Garmin GNC 300XL
Pilot's Quick Reference Guide

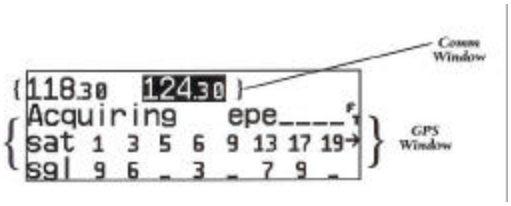
CURSOR/ DATA ENTRY

Cursor control:

CRSR The cursor key is used to activate the cursor in the comm and GPS windows, and is used to highlight fields for data entry, changing display data or cycling through available options.

Pressing CRSR once activates the cursor in the comm window, and is indicated by a highlighted area around the standby frequency.

Pressing CRSR again moves the cursor to the GPS window and is indicated by a highlighted data field. Pressing CRSR a third time turns the cursor off.



Data Entry:

The outer knob is used to advance through pages, select comm frequency (MHz), advance the cursor or move through data fields.

The inner knob is used to change data, select comm frequency (kHz) or scroll through additional information that cannot fit on the screen.

CLR The clear key is used to erase information or cancel an entry

ENT The enter key approves operations and confirms data entry and prompts.

Flying Start

Power Up:

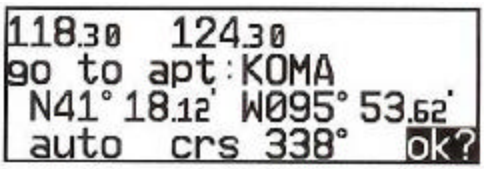
- Insert data card in card slot
- Rotate the power/volume know clockwise to runt the unit on and adjust volume. The welcome page will appear while the unit performs a self test.
- Press ENT to confirm database prompt.
- Satellite acquisition will begin and the unit will display a ”Ready for Navigation” message once a position fix has been calculated.
- To view message, press the msg key. Press msg again to return to the previous screen.

Select Active and Standby Frequencies:

- Press CRSR to activate the cursor in the standby frequency field.
- Rotate ○ and ● to dial in the desired active frequency
- Press ↔ to place the selected frequency in the active field.
- Rotate ○ and ● to dial in the desired standby frequency.
- Press CRSR twice to remove cursor.

To Select a Direct–To Destination:

- Press D→
- Rotate ● to select the first character of the destination waypoint’s identifier. Remember to use the ICAO identifier if your are entering an airport as your destination (e.g., “KOSH” for Whitman Regional Airport, versus “OSH” for Oshkosh VOR.)
- Rotate ○ one stop to the right to advance the cursor to the next character position, and use ● to select the next character of the identifier.
- Repeat the previous step until the desired waypoint is displayed.



- Press ENT to confirm the identifier. The direct – to confirmation page will appear, showing the position of the selected destination and the course from your present position.
- Press ENT to confirm the direct – to destination. The navigation page will appear, displaying detailed navigation data to our destination. The graphical DI at the upper left corner of the page indicates the distance and direction you are off course.

Communication

To Select Comm Frequencies:

- Press CRSR to highlight the standby field.
- Rotate ◯ to select the desired megahertz (to the left of the decimal.)
- Rotate ● to select the desired kilohertz (to the right of the decimal.)
- Press CRSR twice to remove the cursor from the comm and GPS windows.

To Exchange Active and Standby frequencies:

Press the ↔ button

To Adjust the Audio Volume:

- Rotate the power \ volume knob.

To Override the Automatic Squelch:

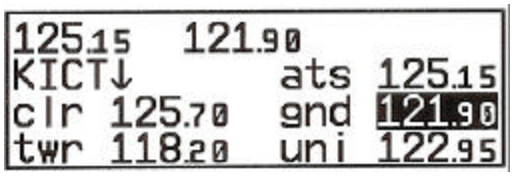
- Press the SQ squelch key. Press SQ again to return to automatic squelch.

To Auto-Tune a Frequency Displayed In the GPS Database:

- Press ENT with cursor off to select the frequency as the standby frequency.

To Auto-Tune a Frequency From a List In the GPS Database:

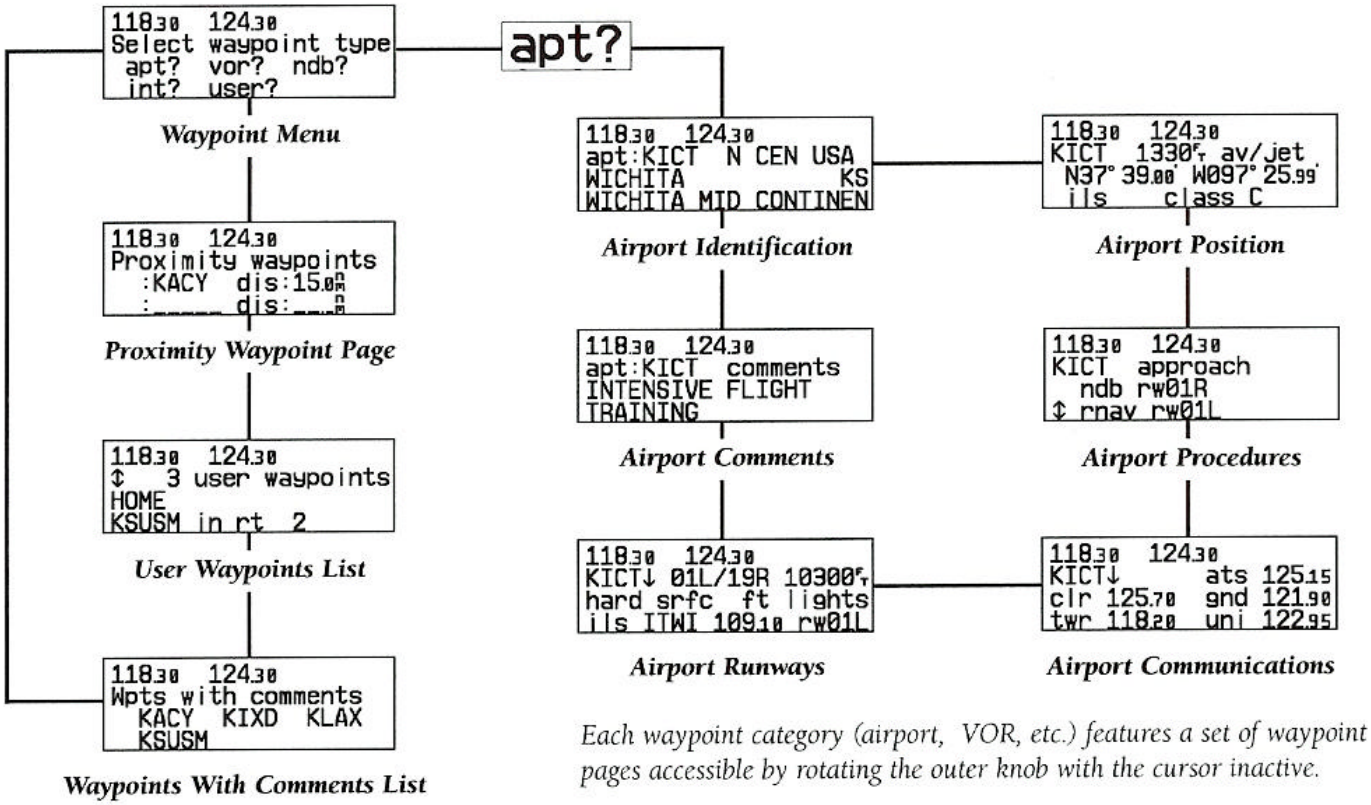
- Press CRSR twice to activate the cursor in the GPS window
- Rotate ◯ to highlight the desired frequency
- Press ENT to place the frequency in the standby field.



To Automatically Tune For Emergency Transmissions:

- Press and hold the ↔ key for more than 2 seconds.

Waypoint and Airport Information



Each waypoint category (airport, VOR, etc.) features a set of waypoint pages accessible by rotating the outer knob with the cursor inactive.

The WPT key is used to view position, runway, frequency and other information on airports, VORs, NDBs, intersections and user waypoints. To scroll through the waypoint page, press WPT and rotate the ◯ knob.

To Access Airport Information:

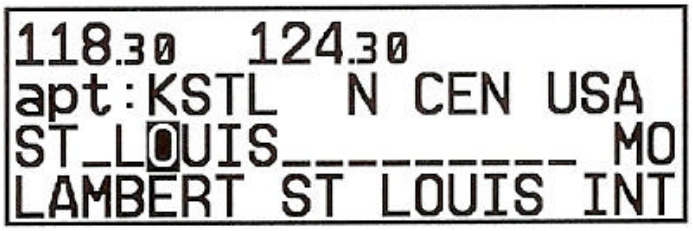
- Press the WPT key.
- Press CRSR twice to activate the cursor
- Press CRSR to confirm the "apt?" category The airport identification page will appear with the identifier ready for entry

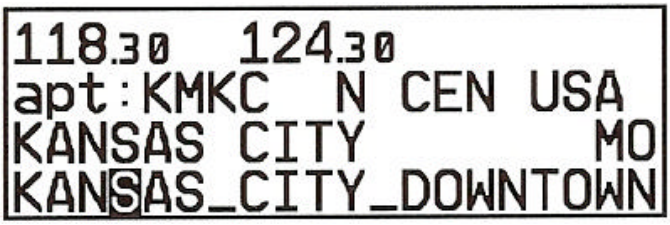
To Enter airports by Identifier:

- Highlight an identifier field, and enter the identifier
- As the identifier is entered, the GNC 300XL will display the first waypoint with the same identifier letters you have entered to that point
- When the desired airport appears. Press ENT

To Select and Airport by Facility Name or City:

- From the airport identification page, highlight the second field to enter the city name**, or** . . . highlight the last field to enter the facility name.
- Enter the city or facility name of the airport.
- Press CRSR to finish





Direct – To

To Select a Direct-To Destination:

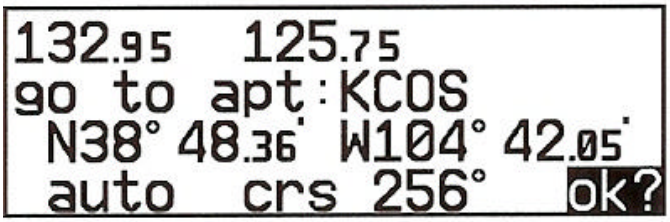
- Press the D→ key
- Enter the identifier of the destination waypoint using ○ and ●.
- Press ENT to accept the identifier and ENT again to accept the direct-to confirmation page.

To Re-Center the CDI:

- Press D→ followed by ENT twice.

To Select a Direct-To From Any Page That Display a Single Waypoint Identifier:

- Press the D→ key followed by ENT.



To Cancel a Direct-To:

- Press D→ key.
- Press the CLR key, followed by ENT.

Using the Direct-To Confirmation Page:

- The GNC 300XL direct-to confirmation page may also be used to select a destination waypoint, review a waypoint's position, facility name or location, and set a course to/from the destination.

To Select A Direct-To Destination:

- Highlight the identifier field and enter the identifier using ○ and ●. Press ENT when finished.

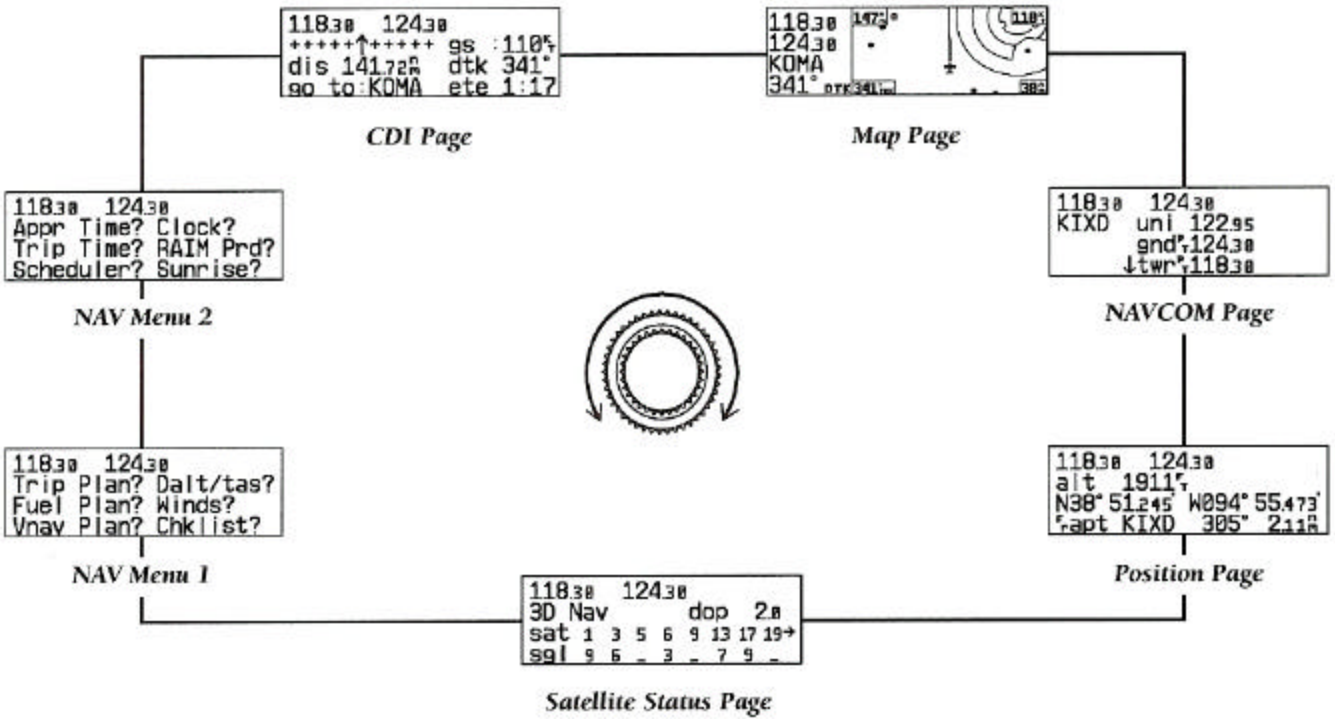
To Review The Location / Facility Name of the Direct-To Waypoint:

- Highlight the location field and rotate ●.

To Enter a Desired Course to the Destination Waypoint:

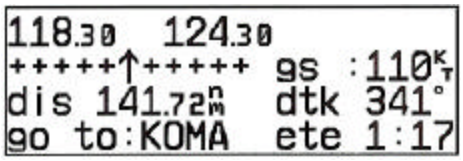
- Dial in the desired course on the OBS and set the external GPS SEQ switch to the HOLD position.

Navigation



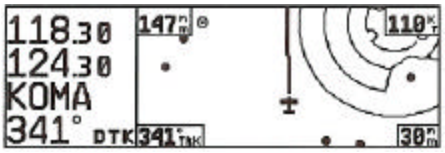
The NAV key is used to view navigation, position and status information and provides access to various planning and calculation functions. To scroll through the navigation pages, press NAV and rotate the knob, or press the NAV key repeatedly.

CDI PAGE



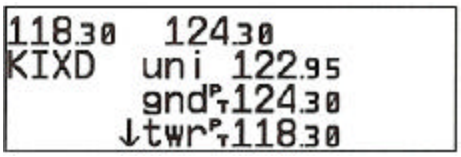
- Provides a graphical CDI and displays your speed and track over the ground, and the distance and bearing to your destination.
- The four data fields may be changed to display different data by placing the cursor over the desired field and rotating the knob
- When the GPS SEQ switch is set to "hold", the desired course may be entered on the OBS

MAP PAGE



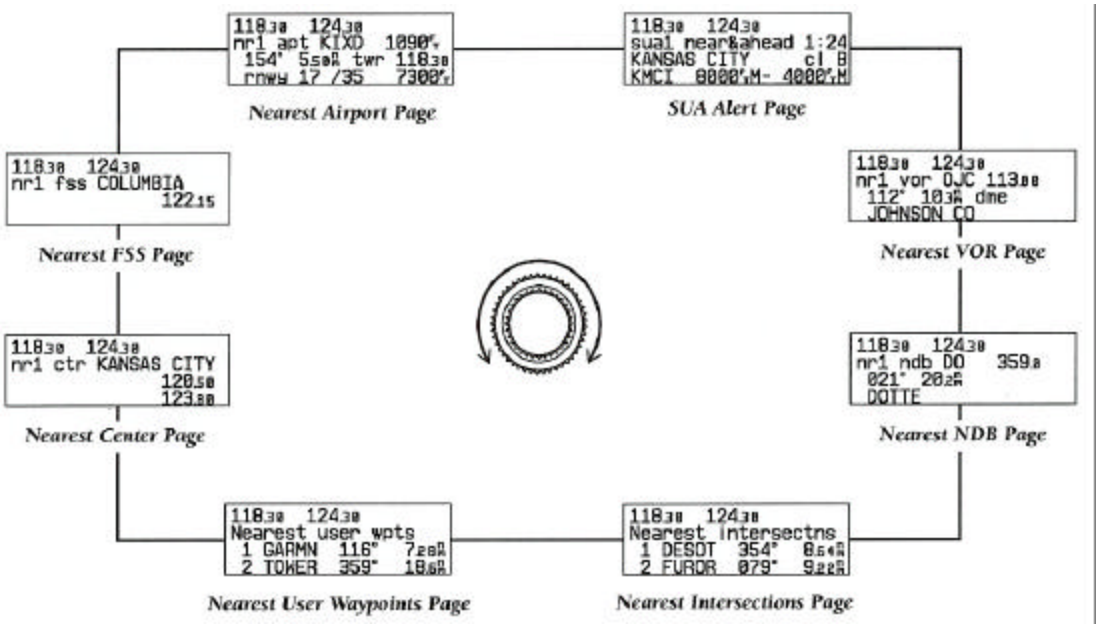
- Displays your present position, nearby airports, navaids and airspaces on a moving map. Destination identifier and desired track are indicated to the left of map display.
- Indicates ground speed, distance to waypoint, map scale, ground track and north reference in the corners of the map display. All but map scale may be removed by pressing CLR
- To change the map scale, rotate the knob.

NAV-COM PAGE



- Displays the available communication frequencies of the nearest or departure airport, as well as the frequency of the arrival airport during direct-to and route operations.
- To scroll through the frequencies list, rotate the knob with the cursor inactive, or use the knob with the cursor active.

Nearest / SUA



The NRST key is used to obtain information on the nine nearest airports, VORs, NDBs, intersections, user waypoints, two nearest ARTCCs and two nearest FSSs, and provides SUA alert information. To scroll through the nearest pages, press NRST and rotate the ○ knob.

Nearest Waypoint Information

To View Nearest Airport Information

Press the NRST key. The nearest airport will be displayed, subject to the runway surface type and minimum runway length currently selected.

To View Other Nearest Airports:

- Rotate ● to the right.

To View Any Additional Airport Information:

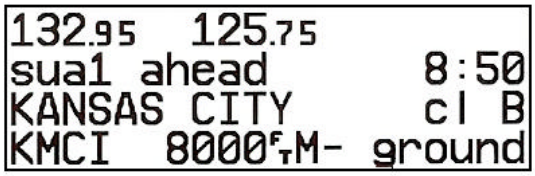
- Highlight the frequency field or the runway identification field
- Rotate ● to scroll through any additional information.
- Alternatively, highlight the identifier and press ENT and rotate ○.

To View Other waypoint Categories:

- Remove the cursor by pressing CRSR and rotate the ○ knob.

Special Use Airspace Alerts

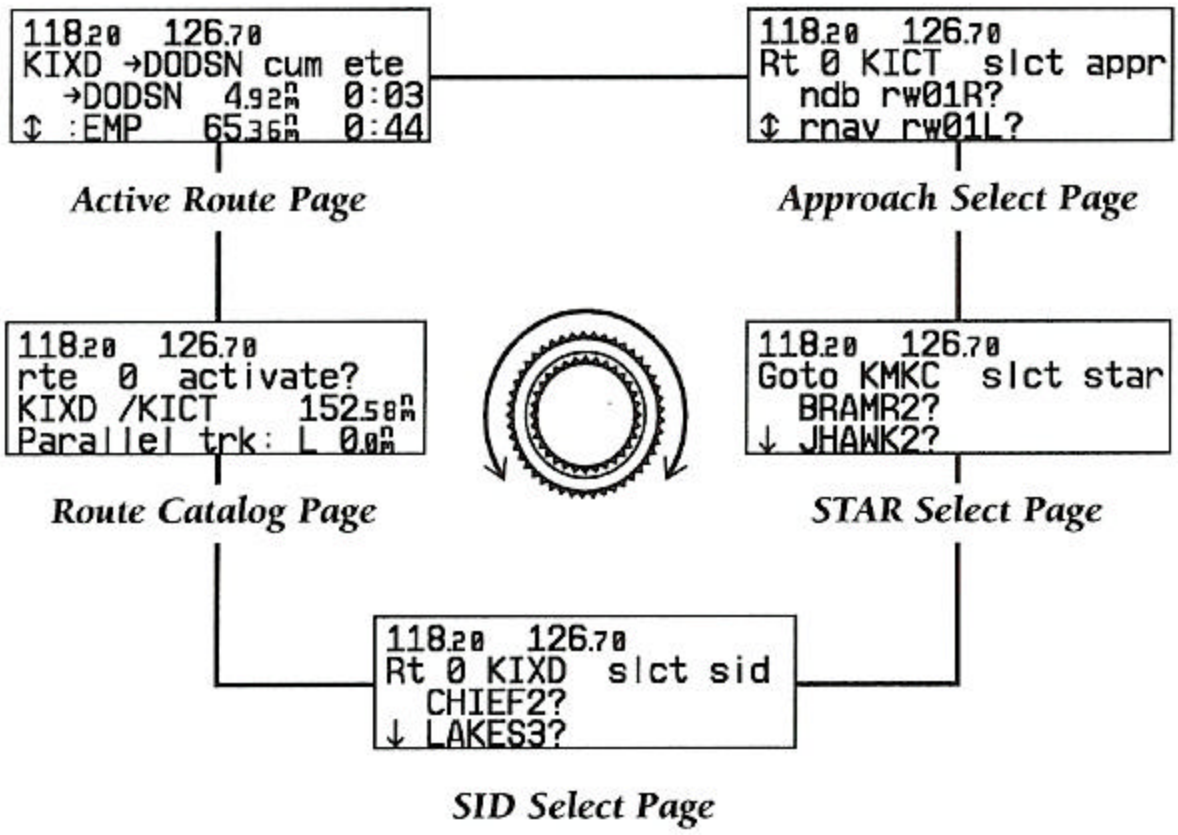
The GNC 300KL NRST key also provides access to Special Use Airspace information to which you are currently being alerted



To View the SUA Alert Page:

- Press the NRST key
- Rotate ○ one stop to the right
- To toggle the display between the SUA name and controlling agency and scroll through other SUA alerts, rotate ● in either direction.

Routes

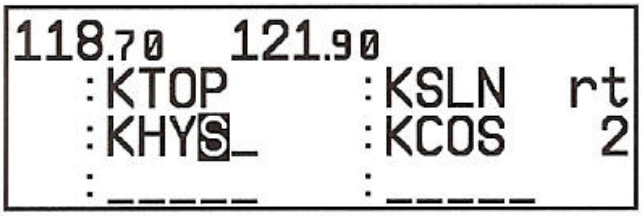


The RTE key allows you to create, edit and activate routes, and provides access to search-and-rescue, offset navigation and closest point of approach functions. To scroll through the route pates, press RTE and rotate the ○ knob, or press the RTE key repeatedly.

To Create Or Edit A Route:

- Press the RTE key and rotate ○ until the route catalog page appears.
- Rotate ● to display the route number you would like to created or edit (route 0 for the active route).
- Press CRSR twice to activate the cursor.
- Rotate ● to select the "edit" option from the route action field. Press ENT
- To add a route waypoint, highlight the first blank waypoint. Enter the waypoint identifier and press ENT. Press ENT again to accept the waypoint confirmation page.
- To delete a route waypoint, highlight the waypoint and press CLR then ENT

Press CRSR to finish.



To Activate a Route:

- Press RTE and rotate ○ to display the route catalog page
- Rotate ● to display the desired route
- Press CRSR twice to activate the cursor.
- Rotate ● to select the "activate" option from the route action field.
- Press ENT. The route will be copied into route 0 (the active route)

To Delete / Stop Navigating a Route:

Follow the first three steps described above.

- Rotate ● to select the "delete?" option and press ENT.

To Review Route Waypoints From the Active Route Page:

- With the cursor off, rotate ● in the direction of the arrow prompts.

To Manually select the Next Route Waypoint:

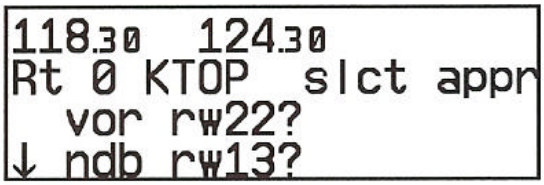
- Highlight the desired waypoint with the cursor and press D→ followed by ENT The GNC 300XL will provide direct navigation guidance to the selected waypoint and then resume navigating the remainder of the route sequence.

To Hold an a Route Waypoint:

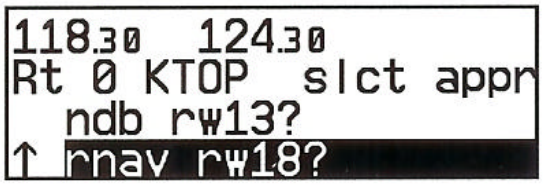
- Highlight the route waypoint you want to hold on, press D→ and ENT.
- To set a desired inbound course, dial the desired course on the OBS.
- Set the external GPS SEQ switch to the HOLD position.
- The GNC 300XL will hold on the "active to" waypoint and will not sequence to the next waypoint in a route. The selected course will appear at the bottom left of the CDI and map pages. To cancel the waypoint hold, set the external GPS SEQ switch back to the AUTO position.

Approaches, SIDs and STARs

To Select an Approach:

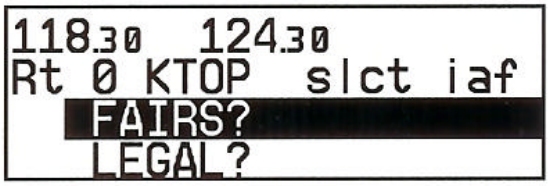


- Select the destination airport using the D→ key, or create and activate a route to the destination airport.
- Press RTE and rotate ◯ to display the approach select page.
- Press CRSR twice to activate the cursor and rotate ◯ to select the desired approach procedure.
- Press ENT to confirm
- If an approach procedure has more than one Initial Approach Fix (IAF), you'll need to select the desired IAF for your approach.



To Select an IAF:

- Rotate ◯, until the desired IAF is highlighted.
- Press ENT to confirm.
- Once the IAF is selected, the approach waypoints will be inserted into route 0, replace the airport waypoint and the active route page will be displayed. NOTE: Once an approach is activated, the GNC 300XL will provide navigation to the initial approach fix, not the airport waypoint.



Flying the Approach

- Once an approach has been loaded, the GNC 300XL will automatically sequence through each approach fix, prompting you to set the OBS for the required course at each waypoint.
- If you are flying a full approach without radar vectors or a procedure turn, set the external GPS SEQ switch to the AUTO position.
- If you are being vectored or plan to fly a procedure turn, you may temporarily suspend auto sequencing by setting the GPS SEQ switch to HOLD
- Once you're established on the inbound course, resume automatic sequencing by setting the GPS SEQ switch back to AUTO.
- Once you're within 30 miles of the airport, the GNC 300XL will automatically activate the approach and begin automatic CDI scale transitioning. RAIM integrity monitoring tolerance will be tightened and you may wish to enter an altimeter setting for improved position accuracy.

To Enter the Altimeter Setting:

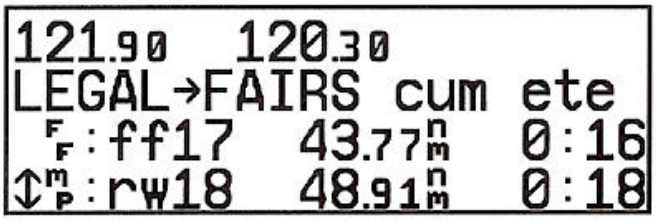
- Press NAV and rotate ◯ to display the position page.

- Press CRSR twice and rotate ◯ to highlight the pressure field.
- Use ● and ◯ to enter the setting. Press ENT to confirm
- During the approach, the GNC 300XL will automatically ramp down to a small CDI scale when you're within 2 miles of the final approach fix. The GPS APR switch will automatically switch from ARM to ACTV.

Selecting Approach Fixes

- When you are flying an approach, you may manually select your next approach waypoint from the active route pate to skip part of the approach sequence. This allows you to select your destination waypoint in case you are vectored to a fix other than the IAF.

- **To Select An Approach Fix**
- Press RTE and rotate ◯ to display the active route page.
- Press CRSR twice to activate the cursor and rotate ◯ to select the desired waypoint
- Press D→ followed by ENT.

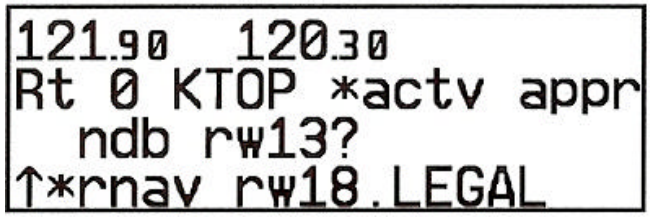


Replacing the Active Approach

To Replace or Delete the Active Approach

- Press RTE and rotate ◯ to display the approach select page. The active approach will be identified by an asterisk to the left of the procedure name.
- Press CRSR twice to activate the cursor and rotate ◯ to select a new approach (or press CLR to delete the approach.)
- Press ENT to confirm. If the new approach procedure has more than one IAF, you'll need to select the desired identifier for your approach.
- Rotate ◯ until the desired IAF is highlighted and press ENT to confirm.

The active route page will appear, and the GNC 300XL will now provide direct navigation to the IAF of the new approach.



Flying the Missed Approach

- To comply with TSO specifications, the GNC 300XL's automatic waypoint sequencing stops at the missed approach point. Once you've crossed the MAP, the GNC 300XL will give you the option of flying to the holding fix
- To begin the missed approach procedure, press the GPS APR switch to disarm the approach and return the CDI scale to 1.0 nm sensitivity.
- After crossing the missed approach point press D→ followed by ENT to fly directly to the missed approach holding point.

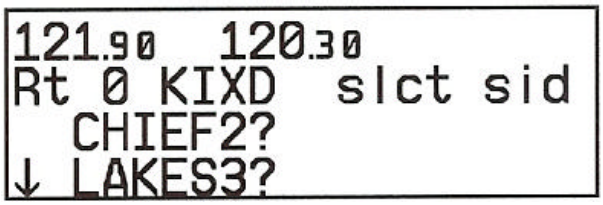
CAUTION! Direct-to navigation to the missed approach holding point may not correspond to the published missed approach procedure. Always fly the applicable portions of the published procedures before selecting the missed approach holding point on the GNC 300XL.

Selecting SIDS and STARS

- Press RTE and rotate ◯ to display the SID or STAR select page. To select a STAR, you must have an active direct-to or route with an airport as the final destination. The GNC 300XL will automatically provide any available SID for the nearest airport without an active route in place.

- Press CRSR twice to activate the cursor and rotate ◯ to select the desired procedure.

- Press ENT to confirm
- If a SID or STAR has more than one transition or runway option, select the desired identifier for the transition and press ENT.



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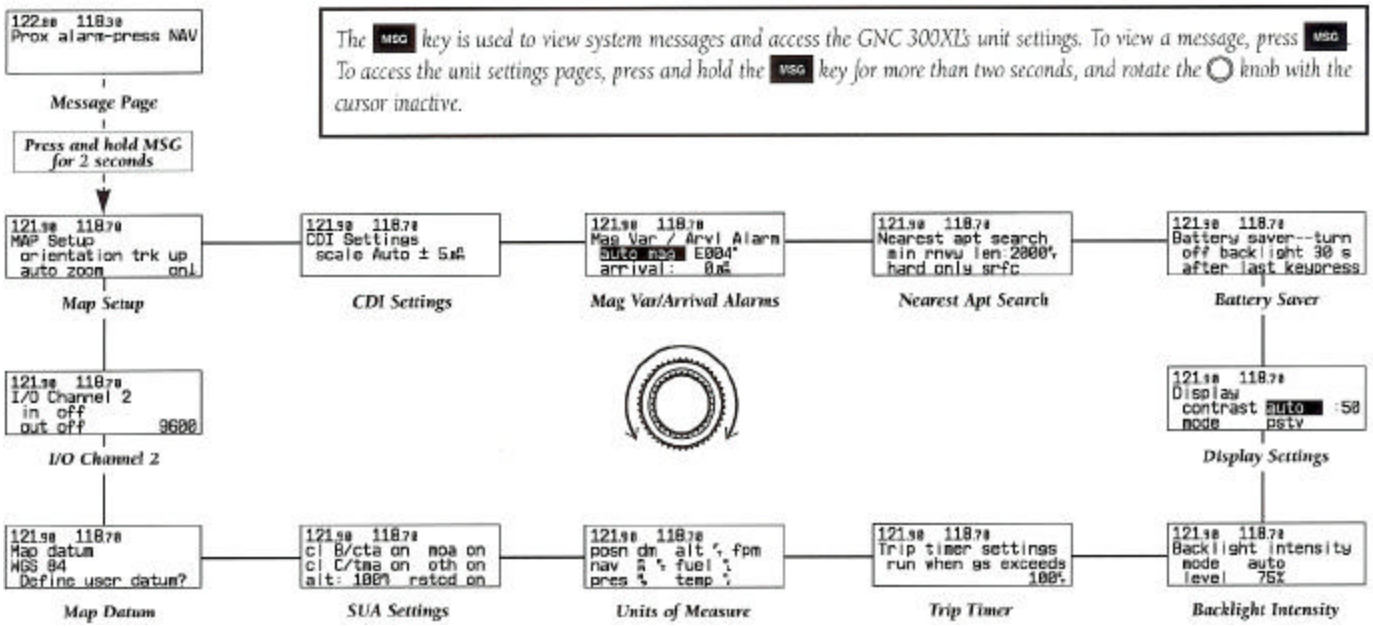
SIDs or STARs may be replaced or deleted from the SID or STAR select page following the same steps outlined for approaches.

MESSAGES / UNIT SETTINGS



UNIT SETTINGS

Map Setup- defines the orientation of the map display; north up, ground track up or desired track up. Allows you to specify which waypoint information (airports, navaids, airspaces, identifiers) will appear on the map display by scale setting and enable/ disable auto-zoom

CDI Settings- allows you to set the CDI scale to 0.3, 1.0, or 5.0 nm scale or an automatic scale. The default setting is “auto”.

Mag Var Arvl Alarm- allows you to select between true north, auto or user defined magnetic variation options and set an arrival alarm for waypoint arrival at a specified distance from a destination waypoint. The default setting for magnetic variation is “auto”.

Nearest Apt Search- allows you to define the runway length and surface type, used in determining which nearest airports are displayed. The default settings are “) ft / me” for length and “any” for runway surface.

Battery Saver- allows you to specify a timeout interval for the GNC 300XL display. The default setting is 30 seconds.

Display settings- allows you to manually adjust the contrast and mode of the display. The default settings are automatic

Backlight Intensity- allows you to manually adjust the backlighting level. The default setting is automatic backlighting control.

Trip Timer- provides a running clock on Nave Menu 2 that may be set to run when power is on or when ground speed exceeds a user-defined level.

Units of Measure- allows you to select nautical, statue or metric units of measure for various navigation and planning displays.

Special Use Airspace- allows you to turn specific controlled / special use airspace message alerts on or off. Turning message alerts off will not prevent SUA information from being displayed on the nearest SUA page.

Map Datum- allows you to select or define the map datum used The default datum is WGS 84

I / O Channel 2- allows you to select input and output interface settings and baud rate for channel 2. The default settings or “off”.