GNS 530

Quick Reference

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** (COM/VLOC) is used to tune the megahertz (MHz) value of the standby frequency for the communications transceiver (COM) or the VOR/Localizer receiver, whichever is currently selected by the tuning cursor.

The **small left knob** (PUSH C/V) is used to tune the kilohertz (kHz) value of the standby frequency for the communications transceiver (COM) 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 **range key** allows you to select the desired map scale. Use the up arrow 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 you 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 you to access additional features or make settings changes which relate to the currently displayed page.

The **clear key** is used to erase information or cancel an entry. Press and hold this key to immediately display the Default Navigation Page, regardless of which page is currently displayed.

The **enter key** is used to approve an operation or complete data entry. It is also used to confirm information, such as the Database Page during power on.

The **large right knob** (GPS) 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 you to move the cursor about the page.

The **small right knob** (PUSH CRSR) 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 you to enter data and/or make a selection from a list of options.

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 this key selects OBS mode, which will retain the current "active to" waypoint as your navigation reference even after passing the waypoint (i.e., prevents sequencing to the next waypoint). Pressing the **OBS key** again will return to normal operation, with automatic sequencing of waypoints. Whenever OBS mode is selected, you may set the desired course to/from a waypoint using the OBS Page, or an external OBS selector on your HSI or CDI.

The **message key** is used to view system messages and to alert you to important warnings and requirements.

The **flight plan key** allows you 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 flight plan key.

The **vertical navigation key** allows you to create a three-dimensional profile which guides you to a final (target) altitude at a specified location.

The **procedures key** allows you to select approaches, departures and arrivals from your flight plan. When using a flight plan, available procedures for your departure and/or arrival airport are offered automatically. Otherwise, you may select the desired airport, then the desired procedure.
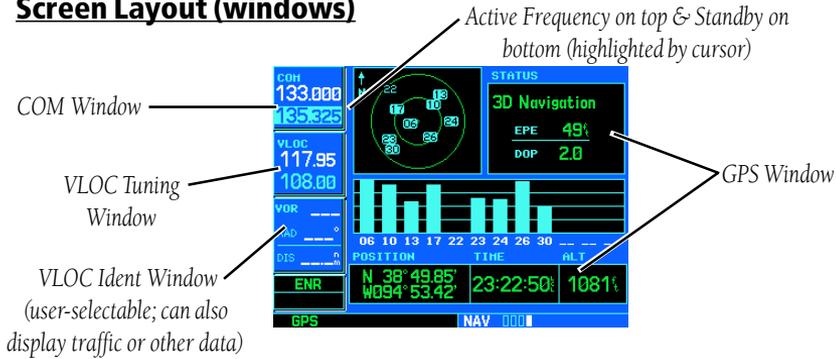
Powering up the GNS 530

1. Rotate the **COM power/volume knob** clockwise to turn the unit on and set the desired radio volume.

2. A Welcome Page appears briefly, followed by the Land Data Page, as the unit conducts a self-test to ensure proper operation.

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 **ENT** to acknowledge the Database Confirmation Page and proceed to the Instrument Panel Self-Test Page.

4. The Instrument Panel Self-Test Page allows you to verify that the GNS 530 is communicating properly with in-panel instruments. Compare on-screen indications with the information depicted on connected instruments, such as CDI, HSI, RMI and/or external annunciators. Once you have verified proper operation, press **ENT** to display the Satellite Status Page.

5. When the GNS 530 has acquired a sufficient number of satellites to determine a position, the Map Page will automatically appear showing your present position.

Screen Layout (windows)

COM Window

VLOC Tuning Window

VLOC Ident Window (user-selectable; can also display traffic or other data)

Active Frequency on top & Standby on bottom (highlighted by cursor)

GPS Window

The GNS 530's display is divided into four separate "windows" (or screen areas). The left 1/4 of the display provides a *COM window* (top two lines) and a *VLOC window* (by default with VOR ident/radial, but selectable for other data). The right 3/4 of the display consists of a *GPS window*, which is where you'll find the various navigation, waypoint information and settings "pages". The bottom of the display is used for annunciators.

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 page 5 for arrangement of the GNS 530'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. Pushing the **small left knob** moves the tuning cursor back-and-forth between the COM and VLOC frequency windows. To select the active frequency, you must first enter the frequency in the standby field, then use the **COM** or **VLOC flip-flop key** to activate the frequency. Use the **large right knob** to move the GPS window cursor around the page.
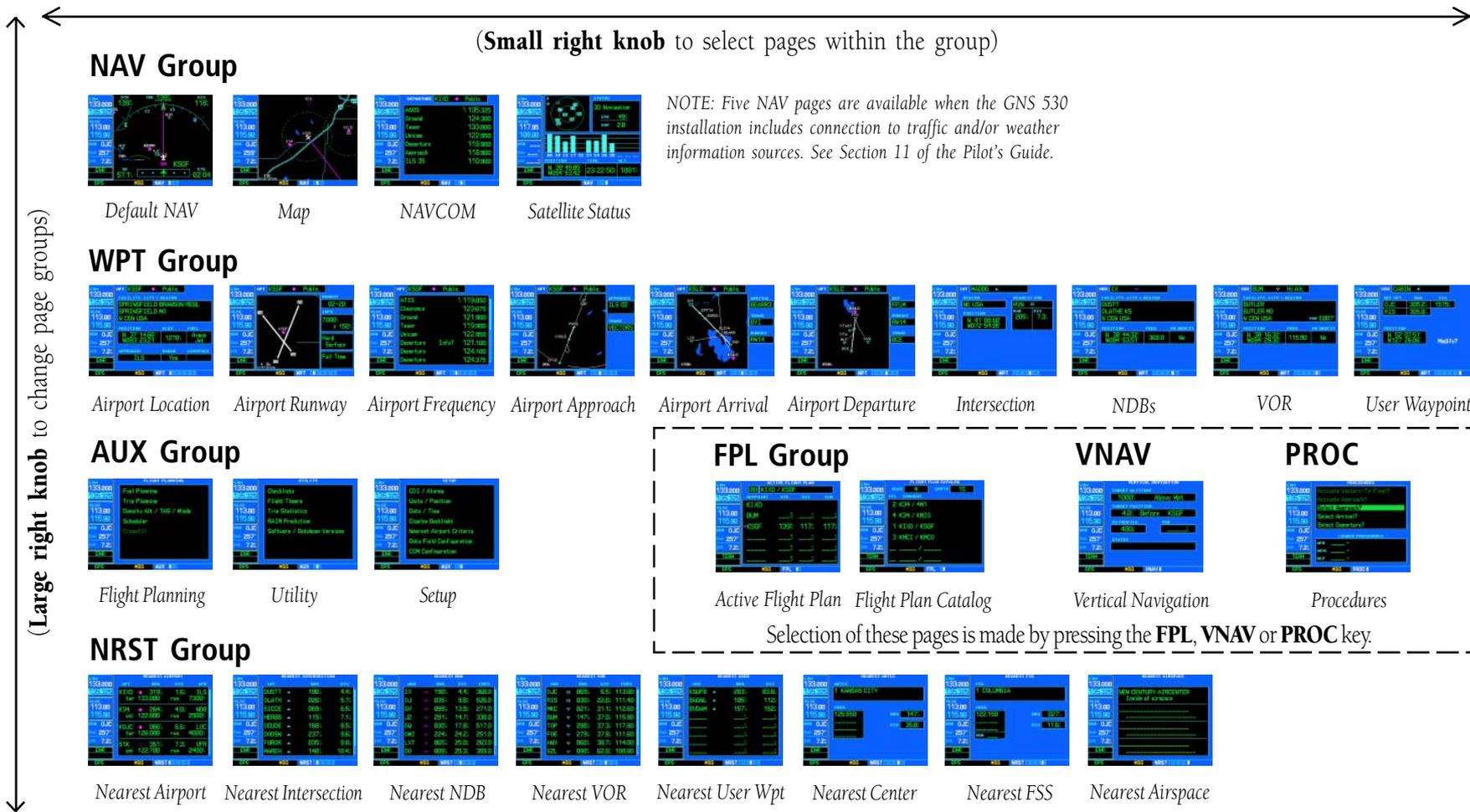
4

Frequency Selection

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

2. Rotate the **large left knob** to select the desired megahertz (MHz) value. For example, the "117" portion of the frequency "117.70".

3. Rotate the **small left knob** to select the desired kilohertz (kHz) value. For example, the ".70" portion of the frequency "117.70".

4. To activate the selected frequency, press the corresponding **flip-flop key**—**COM** for communication frequencies or **VLOC** for VOR/Localizer frequencies.

Data Entry

Data is entered in the GPS window using the **small** and **large 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. For example, to change the "N" in the illustration at right to a different character, rotate the **small right knob**.

(**Small right knob** to select pages within the group)

NAV Group

Default NAV   Map   NAVCOM   Satellite Status

NOTE: Five NAV pages are available when the GNS 530 installation includes connection to traffic and/or weather information sources. See Section 11 of the Pilot's Guide.

WPT Group

Airport Location Airport Runway Airport Frequency Airport Approach Airport Arrival Airport Departure Intersection NDBs VOR User Waypoint

AUX Group

Flight Planning   Utility   Setup

FPL Group

Active Flight Plan Flight Plan Catalog

VNAV

Vertical Navigation

PROC

Procedures

Selection of these pages is made by pressing the **FPL**, **VNAV** or **PROC** key.

NRST Group

Nearest Airport Nearest Intersection Nearest NDB Nearest VOR Nearest User Wpt Nearest Center Nearest FSS Nearest Airspace

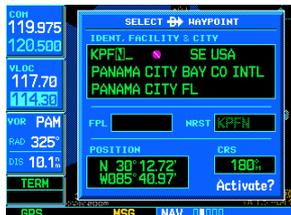(**Large right knob** to change page groups)

Selection of any main page is performed using the **large** and **small right knobs**. When the *GPS window cursor* is off, the **large right knob** selects the page group: NAV, WPT, AUX or NRST. The **small right knob** selects the desired page within a group. To quickly select the Default NAV Page, press and hold **CLR**.

To Select a Direct-To Destination

1. Press the **direct-to key**. A Select Direct To Waypoint Page will appear, 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 **ENT** to confirm the selected waypoint, and **ENT** to activate the direct-to function.

To Select a Direct-To Destination from the Map Page

1. Select the Map Page from the main page group. (See page 5.)

2. Press the **small right knob** to display a panning pointer.

3. Rotate 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 will be highlighted. Press the **direct-to key**, then **ENT** (twice) to navigate to the waypoint.

5. If the panning pointer is placed on an open location, press the **direct-to key**, then **ENT** (twice) to create a waypoint at the pointer location (named "+MAP") and navigate to it.

To Select a Direct-To Destination by Facility Name or City

1. Press the **direct-to key**. A Select Direct To Waypoint Page will appear, with the waypoint identifier field highlighted.

2. Rotate 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. As you spell the facility name or city, the GNS 530's Spell'N'Find feature will select the first entry in the database based upon the characters you have entered up to that point.

4. Continue rotating the **small right knob** to scroll through any additional database listings for the selected facility name or city. You can also scroll backwards with the **small right knob** if you scroll past the desired waypoint.

5. Press **ENT** to confirm the selected waypoint, and **ENT** 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**. A Select Direct To Waypoint Page will appear, with the waypoint identifier field highlighted.

2. Rotate the **large right knob** to highlight the nearest airport (NRST) or flight plan (FPL) field.

3. Rotate the **small right knob** to display a window listing nearby airports or all waypoints in the active flight plan.

4. Continue rotating the **small right knob** to scroll through the list and highlight the desired waypoint.

5. Press **ENT** to confirm the selected waypoint, and **ENT** to activate the direct-to function.

Viewing Airport Information

1. From any page, press and hold **CLR** to display the Default NAV Page. (You may skip this step if you are already viewing any of the main GPS pages.)

2. Rotate the **large right knob** to select the WPT page group. "WPT" will appear in the lower right corner of the screen.

3. Rotate 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.

4. Press the **small right knob** to activate the cursor.

5. Use the **small** and **large right knobs** to enter the identifier of the desired airport.

6. Once the identifier is entered, the information for that airport will appear on the page. Press **ENT** to accept the selected identifier.

7. To view the other airport information pages, press the **small right knob** to remove the cursor, then rotate the **small right knob** to select the desired page.

Viewing Airport Information by Facility Name or City

1. Select the Airport Location Page. (See page 5.)

2. Press the **small right knob** to activate the on-screen cursor.

3. Rotate the **large right knob** to highlight the facility name (second line) or the city (third line) field.

4. Use the **small** and **large right knobs** to enter the facility name or city location of the desired airport. As you spell the facility name or city, the GNS 530's Spell'N'Find feature will select the first entry in the database based upon the characters you have entered up to that point.

5. Once the name is entered, the information for that airport will appear on the page. Press **ENT** to accept the selected airport.

6. To view the other airport information pages, press the **small right knob** to remove the cursor, then rotate the **small right knob** to select the desired page.

Auto-Tuning a Frequency from a List

The GNS 530's auto-tune feature allows you to quickly select any displayed database frequency as your standby frequency. With a minimum of keystrokes, any frequency listed on the Airport Frequency Page 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 5.)

2. Press the **small right knob** to activate the cursor on the airport identifier field.

3. Use the **small** and **large right knobs** to enter the identifier of the desired airport. Press **ENT** when finished.

4. Rotate the **large right knob** to highlight the desired frequency.

5. Press **ENT** to place the highlighted frequency in the standby field of the COM or VLOC window (as appropriate).

6. To activate the selected frequency, press the **COM** or **VLOC flip-flop key** (as appropriate).

Default NAV Page

Active Leg of Flight Plan, or Direct-to Destination

User-selectable Data Fields (all four corners)

To/From Flag

Course Deviation Indicator (CDI)

The following symbols are used —directly above the graphic CDI—to depict the "active leg" of a flight plan or direct-to:

➡ *Course to a Waypoint, or Desired Course between Two Waypoints*

➔ *Direct-To a Waypoint*　　　　ᵛTF *Vectors-To-Final*

↶ *Left Procedure Turn*　　　　↷ *Right Procedure Turn*

↶ *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

1. From any page, press and hold **CLR** 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 an options menu.

2. Rotate the **large right knob** to highlight the "Change Fields?" option, and press **ENT** to select this option.

3. Use the **large right knob** to highlight the data field you wish to change.

4. Rotate the **small right knob** to display a list of available data items. Continue rotating the **small right knob** to select the desired data item from the list.

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

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

Map Page

Map Display

Map Scale

(Optional) Data Fields can appear on the right-hand side of the page

Present Position

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

Symbol	Description	Symbol	Description
	Airport with Hard surface runway(s); Primary runway shown		
	Airport with Soft surface runway(s) only		
	Private Airfield		*Intersection*
	VOR		*VORTAC*
	VOR/DME		*TACAN*
	DME		*NDB*
	Localizer		*Locator Outer Marker*

To Select a Map Scale

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

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

To Quickly Declutter the Map Display

1. Press the **CLR** key momentarily (as often as needed) to select the desired amount of map detail. The declutter level will appear adjacent to the map scale.

To Turn the Data Fields On Along the Right-hand Side of the Map Page

1. With the Map Page displayed, press **MENU** to display an options menu.

2. Rotate the **large right knob** to highlight "Data Fields On?", then press **ENT**.

3. To return to a full-screen map display, follow steps 1 and 2, but instead select "Data Fields Off?" from the options menu.

To Select a Different Data Item for any Data Field along the Right-hand Side of the Map Page

1. With the Map Page displayed, press the **MENU** key to display an options menu.

2. Rotate the **large right knob** to highlight the "Change Fields?" option, and press **ENT** to select this option.

3. Use the **large right knob** to highlight the data field you wish to change.

4. Rotate the **small right knob** to display a list of available data items. Continue rotating the **small right knob** to select the desired data item from the list.

5. Press **ENT** to select the desired data item and return to the Map Page.

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

NAVCOM Page

Departure, Enroute or Arrival Airport

Frequency Category

Usage Restriction Information

Scroll Bar

Assigned Frequency

The NAVCOM Page provides a list of the airport communication and navigation frequencies at your 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. Rotate the **large right knob** to place the cursor on the airport identifier field (top line on the NAVCOM Page).

3. Rotate the **small right knob** to select the desired airport and press **ENT**.
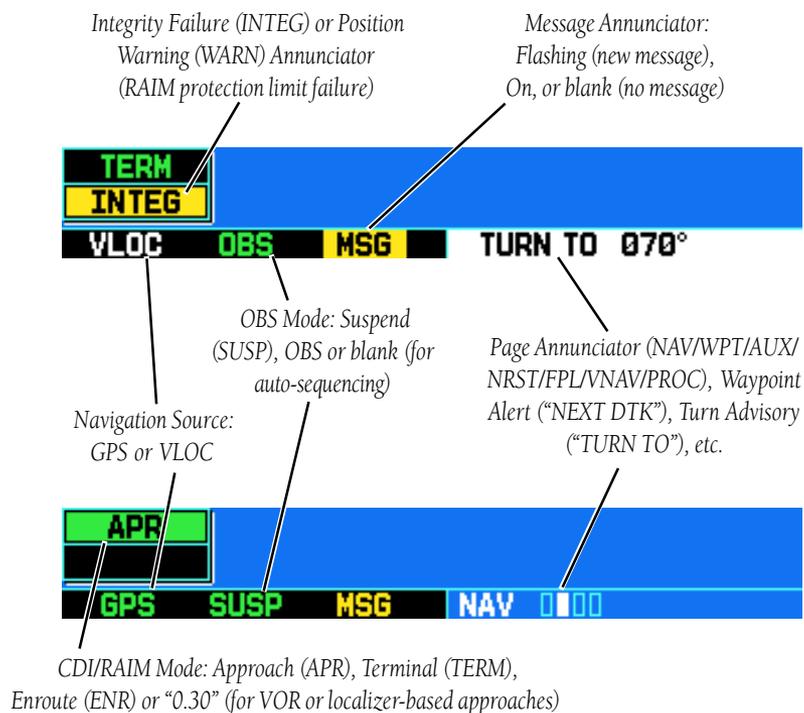
To Scroll Through the List of Frequencies

1. Activate the cursor, if not already active, by pressing the **small right knob**.

2. Rotate the **large right knob** to move the cursor through the list of frequencies. If there are more frequencies in the list than can be displayed on the screen, a scroll bar along the right-hand side of the screen will indicate which part of the list is currently being displayed.

Auto-Tuning a Frequency from the NAVCOM Page

1. Highlight the desired frequency by scrolling through the list of frequencies, as described in the previous procedure.

2. To place a frequency in the standby field of the COM or VLOC window, highlight the desired frequency and press **ENT**.

Bottom Row Annunciators and Messages

Integrity Failure (INTEG) or Position Warning (WARN) Annunciator (RAIM protection limit failure)

Message Annunciator: Flashing (new message), On, or blank (no message)

OBS Mode: Suspend (SUSP), OBS or blank (for auto-sequencing)

Page Annunciator (NAV/WPT/AUX/ NRST/FPL/VNAV/PROC), Waypoint Alert ("NEXT DTK"), Turn Advisory ("TURN TO"), etc.

Navigation Source: GPS or VLOC

CDI/RAIM Mode: Approach (APR), Terminal (TERM), Enroute (ENR) or "0.30" (for VOR or localizer-based approaches)

To View a List of the Nearest Airports

1. From any page, press and hold **CLR** to select the Default NAV Page. (You may skip this step if you are already viewing any of the main pages.)

2. Rotate the **large right knob** to select the NRST page group. "NRST" will appear in the lower right corner of the screen.

3. If necessary, rotate 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. Rotate 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 procedure above.

2. Press **ENT** 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. Rotate 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 **ENT** (or press **CLR**).

To Select a Nearby Airport as a Direct-To Destination

1. Press the **direct-to** key. The select direct-to waypoint page will appear, with the waypoint identifier field highlighted.

2. Rotate the **large right knob** to highlight the nearest airport (NRST) field.

3. Rotate the **small right knob** to display a window showing up to nine nearby airports.

4. Continue rotating the **small right knob** to scroll through the list and highlight the desired airport.

5. Press **ENT** to confirm the selected airport, and press **ENT** a second time (with "Activate?" highlighted) to begin navigating to the selected waypoint.

To Quickly Tune and Activate the 121.500 Emergency Channel

1. Press and hold the **COM flip-flop key** for approximately two seconds.

FLIGHT PLANS

To Create a New Flight Plan

1. Press **FPL** and rotate the **small right knob** to display the Flight Plan Catalog.

2. Press **MENU** to display the Flight Plan Catalog Options.

3. Rotate the **large right knob** to highlight "Create New Flight Plan?" and press **ENT**.

4. A blank flight plan page will appear for the first empty storage location. Use the **small** and **large right knobs** to enter the identifier of the departure waypoint and press **ENT**.

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.

To Navigate a Flight Plan

1. Press **FPL** and rotate the **small right knob** to display the Flight Plan Catalog.

2. Press the **small right knob** to activate the cursor.

3. Rotate the **large right knob** to highlight the desired flight plan and press **MENU** to display the Flight Plan Catalog Options.

4. Rotate the **large right knob** to highlight "Activate Flight Plan?" and press **ENT**.

12

To Stop Navigating a Flight Plan

1. Press **FPL**. The Active Flight Plan Page will appear.

2. Press **MENU** to display the Active Flight Plan Options.

3. Rotate the **large right knob** to highlight "Delete Flight Plan?" and press **ENT**.

4. Press **ENT** again to confirm.

To Edit a Flight Plan

1. Press **FPL** and rotate the **small right knob** to display the Flight Plan Catalog.

2. Press the **small right knob** to activate the cursor.

3. Rotate the **large right knob** to highlight the desired flight plan and press **ENT**.

4. To add a waypoint to the flight plan: Rotate the **large right knob** to select the point where you wish to add the new waypoint. (If an existing waypoint is highlighted, the new waypoint will be placed directly in front of this waypoint.) Use the **small** and **large right knobs** to enter the identifier of the new waypoint and press **ENT**.

5. To delete a waypoint from the flight plan: Rotate the **large right knob** to select the waypoint you wish to delete and press **CLR** to display a "remove waypoint" confirmation window. With "Yes?" highlighted, press **ENT** to remove the waypoint.

6. Once all changes have been made, press the **small right knob** to return to the Flight Plan Catalog.

Selecting Approaches

In order to select an approach, you must first have an active direct-to or flight plan which terminates at an airport with a published approach.

1. Press the **PROC** key to display the Procedures Page.

2. Rotate the **large right knob** to highlight "Select Approach?" and press **ENT**.

3. A window will appear listing the available procedures. Rotate the **large right knob** to highlight the desired procedure and press **ENT**.

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

5. Rotate the **large right knob** to highlight "Load?" or "Activate?" and press **ENT**. ("Load?" will add the procedure to the flight plan without immediately using it for navigation guidance. This allows you to continue navigating the original flight plan, but keeps the procedure available on the Active Flight Plan Page for quick activation when needed. "Activate?" overrides the "enroute" portion of the active flight plan, proceeding directly to the "approach" portion.)
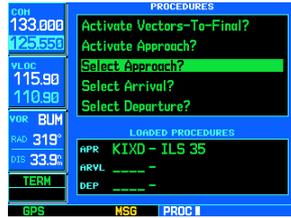
6. For precision approaches and some non-precision approaches, a reminder window will appear indicating that GPS guidance on such approaches is strictly for monitoring only—use the VLOC receiver and external CDI (or HSI) for primary navigation. To confirm this reminder, highlight "Yes?" and press **ENT**.

Not all approaches in the database are approved for GPS use. As you select an approach, a "GPS" designation to the right of the procedure name indicates the procedure can be flown using the GPS receiver. *Some procedures will not have this designation, meaning the GPS receiver may be used for supplemental navigation guidance only. If the GPS receiver cannot be used for primary guidance, you must use the appropriate receiver for the selected approach (e.g., VOR or NDB).* The final course segment of 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*. Loading the approach adds the procedure to the flight plan without immediately using it for navigation guidance. You can continue navigating the original flight plan, but the procedure is available for quick activation when needed. Activating the approach overrides the "enroute" portion of the active flight plan, proceeding directly to the "approach" portion. 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 FAF waypoint active. Otherwise, activate the full approach using the "Activate Approach?" option.

Activating an Approach

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

2. Rotate the **large right knob** to highlight "Activate Approach?".

3. Press **ENT**.
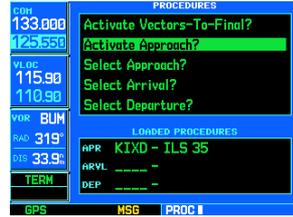
Activating an Approach with Vectors-to-Final

The "Activate Vectors-To-Final?" option allows you to activate the final course segment of the approach. This option assumes you will receive vectors to the final approach fix (FAF) and guides you to intercept the final course, before reaching the FAF.

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

2. Rotate the **large right knob** to highlight "Activate Vectors-To-Final?".

3. Press **ENT**.

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

- The GNS 530 is designed to complement your printed approach plates and vastly improve situational awareness throughout the approach. However, you must always fly an approach as it appears on the approach plate

- You 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 for the Procedures Page. (Otherwise, you must 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 10.)

- An "ILS CDI Capture" setting provides automatic switching to "VLOC" as you intercept the final approach course. When the ILS approach is activated (and the correct frequency is active in the VLOC window), the GNS 530 will automatically switch within 1.2 nautical miles left or right of the approach course. This switch can take place anywhere from 2.0 to 15.0 nautical miles from the FAF. The switch occurs gradually to prevent abrupt CDI changes.

- As you progress to each waypoint, a waypoint alert message (e.g., "NEXT DTK ###°") will appear in the lower right corner of the display. (See page 10.)

- When you should begin a course change (via a standard rate turn), turn advisories ("TURN TO ###°") will appear in the lower right corner of the display. (See page 10.)

- For GPS-based approaches, receiver autonomous integrity monitoring (RAIM) will monitor satellite conditions and alert you—using an "INTEG" or "WARN" annunciation at the bottom left corner of the display (see page 10)—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, such as the GNS 530's VOR/Localizer receiver, 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; or "ENR") to 1.0 nautical mile (terminal mode; or "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; or "APR").

- A "START PROC TURN" prompt will appear in the lower right corner of the display to remind you to initiate a procedure turn (if you haven't already begun the procedure turn). The procedure turn is displayed on the Default NAV and Map pages, 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 you through a DME arc. Just keep the needle centered as you 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).

- As you cross the missed approach point (MAP), "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).

Flying the Missed Approach

1. After crossing the missed approach point, press the **OBS** key. The next waypoint in the approach is automatically offered as the destination waypoint.

2. Follow the missed approach procedures, as published on your approach plate, for proper climb and heading instructions.

3. An alert message in the lower right hand corner of the screen will recommend entry procedures for a holding pattern (i.e., "HOLD DIRECT", "HOLD PARALLEL", or "HOLD TEARDROP"). As you fly the holding pattern, a timer appears on the Default NAV Page. The timer automatically resets on the outbound side of the hold when you are abeam the hold waypoint. The timer again resets as you turn inbound (within approximately 30° of the inbound course). This allows you to use standard timing (typically one minute) to fly the inbound and outbound legs of the hold.

4. The GNS 530 will provide 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.)

GARMIN