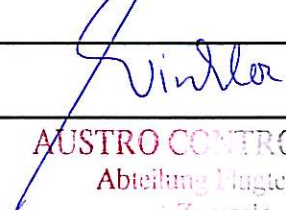



**SUPPLEMENT A17
TO THE AIRPLANE FLIGHT MANUAL
DA 40, DA 40 D, DA 40 F**

**COM / NAV / GPS
GNS 430
GARMIN**

Doc. No. : 6.01.01-E (DA 40)
6.01.05-E (DA 40 D)
6.01.02-E (DA 40 F)
Date of Issue of the Supplement : 01 Oct 2001
Design Change Advisory : OÄM 40-097 (DA 40)
OÄM 40-136 (DA 40 D)
OÄM 40-221 (DA 40 F)

Signature : 
Authority : 
Stamp : **AUSTRO CONTROL GmbH**
Abteilung Flugtechnik
Zentrale
A-1030 Wien, Schnirchgasse 11
Date of approval : 20. SEP. 2005

This Supplement has been verified for EASA by the Austrian Civil Aviation Authority Austro Control (ACG) as Primary Certification Authority (PCA) in accordance with the valid Certification Procedures and approved by EASA with approval no.: 2005-3345

DIAMOND AIRCRAFT INDUSTRIES GMBH
N.A. OTTO-STR. 5
A-2700 WIENER NEUSTADT
AUSTRIA

0.1 RECORD OF REVISIONS

Rev. No.	Reason	Chapter	Page(s)	Date of Revision	Approval Note	Date of Approval	Date Inserted	Signature
1	OÄM 40-117 WX 500	0	9-A17-1, 9A17-2, 9-A17-3, 9-A17-4	15-Mar-2002	/	/		
		7	9-A17-31, 9-A17-32					
2	OÄM 40-136	all	all	17-Feb-2003	/	/		
3	OÄM 40-221 EASA Statement	all	all	22-Jun-2005				

0.2 LIST OF EFFECTIVE PAGES

Chapter	Page	Date
0	9-A17-0	22 Jun 2005
	9-A17-1	22 Jun 2005
	9-A17-2	22 Jun 2005
	9-A17-3	22 Jun 2005
	9-A17-4	22 Jun 2005
1	9-A17-5	22 Jun 2005
2	9-A17-5	22 Jun 2005
	9-A17-6	22 Jun 2005
	9-A17-7	22 Jun 2005
3	9-A17-8	22 Jun 2005
4A	9-A17-9	22 Jun 2005
	9-A17-10	22 Jun 2005
4B	9-A17-10	22 Jun 2005
5, 6	9-A17-10	22 Jun 2005

7	9-A17-11	22 Jun 2005
	9-A17-12	22 Jun 2005
	9-A17-13	22 Jun 2005
	9-A17-14	22 Jun 2005
	9-A17-15	22 Jun 2005
	9-A17-16	22 Jun 2005
	9-A17-17	22 Jun 2005
	9-A17-18	22 Jun 2005
	9-A17-19	22 Jun 2005
	9-A17-20	22 Jun 2005
	9-A17-21	22 Jun 2005
	9-A17-22	22 Jun 2005
	9-A17-23	22 Jun 2005
	9-A17-24	22 Jun 2005
	9-A17-25	22 Jun 2005
	9-A17-26	22 Jun 2005
	9-A17-27	22 Jun 2005
	9-A17-28	22 Jun 2005
	9-A17-29	22 Jun 2005
	9-A17-30	22 Jun 2005
8	9-A17-30	22 Jun 2005

0.3 TABLE OF CONTENTS

	Page
1. GENERAL	9-A17-5
2. OPERATING LIMITATIONS	9-A17-5
3. EMERGENCY PROCEDURES	9-A17-8
4A. NORMAL OPERATING PROCEDURES	9-A17-9
4B. ABNORMAL OPERATING PROCEDURES	9-A17-10
5. PERFORMANCE	9-A17-10
6. MASS AND BALANCE	9-A17-10
7. DESCRIPTION OF THE AIRPLANE AND ITS SYSTEMS	9-A17-11
8. AIRPLANE HANDLING, CARE AND MAINTENANCE ...	9-A17-30

1. GENERAL

This Supplement supplies the information necessary for the efficient operation of the airplane when the COM/NAV/GPS GNS 430 is installed. The information contained within this Supplement is to be used in conjunction with the complete AFM.

This Supplement is a permanent part of this AFM and must remain in this AFM at all times when the GNS 430 is installed.

Refer to Section 7.14 for approved modes of operation (i.e. BRNAV, MNPS) of the GNS 430's GPS receiver.

2. LIMITATIONS

- A. The GNS 430 Pilot's Guide, dated October, 1998, or later appropriate revision, must be immediately available to the flight crew whenever navigation is predicated on the use of the system.
- B. The GNS 430 must utilize the following or later approved software versions:

Sub-System	Software Version
Main	200
GPS	200
COMM	122
VOR/LOC	125
G/S	200

The Main software version is displayed on the GNS 430 self test page immediately after turn-on for 5 seconds. The remaining system software versions can be verified on the AUX group sub-page 2, 'SOFTWARE/DATABASE VER'.

- C. IFR en route and terminal navigation predicated upon the GNS 430's GPS Receiver is prohibited unless the pilot verifies the currency of the data base or verifies each selected waypoint for accuracy by reference to current approved data.
- D. Instrument approach navigation predicated upon the GNS 430's GPS Receiver must be accomplished in accordance with approved instrument approach procedures that are retrieved from the GPS equipment data base. The GPS equipment database must incorporate the current update cycle.
- (1) Instrument approaches utilizing the GPS receiver must be conducted in the approach mode and Receiver Autonomous Integrity Monitoring (RAIM) must be available at the Final Approach Fix.
 - (2) Accomplishment of ILS, LOC, LOC-BC, LDA, SDF, MLS or any other type of approach not approved for GPS overlay with the GNS 430's GPS receiver is not authorized.
 - (3) Use of the GNS 430 VOR/ILS receiver to fly approaches not approved for GPS require VOR/ILS navigation data to be present on the external indicator.
 - (4) When an alternate airport is required by the applicable operating rules, it must be served by an approach based on other than GPS or Loran-C navigation, the airplane must have the operational equipment capable of using that navigation aid, and the required navigation aid must be operational.
 - (5) VNAV information may be utilized for advisory information only. Use of VNAV information for Instrument Approach Procedures does not guarantee Step-Down Fix altitude protection, or arrival at approach minimums in normal position to land.
- E. If not previously defined, the following default settings must be made in the 'SETUP 1' menu of the GNS 430 prior to operation (refer to Pilot's Guide for procedure if necessary):
- (1) **dis, spd:** nm, kt (sets navigation units to 'nautical miles' and 'knots')
 - (2) **alt, vs:** ft, fpm (sets altitude units to 'feet' and 'feet per minute')

- (3) **map datum:** WGS 84 (sets map datum to WGS-84, see note below)
- (4) **posn:** hddd°mm.mmm' (sets navigation grid units to decimal minutes)
- (5) **fuel:** gl (sets fuel units to gallons)

NOTE

In some areas datums other than WGS-84 may be used. If the GNS 430 is authorized for use by the appropriate Airworthiness authority, the required geodetic datum must be set in the GNS 430 prior to its use for navigation.

- F. The accuracy of the data base information is only assured if it is used before the end of the effectivity period. Use of out of date data base information is done entirely at the user's own risk.

3. EMERGENCY PROCEDURES

- A. If GNS 430 navigation information is not available or invalid, utilize remaining operational navigation equipment as required.
- B. If 'RAIM POSITION WARNING' message is displayed the system will flag and no longer provide GPS based navigational guidance. The crew should revert to the GNS 430 VOR/ILS receiver or an alternate means of navigation other than the GNS 430's GPS Receiver.
- C. If 'RAIM IS NOT AVAILABLE' message is displayed in the en route, terminal, or initial approach phase of flight, continue to navigate using the GPS equipment or revert to an alternate means of navigation other than the GNS 430's GPS receiver appropriate to the route and phase of flight. When continuing to use GPS navigation, position must be verified every 15 minutes using the GNS 430's VOR/ILS receiver or another IFR-approved navigation system.
- D. If 'RAIM IS NOT AVAILABLE' message is displayed while on the final approach segment, GPS based navigation will continue for up to 5 minutes with approach CDI sensitivity (0.3 nautical miles). After 5 minutes the system will flag and no longer provide course guidance with approach sensitivity. Missed approach course guidance may still be available with 1 nautical mile CDI sensitivity by executing the missed approach.
- E. In an in-flight emergency, depressing and holding the Comm transfer button for 2 seconds will select the emergency frequency of 121.500 MHz into the 'Active' frequency window.

4A. NORMAL PROCEDURES

DETAILED OPERATING PROCEDURES

Detailed operating procedures are described in the GARMIN GNS 430 Pilot's Guide, dated October 1998, or later appropriate revision.

PILOT'S DISPLAY

The GNS 430 System data will appear on the Pilot's HSI or CDI. The source of data is either GPS or VLOC as annunciated on the display above the CDI key.

AUTOPILOT COUPLED OPERATION

Coupling of the GNS 430 System steering information to the autopilot can be accomplished by engaging the autopilot in the NAV or APR mode. When the autopilot system is using course information supplied by the GNS 430 System, the course pointer on the HSI must be manually set to the desired track (DTK) indicated by the GNS 430. For detailed autopilot operational instructions, refer to the JAA Approved Flight Manual Supplement for the autopilot.

CROSSFILL OPERATIONS

For dual GNC 400 Product Series installations, crossfill capabilities exist between the number one and number two GNC 400 Systems. Refer to the GNS 430 Pilot's Guide for detailed crossfill operating instructions.

AUTOMATIC LOCALIZER COURSE CAPTURE

By default, the GNS 430 automatic localizer course capture feature is enabled. This feature provides a method for system navigation data present on the external indicators to be switched automatically from GPS guidance to localizer / glide slope guidance as the airplane approaches the localizer course inbound to the final approach fix. If an offset from the final approach course is being flown, it is possible that the automatic switch from GPS course guidance to localizer / glide slope course guidance will not occur. It is the pilot's responsibility to ensure correct system navigation data is present on the external indicator before continuing a localizer based approach beyond the final approach fix. Refer to the GNS 430 Pilot's Guide for detailed operating instructions.

4B. ABNORMAL PROCEDURES

No change.

5. PERFORMANCE

No change.

6. MASS AND BALANCE

Upon removal or installation of the GNS 430 the change of empty mass and corresponding center of gravity of the airplane must be recorded according to Chapter 6 of the Airplane Flight Manual.

7. DESCRIPTION OF THE AIRPLANE AND ITS SYSTEMS

7.14 AVIONICS

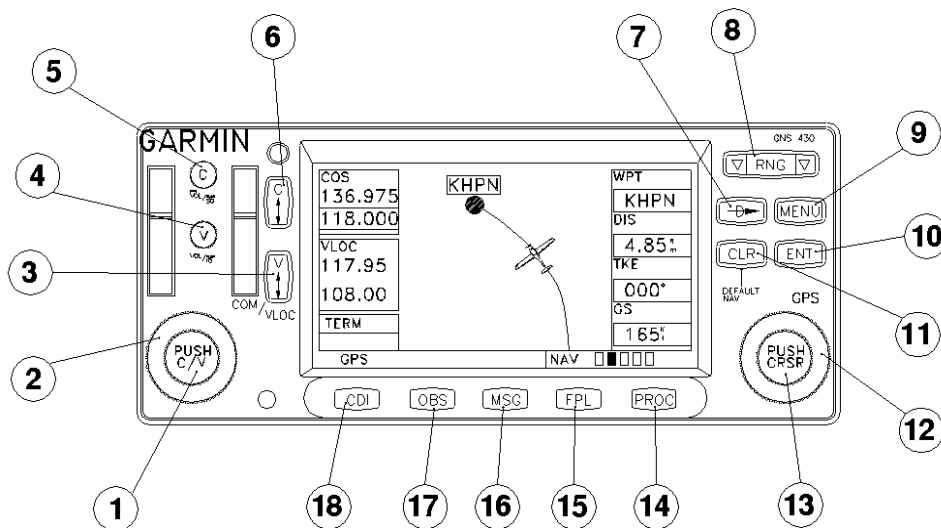
GENERAL

The GNS 430 System is a fully integrated, panel mounted instrument, which contains a VHF Communications Transceiver, a VOR/ILS receiver, and a Global Positioning System (GPS) Navigation computer. The system consists of a GPS antenna, GPS Receiver, VHF VOR/LOC/GS antenna, VOR/ILS receiver, VHF COMM antenna and a VHF Communications Transceiver. The primary function of the VHF Communication portion of the equipment is to facilitate communication with Air Traffic Control. The primary function of the VOR/ILS Receiver portion of the equipment is to receive and demodulate VOR, Localizer, and Glide Slope signals. The primary function of the GPS portion of the system is to acquire signals from the GPS system satellites, recover orbital data, make range and Doppler measurements, and process this information in real-time to obtain the user's position, velocity, and time.

Provided the GNS 430's GPS receiver is receiving adequate usable signals, it has been demonstrated capable of and has been shown to meet the accuracy specifications for:

- VFR/IFR enroute, terminal, and non-precision instrument approach (GPS, Loran-C, VOR, VOR-DME, TACAN, NDB, NDB-DME, RNAV) operation in accordance with AC 20-138.
- One of the approved sensors, for a single or dual GNS 430 installation, for North Atlantic Minimum Navigation Performance Specification (MNPS) Airspace in accordance with AC 91-49 and AC 120-33.
- The systems meets RNP5 airspace (BRNAV) requirements of AC 90-96 and in accordance with AC 20-138, and JAA AMJ 20X2 Leaflet 2 Revision 1, provided it is receiving usable navigation information from the GPS receiver.

Navigation is accomplished using the WGS-84 (NAD-83) coordinate reference datum. Navigation data is based upon use of only the Global Positioning System (GPS) operated by the United States of America.



KEY AND KNOB FUNCTIONS

The key and knob descriptions on the next pages provide a general overview of the primary function(s) for each knob.

LEFT-HAND KEYS AND KNOBS

1. The small left knob (COM/VLOC) 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.

2. 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 VLOC receiver, whichever is currently selected by the tuning cursor.
3. The VLOC flip-flop key is used to swap the active and standby VLOC frequencies (i.e., make the selected standby frequency active).
4. The VLOC volume knob controls audio volume for the selected VOR/Localizer frequency. Press momentarily to enable/disable the ident tone.
5. The COM power/volume knob controls unit power and communications radio volume. Press momentarily to disable automatic squelch control.
6. 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).

RIGHT-HAND KEYS AND KNOBS

7. 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.
8. The range key allows you to select the desired map scale. Use the up arrow side of the key to zoom out to a larger area, or the down arrow side to zoom in to a smaller area.
9. The menu key displays a context-sensitivity list of options. This options list allows you to access additional features or make settings changes which relate to the currently displayed page.
10. 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.
11. 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 being displayed.
12. The large right knob (CRSR) 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.
13. The small right knob (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

14. The procedures key allows you to select and remove 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.
15. 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.
16. The message key is used to view system messages and to alert you to important warnings and requirements.
17. The OBS key is used to select manual or automatic sequencing of waypoints. Pressing the OBS 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.
18. The CDI key is used to toggle which navigation source (GPS or VLOC) provides output to the HSI or CDI.

OPERATION

POWERING UP THE GNS 430

The GNS 430's power and COM volume are controlled using the COM power/volume knob (5) at the top left corner of the unit. Rotating it clockwise will turn unit power on and increase the COM radio volume. After turning the unit on, a 'welcome page' will be displayed while the unit performs a self test.

During the self-test, check for the following indications on other instruments:

- Course deviation - half left / no flag
- TO/FROM flag - TO
- All external annunciators - on
- Glideslope - half up / no flag

The land data page will appear next, followed by the database confirmation page, which shows the current database information on the NavData card (with the valid operating dates, cycle number and database type indicated). The database is updated every 28 days, and must be current for approved instrument approach operations. Information on database subscriptions is available inside your GNS 430 package.

To acknowledge the database information, press the ENT-key.

ACQUIRING SATELLITES & VIEWING MESSAGES

Once the database has been acknowledged, the satellite status page will appear, and the GNS 430 will begin to collect satellite information. An 'Acquiring' status will be displayed on the satellite status page, and the signal strength of any satellites received will appear as 'bar graph' readings. This is a good indication that you are receiving signals and a position fix will be determined. Following the first-time use of your GNS 430, the time required for a position fix will vary - usually from one to two minutes.

If the unit can only obtain enough satellites for 2D navigation (no altitude), the unit will use the altitude provided by the altitude encoder.

If the GNS 430 has not been operated for a period of six months or more, it may have to 'Search the Sky' to collect new data. This means the unit is acquiring satellite data to establish almanac and satellite orbit information, which can take 5 to 10 minutes. The satellite status page will display a 'Searching Sky' status, and the message annunciator (MSG), above the MSG key, will also flash to alert you of a system message, 'Searching the Sky'.

To view a system message, press MSG.

The message page will appear and display the status or warning information applicable to the receiver's current operating condition.

To return to the previous page after viewing a message, press MSG again.

SELECTING COM AND VLOC FREQUENCIES

The GNS 430's display is divided into separate 'windows' (or screen areas), including a COM window, VLOC window and the GPS window (the right 3/4 of the display).

Pushing the small left knob (1) activates the tuning cursor in the desired frequency window. To select the active frequency, you must first enter the frequency in the standby field, and use the COM flip-flop (6) (or the VLOC flip-flop (3)) key to move it to the active field.

To change the standby communication frequency:

1. Press the small left knob (1) if needed, to move the tuning cursor to the COM window
2. Rotate the large left knob (2) to select the MHz, and the small left knob (1) to select the kHz of the desired frequency

To place the standby communication frequency in the active field, press the COM flip-flop key (6).

Once you've entered the active frequency, simply repeat steps 1 and 2, above, to enter the standby frequency. After both communication frequencies have been entered, you may select to keep the COM window 'hot' by leaving the cursor on the standby frequency, or move the cursor to the VLOC window by pressing the small left knob (1).

NOTE

When selecting VLOC frequencies, the tuning cursor will automatically return to the COM window after 30 seconds of inactivity.

To change the standby VLOC frequency:

1. Press the small left knob (1), if needed, to activate the tuning cursor in the VLOC window.
2. Rotate the large left knob (2) to select the MHz, and the small left knob (1) to select the kHz of the desired frequency.

To place the standby frequency in the active field, press the VLOC flip-flop key (3).

MAP PAGE

After the GNS 430 acquires satellites and computes a position, the map page will appear automatically.

The map page displays your present position (using an airplane symbol) relative to nearby airports, VORs, NDBs, intersections, user waypoints and airspace boundaries - and your route displayed as a solid line.

Data fields for destination waypoint (WPT), distance to waypoint (DIS), desired track (DTK) and ground speed (GS) appear on the right hand side of the display. These fields are user selectable to allow you to configure the unit to your own preferences. Available settings include: altitude, bearing, enroute, safe altitude, estimated time of arrival, minimum safe altitude, and ground track.

NAV PAGES & PAGE GROUPS

The map page is one of six pages available under the NAV group:

- Default NAV page
- NAVCOM page
- Satellite status page
- Vertical navigation page
- Position page
- Map page

To select the desired NAV page, rotate the small right knob (13) until the desired page is displayed.

If you are currently viewing a page which is not part of the NAV group, you can quickly return to the NAV group using the CLR-key.

To select the NAV group and display the default NAV page, press and hold the

CLR-key (11).

In addition to the NAV group of pages, additional groups of pages are available for waypoint information (WPT), auxiliary (AUX) functions such as flight planning or unit settings, and listings for nearest (NRST) airports or other facilities.

To select the desired page group, rotate the large right knob (12) until a page from the desired group is displayed

To select the desired page within the group, rotate the small right knob (13) until the desired page is displayed.

DIRECT-TO NAVIGATION

The GNS 430 can use direct point-to-point navigation to guide you from takeoff to touchdown, even in the IFR environment. Once a destination is selected, the unit will provide speed, course and distance data based upon a direct course from your present position to your destination. A destination can be selected from any page with the direct-to-key (7).

To select a direct-to destination:

1. Press the direct-to-key. The select direct-to waypoint page will appear with the destination field highlighted.
2. Rotate the small right knob (13) to enter the first letter of the destination waypoint identifier. The destination waypoint may be an airport, VOR, NDB, intersection or user waypoint, as long as it is in the database or stored in memory as a user waypoint.
3. Rotate the large right knob (12) to the right to move the cursor to the next character position.
4. Repeat steps 2 and 3 to spell out the rest of the waypoint identifier.
5. Press ENT to confirm the identifier. The 'Activate?' function field will be highlighted.
6. Press ENT to activate a direct-to course to the selected destination.

DEFAULT NAV PAGE

During most flights, the default NAV, map and NAVCOM pages will be the primary pages used for navigation. The default NAV page displays a graphic course deviation indicator (CDI), the active leg of your flight plan (as defined by the current 'from' and 'to' waypoints), and six user-selectable data fields. The default settings for these fields are distance to waypoint (DIS), desired track (DTK), bearing to waypoint (BRG), ground speed (GS), ground track (TRK) and estimated time en route (ETE).

From the default NAV page, simply rotate the small right knob (13) to display the map page and again to display the NAVCOM page. The NAVCOM page displays the available frequencies (communications and navigation) for the departure airport, any en route airports which are included in your flight plan, and the final destination airport. When using the direct-to function, frequencies will be listed for the airport nearest to your starting position and the destination airport.

To display the frequency list for the desired flight plan or direct-to airport:

1. Push the small right knob (13) to activate the cursor on the airport identifier field (in the GPS window).
2. Rotate the small right knob (13) to display the list of airports (departure, arrival and en route) for your flight plan or direct-to. Continue to rotate the small right knob (13) until the desired airport is selected.
3. Press ENT to display the frequency list for the selected airport.

NAVCOM PAGE

A frequency listed on the NAVCOM page can be quickly transferred to the standby field of the COM or VLOC windows. This time saving process prevents having to 're-key' a frequency already displayed elsewhere on the screen.

To select a communication or navigation frequency:

Doc. # 6.01.01-E Doc. # 6.01.05-E Doc. # 6.01.02-E	Revision 3 22 Jun 2005	Page 9 - A17 - 22
--	---------------------------	-------------------

1. Push the small right knob (13) to activate the cursor in the GPS window.
2. Rotate the large right knob (12) to select the desired frequency from the list.
3. Press ENT to transfer the selected frequency to the standby field in the COM or VLOC window. COM frequencies will automatically go to the standby field of the COM window and navigation frequencies will automatically go to the standby field of the VLOC window, regardless of which window is currently being highlighted by the cursor.
4. To activate the selected frequency, press the COM flip-flop-key (6) or the VLOC flip-flop-key (3).

IFR PROCEDURES

Once the direct-to or flight plan is confirmed, the whole range of instrument procedures is available to you. Departures (SIDs), arrivals (STARs), non-precision and precision approaches are stored within the NavData card and available using the PROC (procedures) key.

To display the procedures page, press PROC.

The steps required to select and activate an approach, departure or arrival are identical. In this Supplement, examples of the steps required to select an approach are shown, but keep in mind the same process also applies to departures and arrivals.

To select an approach, departure or arrival:

1. Rotate the small right knob (13) to select the desired option ('Select Approach?', 'Select Arrival?', or 'Select Departure?') from the procedures page.
2. Press ENT to display a list of available procedures for the arrival (when using approach or STARs) or departure (when using SIDs) airport.
3. Rotate the small right knob (13) to select the desired procedure and press ENT.
4. For approaches, a window appears to select the desired initial approach fix (IAF) or provide a 'vectors' option to select just the final course segment of the approach. Rotate the small right knob (13) to select the desired option and press ENT. (The 'vectors' option extends the final outbound course beyond the final approach fix, allowing you to intercept the final course segment beyond its normal limits.)
5. For departures and arrivals, a window appears to select the desired transition. Rotate the small right knob (13) to select the desired option and press ENT.

In your flight plan or direct-to, the departure or arrival airport is replaced with the

sequence of waypoints contained within the selected procedure.

NEAREST AIRPORT EMERGENCY SEARCH

The NRST group provides detailed information on the nine nearest airports, VORs, NDBs, intersections and user-created waypoints within 200 nautical miles of your current position. In addition, pages are also provided to display the five nearest center (ARTCC/FIR) and Flight Service Station (FSS) points of communication, plus alert you to any special-use or controlled airspace you may be in or near.

To display the NRST pages:

1. If necessary, press the small right knob (13) to remove the cursor from the page.
2. Rotate the large right knob (12) to select the NRST page group, as indicated by 'NRST' appearing in the lower right corner of the screen.
3. Rotate the small right knob (13) to select the desired NRST page.

The nearest airport page is one of eight pages available under the NRST group:

- Nearest airport page
- Nearest NDB page
- Nearest user waypoints page
- Nearest FSS page
- Nearest intersection page
- Nearest VOR page
- Nearest ARTCC page
- Nearest airspace page

You may examine both the communication frequencies and runway information directly from the nearest airport page. As discussed earlier for the NAVCOM page, you may also place any displayed frequency into the standby COM or VLOC field by highlighting the frequency with the cursor and pressing ENT.

NEAREST AIRPORTS: ADDITIONAL INFORMATION AND DIRECT-TO

To view additional information for a nearby airport:

1. Press the small right knob (13) to activate the cursor.
2. Rotate the large right knob (12) to select the desired airport from the list.
3. Press ENT to display waypoint (WPT) information pages for the selected airport.
4. To display runway and frequency information, press the small right knob (13) to remove the cursor and rotate the small right knob (13) to display the desired information page.

The nearest airport page may be used in conjunction with the direct-to (7) key to quickly set a course to a nearby facility in an in-flight emergency. Selecting a nearby airport as a direct-to destination will override your flight plan or cancel a previously selected direct-to destination. (You'll still have the option of returning to your flight plan by canceling the direct-to.)

To select a nearby airport as a direct-to destination:

From the nearest airport page:

1. Press the small right knob (13) to activate the cursor.
2. Rotate the large right knob (12) to select the desired airport from the list.
3. Press direct-to (7), ENT and ENT (again) to navigate to the nearby airport.

From an airport information page:

1. Press direct-to (7), ENT and ENT (again) to navigate to the nearby airport.

SPECIAL USE AND CONTROLLED AIRSPACE

The last page in the NRST group, the nearest airspace page, provides information for up to nine controlled or special-use airspaces near or in your flight path. Airspace information appears on this page based upon the same criteria used for airspace alert messages.

Nearby airspace information and airspace alert messages are provided according to the following conditions:

- If your projected course will take you inside an airspace within the next ten minutes, the message 'Airspace ahead - - less than 10 minutes' will appear.
- If you are within two nautical miles of an airspace and your current course will take you inside, the message 'Airspace near and ahead' will appear.
- If you are within two nautical miles of an airspace and your current course will not take you inside, the message 'Near airspace less than 2 nm' will appear.
- If you have entered an airspace, the message 'Inside Airspace' will appear.

By default, airspace alert messages are turned off. When turned on, the message (MSG) annunciator located directly above the MSG-key will flash to alert you to the airspace message.

To view an airspace alert message:

1. Press the MSG-key. The message page appears with the alert message.
2. Press MSG again to return to the previous display.

Note that airspace alerts are based upon three-dimensional data (latitude, longitude and altitude) to avoid nuisance alerts. The alert boundaries for controlled airspace are also sectorized to provide complete information on any nearby airspace. Additional information about a nearby airspace - such as controlling agency, frequency and floor/ceiling limits - is available from the nearest airspace page.

FLIGHT PLANS

The GNS 430 lets you create up to 20 flight plans, with up to thirty-one waypoints in each flight plan. Flight plans are created, edited and activated using the FPL-key. The FPL page group includes two pages: the active flight plan page and the flight plan catalog. The active flight plan provides information and editing features for the flight plan currently in use (referred to as 'flight plan 00'). The flight plan catalog serves as the main page for creating new flight plans, as well as editing or activating previously created flight plans.

Since using flight plans is arguably one of the more complex features of the GNS 430, we'll only discuss it briefly here - focusing on creating a new flight plan and activating it to use for navigation. After reading through this brief introduction, answers to additional questions you may have about flight plans can be found in the Pilot's Guide.

To create a new flight plan:

1. Press the FPL-key and rotate the small right knob (13) to select the flight plan catalog.
2. Press the MENU-key to display the flight plan catalog options.
3. Rotate the large right knob (12) to select 'Create New Flight Plan?' and press ENT.
4. The cursor will appear on the first waypoint identifier field (located directly below 'WAYPOINT'). Use the large (12) and small (13) right knobs to enter the identifier of the first waypoint in the flight plan. (The small knob is used to select the desired letter or number and the large knob is used to move to the next character space.)
5. Press ENT once the identifier has been selected. The cursor will move to the next blank waypoint identifier field.
6. Repeat steps 4 and 5, above, until all waypoints for the flight plan have been entered.

Once the flight plan is created, it may be activated from an options window. Activating the flight plan will place it into 'flight plan 00' (a copy of it will still reside in the original catalog location) and replaces any flight plan which currently exists in 'flight plan 00'.

To activate the new flight plan:

1. Press the MENU-key to display the flight plan catalog options.
2. Rotate the small right knob (13) to select 'Activate Flight Plan?' and press ENT.

STORMSCOPE INTERFACE

The GNS 430 provides the display interface for the Goodrich Stormscope WX-500 Weather Mapping Sensor. The interface capability allows weather data to be shown on the color display which gives you the ability to look at your display and quickly identify weather hazards relative to your airplane.

NOTE

Refer to the WX-500 Supplement A24 to the AFM and to the WX-500 Pilot's Guide for a detailed description of the WX-500 Stormscope.

NOTE

Refer to the Pilot's Guide Addendum of the GNS 430 for detailed operating procedures of the GNS 430 when the WX-500 Stormscope is installed.

8. AIRPLANE HANDLING, CARE AND MAINTENANCE

No change.