

USS ENTERPRISE CVN-65 < THE FINAL CRUISES >



by Team SDB Scenery
for FSX/FSX-SE and Prepar3D v3/v4

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Introduction

This version began as an idea to enhance the original release for use in Prepar3D v4 by updating the RFN Carrier gauge to the 64-bit version. The initial idea was to replace the F-14 Tomcats, A-7 Corsair IIs, A-6 Intruders, and SH-3 Sea Kings with the more modern F/A-18 Hornets and SH-60 Seahawks borrowed from Javier Fernandez's beautiful Nimitz carrier package. But as happens sometimes the smallish project took on a life of its own and soon became an extensive overhaul worthy of a separate package. The new model visually reflects changes from the 3+ year refit of 1990-1994 and the overhauls of 2005 and 2008-2009.

We selected two cruises. The final World Cruise in 2006, one of the last cruises for the S-3 Viking onboard the Enterprise. And the 2012 Mediterranean/Arabian Sea Cruise, the last cruise of the Enterprise before returning stateside for defueling and eventual decommissioning in 2017. Both cruises originated at Oceana, Virginia and saw military action in the Persian Gulf. The included Boat Traffic files cover these two areas of operation. The included aircraft types, units, and markings are correct for the two cruises.

In addition to the Enterprise we have included an Arleigh Burke class Destroyer in two versions – Flight IIA Class2 and Flight IIA Class5. These are based on the models by Henrik Nielsen. With Henrik's permission, we have enhanced them for this project.

To give the package a bit more usefulness we have gone a step further from the original release and have included a complete RFN Carrier gauge. This will not only give access to nearly a dozen Advanced Features but also a graphic interface to locate and interact with the ships. Thanks to the improvements of Prepar3D v4 we have been able to include very realistic night lighting effects on all ships. To manipulate the lights and other details a configuration interface is included.

The onboard aircraft consist of the following:

2006 Cruise - Carrier Air Wing 1

- VFA-86 – F/A-18C Hornet
- VFA-136 – F/A-18C Hornet
- VFA-211 – F/A-18F Super Hornet
- VMFA-251 – F/A-18C Hornet
- VAW-123 - E-2C Hawkeye
- VS-32 - S-3B Viking
- HS-11 - SH-60 Seahawk
- VAQ-137 - EA-6B Prowler

2012 Cruise - Carrier Air Wing 1

- VFA-11 – F/A-18F Super Hornet
- VFA-136 – F/A-18E Super Hornet
- VFA-211 – F/A-18F Super Hornet
- VMFA-251 – F/A-18C Hornet
- VAW-123 - E-2C Hawkeye
- HS-11 - SH-60 Seahawk
- VAQ-137 - EA-6B Prowler

List of Features

- Two configurations representing the 2006 World Cruise and the 2012 Final Cruise with unique carrier details and carrier/aircraft textures for each
- Empty deck versions of both cruises
- Full FSX Acceleration carrier operations compatibility
- New and updated static aircraft on deck (F/A-18C Hornet, F/A-18E Super Hornet, F/A-18F Super Hornet, EA-6B Prowler, S-3B Viking, E-2C Hawkeye, and SH-60 Seahawk)
- Aircraft servicing vehicles, fire trucks, and deck crew figures
- SH-60 Seahawk plane guard helicopter flying alongside
- Arleigh Burke class Destroyer escorts (Flight IIA Class2 and Flight IIA Class5)
- RFN gauge for TACAN (TACTical Air Navigation system - course and distance) and ICLS (Instrument Carrier Landing System) navigation to the ship
- Advanced FLOLS (Fresnel Lens Optical Landing System) system with correct glide slope
- LRLS – Long Range Line-Up System
- Audible LSO (Landing Signal Officer) announcements
- Advanced aircraft launch trigger
- Realistic launch speed tailored to individual aircraft
- Animated Catapult Officer (Shooter)
- Steam effect on catapult (Prepar3D v4 only)
- GOTO feature to position your aircraft in one of four deck locations
- Working #3 elevator for movement between hanger deck and flight deck
- Night operations lighting including sequenced flashing centerline lights
- Dynamic night lighting (Prepar3D v4 only)
- Carrier Traffic files for both cruises near NAS Oceana, Virginia and the Persian Gulf
- Configuration file for use with AI Carrier utility

System Requirements

- Windows 10 / 8 / 7 / Vista / XP w/SP2 (32-bit or 64-bit)
- Microsoft Flight Simulator X with Service Pack2 and Acceleration
- or Microsoft Flight Simulator X Gold
- or Dovetail Games FSX: Steam Edition
- or Lockheed Martin Prepar3D® Simulation Software v3 or v4
- CPU: 3.0 GHz, 2 Core (Intel i3 or better)
- RAM: 2GB Minimum
- Graphics Card: 1GB (NVIDIA GeForce *GTS 450* or better)
- 350 MB hard disk space for download, 485 MB for installation

USS Enterprise (CVN-65) History

The world's first nuclear-powered aircraft carrier, and the eighth U.S. Navy ship to bear this historic name, the USS Enterprise was the Navy's most storied warship in history. Like her predecessor of World War II fame, she was nicknamed the "*Big E*".

In 1954 Congress authorized the construction of the world's first nuclear-powered aircraft carrier. The giant ship was to be powered by eight nuclear reactors, two for each of its four propeller shafts. This was a daring undertaking, for never before had two nuclear reactors ever been harnessed together.

Three years and nine months after construction began, the Enterprise was ready to be presented to the world as "The First, The Finest" super carrier. The new super carrier's performance exceeded the Navy's most optimistic expectations. The Enterprise broke all previous records for speed when it exceeded 40 miles-per-hour during initial trials.

At 1,123 feet, she was the longest naval vessel in the world. Her 93,284 long tons displacement ranked her as the 11th-heaviest super carrier, after the 10 carriers of the Nimitz class. Enterprise was meant to be the first of a class of six, but construction costs ballooned and the remaining vessels were never laid down. Powered by eight Westinghouse A2W reactors, each providing 35,000shp, the hull had to be enlarged to accommodate the size of the reactors, which meant a much larger flight deck. One additional feature that identified Enterprise as unique among carriers was its unusual square island. Because the carrier was nuclear-powered, there was no need for exhaust funnels. Even more so, what made the Enterprise's initial superstructure unique was the then-revolutionary twin-element phased planar array radar system.

The USS Enterprise has played a role in almost every major conflict since her commissioning. From the Cuban Missile Crisis, through multiple tours off Yankee Station in the Vietnam conflict, cold war tensions, and culminating with her rapid response on 9/11.

Throughout Enterprise's naval career, it has earned many accolades and distinguished itself honorably time and time again. During her more than 50 years of service she has set many records and milestones. She became the first nuclear carrier to transit the Suez Canal and the first carrier to operate the F-14 Tomcat fighter aircraft.

She was originally scheduled for decommissioning in 2014 or 2015, depending on the life of her reactors and completion of her replacement. But the National Defense Authorization Act for Fiscal Year 2010 slated the ship's retirement for 2013, when she would have served for 51 consecutive years, the most of any U.S. aircraft carrier. The Enterprise began her 22nd and final deployment, a seven month cruise to the Middle East in March 2012 from Norfolk Naval Station and returned in November 2012. She was deactivated in December 2012 and was officially decommissioned in February 2017 after over 55 years of service.

Advanced Features

The Advanced Features of the Enterprise make use of the RFN Carrier gauge developed by our shipbuilder, Sylvain Parouty. These features greatly increase the realism of the carrier experience but do require some editing of the "panel.cfg" file of each aircraft you want to use them with. It still isn't seamless but it is a lot less involved than our original 80s-90s release.

The default FSX-Accelerator carrier enhancements were a big improvement to the sim and lead to many third party products. But only one of these products had addressed two big issues of the default offerings – too fast of a catapult launch and too high of an approach light (FLOLS) angle. The RFN Carrier gauge solved both of these problems nearly a decade ago and since then other developers have come up with workarounds as well.

Two versions of the 2006 and 2012 Enterprise are included in this package. One labeled as FS and the other labeled as RFN -- one using the default FSX - Acceleration FLOLS system and one using the Advanced RFN FLOLS system. The main difference between these two systems is the adjustable glide slope of the Advanced FLOLS version (set at 3.5 degrees versus 4.0+ degrees of default) and the FLOLS/deck lighting.

Other enhancements come into play when either version is tuned to the RFN Carrier gauge. These Advanced Features include the following:

1. Catapult launch triggered using brakes button on joystick (rather than the default FSX - Acceleration "Shift + Spacebar" keystroke combination)
2. Reduced (more realistic) catapult launch speed tailored to the individual aircraft (as opposed to the too fast default FSX - Acceleration launch).
3. Animated Catapult Officer (Shooter)
4. Steam effect on catapult (Prepar3D v4 only)
5. LSO (Landing System Officer) voice on approach and trap
6. Advanced FLOLS with settable glide slope (preset to 3.5 degrees) and new night lighting
7. LRLS – Long Range Line-Up System
8. SH-60 Seahawk plane guard helicopter flying alongside
9. RFN gauge for TACAN (TACTical Air Navigation system - course and distance) and ICLS (Instrument Carrier Landing System) navigation to the ship
10. Audible LSO (Landing Signal Officer) announcements
11. GOTO feature to position your aircraft in one of four deck locations
12. Working #3 elevator for movement between hanger deck and flight deck

Advanced Features via RFN Carrier Gauge

Sylvain Parouty has graciously allowed for the analog version of his RFN Carrier gauge to be included with this package. This provides several new features from the original Enterprise version.



In the image above the ARN52B radio portion of the gauge is tuned to the 2012 RFN version of the Enterprise on TACAN channel 26Y. The ship is 9 miles away and the course to the TACAN beacon onboard is about 144 degrees. The yellow dot to the right of the gauge is the LRLS (Long Range Line-Up System) mounted on the stern of the ship indicating that the aircraft is lined up within 0.5 degrees left or right of the flight deck centerline. The yellow on green text at the top of the screen also indicates which carrier or destroyer has been tuned.

How the gauge works

First you need to make the gauge visible. In FSX and FSX-SE go to the top dropdown menu and select "Views" then "Instrument Panel" and then "TACAN RFN". In Prepar3D v3 and v4 go to the top dropdown menu and select "Vehicle" then "Instrument Panel" and then "TACAN RFN". If installed correctly (page 10 below takes you through installation step by step) the gauge will appear as in the image above but on the left edge of the screen. You can left-click on any visible part of the gauge and reposition it. If you change views and the gauge disappears you can open it again and it will remember where you repositioned it to.

The following two pages identify the components of the gauge and what they do.



- 1) The "X" box at the top left will close the visible gauge. The gauge effects will remain active.
- 2) The green "Carrier" light indicates you are tuned to a ship as opposed to a land based FLCP location.
- 3) The **LSO on/off** button will toggle the audible LSO messages on and off. The messages begin with "Call the Ball" at 3/4 mile away and will talk you down to what wire you caught. Or if things are not coming together, a Wave Off command.
- 4) A thin line at the top and bottom (solid at the top for the bow and hashed at the bottom for the stern) indicates the flight deck centerline and orientation of the ship. In this case the aircraft is lined up with the deck centerline and is approaching from the stern.
- 5) The **TACAN** button switches between a TACAN course indicator as shown and an ICLS gauge with localizer and glide slope indicators.
- 6) The "9.0" in the window indicates the ship is nine (9) miles away
- 7) The "**GO TO**" button will bring up a GO TO menu and let you select from four deck locations on the Enterprise carrier or the rear helipad of the Destroyers. You can also bring up the GO TO menu with the keyboard shortcut of CTRL+F1.
- 8) The large arrow is pointing to the ship.



This is the ARN52B radio tuning portion of the gauge. As you can see from the window in the center of the gauge it is tuned to TACAN Channel Y26 for the USS Enterprise CVN65 (2012) RFN version.

You can select a TACAN channel by using the three buttons as described below or by the radio gauge of the aircraft. Available frequencies are 17X to 59Y and 70X to 126Y (108.00 to 117.95 MHz). For channels 17 to 19 and 121 to 126 select the whole units first and then the tens.

- 1) Click on the left side of the knob (a minus - sign will appear) to decrease tens (10 through 120) and click on the right side (a plus + sign will appear) to increase. You can also hover over the knob and scroll the mouse wheel to increase or decrease the tens value.
- 2) Click on the left side of the knob (a minus - sign will appear) to decrease units (0 through 9) and click on the right side (a plus + sign will appear) to increase. You can also hover over the button and use the mouse wheel to increase or decrease the tens value.
- 3) The "108.95" in yellow is the VOR MHz equivalent. This appears momentarily as you tune the gauge and is useful if using the aircraft's NAV1 or NAV2 radio.
- 4) To change the Channel to Y or X click on the far right knob below the X or Y letter. The white dot on the top of the knob will point to the selected range.
- 5) The window in the center of the gauge displays the current TACAN Channel.

Ship Channels/Frequencies

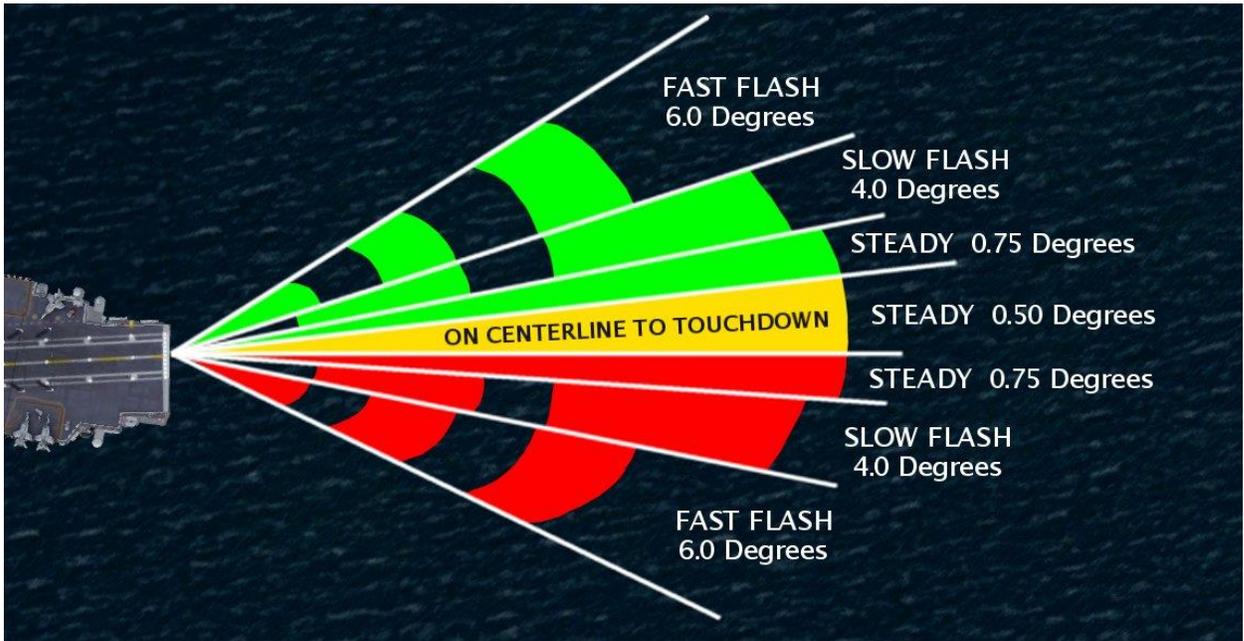
Below are the TACAN channels used by the RFN gauge for the various ships included in this package. The frequencies for the original CVN-65 Enterprise (80-90 Cruises) are unchanged.

CVN-65 USS Enterprise 2006 FS	25X	(108.80)
CVN-65 USS Enterprise 2006 RFN	25Y	(108.85)
CVN-65 USS Enterprise 2012 FS	26X	(108.90)
CVN-65 USS Enterprise 2012 RFN	26Y	(108.95)
DDG-81 USS W S Churchill	81X	(113.40)
DDG-84 USS Bulkeley	81Y	(113.45)
DDG-94 USS Nitze	82X	(113.50)
DDG-95 USS J E Williams	82Y	(113.55)

- "FS" in the title means it works as an FSX-Acceleration carrier without the RFN Carrier gauge Advanced Features.
- "RFN" in the title means it was made to use the RFN Carrier gauge Advanced Features.
- The TACAN X and Y number refer to the channel to be dialed in using the radio part of the RFN gauge to use the Advanced Features.
- The numbers in parenthesis after the TACAN channel are the VOR MHz equivalent if you want to tune in the ship using a standard radio gauge. The RFN gauge must still be activated by the "panel.cfg" file of that aircraft in order to use the Advanced Features.



LRLS – Long Range Line-Up System



The Long Range Line-Up System is activated on the Enterprise when the RFN gauge is tuned to the ship. It is visible from approximately 10 nautical miles out down to 0.65 miles out. When near the center the lights are solid. The further away from centerline the pilot is the more rapidly the lights flash.

In the real world the LRLS device is located just below the flight deck on the left end of the ship. It contains ten eye-friendly lasers (four red, one yellow, five green), masks, and filters which form seven ranges indicating the position of the aircraft relative to the flight deck centerline. The precision visual landing cues help with earlier detection of the centerline at night reducing the requirement for close-in line-up corrections as well as minimizing radio transmissions.



Left of Centerline

On Centerline

Right of Centerline

RFN Carrier Gauge Installation

If you already use the RFN Carrier Gauge you can skip this section. If you don't have the latest v5.0 version of the gauge please read on.

For **FSX/FSX-SE/Prepar3D v3 (32-bit)** you will edit the "panel.cfg" file. The "panel.cfg" file is located in the \panel folder of the aircraft. You might want to save a copy of the original "panel.cfg" file for safe keeping or to easily reverse the changes. Open the "panel.cfg" file using Notepad and make the following edits.

A) In the [Window Title] section, after the last line of Windows declarations, add the line:

```
WindowXX=TACAN RFN
```

Change XX above to the next available window number.

B) After the last line of the last "Windows" section add this new window section:

```
[WindowXX]
Background_color=0,0,0
size_mm=300,421
pixel_size=300,421
window_pos=0.0, 0.550
visible=0
alpha_blend=0.85
sizeable=1
type=special
ident=11501

gauge00=RFN_CarrierGauge32!Close_Subpanel, 0, 2, 18, 18, c11501
gauge01=RFN_CarrierGauge32!Aircraft_Carrier_Indicator, 0, 0, 300, 310
gauge02=RFN_CarrierGauge32!Radio_TACAN_ARN52B, 0, 311, 300, 100
```

C) In the [VCockpit01] section add the following lines after the already declared gauges:

```
[VCockpit01]
...
gauge81=RFN_CarrierGauge32!TACAN_Navigation, 0, 0, 0 ,0, Nav1
gauge82=RFN_CarrierGauge32!CustomCatapult, 0, 0,
gauge83=RFN_CarrierGauge32!Approach_Ctrl, 0, 0, 0 ,0, 0.0
```

To use Nav2 rather than Nav1 change the Nav1 to Nav2 in the gauge81 line.

For a panel without Virtual Cockpit sections, add the these three gauge lines above (81-83) to the end of one of the [WindowXX] sections and renumber the lines if necessary

For **Prepar3D v4 (64-bit)** edit the panel.cfg file located in the \panel folder of the aircraft you wish to use. As noted before you might want to save a copy of the original panel.cfg file for safe keeping or to easily reverse the changes. Open the panel.cfg file using Notepad and make the following edits.

A) In the [Window Title] section, after the last line of Windows declarations, add the line:

```
WindowXX=TACAN RFN
```

Change XX above to the next available window number.

B) After the last line of the last "Windows" section add:

```
[WindowXX]
Background_color=0,0,0
size_mm=300,421
pixel_size=300,421
window_pos=0.0, 0.550
visible=0
alpha_blend=0.85
sizeable=1
type=special
ident=11501

gauge00=RFN_CarrierGauge64!Close_Subpanel, 0, 2, 18, 18, c11501
gauge01=RFN_CarrierGauge64!Aircraft_Carrier_Indicator, 0, 0, 300, 310
gauge02=RFN_CarrierGauge64!Radio_TACAN_ARN52B, 0, 311, 300, 100
```

C) In the [VCockpit01] section add the following lines after the already declared gauges:

```
[VCockpit01]
...
gauge81=RFN_CarrierGauge64!TACAN_Navigation, 0, 0, 0 ,0, Nav1
gauge82=RFN_CarrierGauge64!CustomCatapult, 0, 0,
gauge83=RFN_CarrierGauge64!Approach_Ctrl, 0, 0, 0 ,0, 0.0
```

To use Nav2 rather than Nav1 change the Nav1 to Nav2 in the gauge81 line.

For a panel without Virtual Cockpit sections, add the these 3 lines above to the end of one of the [WindowXX] sections and renumber the lines if necessary

The above edits need to be repeated for the panel of each aircraft type you wish to use the RFN Gauge with to access all of the features it provides.

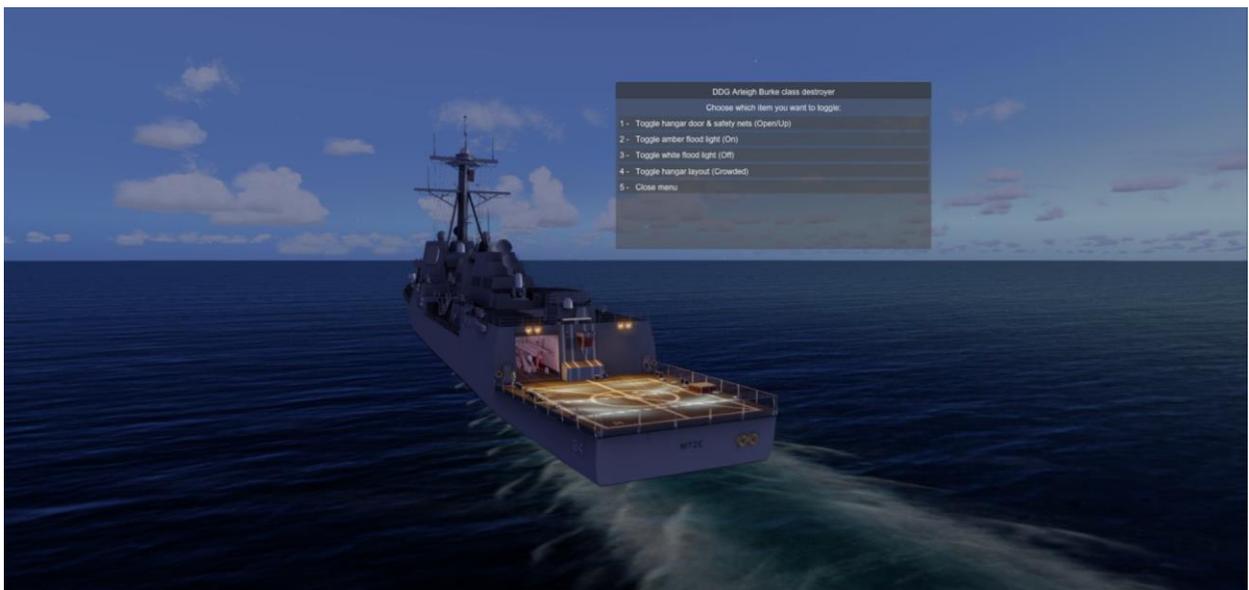
The latest version of the RFN gauge (highly recommended) includes an optional digital interface version is available at <http://royalefrenchnavy.restauravia.fr/RFN-Creations.htm#Gau>.

Ship Configuration file

You can manipulate some things on the carrier such as removing all aircraft, raising and lowering the #3 elevator, and in Prepar3D v4, apply some dynamic lighting effects.



You can do similar things with the included Destroyers as well – raise and lower the safety netting around the helipad, open and close a hangar door, remove the SH-60 Seahawk helicopter from the hanger, and turn on and off white and amber helipad spotlights (Prepar3D v4 dynamic lighting effects).



Enabling the Ship Configuration DLL file

This can be tricky but if you've used AI Carriers you've already done something similar. It is independent from the aircraft in the sim so it only needs to be done once.

For FSX / FSX-SE / Prepar3D v3 (32-bit)

Open File Explorer and Copy (Ctrl-C) and Paste (Ctrl-V) one of the following "%APPDATA%\..." lines into the Address Bar near the top of the window based on the sim.

```
FSX ->          %APPDATA%\Roaming\Microsoft\FSX
FSX-SE ->       %APPDATA%\Roaming\Microsoft\FSX-SE
Prepar3D v3 ->  %PROGRAMDATA%\Lockheed Martin\Prepar3D v3
```

In the list of files locate "dll.xml". Right click the file and select "Open with" and "Notepad". Add the following lines above </SimBase.Document> (the last line at the bottom of the file). Notice each entry starts with <Launch.Addon> and closes with </Launch.Addon> and the entire xml file needs to have the closing </SimBase.Document>. Save the file when finished.

```
<Launch.Addon>
  <Name>SDB Ship Configuration</Name>
  <Disabled>False</Disabled>
  <ManualLoad>False</ManualLoad>
  <Path>Gauges\SDB_ShipConf32.dll</Path>
  <DllStartName>module_init</DllStartName>
  <DllStopName>module_deinit</DllStopName>
</Launch.Addon>
```

For Prepar3D v4 (64-bit)

During installation the "SDB_ShipConf64.dll" file is placed in the "Documents\Prepar3D v4 Add-ons" folder. The file will auto-activate when Prepar3D v4 is next started.

If for some reason the file isn't activating you may need to manually install it. To do so follow these steps.

Open File Explorer and Copy (Ctrl-C) and Paste (Ctrl-V) the following line into the Address Bar near the top of the window.

```
%PROGRAMDATA%\Lockheed Martin\Prepar3D v4
```

In the list of files locate "dll.xml". Right click the file and select "Open with" and "Notepad". Add the following lines above </SimBase.Document> (the last line at the bottom of the file). Notice each entry starts with <Launch.Addon> and closes with </Launch.Addon> and the entire xml file needs to have the closing </SimBase.Document>. Save the file when finished.

```
<Launch.Addon>
  <Name>SDB Ship Configuration</Name>
  <Disabled>False</Disabled>
  <ManualLoad>False</ManualLoad>
  <Path>Gauges\SDB_ShipConf64.dll</Path>
  <DllStartName>module_init</DllStartName>
  <DllStopName>module_deinit</DllStopName>
</Launch.Addon>
```

Once you restart the sim the "SDB_ShipConf32(or 64).dll" file will add an "Add-ons/SDB Ship Configuration" dropdown menu item similar to the AI Carriers' "Add-ons/AI Ships" menu. It will give you the choice of the Enterprise (CVN65) or the Arleigh Burke destroyers (DDG) to manipulate. The menu can be repositioned by left-clicking anywhere on the menu and dragging it to a new location on the screen. It will go away after a few seconds but when you open it again it will remember the new location. As an option to using the dropdown menu there are keyboard shortcuts to open the menu for the appropriate vessel type:

[CVN65] = Shift + Ctrl + F3

[DDG] = Shift + Ctrl + F2



Carrier Traffic Locations

The Carrier Traffic tracks consist of a straight line run in one direction followed by an unprototypical 180-degree turn and a run in the opposite direction. If the carrier begins to turn at the end of the track give it a few minutes to straighten out before attempting to land.

Among the installed files are traffic files in the Add-on Scenery folder that place the ship and escort(s) at several locations. You can put yourself nearby and fly out to the ship by going to these airports:

KNTU – Naval Air Station Oceana, Virginia, USA - 2006/2012 Cruises

OTBH - Al Udeid Air Base, Qatar - 2006 Cruise

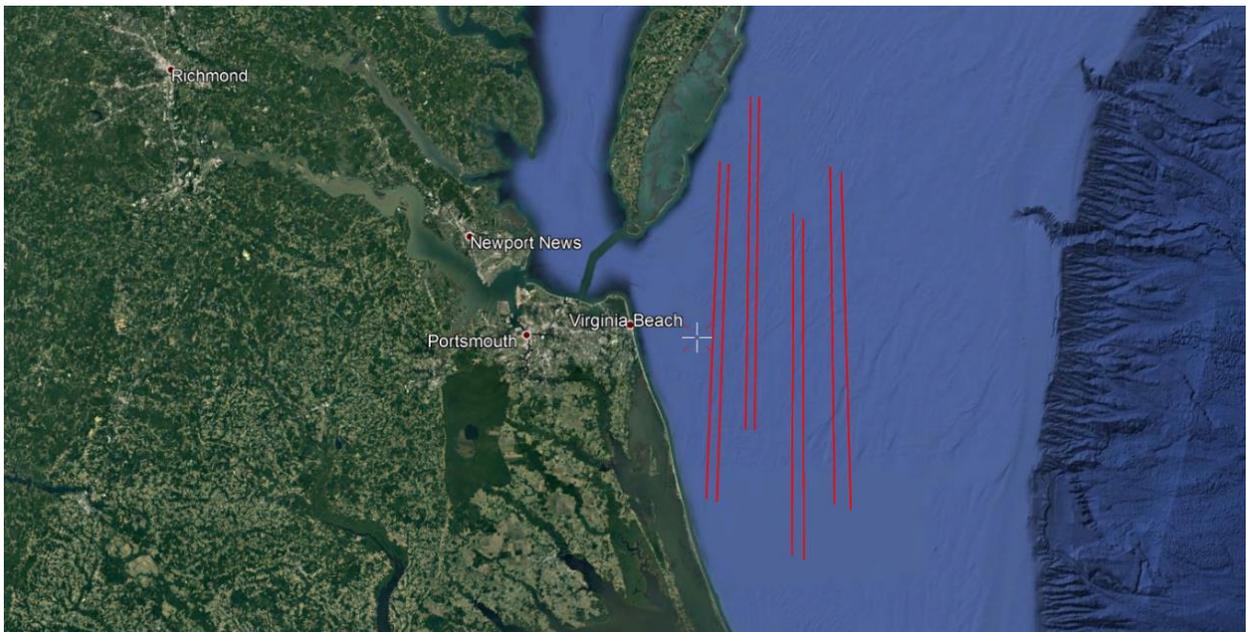
OBBS - (Shaikh) Isa Air Base, Bahrain - 2006 Cruise

OKAJ - Ahmad al-Jaber Air Base, Kuwait - 2012 Cruise

OMAM - Al Dhafra Air Base, United Arab Emirates - 2012 Cruise

If the ship is tuned using the RFN Gauge you can use the TACAN version of the gauge to guide you to the ship or you can use the GOTO button and select to position your aircraft on one of four positions on the carrier deck (on the cables, at Catapult #1, at Catapult #3, or at Catapult #4). For the Destroyers you will be placed on the helipad. You can also bring up the GOTO menu with the keyboard shortcut of CTRL + F1.

Traffic_CVN65_DDG_KNTU_Oceana



Traffic_CVN65-2006-FS_DDG_OTBH-AI-Udaid



Traffic_CVN65-2006-RFN_DDG_OBBS-Shaikh-Isa



Traffic_CVN65-2012-FS_DDG_OKAJ-Ahmad-al-Jaber



Traffic_CVN65-2012-RFN_DDG_OMAM-AI-Dhafra



Traffic Scenery Activation

Traffic Scenery Activation for FSX/FSX-SE in WinXP and Vista

1. Click to the "Settings" link in the Start Page of the simulation.
2. Click on the "Scenery Library" button under "Scenery".
3. Click on the "Add Area..." button. Use the Browser window which comes up to locate the "Addon Scenery\CVN-65_Final_Cruises_Traffic" folder.
4. Click on "OK" button.
5. Click on "OK" button at the bottom of "Settings-Scenery Library" page.
6. Restart the simulation to finish the Scenery Activation process.

Traffic Scenery Activation for FSX/FSX-SE in Windows 10 / 8 / 7

For users running Windows 7, 8, and 10 follow this procedure to activate the scenery.

1. Click to the "Settings" link in the Start Page of the simulation.
2. Click on the "Scenery Library..." button under "Other settings".
3. Click on the "Add Area..." button. Use the Browser window that comes up to locate and highlight the "CVN-65_Final_Cruises_Traffic" folder.
4. Click on "OK" button.
The add-on scenery Directory path that you have selected will not be added; instead the browser window will advance inside the directory. To add the scenery LEFT click on any blank space inside the folder view, and the window should close. You should now see the add-on scenery listed in the scenery library.
5. Click on "OK" button at the bottom of "Settings-Scenery Library" page.
6. Restart the simulation to finish the Scenery Activation process.

Traffic Scenery Activation in Prepar3D v3:

1. Launch Prepar3D.
2. On the top menu bar select "World" and then click on "Scenery Library...".
3. On the "Scenery Library" window click on the "Add Area..." button. Using the "Add Scenery Area" window that comes up browse to the "\\Lockheed Martin\Prepar3D v3\Addon Scenery\ CVN-65_Final_Cruises_Traffic" folder.
4. Once selected the path to the scenery will be displayed in the top field and the scenery name in the bottom field.
5. Click on the "OK" button at the bottom of the "Scenery Library" window.

Traffic Scenery Activation in Prepar3D v4:

The scenery is installed to the "Documents\Prepar3D v4 Add-ons" folder. The scenery will auto-activate in Prepar3D when the "YES" button is clicked on the "Enable add-on:..." prompt when Prepar3D is next started.

Traffic Scenery Uninstall / De-Activation

Traffic Scenery Uninstall / De-Activation Procedure for FSX/FSX-SE:

The Uninstaller program for the Team SDB scenery (Uninstall_cvn65_final_cruises.exe) is located in the root folder of the simulation as well as in Start Menu/All Programs/Team SDB Scenery, and will remove all files added during the initial Install. However, you will need to remove all references from the "Scenery Library" manually. To do so:

1. Click to the "Settings" link in the Start Page of the simulation.
2. Click on the "Scenery Library..." button under "Other settings".
3. In the "Areas" list of sceneries highlight the line "CVN-65_Final_Cruises_Traffic" and click the "Delete Area" button.
4. Select "Yes" to the "Are you sure..." prompt.
5. Click on the "OK" button at the bottom of "Settings-Scenery Library" page.
6. Restart the simulation to complete the De-Activation process.

Traffic Scenery Uninstall / De-Activation Procedure for Prepar3D v3:

The Uninstaller program for the Team SDB scenery (Uninstall_cvn65_final_cruises.exe) is located in the root folder of Prepar3D as well as in Start Menu/All Programs/Team SDB Scenery, and will remove all files added during the initial installation. However, you will need to remove all references from the "Scenery Library" manually. To do so:

1. Launch Prepar3D.
2. On the top menu bar select "World" and then click on "Scenery Library...".
3. In the "Available scenery areas" list of sceneries highlight the "CVN-65_Final_Cruises_Traffic" line, click the "Delete Area" button and select "Yes" when asked "Are you sure...".
4. Click on the "OK" button at the bottom of "Scenery Library" page.
5. Restart Prepar3D to complete the De-Activation process.

Traffic Scenery Uninstall / De-Activation Procedure for Prepar3D v4:

The Uninstaller program for the scenery (Uninstall_cvn65_final_cruises.exe) is located in the Start Menu/All Programs, and will remove all files added during the initial installation.

Restart Prepar3D to complete the De-Activation process.

Troubleshooting

This product has been well tested and everything should work as advertised. But just in case it is always useful to have a few ideas on what to check if there are issues. This will hopefully get you up and running without the delay you might have when asking for technical support.

The Advanced System uses Simconnect. So if all settings have been made correctly and things do not work it is possible that your system does not have the required Microsoft Visual C++ 2010 Redistributable Package (x86) installed. This package installs runtime library components required to run applications developed with Visual C++ on a computer that does not have Visual C++ installed. Most systems have this runtime package already installed but it is possible it is missing or has been compromised. To download and install the runtime files visit: <https://www.microsoft.com/en-us/download/details.aspx?id=40784>.

The "shooter" figure is animated using "skin mesh animation". To allow FSX to "play" the animations make sure you have enabled "Advanced animations" under "Settings-Display/Graphics/Global Options".

If you see a glowing light above the FLOLS of the RFN versions in Prepar3D v4 uncheck "SimObjects" under "Options – World/Water and Bathymetry".

Some cases of malfunction have been reported (backwards movement of the aircraft before catapulting, no acceleration during catapulting, erratic LSO announces, displacement under the deck with the "Go To" function). Although the gauge can coexist with any software, FSinn, Addon Manager, Couatl, SODE, RAAS, seem to interfere sometimes. By disabling or uninstalling them, the functioning should return to normal. SODE seems to not interfere on P3Dv3. If necessary, the SODEPlatformManager.exe can temporarily disable SODE.

No function with Nav2 or Nav1 and/or no function with TACAN buttons

In case of absence of the section [Radios] you need to add it in the "aircraft.cfg" file. Nav2 or Nav1 must be active with value 1 in the first parameter and the standby frequency must be non-operative with the second parameter set to 0:

```
[Radios]
Audio.1 = 1
Com.1 = 1, 0
Nav.1 = 1, 0, 0
Nav.2 = 1, 0, 0
Adf.1 = 0
Transponder.1 = 0
Marker.1 = 0
```

- In the gauges folder, check for the gauges "RFN_CarrierGaugeXX.dll" (XX=32 or 64) and "RFN_Resources" and "RFN_Sounds" folders and that they are not corrupted during installation, for example by antivirus.

In the "panel.cfg" file of each equipped airplane, section [Window Titles], check the window number to be in the proper order and must match the installation of the TACAN RFN

window. In the sections [WindowXX] and [VCockpit01], check all the lines of the gauge and that the versions (32 or 64) are correct for the sim version.

Microsoft.Net Framework is also required.

<https://dotnet.microsoft.com/download/dotnet-framework>

Microsoft Flight Simulator SimConnect Client must be present.

C:\Program Files (x86)\Steam\SteamApps\common\FSX\SDK\Core Utilities Kit\SimConnect SDK\LegacyInterfaces

If the gauge still does not work, a full re-installation of the RFN Carrier gauge may be necessary.

<http://royalefrenchnavy.restauravia.fr/RFN-Creations.htm#Gau>

We also encourage you to visit, and if you can't find the answer, ask for help in our support forum at "<http://www.glowingheat.co.uk>". Click in the "Forum" link and then scroll down to the "Team SDB - Scenery Design" section.



Project Reference Sources (Partial List):

- [http://en.wikipedia.org/wiki/USS_Enterprise_\(CVN-65\)](http://en.wikipedia.org/wiki/USS_Enterprise_(CVN-65))
- [https://www.wikiwand.com/en/USS_Enterprise_\(CVN-65\)](https://www.wikiwand.com/en/USS_Enterprise_(CVN-65))
- <http://navysite.de/cvn/cvn65.html>
- <http://www.uscarriers.net/cvn65history.htm>
- <http://www.hullnumber.com/CVN-65>
- <http://www.maritimequest.com/>
- <https://www.history.navy.mil/>
- Detail & Scale (Bert Kinsey) - No. 39: USS Enterprise CVN-65
- Warship Profile 15 - USS Enterprise (Cmdr. W. H. Cracknell, USN)
- Osprey Publishing (Tony Holmes) - Seventh Fleet Super Carriers
- Osprey Publishing (Jean-Pierre Montbazer) - Super Carriers
- NAVAIR 00-80T-104 NATOPS Landing Signal Officer Manual
- NAVAIR 00-80T-120 NATOPS CVN Flight/Hangar Deck Manual
- Naval Safety Center - Flight Deck Awareness



Credits:

Sylvain Parouty – Sharing his expertise, bringing the original Team SDB Enterprise into Prepar3D, being extremely patient, and so much more...

Javier Fernandez – Original F/A-18C/E/F Hornet and SH-60 Seahawk modified and used for static models

Henrik Nielsen – Designer of the Arleigh Burke Class Destroyers

Michel Panattoni – AI Ship Traffic

Frank Safranek – Aircraft Textures, User Manual

Michael Dews – Multi-Sim Installer

Carl Edwards – Original designer of the Alphasim CVN-65 “Big E” package

Serge Luzin – vLSO Integration

Beta Testers – Michael Dews, Dave Hazelgrove, Serge Luzin, William Mackay, Michel Panattoni, Sylvain Parouty, Frank Safranek, Henk Schuitemaker, Russel Smith

Technical Support Forum

A forum area for Technical Support has generously been provided by David Bushell for Team SDB use via the support forum at "<http://www.glowingheat.co.uk>". Click in the "Forum" link and then scroll down to the "Team SDB - Scenery Design" section. Please search and review any previous questions as your issue may have already been addressed. If so please add your comments to the existing thread.

Copyright Information

All files including the RFN Carrier Gauge by Sylvain Parouty as included are a commercial product and should NOT be treated as freeware. These files may not be copied (other than for backup purposes), transmitted, passed to third parties, reverse engineered, or altered in any way without prior written permission from Team SDB Scenery. Any breach of the aforementioned copyright will result in the full force of law being brought to bear on those responsible. Additional Copyright information is included the End User License Agreement (SDB EULA CVN65.pdf).

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For more info, pictures, and news please...

Join our Facebook page: <http://www.facebook.com/TeamSDB.scenery>



Appendix A: User Positioned Moving Carriers (AI Carriers)

In addition to the eight pre-defined ship traffic patterns included, you can place the moving Enterprise and destroyers wherever you like by using the "AI Carriers" add-on module by Lamont Clark. Information regarding AI Carriers and the download link is available from Lamont Clark's website at <http://lc0277.gratisim.fr/software.html>. For FSX: Steam Edition and Prepar3D versions it is recommended you use the revised .NET version by Orion Lyau available at <https://github.com/ollyau/AICarriers>. Follow the notes below for both versions.

A configuration file has been provided to add the Enterprise and Destroyer versions as well as fleet formations to the selection list in AI Carriers. For Prepar3D v4 navigate in File Explorer to the "\\Documents\Prepar3D v4 Add-ons\CVN-65 USS Enterprise Final Cruises\Team SDB_AI Carriers" folder. Copy the "CVN65_Enterprise Final Cruises.cfg" file to the "\\conf.d" folder of the AI Carrier installation folder (default location is "C:\Program Files\AICarriers" but yours may be different). For FSX, FSX-SE, and Prepar3D v3 the file is located in the "\\FSX\Team SDB_AI Carriers" folder.

Once the configuration file has been added start FSX or Prepar3D and within Free Flight mode use the drop down "Add-ons -> AI Ships" menu in the Title bar (or use Shift + J). From here you can select to deploy the CVN-65 Enterprise carrier or destroyers from the 2006 or 2012 cruises. The selected ship or group will be placed where you designate using the distance options menu in AI Carriers.



Note: Sometimes AI Carriers does not unload from memory when FSX/Prepar3D is closed and will not restart when you launch FSX or P3D again. If "AI Ships" is not available under "Add-ons" in the dropdown menu check Task Manager or the Hidden Icons box of the lower Task Bar. If it is running (an icon is visible) when FSX or P3D is not running, right-click the icon and click on "Exit". You can then reload it by restarting FSX/P3D or going to the AI Carriers installation folder and double-click on "AICarriers.exe" to relaunch it. Again, the default location is "C:\Program Files\AICarriers" but yours may be different.

Appendix B: Moving Carrier Navigation Aids Suggestion

Locating and landing on a moving AI carrier is a bit different from doing so on a static one because all navigation aids attached to the carrier are missing. But there is a solution to this by using the RFN Carrier gauge developed by Sylvain Parouty.

Following the setup described on page 10 of this User Manual, this gauge can be added to any aircraft of your choice. Once installed, the gauge will scan for any AI object (installed to the "\\SimObjects\Boats" folder) within a 100 mile range that is defined in the "\\Gauges\RFN_Resources\RFN_Carrier.xml" file. Once the assigned frequency is tuned the gauge will show the direction and distance of the particular AI boat as well as its orientation. As your aircraft gets closer to the carrier you can switch from TACAN mode to ICLS mode.

In the image below the gauge is tuned to TACAN Channel X025 (108.80 MHz) to lock on to the "USS Enterprise CVN65 (2006) FS" version and the gauge indicates the ship is in front of the aircraft and is 0.1 miles away.



In addition to the Advanced features described on pages 4-7 in this Enterprise package the full RFN Carrier gauge includes a second New Generation digital gauge with even more useful information and controls as shown in the image above.

The "RFN_Carrier.xml" file is editable and the package is very well documented so you can add additional carriers and land based FCLP (Field Carrier Landing Practice) locations. The description of the gauge in this User Manual has only been sufficient to use it with this Enterprise carrier package. It is highly recommended that you download and install the full package if for nothing else, the included documentation.

You can access the latest version of the RFN Carrier gauge from the RFN website at <http://royalefrenchnavy.restauravia.fr/RFN-Creations.htm#Gau>. Each new version improves existing methods and features if needed and adds new ones.

Appendix C: Adapting Aircraft to FSX - Acceleration (and P3D) Carriers

Some aircraft like the F/A-18 included in the FSX - Acceleration have Launch Assistance and Tailhook features hard coded into the model (.mdl) file. Adapting other FSX/P3D aircraft for use with the Big E carrier without these features hard coded in requires editing the "aircraft.cfg" file of the aircraft using Notepad to add [launch_assistance] and [TailHook] sections. This method works on all aircraft.

The launch_bar coordinates are given in longitudinal, lateral, and vertical feet from the datum reference point of the aircraft model (not always the same as the real aircraft). For a quick test, you can start with the coordinates of the nose gear (point.0) in the [contact_points] section since they are defined the same way. See Henk Schuitemaker's [launch_assistance] coordinate formula: <http://www.sim-outhouse.com/sohforums/showthread.php?&p=499287>

The following examples were determined for the "IRIS T-6A Texan II SP2" (pictured below) included in Prepar3D v1-v3:

```
[launch_assistance]
launch_bar_pivot= 6.63, 0.0, -4.0
launch_bar_lug= 8.13, 0.0, -4.36

[TailHook]
tailhook_length= 4
tailhook_position= -12.0, 0, -0.8
cable_force_adjust= 1
```

The IRIS T-6A Texan II SP2 was removed from the included aircraft in Prepar3D v4 but is now available as freeware. You can download a copy of "IRIS Pro Series T-6/A Texan II" at <https://simviation.com/1/search?submit=1&keywords=irisclassicst6.zip>.

The [TailHook] section was an option as far back as FS2002/CFS2 -- well before FSX - Acceleration -- so many add-on aircraft may already have this section included.

For more information please consult Lamont Clark's website:

http://lc0277.gratisim.fr/Adapting_SX_aircrafts_to_acceleration_carriers.html



Appendix D: Launching / Recovery with FSX - Acceleration Carriers

It is not the intent of this User Manual to provide all answers about launching and recovery from FSX - Acceleration carriers, but this section will at least get you started.

Now that you have everything installed, and you are on the carrier with your selected aircraft, you are ready to launch. The keystrokes described here are default and not for the Advanced features. These work in both FSX and Prepar3D.

1. **Taxi to the catapult location.** Ensure that your nosewheel is close to the catapult shuttle. This will not be exact for all aircraft but with a little trial and error you will know where to position your aircraft for this first step. For night operations a small red light has been added to assist in locating the shuttle. **Unfold the wings (Ctrl-Shift + W)** if necessary and apply slats/flaps and trim for takeoff.
2. If your aircraft is so equipped, lower the animated **Launch Bar** using **Shift + U**.
3. Arm the **Takeoff Assist** using **Shift + I**. This step does several things:
 - a. First, you may see the aircraft move automatically to position itself with the catapult.
 - b. Second the jet blast deflector behind the aircraft will move to the raised position.
 - c. And third, a red "Holdback Bar" message (indicating successful hookup) will appear in the lower left corner of the screen.
4. Set trim and flaps for Takeoff. Apply **Full Power** (Full Afterburner) for takeoff using throttles and/or the **[F4]** key.
5. Apply the **Catapult Launch** (Trigger) using **Shift + Spacebar**. The animated Catapult Officer (Shooter) will signal that everything is ready to go and you will be launched. The jet blast deflector behind you will lower for the next aircraft to taxi into position.

Note: In order to have all the animations showing, verify that the 'Enhanced Animations' option is selected in your FSX Settings.

Landing or Recovery on a carrier is just as easy. The Team SDB Enterprise "FS" versions use the Fresnel Lens Optical Landing System (FLOLS) included in FSX Acceleration. This system uses a 4-degree glide slope rather than the 3.5-degree glide slope normally used on US Navy aircraft carriers. So if you feel you are lined up but are too high during approach, you are. For a more accurate experience make use of the adjusted RFN FLOLS with a 3.5-degree glide slope.

Just remember to follow your checklist and lower the landing gear and flaps before landing.

1. **Extend the Tailhook** on approach using **Shift + Q**. Go to full power as you go over the wires in case you "Bolter" -- miss the wires and have to go around. After you land and catch a wire, throttle to idle and raise the tailhook using **Shift + Q**. Carrier landings are often referred to as controlled crashes. You may need to disable Crash Detection.
2. Parking is always tight on deck so if the aircraft is equipped with **folding wings** you should fold them using **Ctrl-Shift + W** whenever you are not in launch position to avoid hitting other aircraft while taxiing.

Appendix E: Virtual Landing Signal Officer (vLSO)

The Advanced Features of the Enterprise package included an audible LSO giving you course and glideslope adjustment suggestions during the approach as well as Wave-Off command when it all does south and finally a report of which wire you caught when it all works out.

If you want to really know how you did on a consistent basis there is an add-on software product known as vLSO. The software provides even more detailed steering commands during approach and landing. vLSO also grades each of your landings, writes a comment and debriefs.

This program supports the Team SDB Enterprise, the RFN Carrier Gauge, and all carriers and FCLP sceneries, listed in the RFN_carrier.xml file. The RFN_CarrierGauge.dll of version 5.0 or above is required. When using the RFN Carrier Gauge and vLSO, the audible LSO callouts are controlled and provided by vLSO.

The program comes with a very complete User Manual that is a real plus to anyone interested in advancing their simulated carrier landing abilities.

More information and the free download is available here:

<http://vlso.blogspot.com/>

<http://www.fsdreamteam.com/forum/index.php/topic.4915.0.html>

#	Aircraft	Date	C	Comments	Grade	Wire
1	F4U Corsair	28.01.2018	1		(OK)	3
2	T-45C Goshawk	29.01.2018	1	FX F(LO)IM F(LO)IC	WO	
3	T-45C Goshawk	12.02.2018	1	FX FIM HFIC	WO	
4	T-45C Goshawk	16.02.2018	1	F(LO)X F(LO)IM HFIC	WO	
5	T-45C Goshawk	20.02.2018	1		WO	
6	T-45C Goshawk	20.02.2018	1		WO	
7	T-45C Goshawk	01.03.2018	1	SLOX	(OK)	3
8	T-45C Goshawk	01.03.2018	1		(OK)	3
9	T-45C Goshawk	01.03.2018	1		(OK)	4
10	T-45C Goshawk	01.03.2018	1	NESA SLO(H)X SLOIM SLOIC	B	
11	T-45C Goshawk	01.03.2018	1	(LIQ)	(OK)	3
12	T-45C Goshawk	02.03.2018	1	NESA SLO(H)IM	B	
13	T-45C Goshawk	02.03.2018	1	(LIQ) LR	(OK)	2
14	T-45C Goshawk	02.03.2018	1	(LIQ)	(OK)	3
15	F/A-18A Hornet	02.03.2018	1	NESA (LO)X (H)IM LOIC LR	C	T1
16	F/A-18A Hornet	02.03.2018	1	NESA (LO)IM (LO)IC	(OK)	1
17	F/A-18A Hornet	02.03.2018	1	(LO)IM (LO)IC	OK	4
18	F/A-18A Hornet	02.03.2018	1	SLO(LO)X (LO)IM	(OK)	1
19	F/A-18A Hornet	02.03.2018	1		OK	2
20	F/A-18A Hornet	02.03.2018	1		WO	
21	F/A-18A Hornet	02.03.2018	1		OK	2
22	T-45C Goshawk	02.03.2018	1	FX F(H)IM HFIC	WO	
23	T-45C Goshawk	03.03.2018	1	FX HFIM	WO	
24	T-45C Goshawk	03.03.2018	1		WO	

	GPA	BR, %	Currency
Carrier landings			
Day	1.72	32.56	Initial CQ required
Night	1.00	0.00	Initial CQ required
Total	1.67	30.43	Not yet qualified
Field practice			
Day	1.67	N/A	189 days elapsed
Night	0.00	N/A	Not current
Total	1.67	N/A	-