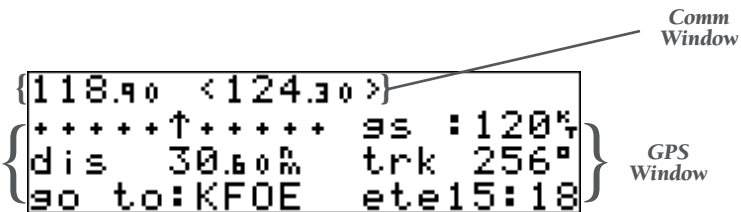




GNC 250

Pilot's Quick Reference Guide



CURSOR/DATA ENTRY

CURSOR CONTROL

CRSR The cursor key is used to activate and deactivate 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 `<>` around the standby frequency (see above).

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


CURSOR/DATA ENTRY








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.
-  The clear key is used to erase information or cancel an entry.
-  The enter key approves operations and confirms data entry and prompts.





POWER UP

- ❑ Insert data card in card slot.
- ❑ Rotate the power/volume knob  clockwise to turn the unit on and adjust volume. The welcome page will appear while the unit performs a self test.
- ❑ Press **ENT** to confirm the 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 messages, press the **MSG** key.



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.



TO SELECT A DIRECT-TO DESTINATION:

- ❑ Press .
- ❑ Rotate  to select the first character of the destination waypoint's identifier. Remember to use the ICAO identifier if you are entering an airport as your destination (i.e., KOSH for Wittman Regional Airport).
- ❑ 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 steps 2 and 3 until the desired waypoint is displayed.

```
122.95 118.90  
go to apt:KICT  
N37° 39.00' W097° 25.99'  
auto crs:220° ok?
```

- ❑ Press  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  to confirm the direct-to destination. The navigation page will appear, displaying detailed navigation data to your destination. The graphical CDI at the upper left corner of the page indicates the distance and direction you are off course on a 5.0 nm scale.

TO SELECT COMM FREQUENCIES:

- ❑ Press **CRSR** repeatedly to highlight the standby field (e.g., "<121.75>").
- ❑ 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 the cursor off to select the frequency as the standby frequency.

```
118.90 122.95
nr1 apt KFOE 1080%
042° 15.2% twr 120.80
rnwy 13 /31 12800%
```

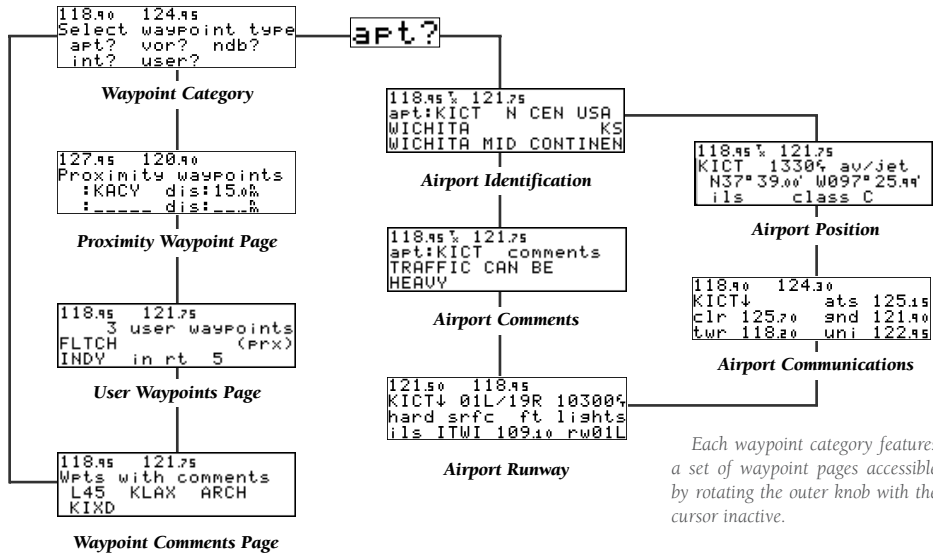
TO AUTO-TUNE A FREQUENCY FROM A LIST IN THE GPS DATABASE:

- ❑ 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.

```
118.90 124.30
KICT↓          ats 125.15
clr 125.70   end 121.90
twr 118.20   uni 122.95
```

TO AUTOMATICALLY TUNE FOR EMERGENCY TRANSMISSION:

- ❑ Press and hold the **◀ ▶** key for > 2 seconds.



The WPT key is used to view position, runway, frequency sections and user waypoints. To scroll through the waypoint and other information on airports, VORs, NDBs, inter-
sections and user waypoints. To scroll through the waypoint pages, press WPT and rotate the outer knob.

TO ACCESS APT INFORMATION:

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

```
118.90 124.95
apt:KGJT SW USA
GRAND JUNCTION CO
WALKER
```

TO ENTER APTS BY IDENTIFIER:

- ❑ Highlight an identifier field, and enter the identifier.
- ❑ As the identifier is entered, the GNC 250 will display any waypoints with the same identifier letters you have entered to that point.
- ❑ When the desired airport is displayed, press **CRSR**.

TO SELECT AN APT BY FACILITY NAME OR CITY:

```
118.90 124.95
apt:KDCR NE USA
WASHINGTON VA
WASHINGTON NATIONAL
```

- ❑ From the airport identification page, highlight the second field in the GPS window to enter the city name, OR:
highlight the last field in the GPS window to enter the facility name.

```
118.90 124.95
apt:KMKC N CEN USA
KANSAS CITY MO
ANSAS_CITY_DOWNTOWN
```

- ❑ Enter the city or facility name of the airport.
- ❑ Press **CRSR** to finish.

TO SELECT A DIRECT-TO DESTINATION:

- Press the **→** key.
- Enter the identifier of the destination waypoint.
- Press **ENT** to accept the identifier, and **ENT** again to accept the direct-to confirmation page.

```

121.50  118.95
Enter wpt  ss :120%
dis  _ _ _ _  trk 356°
go to:KICT_  ete _ _ : _ _

```

TO RE-CENTER THE D-BAR:

- Press **→**, followed by **ENT** twice.

TO SELECT A DIRECT-TO FROM ANY PAGE THAT DISPLAYS A SINGLE WAYPOINT IDENTIFIER:

- Press **→**, followed by **ENT**.

```

122.95  118.90
go to apt:KICT
  N37° 39.00' W097° 25.99'
auto crs:220°  ok?

```

TO CANCEL A DIRECT-TO:

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

USING THE DIRECT-TO CONFIRMATION PAGE

```
118.90 124.30  
go to apt:KICT  
N37°39.00' W097°25.99'  
auto crs:233° ok?
```

The GNC 250's direct-to confirmation page may also be used to select a destination waypoint, review a waypoint's position, facility name or location, and manually set a course to/from the destination.

TO SELECT A DIRECT-TO DESTINATION:

- ❑ Highlight the identifier field and enter the identifier using  and . Press  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 OR FROM THE DESTINATION WAYPOINT:

- ❑ Highlight the course select ('crs') field and use  and  to enter the desired course. Press  when finished.

WAYPOINT SEQUENCING AND HOLD MODE

The GNC 250's waypoint sequencing field allows you to 'hold' on a selected waypoint and prevent the GPS from sequencing to the next route waypoint. You may also use the hold mode with the course select feature to maintain a user-defined course to the hold waypoint.

TO HOLD ON A WAYPOINT:

- ❑ Set the waypoint sequencing field to the 'hold' setting by highlighting the waypoint sequencing field and rotating  one stop in either direction.
- ❑ To enter a desired course to or from the destination waypoint, highlight the 'crs' field and use  and  to enter the desired course.
- ❑ Press **ENT** when finished.

```
118.90 124.30
go to apt:KICT
N37°39.00' W097°25.99'
auto crs:233° ok?
```



Waypoint sequencing field set to AUTO.

```
118.90 124.30
go to apt:KICT
N37°39.00' W097°25.99'
hold crs:246° ok?
```



Waypoint sequencing field set to HOLD.

USING THE COURSE SELECT FUNCTION

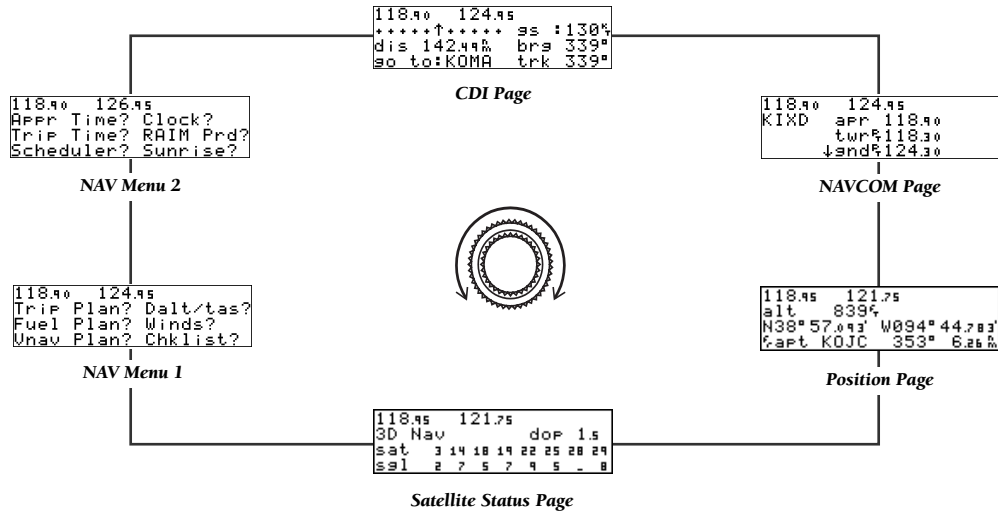
```

118.90  124.30
+*****^*****  gs :120%
dis  15.30%  trk  107°
074° :KIXD  ete  9:48
  
```

Once the waypoint sequencing field is set to the 'hold' position, the selected course will appear at the bottom left corner of the CDI page.

TO ENTER A NEW COURSE FROM THE CDI PAGE:

- ❑ Press **CRSR** twice to activate the cursor in the GPS window.
- ❑ Rotate **○** to highlight the course select field.
- ❑ Use **●** and **○** to enter the desired course.
- ❑ Press **ENT** to confirm, and **CRSR** to remove the cursor.
- ❑ To establish a new GPS calculated course, press **→**, then **ENT**. Press **ENT** again to confirm the 'ok?' prompt.



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 outer knob; or press the NAV key repeatedly.

CDI PAGE

```
118.90 124.95
++++↑++++ ss :130%
dis 142.49% brs 339°
so to:KOMA trk 339°
```

- ❑ Provides a graphical CDI and displays your speed and track over the ground, and the distance and ETE to your destination.
- ❑ The four data fields may be changed to display different data by placing the flashing cursor over the desired field and rotating the inner knob.
- ❑ When the GNC 250's waypoint sequencing mode is set to 'hold', the desired course may be entered in the course select field.

NAVCOM PAGE

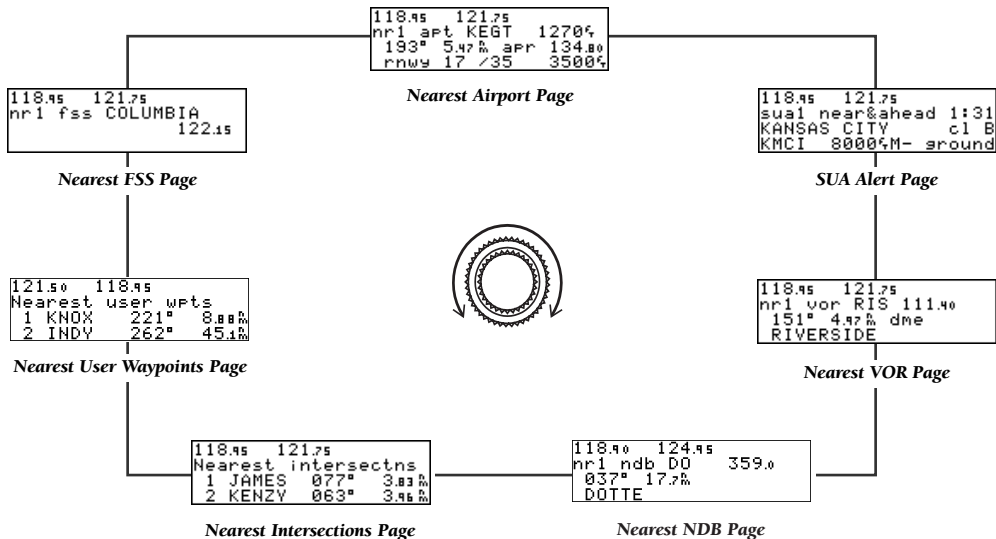
```
118.90 124.95
KIXD apr 118.90
      twr 118.30
      ↓and 124.30
```

- ❑ 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 inner knob with the cursor inactive.
- ❑ To place a displayed frequency in the standby field, highlight the frequency with the cursor and press **ENT**.

POSITION PAGE

```
118.95 121.75
alt 839%
N38° 57.093' W094° 44.783'
Crpt KOJC 353° 6.26%
```

- ❑ Displays your present position and altitude information (altitude, msa or esa).
- ❑ The reference waypoint field indicates your radial and distance from the nearest airport, VOR, NDB, intersection or user waypoint, and can be used to maintain a radial or distance from a waypoint.
- ❑ You may also display the radial and distance from any other waypoint (not just the nearest waypoint of each category) by selecting the 'wpt' category and entering the desired identifier.



NEAREST/SUA

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

NEAREST WAYPOINT INFORMATION

TO VIEW NEAREST APT 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 APTS:

- ❑ Rotate **●** to the right.

TO VIEW ANY ADDITIONAL AIRPORT INFO:

- ❑ Highlight the frequency field or the runway identification field.
- ❑ Rotate **●** to scroll through any additional information.

To view other wpt categories, remove the cursor and rotate the outer knob.

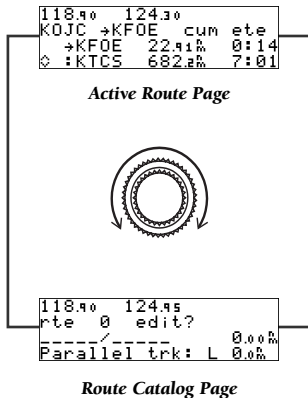
SPECIAL USE AIRSPACE ALERTS

```
118.95 121.75
sua1 near&ahead 1:31
KANSAS CITY c1 B
KMCI 80004M- ground
```

The GNC 250's **NRST** key also provides access to Special Use Airspace information that you are currently being alerted to.

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 the controlling agency and scroll through other SUA alerts, rotate **●** in either direction.



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 pages, press RTE and rotate the outer knob; or press the RTE key repeatedly.

TO CREATE OR EDIT A ROUTE:

```

118.95 121.75
:KTOP :KFOE_ rt
:KEMP :KOKC 1
:-----:-----
    
```

- Press the **RTE** key and rotate until the route catalog page appears.
- Rotate to display the route number you would like to create or edit (route 0 for the active route).
- Press **CRSR** twice to activate the cursor in the GPS window.
- Rotate to select the 'edit?' option from the route action field. Press **ENT**.
- To add a route waypoint, highlight the first blank waypoint field or the point where you want to enter the new 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**.

ACTIVATING AND DELETING ROUTES

```
118.45 121.75
rte 0 activate?
KTOP /KOKC 241.03 %
Parallel trk: L 0.0%
```

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 in the GPS window.
- ❑ 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**.

FLYING THE ACTIVE ROUTE

TO REVIEW ROUTE WAYPOINTS FROM THE ACTIVE ROUTE PAGE:

- ❑ With the cursor off, rotate **⦿** in the direction of the arrow prompts.
- ❑ To manually select your next route waypoint, highlight the desired waypoint with the flashing cursor and press **→**, followed by **ENT**. The GNC 250 will provide direct navigation guidance to the selected waypoint and resume navigating the remainder of the route in sequence.

TO HOLD ON A ROUTE WAYPOINT:

- ❑ Highlight the route waypoint you want to hold on and press **→**.
- ❑ Rotate **⦿** to highlight the waypoint sequencing field and use **⦿** to select the 'hold' setting. Press **ENT** to accept.
- ❑ Use **⦿** and **⦿** to enter the desired course. Press **ENT** to confirm.
- ❑ Press **ENT** to confirm the 'ok?' prompt. The CDI page will display the course at the bottom left of the page.

```
118.95 121.75
Prox alarm-Press NAV
```

Message Page

Press and hold MSG
for 2 seconds

```
127.95 128.20
CDI Settings
scale Auto : 5.0%
```

CDI Settings

```
118.90 124.30
I/O Channel 2
in off
out off 9600
```

I/O Channel 2

```
127.95 127.20
Map datum
WGS 84
Define user datum?
```

Map Datum

```
118.90 124.30
Mag Var / Arrvl Alarm
user mag: E004°
arrival: 0.0%
```

Mag Var/Arrival Alarms

```
127.95 128.20
Nearest apt search
min rnwy len:2000%
hard only srfc
```

Nearest Apt Search

```
127.95 128.20
Battery saver--turn
off display 30 sec
after last keypress
```

Battery Saver

```
121.50 118.95
Display intensity
mode auto
level 75%
```

Display Intensity

```
127.95 128.20
Trip timer settings
run when ss exceeds 100%
```

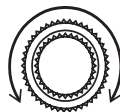
Trip Timer

```
127.95 127.20
cl B/cta on moa on
cl C/tma on oth on
alt: 100% rstcd on
```

SUA Settings

```
127.95 128.20
Posn dm alt % fpm
nav M % fuel %
Pres % temp %
```

Units of Measure



The MSG key is used to view system messages and access the GNC 250's unit settings. To view a message, press MSG. To access the unit settings pages, press and hold the MSG key for more than two seconds, and rotate the outer knob with the cursor inactive.

- 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 5.0 nm.
- MAG VAR/ARVL ALARM— allows you to select between true, 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 '0 ft/mt' for length and 'any' for runway surface.
- BATTERY SAVER— allows you to specify a timeout interval for the GNC 250 display. The default setting is 30 seconds.
- DISPLAY INTENSITY— allows you to manually adjust the brightness of the display. The default setting is for automatic brightness.
- TRIP TIMER— provides a running clock on Nav Menu 2 that may be set to run when power is on or when ground speed exceeds a user-defined minimum.
- UNITS OF MEASURE— allows you to select units of measure for various navigation and planning displays.
- SPECIAL USE AIRSPACE— allows you to turn specific controlled/restricted 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 are 'off'.



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