

B737 NG Systems Review

A comprehensive study and review program covering all major systems on B737 NG 700/800/900 aircraft.

User Guide

Rev 1.4



www.b737studyguide.com

B737 NG Systems Review uses several methods to convey essential information on the major systems of the B737 NG 700, 800 and 900 series aircraft.

- Accurate pictorial panel representations with “at a glance” essential information presented for each light, switch or other control associated with the system panel. Many of the controls and lights will function in the same manner as in the aircraft.
- In depth information through a series of “info boxes” that are available within each panel study module containing expanded text information and schematics as appropriate.
- A series of Question and Answer “slides” on most panel modules.
- Online knowledge exercises to further aid in the comprehension and retention of the material presented. Knowledge exercises are updated and revised on a regular basis. Questions and multiple choice answers are shuffled each time you elect to take an exercise.

Each panel module covers the system or systems associated with that panel and are presented in the context of the B737 Flight Deck layout. Some panel modules will repeat essential information in their relationship to other panels i.e. the Flight Control Panel and Hydraulic Panels will both present the various associated hydraulic systems as they relate to that particular panel and in relation to the system as a whole.

A Systems General Review section presents an overview of the major aircraft systems.

All information is presented based on standard aircraft configurations with optional equipment indicated by **Option** as may be installed. Limitations, as they apply, are included based on the Boeing Flight Crew Manual. Individual operators may have additional limitations which are outside the scope of information contained in the program.

The program does not include any operating parameters, except as necessary within the context of systems descriptions and are derived from information contained in the Boeing Flight Crew Manual.

The B737 NG Systems Review study guide is intended for personal use to supplement approved manuals and training programs and is not to be used as a substitute for any FAA, Boeing, Airline Operator or other Operator's approved training program. The information contained in the program is not to be used as a substitute for such manuals and training programs or is the information to be used for any aircraft operation. Should any information contained in this program conflict with approved manuals or training programs the approved sources shall be used as the definitive source of information.



B737 NG Systems Review

System requirements and installation notes

System requirements

Hardware :

450 MB of free space on the system hard drive.
1.5 GHz Processor.
500 MB of RAM.
1200 X 800 screen resolution highly recommended.

Installed software :

Windows 2000 XP Service Pack 2 or greater. Windows Vista
Check Windows 98 compatibility by using the Trial Version. Some versions of Windows 98 are unable to properly display the Q and A modules.
IE Explorer V4.0 or higher.*
Java Script enabled.

* IE Explorer does not need to be your default web browser, only present in the operating system.

Installation notes

The Trial Version must be installed and functioning on your system to upgrade to the unrestricted version of B737 NG Systems Review. This will allow you to explore all of the features of the program and also check your system's compatibility before committing to a full version purchase. The trial will expire after a two day time period, however an upgrade license may still be purchased and installed after the expiration period.

Download file size for the Trial Version is approximately 49 MB. Download time is approximately 5 minutes with a high speed connection. The program setup file is named B737NGSetup and should be saved to your desktop or a location on your system where you normally save downloaded files. After the download is complete, click on the setup icon to begin the installation. Once you have taken the Trial Version on a "Test Flight", you may elect to purchase the upgrade license. The upgrade license number and installation password will be furnished via email immediately after your transaction is complete.

B 737 NG Systems Review must reside on the system hard drive as installed. Moving data files from the installed drive or folders will cause the program to function incorrectly or stop working entirely. Do not move, alter or rename any folder with the NGData designation.



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Navigating within the program

The Menu Bar and the Panel Navigator

The menu bar contains text menu buttons to allow navigation within the program. The program will launch with the Panel Navigator™ in the Integrated Information Environment™ (IIE).

To access the various panels simply point and click to enlarge the main panel and then point to highlight the panel module and click to open.

The program navigational characteristics emulate those of a typical web browser within the IIE.

COMMAND BAR

- **Panel Navigator** returns you to the Panel Navigator from anywhere within the program.
- **Jump To** takes you to the major panels or free-standing system modules.
- **SGR** takes you to Systems General Review.
- **System Q and A** takes you to the Main Question and Answer Menu.
- **My Notes** allows you to take notes or read previously saved notes using a simple built in word processor .
- **Go Online** allows access to the Systems Quiz Main Menu, Updates, Revision Status Check and Bulletins. An Internet connection is required.
- **Revision** opens the Version and Revision status dialogue.



Navigating within the program

Panel Navigator

The program first launches with the Panel Navigator™ in the IIE.

Pointing to, and then clicking, the main panel will then open that panel for individual system panel selection.

You can return to the Panel Navigator™ at anytime and from within any module by clicking on the Panel Navigator text button on the Menu Bar or you can return to the last selected Main Panel by clicking anywhere on the Main Panel “background” image.





Navigating within the program

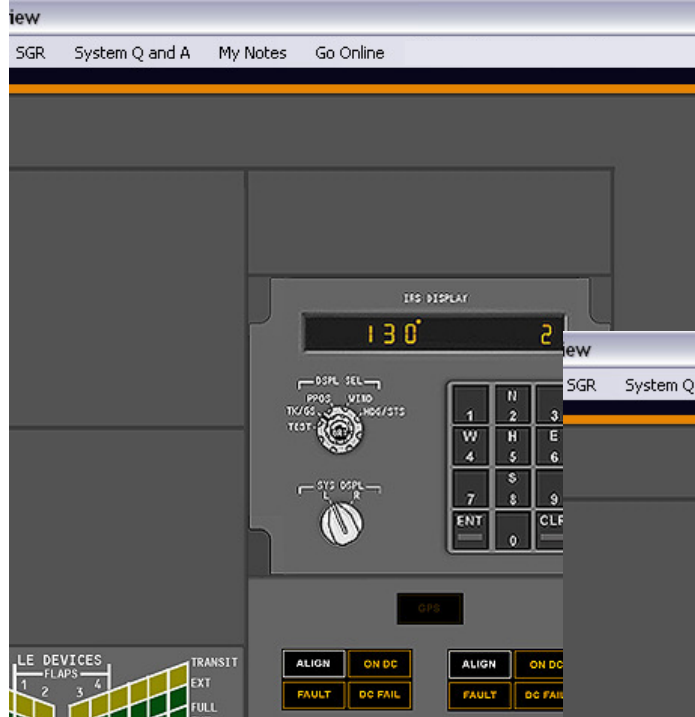
Panel Navigator Opening a System Panel Module

Point and Click on the Main Panel. The Aft Overhead Panel is selected in this example.

Go Online



The panel expands to allow selection of the individual system panel. The IRS Display (ISDU) is selected in this example





Navigating within the program

System Panels

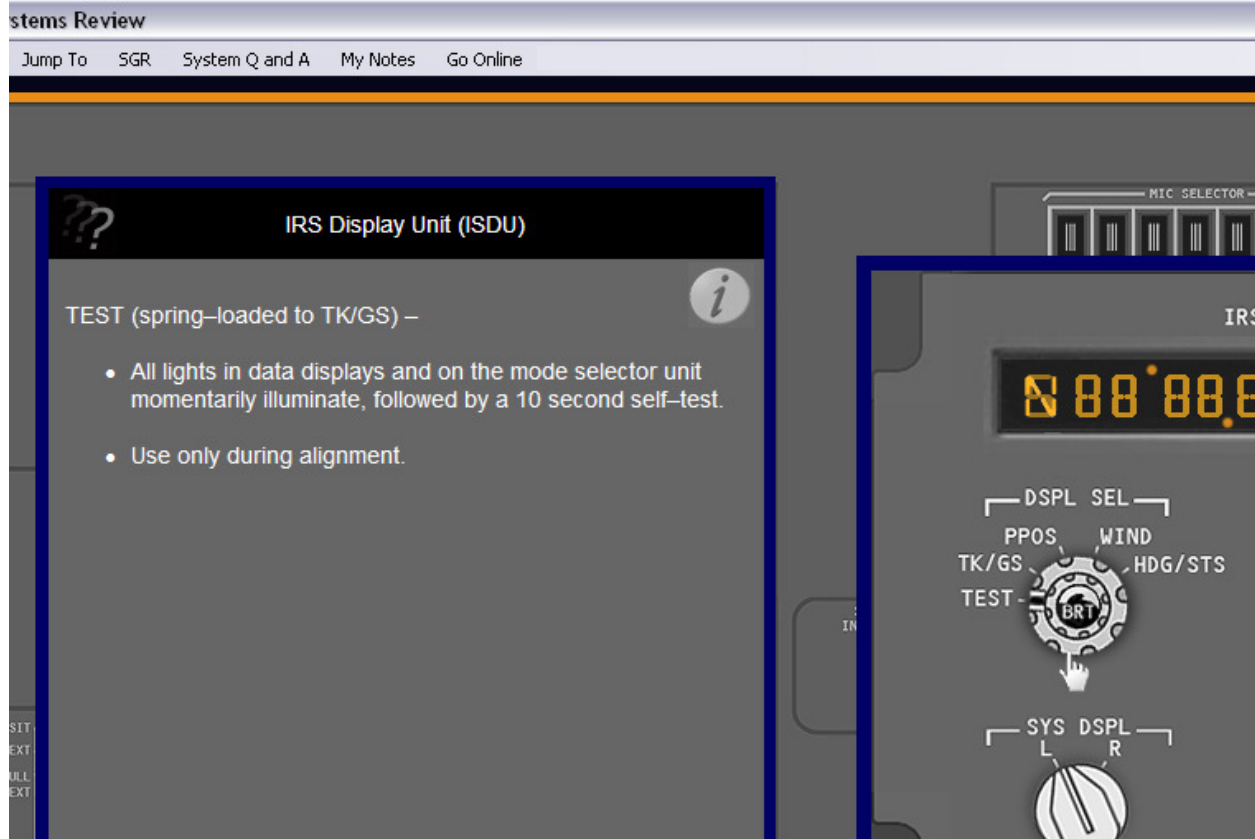


Once the selected system panel is open for view each individual control, light or switch on the panel may be selected. Most of the various switches, lights and controls will react in the same manner as the actual aircraft panel. Selecting an individual component will then give a brief “at a glance” description of its function in the information box to the left of the system panel. Panels are graphically rendered to be as realistic and accurate as possible.



Navigating within the program

System Panels “at a glance” info box , Q and A and expanded “info box”



The TEST position on the DSPL SEL has been selected. The panel display shows what you would expect to see on the aircraft panel when moving the DSPL SEL knob to this position. The selected function and an operational restriction is shown in the “at a glance” information box in this example.



The info button, when clicked, opens an expanded “info box” with a more in depth discussion of the system or systems corresponding to the panel. Some minor system modules, such as the Dome Light and similar systems do not require an expanded “info box” and the info button will be inactive.



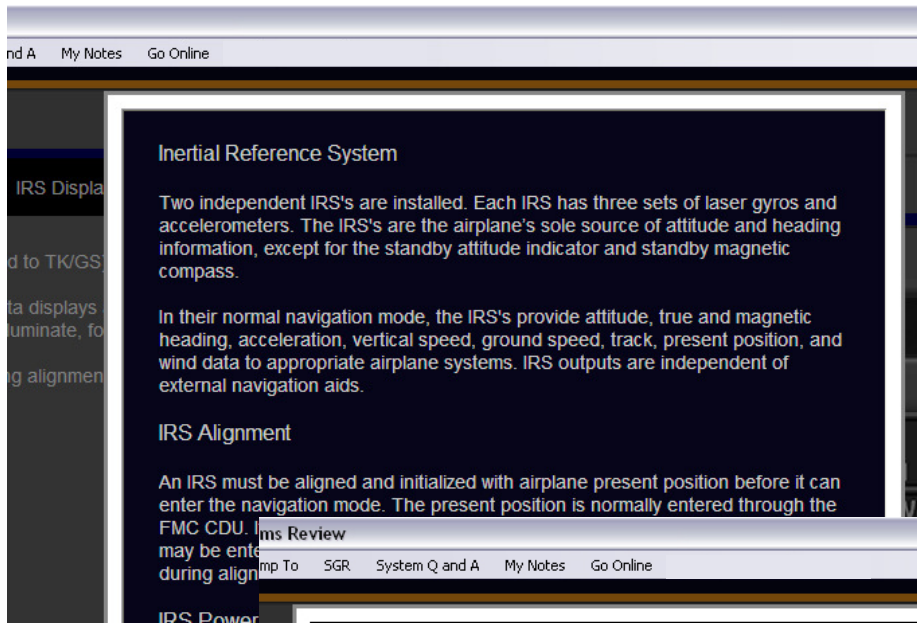
The question mark symbol, when clicked, opens the Question and Answer window for the associated panel. Questions will be appropriate to the information in the “at a glance” and expanded info boxes. Again, minor systems may not have a Q and A section and the button will be inactive.

Any minor system Q and A’s will be included in the Main Q and A section accessible from the Menu Bar.



Navigating within the program

System Panels Q and A window and "expanded info box" window



Clicking the info button opens the expanded "info box" Each info box may have several pages which are navigated by using next and previous page buttons within the info box. To exit the expanded info box, click the close button or anywhere outside of the expanded info box.

The Q and A slide window opens after clicking the question mark symbol. Advancing from question to answer is accomplished using the next and previous buttons. You can move forward or backward by using the buttons. At the end of the session you can choose to re-run the session from the beginning. To exit the Q and A window, click the close button or anywhere outside of the Q and A window.

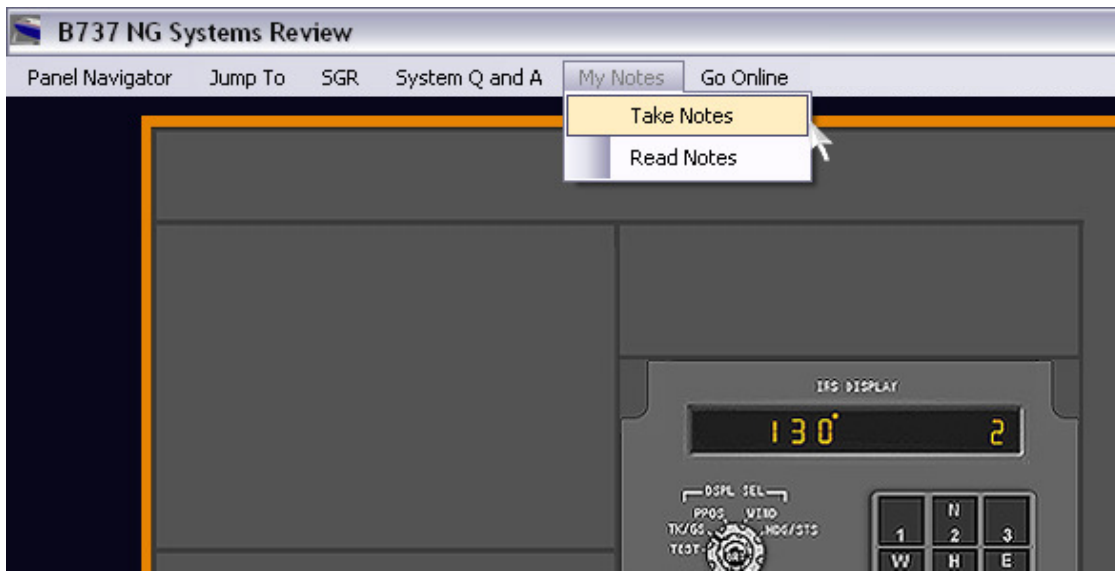




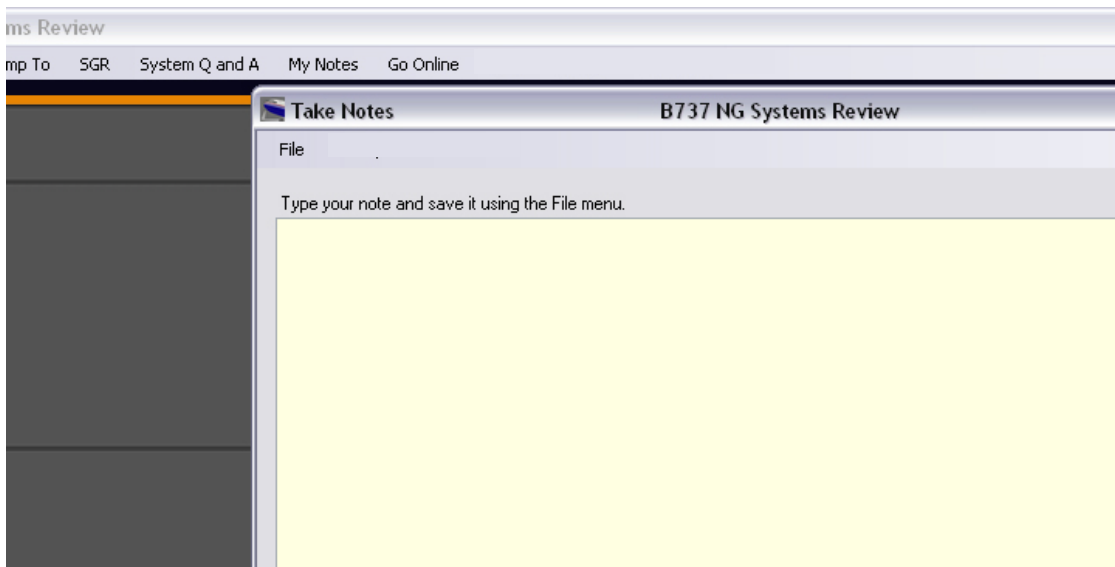
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Navigating within the program

Taking and Reviewing Personal Notes



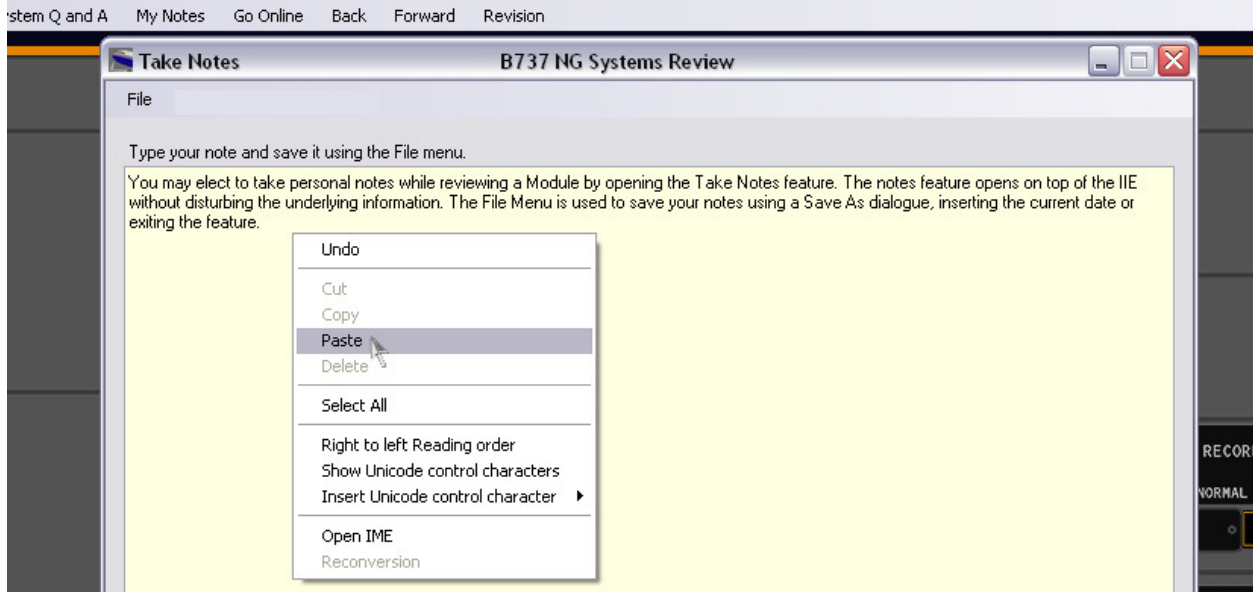
You may elect to take personal notes while reviewing a Module by opening the Take Notes feature. The notes feature opens on top of the IIE without disturbing the underlying information. The File Menu is used to save your notes using a Save As dialogue. Don't exit without saving your note. The feature does not support the "Are you sure" dialogue and your note will be lost.



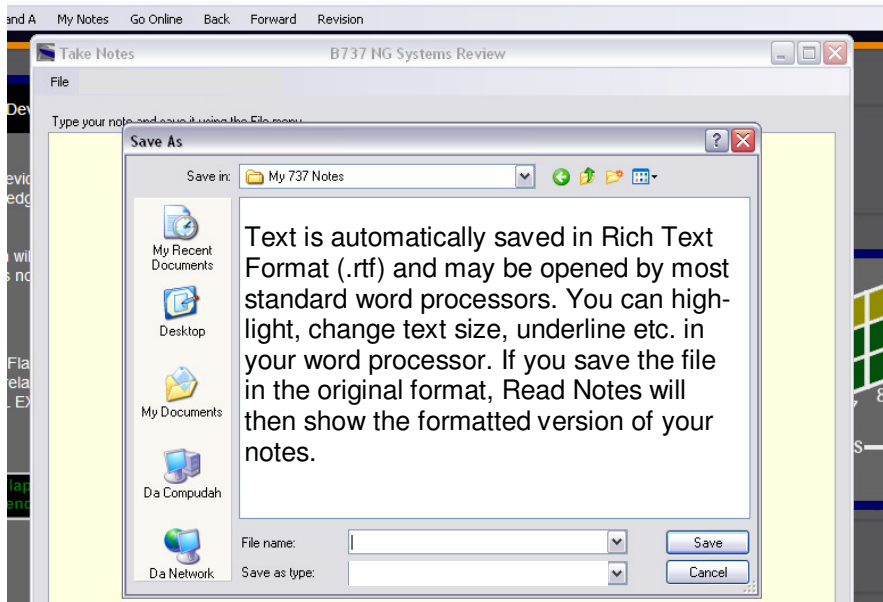


Navigating within the program

Taking and Reviewing Personal Notes



Take Notes supports cut and paste using the “right click” menu but not from information contained in the IIE. The “right click” menu is disabled within the IIE. If you have notes from other text files and want to organize them for a single source study guide you can use the cut and paste feature to save time.



Save your notes in a folder that you can easily locate with the Read Notes dialogue. When saving your first note, create a folder such as My 737 Notes in this example or use an existing folder on your computer. The Save As dialogue supports all standard Windows™ commands including Create New Folder. Use the Read Notes feature to open a previously saved file for review. Since both Take Note and Read Note open on top of the IIE, your notes are always available without disturbing the IIE window.

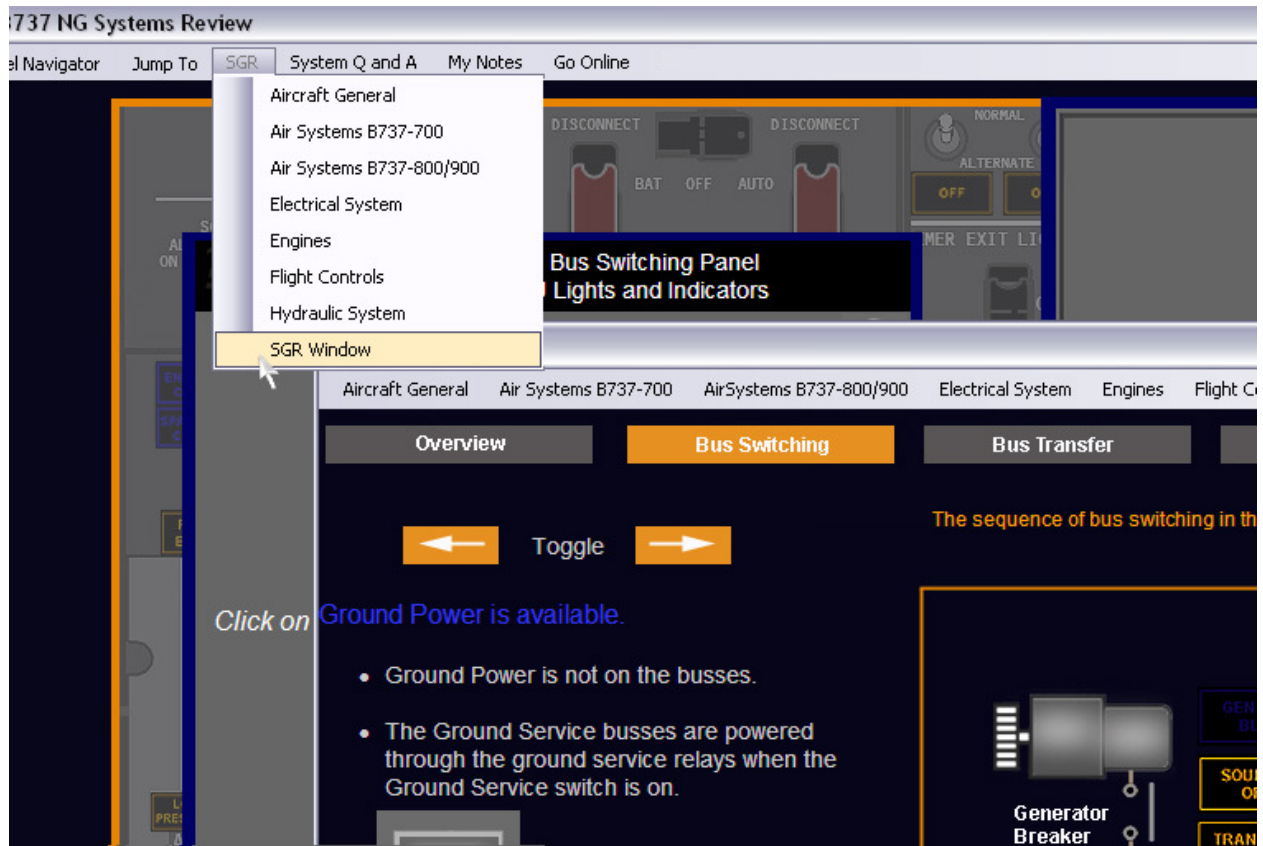


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Navigating within the program

SGR—The Systems General Review module.

When selecting SGR on the command bar the SGR sub menu is opened. In addition to the system review modules, the sub menu includes the SGR Window menu item. This opens the Systems General Review in a separate IIE window which can be minimized or moved anywhere on the screen. This feature is helpful if you want to access a particular SGR module while reviewing a panel module. For instance, while reviewing the Bus Switching Panel, you may want to also look at the Bus Switching schematic in the Electrical SGR .




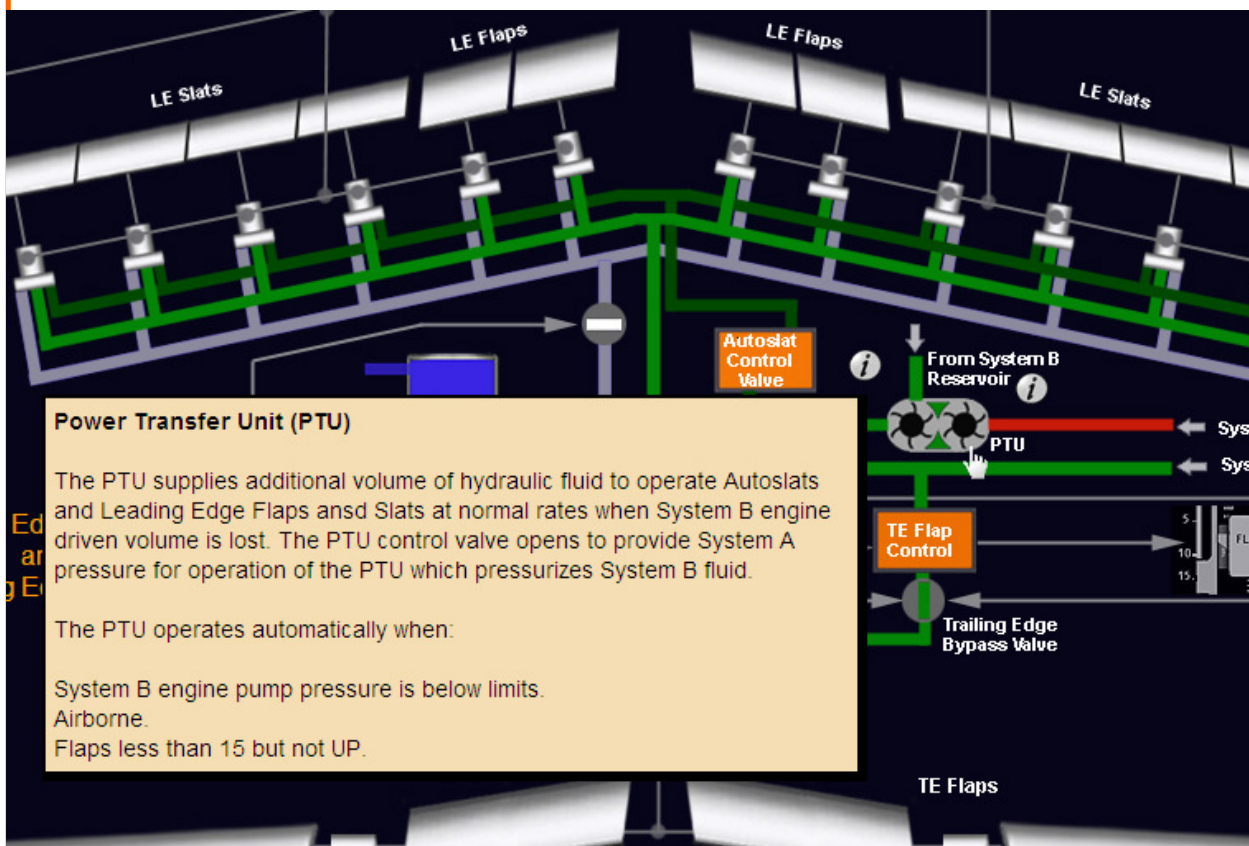


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Navigating within the program

SGR—The Systems General Review module.

The SGR modules feature “Info” anchors which show expanded information. Moving the cursor on to or near the  symbols will open the Info anchor.

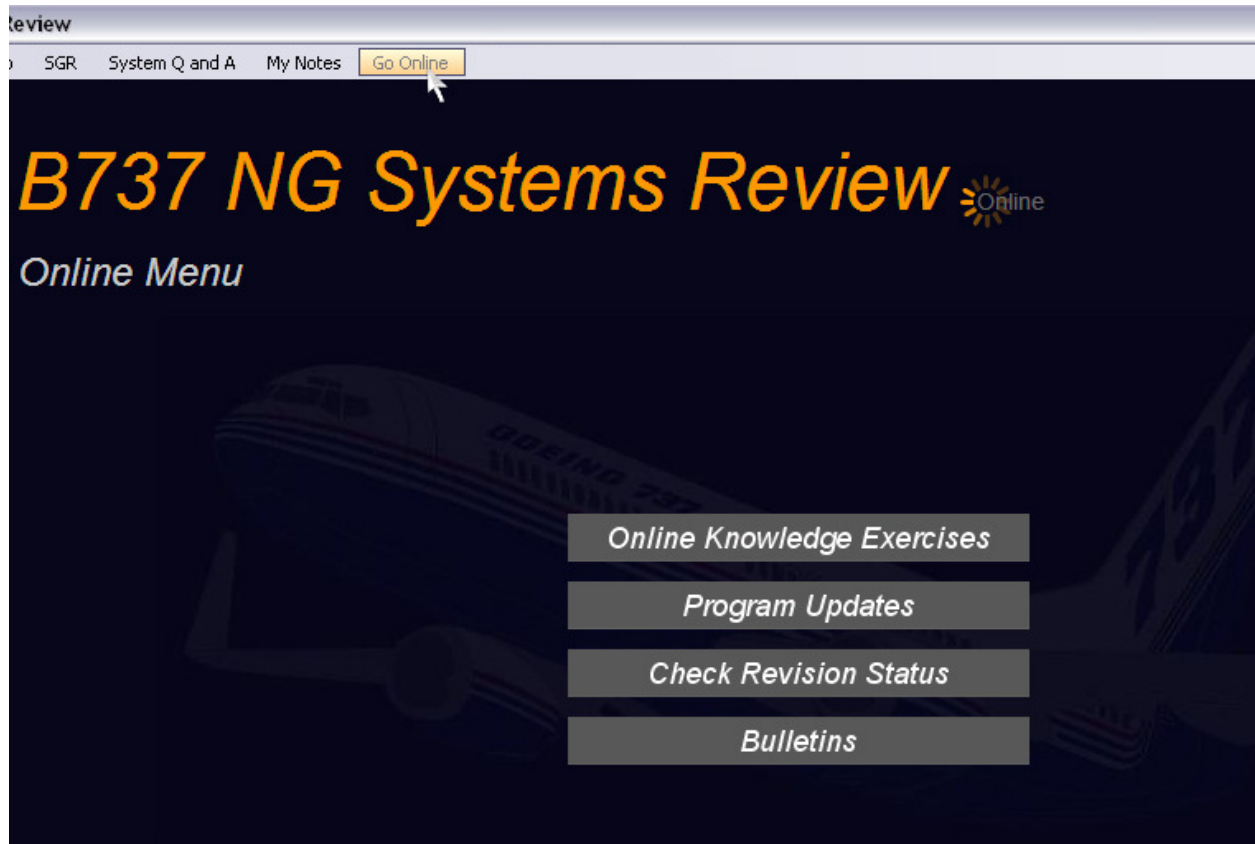




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Navigating within the program

Go Online The IIE as a Web Browser



Go Online causes the IIE to emulate a standard Web Browser and will open the B737 NG Systems Review Online Menu. You may then choose to take one of the online knowledge exercises, check for new revisions or view any pertinent bulletins or program announcements. To check your revision status, select Revision Status from the online menu and then select Revision from the command bar. Compare the Online Check Revision Status to the program's Revision Status window. The Revision Status window is updated when you download and install the latest revision. A detailed description of any major program revision will be available in the Online Bulletins.

If the IIE Web Browser does not detect an online connection an error message appears and navigation to the web page is cancelled. You can return to any other IIE page by selecting a menu item from the command bar such as the Panel Navigator without ending the program.



General

The Question and Answers and Online Knowledge Exercises

Many of the questions in the Q and A modules are difficult questions. Don't worry if your answers are not complete, entirely correct or you don't know the answer at all. The questions are designed to make you think about the system and reason your way toward the correct answer. With repeated occasional study and review, you will find that the answers will come to you, not from rote memorization but gradual insight and understanding of the various aircraft systems. This type of learning will stay with you throughout your career on the B737 NG and you will find that an occasional review will refresh your systems knowledge very quickly.

Not just a fancy name for systems quiz, the Online Knowledge Exercises are designed as a learning tool. Questions and multiple choice answers are carefully worded so that again, you can reason your way to the correct answer through systems knowledge and not memorization. Many times, a multiple choice test will have a most correct answer, one that is reasonably close and one or two that are clearly wrong, if not totally negative or ridiculous. The knowledge exercises available online from B737 NG Systems Review strive to make each question and answer relevant and even if you are not correct on your first choice, will lead you toward the correct answer. Don't think in terms of pass or fail while working the exercises but more in terms of striving to get the correct answer as your first choice. If you don't choose the correct answer as your first choice, you will have the opportunity to review the remaining answers and pick again.

Traditional scoring is not used in these knowledge exercises rather a "weighted" scoring is used based on how many questions were answered correctly on the first try. If you choose the correct answer on the second or third try, credit for the question is reduced proportionately. An example of this would be :

Claudette is a brunette. What is Claudette's hair color ?

- A. Brown
- B. Brunette
- C. Dark
- D. Curly

Answers B and C are relevant to the question and therefore some credit might be given if you chose Brunette which is Claudette's hair color but is not considered to be a color. Less credit might be awarded for Dark, which also would describe Claudette's hair color. D is an example of an answer that is not relevant to the question but is only relevant to hair. This is the type of answer that is avoided whenever possible in the B737 NG Study Guide Online Knowledge exercises

If you're still stumped about Claudette's hair color, the correct answer is A.

For those of you who still want to know whether you have "Passed" or "Failed", traditional scoring is indicated by the term "Raw" score.



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An example from the APU Knowledge Exercise that promotes systems knowledge would be the question:

Which of these four lights will not cause an automatic shutdown of the APU ?

- A. MAINT
- B. LOW OIL PRESSURE
- C. FAULT
- D. OVERSPEED

The incorrect answers will reinforce your knowledge of which conditions will cause an automatic shutdown of the APU.

B 737 NG Systems Review and your system.

B737 NG Systems Review relies heavily on graphics to display the panels and systems in a realistic manner closely and accurately representing the actual aircraft. It is recommended that while running the program other graphic or high memory use programs not be run simultaneously for best performance.

If you notice sluggish response from the program or no response especially while online it is possible you have reached the memory limit for your system. Shut down any memory intensive programs and B737 NG Systems Review should run normally.

The following symptoms indicate that you may have reached the memory limit for your system:

- Menu items or system panel selections do not respond unless you click more than once.
- Slow loading of graphics or delayed response when selecting a panel or system.
- Windows such as System Q and A , Notes or Aux SGR will not restore from a minimized state.
- Online Quizzes will not show questions and answers.
- Online menu selection responds slowly or not at all.

About the program

B737 NG Systems Review is a work in progress. The Online Module is designed to dynamically present additional information as it becomes available. Input from B737 NG pilots is solicited and will be incorporated in additional Online Modules and bulletins. Revisions to the program and data will be available for download as they are published.

Safety through increased knowledge about your aircraft is the primary motivation and philosophy which governs all aspects of B737 NG Systems Review. Your participation in this process is welcomed.

FLY SAFE