

G1000[™]

*VHF NAV/COM pilot's guide
for the Diamond DA40*

Record of Revisions

Revision	Date of Revision	Revision Page Range	Description
A	02/14/05	4-1 – 4-25	Initial release.

4.1 INTERFACE INTRODUCTION

OVERVIEW

On both the Primary Flight Display (PFD) and the Multi Function Display (MFD), the G1000 VHF NAV/COM window occupies the top portion of the panel. As shown in Figure 4.1.1, the NAV-related controls, windows and fields are located on the left side, whereas the COM-related controls, windows and fields are located on the right side. The ADF/DME Tuning window is located to the right of the HSI on the PFD.

This section provides information on the following aspects of the G1000 VHF NAV/COM window:

- Windows and fields
- Radio selection
- Color code
- Tuning box
- Frequency Toggle Arrow
- Radio status indications
- Controls



NOTE: Information relative to the optional ADF and DME radios as well as the ADF/DME Tuning window is presented later in this document.



Figure 4.1.1 G1000 VHF NAV/COM Interface (PFD)

ADF/DME Tuning Window

WINDOWS AND FIELDS

On both the PFD and the MFD, the NAV and COM Frequency windows are located at the top of the display on either side of the Navigation Status bar.

- The **NAV Frequency window** is displayed to the left of the Navigation Status bar.
- The **COM Frequency window** is displayed to the right of the Navigation Status bar.

Each radio frequency sub-window is composed of two (2) fields, a **standby field** and an **active field**.

- In the NAV Frequency window, the active frequency field is located on the right side, while the standby frequency field is located on the left side.
- In the COM Frequency window, the active frequency field is located on the left side, while the standby frequency field is located on the right side.

RADIO SELECTION

Radio selection is performed as follows:

- **NAV radio selection** is performed via the **CDI** softkey located on the PFD:
 - When NAV1 radio is selected, a single green arrow labeled either 'VOR1' or 'LOC1' is displayed on the HSI.
 - When NAV2 radio is selected, a double green arrow labeled either 'VOR2' or 'LOC2' is displayed on the HSI.
- **COM radio selection** is performed via the **COM1 MIC** or **COM2 MIC** keys located on the audio panel:
 - **COM1 MIC** key selects COM1 radio.
 - **COM2 MIC** key selects COM2 radio.

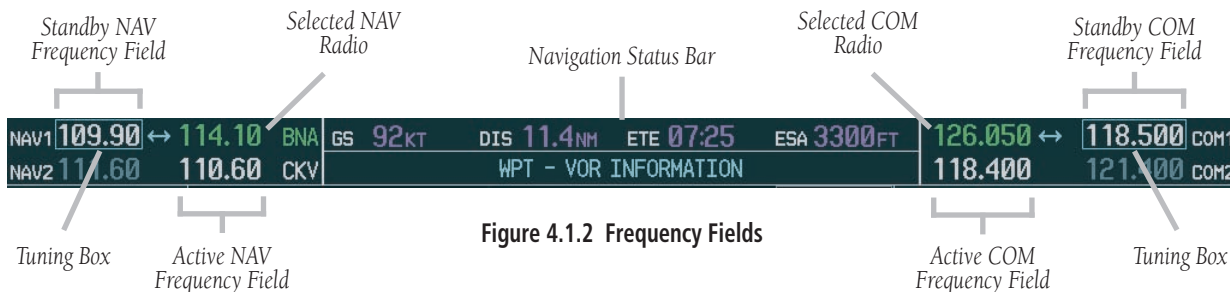


Figure 4.1.2 Frequency Fields

COLOR CODE

Frequencies located in the **active field** are displayed in **either green or white**.

- An active frequency that is displayed in **green** indicates that the corresponding radio is selected (i.e., in use) on the audio panel (COM) or on the HSI (NAV).
- An active frequency that is displayed in **white** indicates that the corresponding radio is not selected on the audio panel (COM) or on the HSI (NAV).



NOTE: In GPS mode, both active NAV frequencies are displayed in white.

Frequencies located in the **standby field** are displayed in **either white or gray**.

- The standby frequency that appears in the tuning box is displayed in **white**.
- The standby frequency that is not in the tuning box is displayed in **gray**.

TUNING BOX

On both the PFD and the MFD, a cyan (i.e., light blue) tuning box appears around the standby frequency field and can be moved from one standby frequency field to another for the purpose of tuning or radio selection by pressing the dual **COM** or **NAV** knob.



Figure 4.1.3 Frequency Toggle Arrow and Tuning Box

FREQUENCY TOGGLE ARROW

In both the COM and NAV windows, a **Frequency Toggle Arrow** appears next to the tuning box, between the active and standby frequencies. Pressing the dual **COM** or **NAV** knob toggles both the frequency tuning box and the **Frequency Toggle Arrow** between the radios.



NOTE: If the frequency tuning box is on a selected COM sub-window when a signal is received or transmitted for this radio, the **Frequency Toggle Arrow** is replaced by an **RX** or a **TX** indication, respectively.



NOTE: Pressing the **Frequency Toggle** key places the standby frequency into the active field, and vice versa.

RADIO STATUS INDICATIONS

- **RX** – When a signal is received on a COM radio, a white **RX** indication appears to the right of the corresponding COM frequency for the duration of the signal reception.
- **TX** – When a COM radio is keyed, a white **TX** indication appears to the right of the corresponding COM frequency for the duration of the signal transmission.
- **ID** – When the Morse code identifier is ON for a NAV radio, a white **ID** indication appears to the left of the corresponding active NAV frequency and the Morse code identifier for this frequency can be heard if the corresponding NAV radio is selected on the audio panel.

CONTROLS

The NAV Frequency window is controlled by knobs and keys located to the left side of the display, while the COM Frequency window is controlled by knobs and keys located to the right side of the display.

The controls associated with the NAV window are as follows:

- A **VOL/PUSH ID** knob
 - **Turn** to adjust the NAV radio volume level.
 - **Press** to turn the Morse code identifier ON and OFF.
- A **Frequency Toggle** key
 - **Press** to toggle the NAV frequencies between the active and standby fields.
- A dual **NAV** knob
 - **Turn** to tune a NAV frequency in the NAV tuning box (**large** knob for **MHz**; **small** knob for **kHz**).
 - **Press** to toggle the NAV tuning box between the NAV radios.

The controls associated with the COM window are as follows:

- A **VOL/PUSH SQ** knob
 - **Turn** to adjust the COM radio volume level.
 - **Press** to turn automatic squelch ON and OFF.
- A **Frequency Toggle** key
 - **Press** to toggle the COM frequencies between the active and standby fields.
 - **Press and hold** for approximately two (2) seconds to tune the emergency frequency (121.500 MHz) automatically in the active COM field.
- A dual **COM** knob
 - **Turn** to tune a COM frequency in the COM tuning box (**large** knob for **MHz**; **small** knob for **kHz**).
 - **Press** to toggle the COM tuning box between the COM radios.

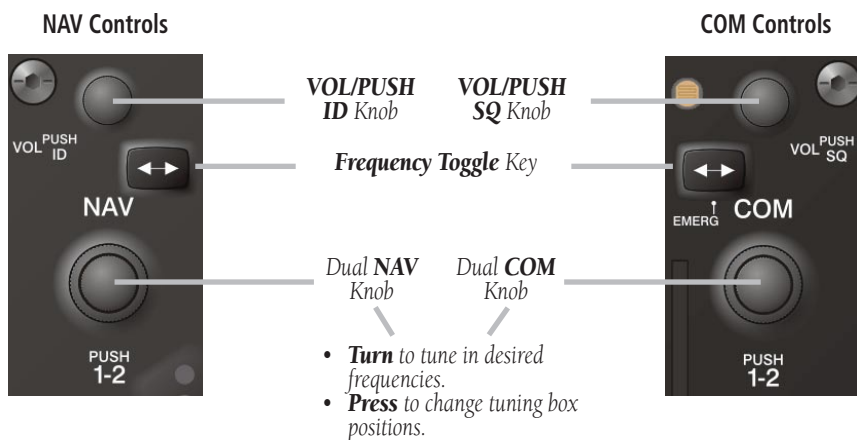


Figure 4.1.4 NAV/COM Controls

4.2 COM FREQUENCY WINDOW

OVERVIEW

The G1000 COM radios can be tuned either over the 118.000 to 136.975 MHz frequency range with 25 kHz spacing selected or over the 118.000 to 136.990 MHz frequency range with 8.33 kHz spacing selected.



NOTE: COM channel spacing can be configured through the MFD, in the System Setup Page of the AUX Page group.

The Communications Frequency window is located to the right of the Navigation Status bar, provides the control and display of dual VHF Radio Communication Transceivers (COM1 and COM2) and displays the following information:

- COM1 and COM2 active and standby frequencies
- Color-coded indication of the selected COM radio
- Indication of signal reception and transmission

VOLUME

COM radio volume level can be adjusted from 0 to 100% of available volume (in increments of 3.25 percentage points) using the **VOL/PUSH SQ** knob located above the **COM Frequency Toggle** key. Turning the **VOL/PUSH SQ** knob clockwise increases volume level for the COM radio on which the tuning box is placed, while turning this knob counterclockwise decreases volume level for this COM radio.

When adjusting volume level for a COM radio, volume level is displayed in place of the corresponding standby COM frequency and the associated COM radio name (i.e., ‘COM1’ or ‘COM2’) is replaced by the term ‘VOLUME’. Volume level remains displayed in the COM Frequency window for a duration of two seconds after volume level is last changed.



Figure 4.2.1 COM Volume Level

AUTOMATIC SQUELCH

Automatic squelch provides maximum sensitivity to weaker signals while canceling most localized noise sources. Automatic squelch can be disabled for a COM radio by pressing the **COM** knob to select the desired COM sub-window, then by pressing the **VOL/PUSH SQ** knob.

When automatic squelch is disabled for a COM radio, COM audio remains continuously open and an RX indication appears between the active and standby frequency fields of this radio.



Figure 4.2.2 Overriding Automatic Squelch



NOTE: Pressing the **VOL/PUSH SQ** knob when automatic squelch is disabled reactivates the automatic squelch function.

SWITCHING THE TUNING BOX BETWEEN COM RADIOS

Pressing the dual **COM** knob toggles the frequency tuning box between the COM1 and COM2 fields.



NOTE: When a different COM MIC is selected on the audio panel, the frequency tuning box also moves on both the PFD and MFD.

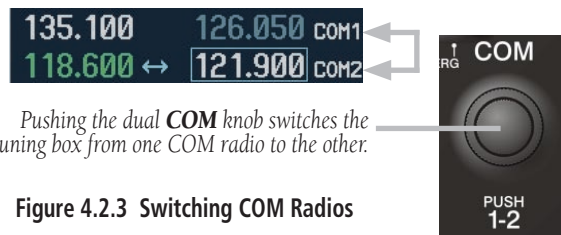


Figure 4.2.3 Switching COM Radios

MANUALLY TUNING A COM FREQUENCY

COM frequency manual tuning is performed by using the dual **COM** knob.

- The MHz (left) portion of the frequency can be tuned by turning the large **COM** knob.
- The kHz (right) portion of the frequency can be tuned by turning the small **COM** knob.

The frequency is tuned in the standby frequency field of the COM Frequency window. Turning either knob clockwise increases the tuned frequency. Conversely, turning either knob counterclockwise decreases the tuned frequency.

TOGGLING COM FREQUENCIES

Pressing the **COM Frequency Toggle** key toggles the COM frequencies between the active and standby fields of the COM radio on which the **Frequency Toggle Arrow** is located.

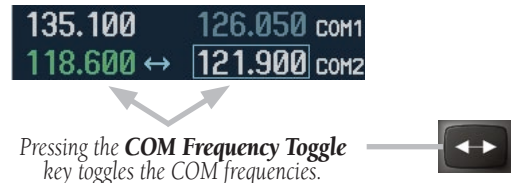


Figure 4.2.4 Toggling COM Frequencies

SELECTING A COM RADIO

The desired COM radio can be selected using the **COM MIC** keys located on the audio panel. When a **COM MIC** key is annunciated on the audio panel, the corresponding active COM frequency is displayed in green in the COM Frequency window.

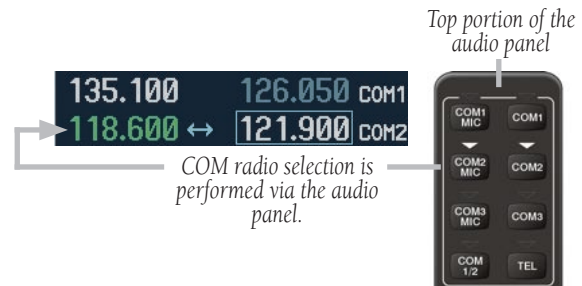


Figure 4.2.5 Selecting a COM Radio



NOTE: Please see the Audio Panel Pilot's Guide for further details on the **COM MIC** keys.

RADIO STATUS

When a COM radio is keyed, a white **TX** indication appears to the right of the active COM frequency to indicate that a transmission is in progress. The **TX** indication disappears once COM transmission is completed.

When a COM signal is received, a white **RX** indication appears to the right of the active COM frequency to indicate that a COM signal reception is in progress. The **RX** indication disappears once COM signal reception is over.



Figure 4.2.6 Radio Status Indications



NOTE: If a signal is transmitted or received on a COM radio for which frequency toggling is enabled (i.e., on which the tuning box is located), the **Frequency Toggle Arrow** disappears and is replaced by a **TX** or an **RX** indication, respectively.

EMERGENCY FREQUENCY (121.500 MHZ)

When a COM tuning failure is detected by the system, the emergency frequency (121.500 MHz) is automatically loaded in the active frequency field of the COM radio for which the tuning failure was detected.



Figure 4.2.7 COM Tuning Failure



NOTE: In the event of a dual display failure, the emergency frequency (121.500 MHz) automatically becomes available to the pilot through the pilot headset.

Quickly Tuning and Activating 121.500 MHz

Pressing and holding the **COM Frequency Toggle** key for approximately two (2) seconds automatically loads the emergency COM frequency (121.500 MHz) in the active frequency field of the COM radio for which frequency toggling is enabled.

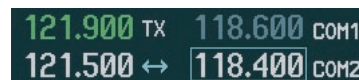


Figure 4.2.8 Quickly Tuning 121.500 MHz

STUCK MICROPHONE

If the COM1 (or COM2) push-to-talk (PTT) switch becomes stuck, or is accidentally left in the keyed position, or if a signal continues to be transmitted after the switch is released, the COM transmitter automatically times out (i.e., ceases to transmit) after 35 seconds of continuous transmitting and an alert appears on the PFD to advise the crew of a stuck COM microphone (see figure below).

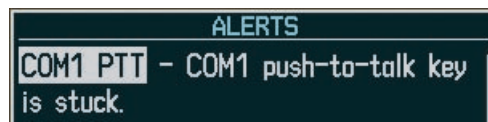


Figure 4.2.9 Stuck COM Microphone Alert

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4.3 NAV FREQUENCY WINDOW

OVERVIEW

The G1000 NAV radios can be tuned over the 108.00 to 117.95 MHz frequency range with 50 kHz spacing. The Navigation Frequency window is located to the left of the Navigation Status bar, provides the control and display of dual VOR/ILS receivers (NAV1 and NAV2) and displays the following information:

- NAV1 and NAV2 active and standby frequencies
- NAV1 and NAV2 identifier indication (if the active NAV frequency is a valid frequency and its Morse code identifier signal is received by the system).
- Color-coded indication of the selected NAV radio
- Indication of the Morse code identifier status

VOLUME

NAV radio volume level can be adjusted from 0 to 100% of available volume (in increments of 3.25 percentage points) using the **VOL/PUSH ID** knob located above the **NAV Frequency Toggle** key. Turning the **VOL/PUSH ID** knob clockwise increases volume level for the NAV radio on which the tuning box is placed, while turning this knob counterclockwise decreases volume level for this NAV radio. When adjusting volume level for a NAV radio, volume level is displayed in place of the corresponding standby NAV frequency and the associated NAV radio name (i.e., ‘NAV1’ or ‘NAV2’) is replaced by the term ‘VOLUME’. Volume level remains displayed in the NAV Frequency window for a duration of two seconds after volume level is last changed.

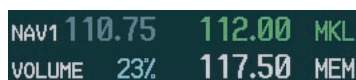


Figure 4.3.1 NAV Volume Level

MORSE CODE IDENTIFIER

Pressing the **VOL/PUSH ID** knob toggles the Morse code identifier ON and OFF for the active NAV frequency next to which the tuning box is located. When the Morse code identifier is ON, an **ID** indication appears to the left of the corresponding active NAV frequency.



The Morse code identifier is ON for the GHM VOR.

Figure 4.3.2 ID Indication

The Morse code identifier for an active NAV frequency can only be heard if the Morse code identifier for the corresponding NAV radio is turned on (i.e., if the ID indication appears next to the active NAV frequency) and if the corresponding NAV radio is selected on the audio panel (i.e., if the associated NAV radio annunciator light is illuminated on the audio panel).



Here, since NAV2 is the only NAV radio selected on the audio panel, only the Morse code identifier for the GHM VOR can be heard.



NAV portion of the audio panel

Figure 4.3.3 Morse Code Identifier Audio



NOTE: When a VOR signal is received, the VOR/LOC name identifier is displayed to the right of the corresponding active NAV frequency, regardless of the status of the Morse code identifier.

SWITCHING THE TUNING BOX BETWEEN NAV RADIOS

Pressing the dual **NAV** knob toggles the frequency tuning box between the NAV1 and NAV2 sub-windows.

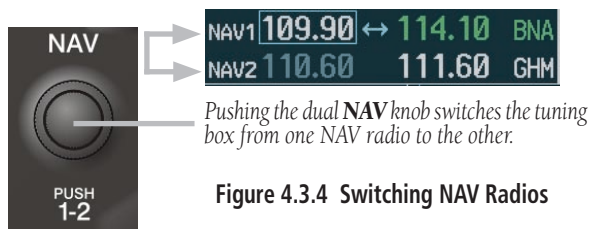


Figure 4.3.4 Switching NAV Radios



NOTE: When a different NAV radio is selected on the HSI via the **CDI** key, the NAV frequency tuning box also moves on the PFD and MFD. However, the NAV frequency tuning box does not move when **GPS** mode is selected.

MANUALLY TUNING A NAV FREQUENCY

NAV frequency manual tuning is performed by using the dual **NAV** knob.

- The MHz (left) portion of the frequency can be tuned by turning the large **NAV** knob.
- The kHz (right) portion of the frequency can be tuned by turning the small **NAV** knob.

The frequency is tuned in the standby frequency field of the NAV Frequency window. Turning either knob clockwise increases the tuned frequency. Conversely, turning either knob counterclockwise decreases the tuned frequency.

TOGGLING NAV FREQUENCIES

Pressing the **NAV Frequency Toggle** key toggles the NAV frequencies between the active and standby fields of the NAV radio on which the **Frequency Toggle Arrow** is located.

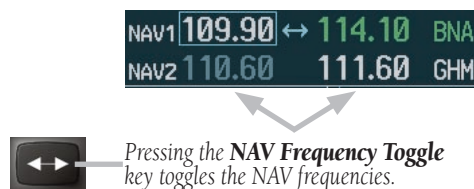


Figure 4.3.5 Toggling NAV Frequencies

SELECTING A NAV RADIO

The desired NAV radio can be selected using the **CDI** softkey located on the PFD. The three navigation modes that can be selected with the **CDI** softkey are as follows:

- **VOR1** (or **LOC1**) – If NAV1 is selected as the NAV mode, a **single green arrow** labeled either ‘VOR1’ or ‘LOC1’ is displayed on the HSI and the active NAV1 frequency is displayed in green.
- **VOR2** (or **LOC2**) – If NAV2 is selected as the NAV mode, a **double green arrow** labeled either ‘VOR2’ or ‘LOC2’ is displayed on the HSI and the active NAV2 frequency is displayed in green.
- **GPS** – If GPS mode is selected, a **single magenta arrow** appears on the HSI and neither NAV radio is selected.



NOTE: In GPS mode, both active NAV frequencies are displayed in white.



NOTE: When a VOR signal is received, the corresponding VOR/LOC name identifier is displayed to the right of the associated active NAV frequency.

NAV1	110.75	↔	112.00	MKL
NAV2	112.40		117.50	MEM

NAV radio selection is performed via the **CDI** softkey.



Figure 4.3.6 Selecting a NAV Radio

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4.4 OPTIONAL NAV RADIOS

OVERVIEW

Optionally, the G1000 system can support up to two (2) remotely-mounted Becker RA 3502 ADF receivers and up to two (2) remotely-mounted Honeywell KN 63 DME transceivers.

- The Becker RA 3502 ADF receiver operates in the 190.0 kHz to 1799.5 kHz frequency band with 0.5 kHz channel spacing.
- The Honeywell KN 63 is a 200-channel, 100-watt, all-solid-state digital DME transceiver that provides distance information to the G1000 system.

ADF/DME TUNING WINDOW

Tuning of the ADF and DME radios is performed via the ADF/DME Tuning window. The ADF/DME Tuning window is an Auxiliary window that is located to the right of the HSI on the PFD. Pressing the **ADF/DME** softkey toggles the ADF/DME Tuning window ON and OFF.



NOTE: Depending upon the nature of the optional NAV radios installed, the Radio Tuning window is entitled either 'ADF TUNING', 'DME TUNING', or 'ADF/DME TUNING', and its associated softkey is entitled either 'ADF', 'DME', or 'ADF/DME', respectively.



NOTE: When another Auxiliary window is turned on, the ADF/DME Tuning window is removed from the PFD.

The following information is displayed in the ADF/DME Tuning window:

- Active and standby ADF frequencies
- ADF receiver mode
- ADF receiver volume
- DME tuning mode

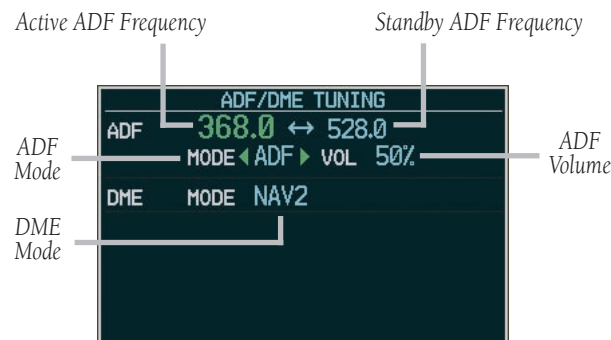


Figure 4.4.1 ADF/DME Tuning Window

Turning the **large FMS** knob moves the selection cursor through the various editable fields (i.e., standby ADF frequency, ADF receiver mode, ADF radio volume and DME tuning mode), while pressing the **FMS** knob activates/deactivates the selection cursor in the ADF/DME Tuning window.



NOTE: When the ADF/DME Tuning window is turned on (i.e., displayed), the selection cursor is automatically activated in the window and is displayed over the standby ADF frequency field.

Tuning and Toggling ADF Frequencies

ADF frequencies in the 190.0 kHz to 1799.5 kHz frequency range can be entered in the standby ADF frequency field of the ADF/DME Tuning window, using both the dual **FMS** knob and the **ENT** key.

To enter an ADF frequency in the standby field:

1. Turn the **large FMS** knob to place the selection cursor over the standby ADF frequency field.
2. Turn the **small FMS** knob both to initiate data entry and to change each digit, and turn the **large FMS** knob to move the cursor to the next or previous character position.
3. Press the **ENT** key to validate data entry for the standby frequency.

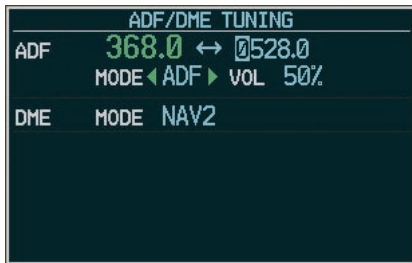


Figure 4.4.2 Entering ADF Standby Frequencies



NOTE: The active ADF frequency field cannot be edited directly.



NOTE: Pressing the **CLR** key while in data entry mode (i.e., before having validated a standby frequency being entered) causes the system to cancel the current data entry for this field and revert back to the previously entered standby ADF frequency.



NOTE: The G1000 system does not support tuning of the 2182.0 kHz ADF emergency frequency.

To toggle the active and standby ADF frequencies:

1. Turn the **large FMS** knob to place the selection cursor over the standby ADF frequency field.
2. Press the **ENT** key.

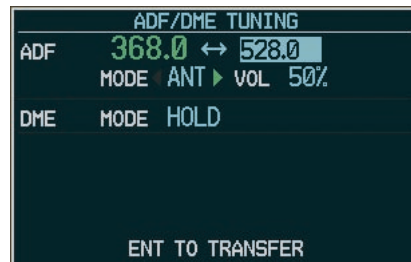


Figure 4.4.3 Toggling ADF Frequencies



NOTE: Pressing the **CLR** key when the selection cursor is flashing over the standby ADF frequency field clears the existing standby frequency, replaces it with '0000.0' and puts the cursor in data entry mode for this field.

Selecting the ADF Receiver Mode

The following modes can be selected:

- **ANT** (antenna) – The ADF bearing pointer is deflected on the HSI by approximately 90 degrees relative to the aircraft heading. In this mode, the NDB Morse code identifier can only be heard if the **ADF** key is selected on the audio panel.
- **ADF** – The ADF bearing pointer moves to point in the direction of the NDB station. In this mode, the NDB Morse code identifier can only be heard if the **ADF** key is selected on the audio panel.
- **BFO** (Beat Frequency Oscillator) – Provides an audible tone when a frequency is tuned. This mode allows for the audio identification of the interrupted carrier beacon stations that are used in various parts of the world. In this mode, the NDB Morse code identifier can only be heard if the **ADF** key is selected on the audio panel.

To select an ADF receiver mode:

1. Turn the **large FMS** knob to place the selection cursor over the ADF mode field.
2. Turn the **small FMS** knob to select the desired ADF receiver mode.

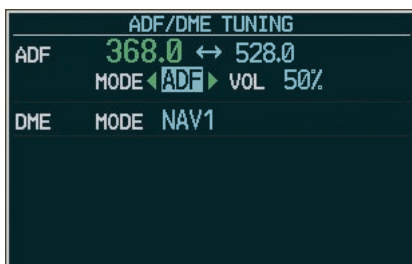


Figure 4.4.4 Selecting ADF Receiver Mode

Adjusting ADF Receiver Volume

ADF receiver volume level can be adjusted on the ADF/DME Tuning window from 0 to 100% of available volume in increments of one percentage point.

To adjust ADF receiver volume:

1. Turn the **large FMS** knob to place the selection cursor over the ADF volume field.
2. Turn the **small FMS** knob to adjust volume as desired.

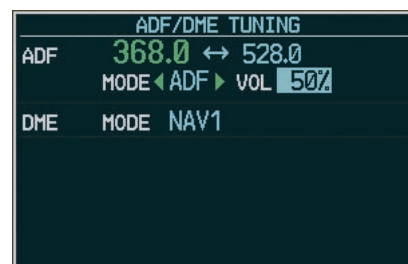


Figure 4.4.5 Adjusting ADF Receiver Volume



NOTE: By default, ADF receiver volume level is set to 50% of available volume.

Selecting the DME Transceiver Tuning Mode

The following DME transceiver tuning modes can be selected:

- **NAV1** – Tunes the DME frequency from the selected NAV1 frequency.
- **NAV2** – Tunes the DME frequency from the selected NAV2 frequency.
- **HOLD** – When transitioning from NAV1 or NAV2 mode to HOLD mode, the DME frequency remains set to the last selected NAV frequency.

To select a DME transceiver tuning mode:

1. Turn the **large FMS** knob to place the selection cursor over the DME tuning mode field.
2. Turn the **small FMS** knob to select the desired DME tuning mode.
3. Press the **ENT** key to validate the selection.



NOTE: Pressing the **CLR** key while in the process of selecting DME tuning mode causes the system to cancel data entry and revert back to the previously selected DME tuning mode.



NOTE: Please refer to the *Primary Flight Display Pilot's Guide* for information on the DME Information window.



Figure 4.4.6 Selecting DME Tuning Mode

4.5 FREQUENCY AUTO-TUNING

OVERVIEW

The G1000 system offers multiple auto-tuning capabilities that help reduce cockpit workload. The PFD allows for the auto-tuning of COM frequencies associated with the nearest airports, while the MFD provides auto-tuning of both COM and NAV frequencies from various pages. In addition, regardless of the display, the pertinent primary NAV frequency is entered automatically in the NAV window upon approach loading or approach activation.

In brief, frequencies can be automatically loaded into their respective frequency windows in the following ways:

- By using the **ENT** key when the frequency is highlighted on the appropriate page (PFD and MFD).
- Upon loading or activating an approach (PFD and MFD).



NOTE: Turn the **FMS** knob to scroll through a list of frequencies.

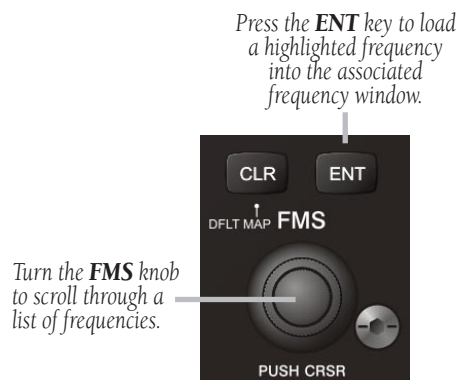


Figure 4.5.1 Loading Frequencies

LOADING FREQUENCIES FROM THE PFD

COM frequencies for the nearest airports may be viewed and loaded from the Nearest Airports window on the PFD.

To load a COM frequency for a nearby airport:

1. Press the **NRST** softkey to open the Nearest Airports window, which displays the list of airport identifiers and corresponding COM frequencies.
2. Turn either **FMS** knob to highlight the desired COM frequency, and ensure that the COM frequency tuning box is on the desired COM sub-window.
3. Press the **ENT** key to load the COM frequency into the COM tuning box.



NOTE: When the desired frequency is entered in the tuning box, it becomes a standby frequency. Pressing the **Frequency Toggle** key places this standby frequency into the active field.

NEAREST AIRPORTS			
51K	124°	6.8NM	VFR
UNICOM	122.700	RNWX	2440FT
KLWC	270°	10.2NM	ILS
UNICOM	123.000	RNWX	5700FT
KIXD	150°	11.4NM	ILS
TOWER	133.000	RNWX	7339FT

XPDR	2345 ON	LCL	01:38:18
IDENT	TMR/REF	NRST	CAUTION

Pressing the **NRST** softkey opens the Nearest Airports window

Figure 4.5.2 Nearest Airports Window (PFD)

LOADING FREQUENCIES FROM THE MFD

Frequencies can be selected and loaded from the following MFD pages:

- WPT – Airport Information
- WPT – VOR Information
- NRST – Nearest Airports
- NRST – Nearest VOR
- NRST – Nearest Frequencies



Figure 4.5.3 MFD Page Group Icon



NOTE: In *NAV mode*, upon any VOR/ILS approach activation, the appropriate NAV frequency is automatically loaded into the **standby field of the selected NAV** radio, regardless of the current MFD page that is displayed.



NOTE: In *GPS mode*, upon any VOR/ILS approach activation, the appropriate NAV frequency is automatically loaded into the **active field of NAV1**, regardless of the current MFD page that is displayed.

WPT – Airport Information Page

The Airport Information Page displays runway information and a list of frequencies for the selected airport identifier as well as departure, arrival and approach information.

To display the entire list of frequencies for a desired airport:

1. On the Airport Information Page, press the **INFO** softkey to display runway and frequency information for a specific airport.
2. Press the **FMS** knob to activate the selection cursor in the window.
3. Turn the **FMS** knob to select the desired airport identifier and press the **ENT** key. A list of all available frequencies for the selected airport appears.



Figure 4.5.4 WPT – Airport Information Page (INFO)

To load the desired COM frequency into the COM tuning box:

1. When the list of frequencies for the selected airport is displayed, highlight the desired frequency by turning the **large FMS knob**.
2. Press the **ENT** key.



NOTE: The runway Pilot Controlled Lighting (PCL) frequency (located in the Runways box of the INFO portion of the Airport Information Page) may also be highlighted with the **large FMS knob** and loaded into the COM tuning box by pressing the **ENT** key.

To load the primary approach NAV frequency into the NAV tuning box:

1. On the Airport Information Page, press the **APR** softkey to display approach information for a specific airport.
2. Press the **FMS** knob to activate the selection cursor in the window.
3. Turn the **large FMS** knob to highlight the primary NAV frequency located in the Primary Frequency box.
4. Press the **ENT** key.



Figure 4.5.5 WPT – Airport Information Page (APR)

WPT – VOR Information Page

The VOR Information Page displays information specific to individual VORs, including the airport that is nearest to the selected VOR.

To load a VOR frequency into the NAV window:

1. On the VOR Information Page, press the **FMS** knob to activate the VOR Information window.
2. Turn the **FMS** knob as needed to select the desired VOR and press the **ENT** key to validate the selection.
3. Turn the **large FMS** knob to highlight the VOR frequency and press the **ENT** key to load this frequency into the tuning box of the NAV Frequency window.



NOTE: If the **MENU** key is pressed when on the VOR Information Page, the 'View Recent VOR List' menu option is displayed for quick access to recently used VORs. However, if no VOR frequencies have been tuned, this menu option is grayed out.



Figure 4.5.6 WPT – VOR Information Page

NRST – Nearest Airports Page

The Nearest Airports Page displays a list of the nearest airports as well as related runway, frequency and approach information. On this page, any frequency associated with the selected airport can be loaded into the NAV or COM Frequency window.

To display the entire list of frequencies for a nearby airport and load a frequency from that list:

1. On the Nearest Airports Page, press the **FMS** knob to activate the selection cursor in the Nearest Airports window.
2. Turn the **FMS** knob to scroll through the list of nearest airport identifiers until the desired nearest airport is highlighted.
3. Press the **FREQ** softkey to activate the selection cursor in the Frequencies box.
4. Turn the **FMS** knob to scroll through the list of frequencies for the selected airport.
5. When the desired frequency is highlighted, press the **ENT** key to load this frequency into the tuning box of the appropriate Frequency window (NAV or COM).

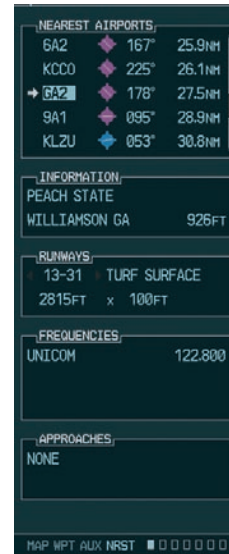


Figure 4.5.7 NRST – Nearest Airport Page

NRST – Nearest VOR Page

The Nearest VOR Page displays a list of the nearest VORs together with related information, including the associated VOR frequency.

To load a VOR frequency into the NAV window:

1. On the Nearest VOR Page, press the **FMS** knob to activate the Nearest VOR window.
2. Turn the **FMS** knob to scroll through the list of nearest VORs until the desired nearest VOR is highlighted.
3. Press the **FREQ** softkey to activate the selection cursor in the Frequency box and press the **ENT** key to load the frequency into the tuning box of the NAV Frequency window.

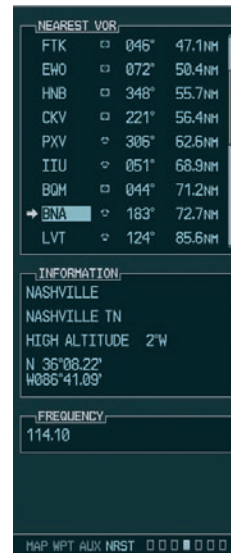


Figure 4.5.8 NRST – Nearest VOR Page

NRST – Nearest Frequencies Page

The Nearest Frequencies Page displays a list of nearest ARTCC, FSS and WX frequencies. For the purpose of frequency selection, the selection cursor can be activated on the ARTCC, FSS, or WX box by using the **ARTCC**, **FSS**, or **WX** softkeys, respectively.

To view a nearest ARTCC frequency and load it into the standby frequency field:

1. Press the **ARTCC** softkey to activate the selection cursor in the Nearest ARTCC box.
2. Turn the **small FMS** knob to scroll through the list of ARTCC names, then the **large FMS** knob to highlight the desired ARTCC frequency.
3. Press the **ENT** key to load the desired ARTCC frequency into the tuning box.



NOTE: The Nearest ARTCC box contains a numbered list of ARTCC names as well as associated bearing and distance information.

To view a nearest FSS frequency and load it into the standby frequency field:

1. Press the **FSS** softkey to activate the selection cursor in the Nearest FSS box.
2. Turn the **small FMS** knob to scroll through the list of FSS names, then the **large FMS** knob to highlight the desired FSS frequency.
3. Press the **ENT** key to load the desired FSS frequency into the tuning box.



NOTE: The Nearest FSS box contains a numbered list of FSS names as well as associated bearing and distance information.

To view a nearest WX frequency and load it into the standby frequency field:

1. Press the **WX** softkey to activate the selection cursor in the Nearest WX box.
2. Turn the **FMS** knob to highlight the desired WX frequency.
3. Press the **ENT** key to load the desired WX frequency into the tuning box.

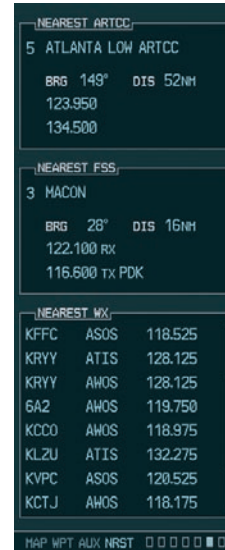


Figure 4.5.9 NRST – Nearest Frequencies Page

AUTO-TUNING UPON APPROACH ACTIVATION (NAV FREQUENCIES)

NAV frequencies can be automatically loaded into the NAV Frequency window upon approach activation, regardless of the display unit being used.



NOTE: The primary NAV frequency also becomes auto-tuned upon loading of an approach.

To auto-tune a NAV frequency if the desired approach is not already loaded:

1. Press the **PROC** key to open the Procedures window.
2. Turn the **large FMS** knob to highlight the 'SELECT APPROACH' menu option and press the **ENT** key.
3. Use both the **FMS** knob and the **ENT** key as needed to select the desired airport, VOR/ILS approach and transition.
4. Turn the **large FMS** knob to highlight either the 'LOAD?' or 'ACTIVATE?' prompt and press the **ENT** key. The primary NAV frequency for the activated approach becomes loaded into the standby field of the selected NAV radio.

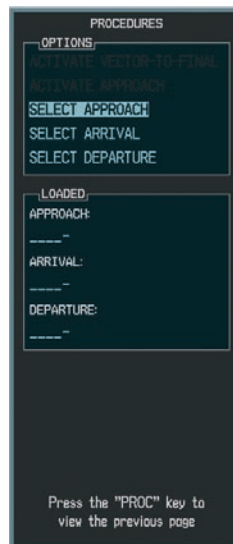


Figure 4.5.10 Selecting an Approach

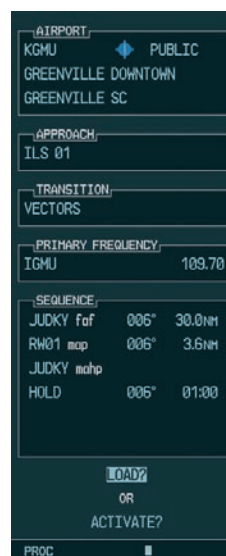


Figure 4.5.11 Loading an Approach

To auto-tune a NAV frequency if the desired approach is already loaded:

1. Press the **PROC** key to open the Procedures window.
2. Turn the **large FMS** knob to highlight the 'ACTIVATE APPROACH' menu option and press the **ENT** key. The approach primary NAV frequency becomes automatically loaded into the standby field of the selected NAV radio.



NOTE: If the system is in GPS mode when a VOR/ILS approach is loaded or activated, the approach primary NAV frequency is automatically loaded into the **active field of NAV1**.



NOTE: Before loading or activating an approach, the associated primary NAV frequency may be loaded into the NAV tuning box by highlighting the frequency in the Select Approach window via the **FMS** knob, then by pressing the **ENT** key.



NOTE: Automatic loading of the NAV frequency also occurs upon vector-to-final activation, if the NAV frequency is not already loaded into either the standby or the active field of the selected NAV radio.



NOTE: Approach activation can also be performed via the **MENU** key when the Flight Plan window is open.

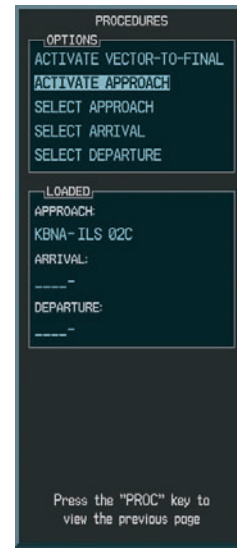


Figure 4.5.12 Activating an Approach



NOTE: When a VOR/ILS approach has been activated in GPS mode, if the ILS CDI Capture option on the AUX 4 Page is set to AUTO, the system automatically switches to NAV mode as the final approach course is intercepted (if within 15 nm from the FAF). Please see the Multi Function Display Pilot's Guide for details on this feature.



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