor.
3) Turn the large **right** knob to highlight the facility name (second line) or the city (third line) field.
4) Turn the small and large **right** knob to enter the facility name or city location of the desired destination waypoint. When spelling the facility name or city, the GNS 430's spell'N'Find feature will select the first entry in the database based upon the characters that have been entered up to that point.



5) Once the identifier is entered, the information for that airport appears on the page. Press the **ENT** Key to accept the selected identifier.
6) To view the other airport information pages, press the small **right** knob to remove the flashing cursor and turn the small **right** knob to select the desired page.

TO AUTO-TUNE A FREQUENCY FROM A LIST

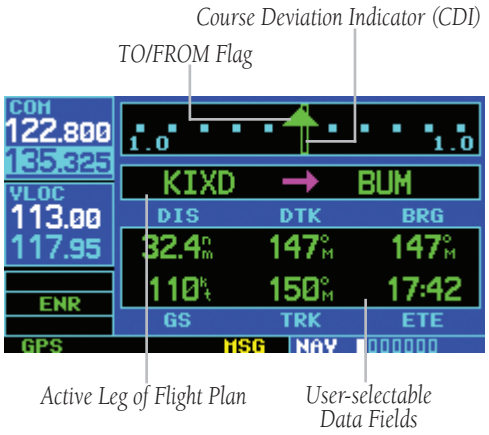
The GNS 430's auto-tune feature allows the pilot to quickly select any database frequency in the GPS Window as the standby frequency. With a minimum of keystrokes, any frequency listed in the GPS Window can be transferred to the standby field of the COM or VLOC window.

1) Select the Airport Frequencies Page from the WPT Page Group (see page 6).
2) Press the small **right** knob to place the cursor on the airport identifier field.
3) Use the small and large **right** knobs to enter the identifier of the desired airport. Press the **ENT** Key when finished.



4) Turn the large **right** knob to highlight the desired frequency.
5) Press the **ENT** Key to place the highlighted frequency in the standby COM or VLOC Window field (as appropriate).
6) To activate the selected frequency, press the **COM Flip-flop** or **VLOC Flip-flop** Key (as appropriate).

DEFAULT NAV PAGE



The following symbols are used on the Default NAV Page (directly below the CDI), to depict the 'active leg' of a flight plan or direct to:

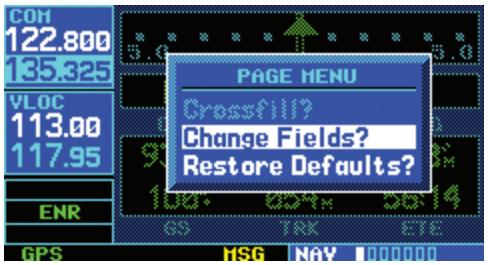
	Direct-to a Waypoint
	Course to a Waypoint, or Desired Course between Two Waypoints
	Procedure Turn
	Procedure Turn
VTF	Vectors-to-Final
	DME Arc to the Left
	DME Arc to the Right
	Left-hand Holding Pattern
	Right-hand Holding Pattern

TO QUICKLY DISPLAY THE DEFAULT NAV PAGE

From any page, press and hold the **CLR** Key for approximately two seconds.

TO SELECT A DIFFERENT DATA ITEM FOR ANY DATA FIELD

1) With the Default NAV Page displayed, press the **MENU** Key to display the Default NAV Page Menu.
2) The 'Change Fields?' option is already highlighted, so press the **ENT** Key to select this option.



3) Use the large **right** knob to highlight the data field to be changed.



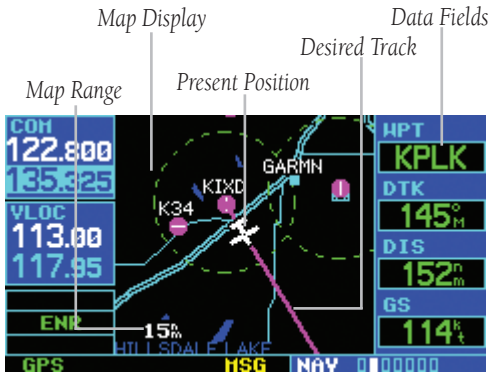
4) Turn the small **right** knob to display the list of available data items. Continue turning the small **right** knob to select the desired data item from the list.



5) Press the **ENT** Key to select the desired data item and return to the Default NAV Page.

6) Press the small **right** knob momentarily to remove the cursor from the page.

MAP PAGE



The following symbols are used to depict the various airports and navaids on the Map Page:

Symbol	Description
	Airport with hard surface runway(s); (primary runway shown)
	Airport with soft surface runway(s) only
	Private Airfield
	Heliport
	VOR
	VOR/DME
	DME
	Localizer
	Intersection
	VORTAC
	TACAN
	NDB
	Locator Outer Marker

TO SELECT A MAP RANGE

1) Press the up arrow of the **RNG** Key to zoom out to a larger map area.

2) Press the down arrow of the **RNG** Key to zoom in to a smaller map area and more detail.

TO SELECT A DIFFERENT DATA ITEM FOR ANY DATA FIELD

1) With Map Page displayed, press the **MENU** Key to display an options menu.
2) Turn the large **right** knob to highlight 'Change Fields?' and press the **ENT** Key.
3) Turn the large **right** knob to highlight the data field to be changed.
4) Turn the small **right** knob to select the desired type of data for this field and press the **ENT** Key.



5) Press the small right knob to remove the cursor.

TO TURN THE DATA FIELDS OFF AND DISPLAY A FULL SCREEN MAP

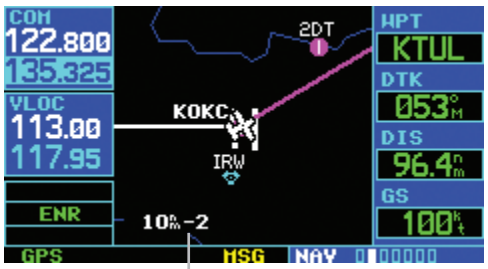
1) With the Map Page displayed, press the **MENU** Key to display an options menu.
2) Turn the large **right** knob to highlight 'Data Fields Off?' and press the **ENT** Key.



3) To re-display the data fields, follow steps 1 and 2, but instead select 'Data Fields On?' from the options menu.

TO QUICKLY DECLUTTER THE MAP DISPLAY

Press the **CLR** Key momentarily (as often as needed) to select the desired amount of map detail.



Map Detail Level

TO INHIBIT TERRAIN:

1) Select the TERRAIN Page and press the **MENU** Key. 'Inhibit Terrain?' is selected by default.



2) Press the **ENT** Key. The 'TER INHB' annunciation is displayed in the TERRAIN annunciator field when TERRAIN is inhibited.

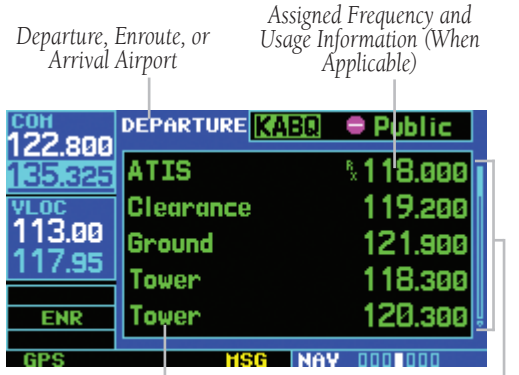


Annunciator Field

NOTE: Inhibit mode deactivates TERRAIN alerting when deemed unnecessary by the pilot. Flying VFR into an area where unique terrain exists could cause the system to annunciate nuisance alerts. Pilots should use discretion when inhibiting the TERRAIN system and always remember to enable the system when appropriate.

NAVCOM PAGE

The NAVCOM Page provides a list of the airport communication and navigation frequencies at the departure, enroute, and arrival airports.



TO SELECT A FREQUENCY LIST FOR A DEPARTURE, ENROUTE, OR ARRIVAL AIRPORT

1) Press the small **right** knob to activate the cursor.
2) Turn the large **right** knob to place the cursor on the airport identifier field (top line on the NAVCOM Page).
3) Turn the small **right** knob to select the desired airport and press the **ENT** Key.

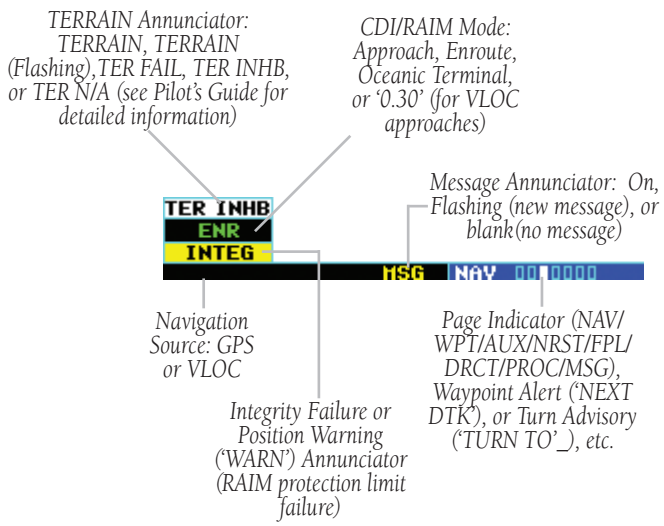
TO SCROLL THROUGH THE LIST OF FREQUENCIES

1) Activate the cursor, if not already active, by pressing the small **right** knob.
2) Turn the large **right** knob to move the cursor through the list of frequencies. If there are more frequencies in the list that can be displayed on the screen, a scroll bar along the right-hand side of the screen indicates which part of the list is currently being displayed.

TO AUTO-TUNE A FREQUENCY FROM THE NAVCOM PAGE

1) Highlight the desired frequency by scrolling through the list of frequencies, as described in the preceding procedure.
2) To place a frequency in the standby field of the COM or VLOC Window, highlight the desired frequency and press the **ENT** Key.

BOTTOM ROW ANNUNCIATORS AND MESSAGES



TO VIEW A LIST OF NEAREST AIRPORTS

1) Turn the large **right** knob to select the NRST Page Group. 'NRST' will appear in the lower right corner of the screen.
2) If necessary, turn the small **right** knob to select the Nearest Airport Page.



TO SCROLL THROUGH THE LIST OF NEAREST AIRPORTS

1) Press the small **right** knob to activate the cursor.
2) Turn the large **right** knob to scroll through the list. The scroll bar along the right-hand side of the page will indicate which part of the list is currently being viewed.
3) To remove the flashing cursor, press the small **right** knob.

TO VIEW ADDITIONAL INFORMATION FOR A NEARBY AIRPORT

1) Highlight the identifier of the desired airport by scrolling through the list, as described in the preceding procedure.
2) Press the **ENT** Key to display the Airport Location Page for the selected airport.



3) To view additional WPT pages for the selected airport (including the airport runway and airport frequency pages), press the small **right** knob to remove the flashing cursor. Turn the small **right** knob to display the additional WPT pages. When finished, press the small **right** knob to return the flashing cursor to the screen.



4) To return to the Nearest Airport Page, verify that 'Done?' is highlighted by the flashing cursor and press the **ENT** (or **CLR**) Key.

TO SELECT A NEARBY AIRPORT AS A DIRECT-TO DESTINATION

1) Press the **Direct-to** Key. The Select Direct-to Waypoint Page appears, with the waypoint identifier field highlighted.
2) Turn the large **right** knob to highlight the nearest airport (NRST) field.
3) Turn the small **right** knob to display a window showing up to nine nearby airports.



4) Continue turning the small **right** knob to scroll through the list and highlight the desired airport.
5) Press the **ENT** Key to confirm the selected airport. Press the **ENT** Key again (with 'Activate?' highlighted) to activate the direct-to function.

TO CREATE A NEW FLIGHT PLAN

1) Press the **FPL** Key and turn the small **right** knob to display the Flight Plan Catalog Page.
2) Press the **MENU** Key to display the Flight Plan Catalog Page Menu.
3) Turn the large **right** knob to highlight 'Create New Flight Plan?' and press the **ENT** Key.



4) A blank Flight Plan Page appears for the first empty storage location. Use the small and large **right** knobs to enter the identifier of the departure waypoint, and press the **ENT** Key.



5) Repeat step 4 above to enter the identifier for each additional flight plan waypoint.
6) Once all waypoints have been entered, press the small **right** knob to return to the Flight Plan Catalog Page.

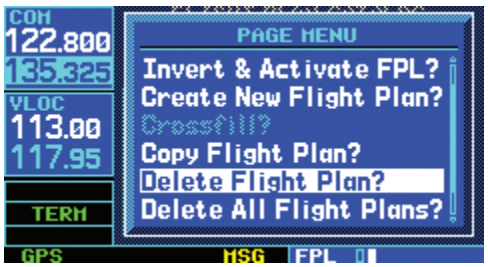
TO NAVIGATE A FLIGHT PLAN

1) Press the **FPL** Key and turn the small **right** knob to display the Flight Plan Catalog Page.
2) Press the small **right** knob to activate the cursor.
3) Turn the large **right** knob to highlight the desired flight plan and press the **MENU** Key to display the Flight Plan Catalog Page Menu.
4) Turn the large **right** knob to highlight 'Activate Flight Plan?' and press the **ENT** Key.



TO STOP NAVIGATING A FLIGHT PLAN

1) Press the **FPL** Key
2) Press the **MENU** Key to display the Flight Plan Catalog Page Menu.
3) Turn the large **right** knob to highlight 'Delete Flight Plan?', and press the **ENT** Key.



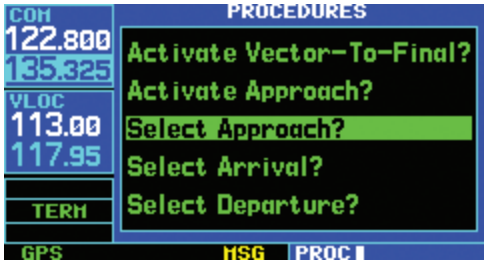
4) With 'Yes?' highlighted, press the **ENT** Key to delete the flight plan.

TO EDIT A FLIGHT PLAN

1) Press the **FPL** Key and turn the small **right** knob to display the Flight Plan Catalog Page.
2) Press the small **right** knob to activate the cursor.
3) Turn the large **right** knob to highlight the desired flight plan and press the **ENT** Key.
4) To add a waypoint to the flight plan: Turn the large **right** knob to select the point to add the new waypoint. (If an existing waypoint is highlighted, the new waypoint is placed directly in front of this waypoint.)
   a) Use the small and large **right** knobs to enter the identifier of the new waypoint and press the **ENT** Key.
5) To delete a waypoint from the flight plan: Turn the large **right** knob to select the waypoint to be deleted and press the **CLR** Key to display a 'remove waypoint' confirmation window.
   a) With 'Yes' highlighted, press the **ENT** key to remove the waypoint.
6) Once all changes have been made, press the small **right** knob to return to the Flight Plan Catalog Page.

TO SELECT AN APPROACH

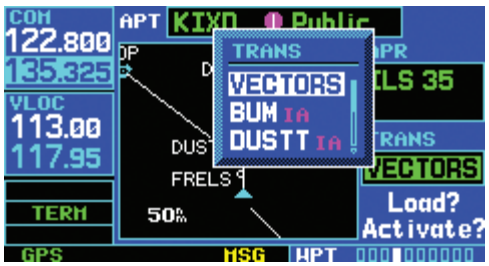
1) Press the **PROC** Key to display the Procedures Page.
2) Turn the large **right** knob to highlight 'Select Approach?' and press the **ENT** Key.



3) A window appears listing the available procedures. Turn the large **right** knob to highlight the desired procedure and press the **ENT** Key.

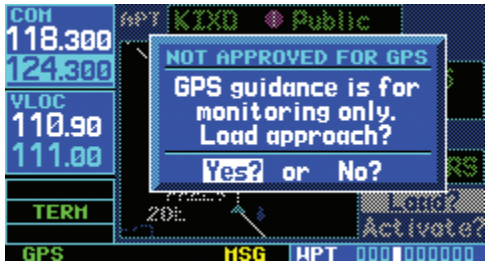


4) A second window appears listing the available transitions. Turn the large **right** knob to highlight the desired transition waypoint and press the **ENT** Key. (The approach 'Vectors' option assumes the pilot will receive vectors to the final course segment of the approach and will provide navigation guidance relative to the final approach course.)



5) Turn the large **right** knob to highlight 'Load?' or 'Activate?' and press the **ENT** Key. ('Load?' adds the procedure to the flight plan without immediately using it for navigation guidance. This allows the pilot to continue navigating the original flight plan, but keeps the procedure available on the Active Flight Plan Page for quick activation when needed.)

6) For precision approaches and some non-precision approaches, a reminder window appears indicating that GPS guidance on such approaches is strictly for monitoring only — use the VLOC receivers and external CDI (or HSI) for primary navigation. To confirm this reminder, highlight 'Yes?' and press the **ENT** Key.



Not all approaches in the database are approved for GPS use. As the pilot selects an approach, a 'GPS' designation to the right of the procedure name indicates the procedure can be flown using the GPS receiver. Some procedures do not have this designation, meaning the GPS receiver may be used for supplemental navigation guidance only. ILS approaches, for example, must be flown by tuning the VLOC receiver to the proper frequency and coupling the VLOC receiver to the external CDI (or HSI).

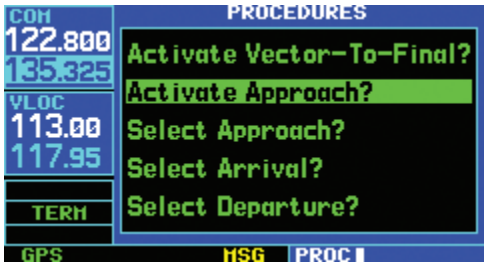
A selected approach may be *activated* or *loaded*. Once an approach is selected, it may be activated for navigation from the Procedures Page. Activating the approach overrides the 'enroute' portion of the active flight plan, proceeding directly to the 'approach' portion (for a full approach, directly to the initial approach fix). Activating the approach also initiates automatic CDI scaling transition as the approach progresses.

In many cases, it may be easiest to 'Load' the full approach while still some distance away, enroute to the destination airport. Later, if vectored to final, use the following steps to select 'Activate Vector-To-Final'—which makes the inbound course to the final approach fix (FAF) waypoint active. Otherwise, activate the full approach using the 'Activate Approach?' option.

TO ACTIVATE AN APPROACH

1) With an approach loaded in the active flight plan, press the **PROC** Key to display the Procedures Page.

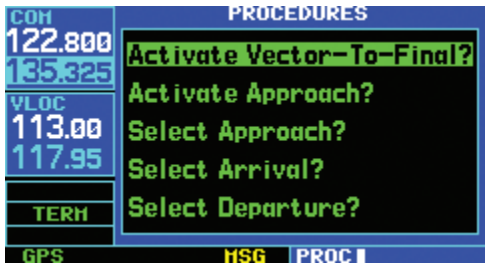
2) Turn the large **right** knob to highlight 'Activate Approach?' and press the **ENT** Key.



The 'Activate Vector-To-Final?' option allows the pilot to activate the final course segment of the approach. This option assumes the pilot will receive vectors to the FAF and provides guidance to intercept the final course, before reaching the FAF.

TO ACTIVATE THE APPROACH WITH VECTORS TO FINAL

1) With an approach loaded in the active flight plan, press the **PROC** Key to display the Procedures Page.
2) Turn the large **right** knob to highlight 'Activate Vector-To-Final?' and press the **ENT** Key.



GUIDELINES FOR FLYING AN APPROACH

Due to the variety of available approach procedures, the specific steps required will vary according to the approach selected. Keep the following general guidelines in mind while flying the approach:

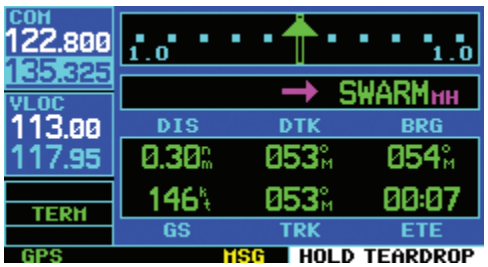
- The pilot will typically select the destination airport as the last waypoint in the active flight plan or using the **Direct-to** Key. Doing so ensures that the desired waypoint will automatically appear when choosing the 'Select Approach?' option from the Procedures Page. (Otherwise, first choose the airport, then the approach procedure.)
- When a localizer-based approach (such as an ILS) is loaded, the desired frequency is automatically placed in standby on the VLOC window. To activate the frequency, press the **VLOC Flip-flop** Key.
- If the VLOC receiver will be used for the approach, be sure to switch the external CDI (or HSI) to 'VLOC' by pressing the **CDI** Key ('VLOC' will appear directly above the **CDI** Key; see page 15).
- An 'Auto ILS CDI' setting provides automatic switching to 'VLOC' once established inbound on the final course segment of an approach.
- As the aircraft progresses to each approach waypoint, a waypoint alert message ('NEXT DTK # # #º') will appear in the lower right corner of the display (see page 15).
- When the pilot should begin a course change (via a standard rate turn), turn advisories ('TURN TO # # #º') will appear in the lower right corner of the display (see page 15).
- For GPS-based approaches, receiver autonomous integrity monitoring (RAIM) will monitor satellite conditions and alert the pilot using an 'INTEG' or 'WARN' annunciation at the bottom left corner of the display (see page 15) if protection limits cannot be maintained. If this occurs, the GPS receiver should not be used for primary navigation guidance. Revert to an alternate navigation source, or select an alternate destination airport.
- Within 30 nautical miles of the destination airport, CDI scaling will transition from 5.0 nautical miles (enroute mode, 'ENR') to 1.0 nautical mile (terminal mode, 'TERM') or when leaving the departure airport, from 1.0 nm to 5.0 nm. Within 2.0 nautical miles of the final approach fix, GPS-based approaches will see a second transition from 1.0 nautical mile to 0.3 nautical mile (approach mode, 'APR').

- A 'START PROC TRN' prompt will appear in the lower right corner of the display to advise the pilot when the aircraft is at a safe distance to initiate a procedure turn. The procedure turn is displayed on the Map Page, but guidance through the turn itself is not provided.
- Alerts for proper holding pattern entry (e.g.' HOLD DIRECT') are displayed in the lower right corner of the display. Waypoint sequencing is automatically suspended (indicated by 'SUSP directly above the **OBS** Key) at the holding waypoint. Press the **OBS** Key again to return to automatic waypoint sequencing. For course reversals, waypoint sequencing is suspended for one trip around the holding pattern only (after which it will return to automatic waypoint sequencing).
- The CDI will guide the pilot through a DME arc. Just keep the needle centered to fly along the arc. When using an autopilot, the course select on the CDI (or HSI) must be periodically updated with the desired track (DTK).
- When crossing the missed approach point, 'SUSP' will appear above the **OBS** Key, indicating that automatic sequencing of waypoint is suspended at the missed approach point, and a 'from' indication will appear on the CDI (or HSI).



TO FLY A MISSED APPROACH

1) Press the **OBS** Key. The next waypoint in the approach (MAHP; in this case 'SWARM' intersection) is automatically offered as the destination waypoint.
2) Follow the missed approach procedures, as published on the approach plate, for proper climb and heading instructions.
3) An alert message in the lower right-hand corner of the screen recommends entry procedures for the holding pattern (e.g., 'HOLD TEARDROP'). When flying the holding pattern, a timer appears on the Default NAV Page. The timer automatically resets on the outbound side of the hold when the aircraft turns abeam the hold waypoint. The timer again resets as the pilot turns inbound (within approximately 30° of the inbound course). This allows use of standard timing (typically one minute) to fly the inbound and outbound legs of the hold.



4) The GNS 430 provides course guidance only on the inbound side of the holding pattern. When leaving the holding pattern to re-fly the approach (or another approach) press the **PROC** Key to 'Select Approach?' or 'Activate Approach?' as previously described. (Or, use the **Direct-to** Key to select another destination.)



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