USS ENTERPRISE
CVN-65

THE BIG-E

By Team SDB Scenery

For Flight Simulator FS2004

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Introduction

The USS Enterprise has the distinction of being both the first nuclear-powered aircraft carrier and the longest carrier in the world. Launched in 1960 and Commissioned in 1961, it is the oldest vessel still in use in the U.S. Navy Fleet. Known as “Big E,” she is due to be decommissioned in 2013 after having served for over 50 years.

Carl Edwards marketed his rendition of the USS Enterprise for FS2004 through Alphasim (now Virtavia) beginning in 2005. It was available for only a couple of years but thanks to Carl's generous offer of the source files to Team SDB Scenery it is now available again. We have combined the updates by Robert Baum not used by Alphasim to make it even better for FS2004 users.

List of Features

- Highly detailed, landable vessel with authentic lighting (day & night)
- Four alternative static aircraft deck layouts (Launch, Recovery, Dual-Purpose, Empty)
- Ten locations around the world
- Optional deck position start points (at catapults or on elevator)
- Navaids - VOR, ILS, NDB
- Working FLOLS 'meatball'
- 'Deck furniture' included (mules, crane)
- Three types of static aircraft on deck (F-14, S-3 and A-6)
- All three deck aircraft types included as AI models
- Animated Radars
- Realistic wake textures
- Cat shots and wire traps are possible with Abacus "Flight Deck" or other third party add-on programs

System Requirements

- Windows XP SP2, Windows Vista, or Windows 7
- Microsoft Flight Simulator 2004 (FS2004)
- CPU 2.4Ghz or better
- 2Gb RAM Minimum
- 512 MB DX9 Graphics Card or better
- 49 MB hard disk space for download, 164 MB for installation


USS
ENTERPRISE
CVN


NH
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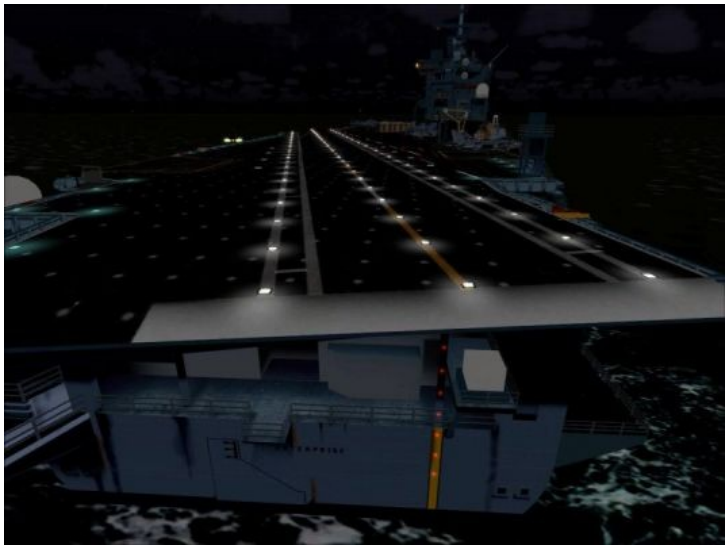
NAVY



Scenery Activation

1. Click to the "Settings" link in the Start Page of FS2004.
2. Click on the "Scenery Library" button under "Scenery".

3a. Click on the "Add Area…" button. Use the Browser window which comes up to locate "Flight Simulator 9\Addon Scenery\Team SDB CVN-65 (Big E)\SDB CVN-65 (Carrier)" folder.

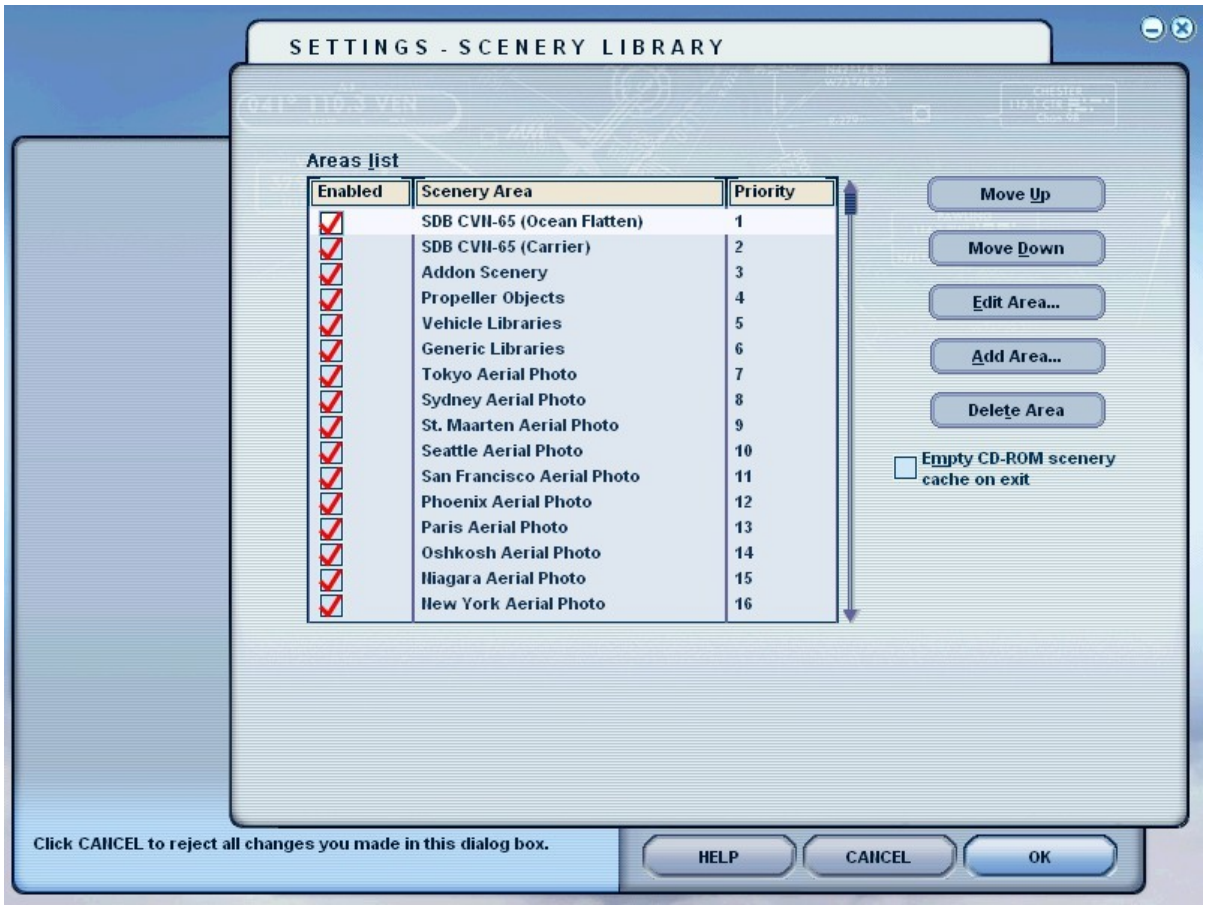
Click on "OK" button.

3b. Click on the "Add Area…" button. Use the Browser window which comes up to locate "Flight Simulator 9\Addon Scenery\Team SDB CVN-65 (Big E)\SDB CVN-65 (Ocean Flatten)".

Click on "OK" button.

4. Click on "OK" button at the bottom of "Settings-Scenery Library" page.
5. Restart FS2004 to finish the Scenery Activation process.

Important: Make SURE that the "SDB CVN-65 (Ocean Flatten)" scenery stays at a higher priority than "SDB CVN-65 (Carrier)" as shown in the image below.



Possible Windows 7 Scenery Activation Issues

For users running Windows 7 and experiencing problems follow this procedure to activate the scenery. The procedure normally relates to FSX users running Windows 7 but MAY also be relevant to FS2004 users running Windows7:

1. Click to the "Settings" link in the Start Page of FS2004.
2. Click on the "Scenery Library" button under "Scenery".

3a. Click on the "Add Area…" button. Use the Browser window which comes up to locate "Flight Simulator 9\Addon Scenery\Team SDB CVN-65 (Big E)\SDB CVN-65 (Carrier)" folder.

The addon scenery that you have selected will not be added. Instead it will advance inside the directory. To add the scenery LEFT click on any blank space inside the folder, and the windows should close. You should now see the addon scenery selected in the scenery library!

Click on "OK" button.

3b. Click on the "Add Area…" button. Use the Browser window which comes up to locate "Flight Simulator 9\Addon Scenery\Team SDB CVN-65 (Big E)\SDB CVN-65 (Ocean Flatten)"

The addon scenery that you have selected will not be added. Instead it will advance inside the directory. To add the scenery LEFT click on any blank space inside the folder, and the windows should close. You should now see the addon scenery selected in the scenery library!

Click on "OK" button.

4. Click on "OK" button at the bottom of "Settings-Scenery Library" page.
5. Restart FS2004 to finish the Scenery Activation process.

Uninstall / De-Activation Procedure:

The Uninstaller program located in the root folder of FS2004 will remove all files added during the initial Install. However, you will need to remove all references from the "Scenery Library" manually.

1. Click to the "Settings" link in the Start Page of FS2004.
2. Click on the "Scenery Library" button under "Scenery"
3. In the "Areas" list of sceneries highlight the line "SDB CVN-65 (Ocean Flatten)" and click the "Delete Area" button.
4. Once more in the "Areas" list of sceneries highlight the line "SDB CVN-65 (Carrier)" and click the "Delete Area" button.
5. Click on "OK" button at the bottom of "Settings-Scenery Library" page.
6. Restart FS2004 to complete the De-Activation process.

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 is the Navy's most storied warship in history. Like her predecessor of World War II fame, she is nicknamed the "*Big E*". Commissioned on November 25, 1961, the Enterprise was originally designed for a 25-year service life, but due to maintenance and upkeep, Enterprise has served for over 50 years and has been engaged in every major combat operation over the past five decades.

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.

The ship's first mission was to track and measure the flight of Mercury 'Friendship 7'. Big E's efforts culminated May 5, 1962 when Cmdr. Alan B. Shepard, Jr., became the first American to break the barrier of the Earth's atmosphere and ascend 116.5 miles in the Mercury capsule.

In October 1962, the Enterprise was dispatched to its first international crisis. The "Big E" and other ships in the Second Fleet set up a quarantine of all military equipment under shipment to communist Cuba. The blockade was put in place on October 24, and the first Soviet ship was stopped the next day. On October 28, Soviet leader Krushchev agreed to

dismantle nuclear missiles and bases on Cuba, concluding the Cuban Missile Crisis, the closest the U.S. and USSR have ever come to nuclear war.

The Big E 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.

In the Fall of 2001, the Enterprise aborted her transit home from a long deployment after the terrorist attacks in New York City and Washington. D.C., on September 11, 2001, and steamed overnight to the North Arabian Sea. In direct support of Operation "Eduring Freedom", the Enterprise once again took her place in history by becoming one of the first units to respond in a crisis with its awesome striking power. The Enterprise expended more than 800,000 pounds of ordnance during the operation.

Throughout Enterprise's naval career, it has earned many accolades and distinguished itself honorably time and time again. The Enterprise continues to be a shining example to the fleet. 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.

At 1,123 ft, she is the longest naval vessel in the world. Her 93,284 long tons displacement ranks 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.

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 will 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 on March 10, 2012 from Norfolk Naval Station in Virginia.

Sources:

http://www.enterprise.navy.mil/
http://en.wikipedia.org/wiki/USS_Enterprise_(CVN-65)
http://navysite.de/cvn/cvn65.html
http://www.uscarriers.net/cvn65history.htm
http://www.hullnumber.com/CVN-65
http://www.mooj.com/rx-deployments.htm

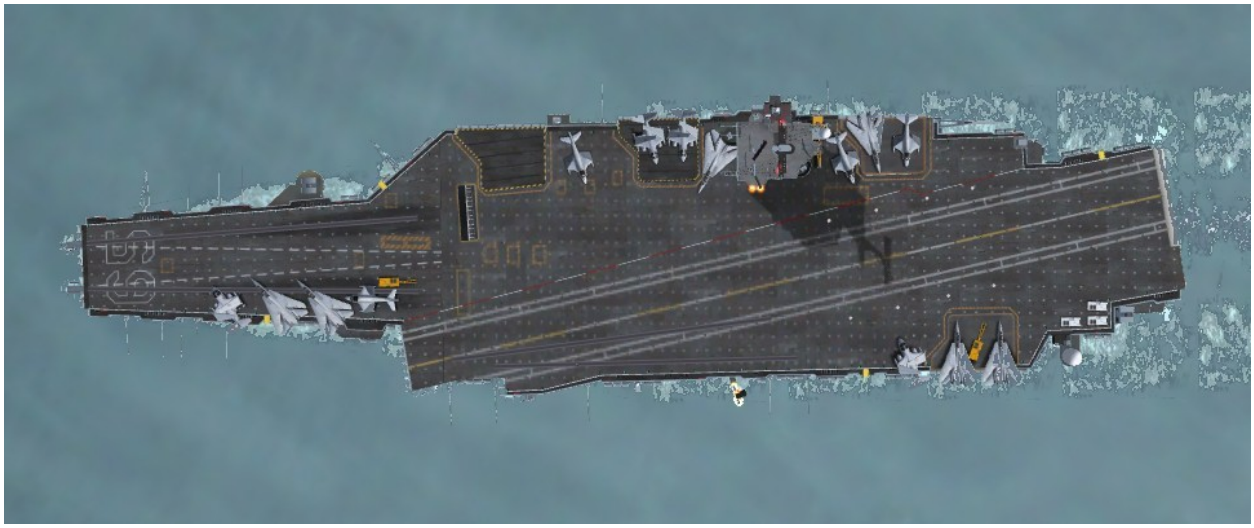
Deck Layouts

The aircraft on a carrier deck are arranged ("spotted") depending on whether the carrier is launching or recovering aircraft. During the launch cycle aircraft are parked behind the working catapults and moved into position for launching by the deck crews. During a recovery cycle the aircraft already on deck and those landing are spotted and parked behind the red/white "landing area foul line". This keeps aircraft away from the angle deck to provide a clear landing area for aircraft returning to the ship.

Normal flight operations are conducted in cycles. In cyclic operations, aircraft are launched and recovered in groups. These groups of aircraft are referred to as events, and are assigned a numeric designator based upon their launch order, i.e., Event 1, Event 2, Event 3, etc. Each aircraft in an event is referred to as a sortie. A sortie is the flight of one aircraft from launch to recovery. In cyclic operations, the launch of each event is followed immediately by the recovery of the preceding event.

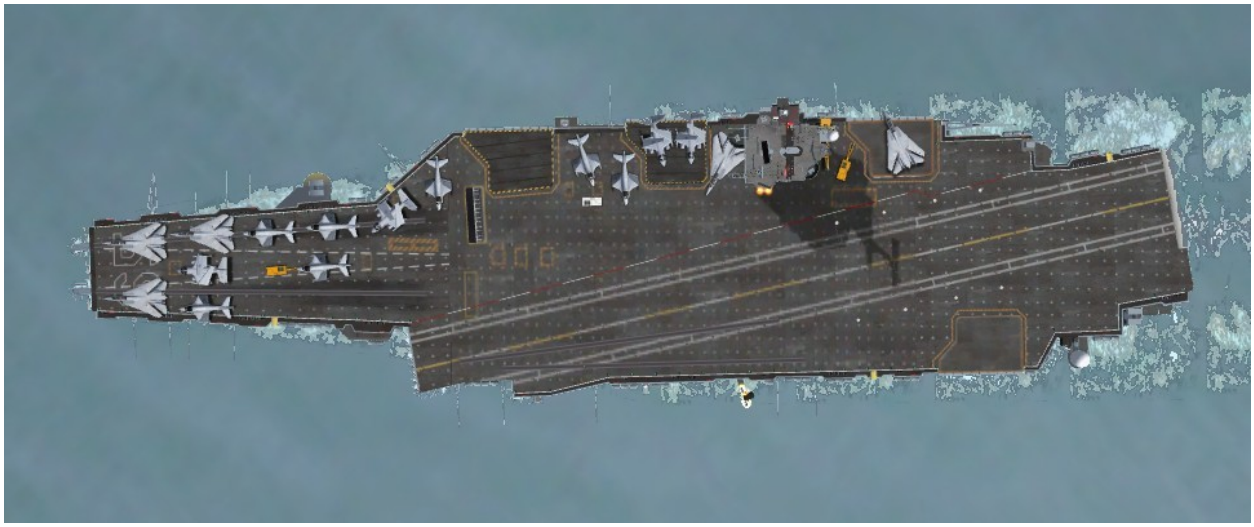
These instructions explain how to change how the static aircraft are parked on the upper deck of the FS2004 version.

The default setup (shown below) is 'dual purpose'. With this arrangement you can take off and recover from the same deck. Realistically it is a compromise.



There are two alternative setups which are more authentic. The version shown below has the forward deck cleared for launching aircraft. Since no aircraft are being recovered during this phase all aircraft on the deck have been repositioned behind the forward catapults.

The second alternate setup shown below has the landing strip area cleared for the recovery of aircraft. Aircraft on the deck have been moved to safe areas behind the "landing area foul line" near the superstructure on the starboard side and forward to the bow area.



Just as in the real world where changing the flight deck setup involves spotting or moving aircraft around, in Flight Simulator some moving around of files is necessary. You need to be familiar with Windows Explorer and Folders.

In the CVN-65 (Carrier) folders you will see a sub-folder called 'scenery'. In this folder there is a further sub-folder called 'StaticAircraftSetups'. In here you will find alternative deck setups in the form of three sets of three .bgl files for each scenery location.

The files are named to make it clear what they do:

CVN65_ EnglishChannel_PlanesLaunch_Part1.bgl (plus _Part2 and _Part3)
CVN65_ EnglishChannel_PlanesRecovery_Part1.bgl (plus _Part2 and _Part3)
CVN65_ EnglishChannel_PlanesDualPurpose_Part1.bgl (plus _Part2 and _Part3)

Using the English Channel location as an example, to change from the default DualPurpose setup to, let's say, the Launch setup, do the following:

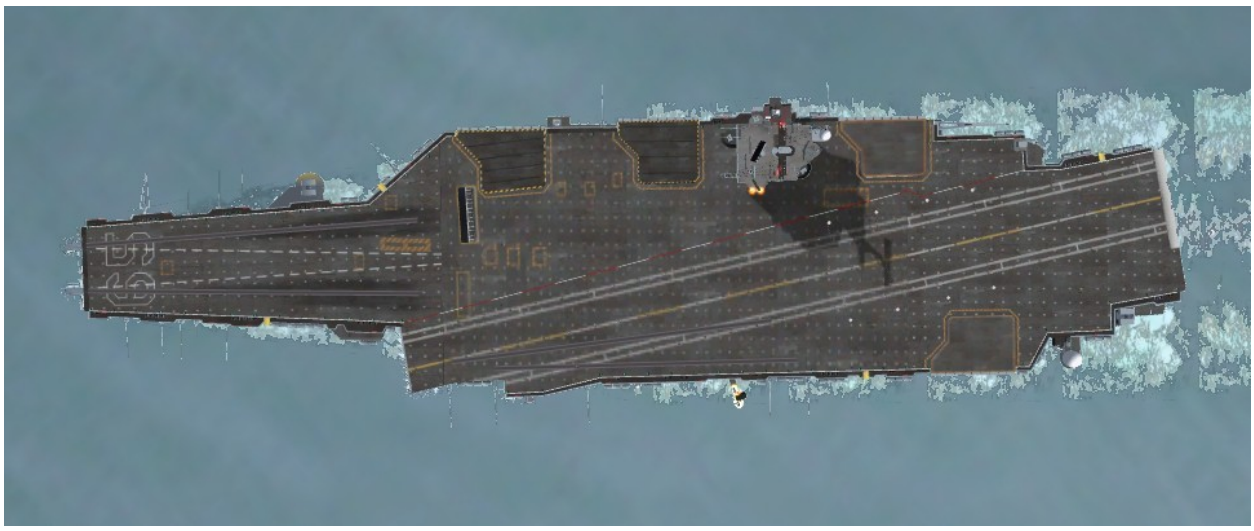
1) Go to: Addon Scenery\CVN-65 (Carrier)\scenery

2) Select these three files:

CVN65_ EnglishChannel_PlanesDualPurpose_Part1.bgl
CVN65_ EnglishChannel_PlanesDualPurpose_Part2.bgl
CVN65_ EnglishChannel_PlanesDualPurpose_Part3.bgl

3) Right-click the mouse and select **'Delete'**.

At this point you could actually use the scenery and have a 'clean' deck as shown below.



4) To change the deck layout to Launch configuration for the English Channel location go to the sub-folder "Addon Scenery\CVN-65 (Carrier)\scenery\StaticAircraftSetups"

5) Select these three files, right-click and select **'Copy'**:

CVN65_ EnglishChannel_PlanesLaunch_Part1.bgl
CVN65_ EnglishChannel_PlanesLaunch_Part2.bgl
CVN65_ EnglishChannel_PlanesLaunch_Part3.bgl

6) Go back to "Addon Scenery\CVN-65 (Carrier)\scenery" (up one level), right-click the mouse and drop the copied files in there using the **'Paste'** command.

After restarting FS2004 you are now ready to use the scenery with the new deck layout. Just reverse the procedure to get the default 'dual purpose' setup back again or switch to the Recovery or Empty deck layouts.

Included Locations

Ten locations are provided for the static carrier in FS2004. For each the location coordinates and heading of the angle deck (ILS Course) are provided below.

San Diego (CVN1)

Location: N32* 50.01' W117* 59.98'
Angle Deck (ILS Course) Heading: 264

Norfolk (CVN2)

Location: N36* 52.95' W75* 49.88'
Angle Deck (ILS Course) Heading: 358

English Channel (CVN3)

Location: N50* 24.01' W2* 39.98'
Angle Deck (ILS Course) Heading: 264

Washington State (CVN4)

Location: N48* 15.02' W122* 59.99'
Angle Deck (ILS Course) Heading: 217

Florida (CVN5)

Location: N30* 9.99' W81* 00.01'
Angle Deck (ILS Course) Heading: 082

Puerto Rico (CVN6)

Location: N18* 14.99' W65* 25.01'
Angle Deck (ILS Course) Heading: 069

Gulf of Oman (CVN7)

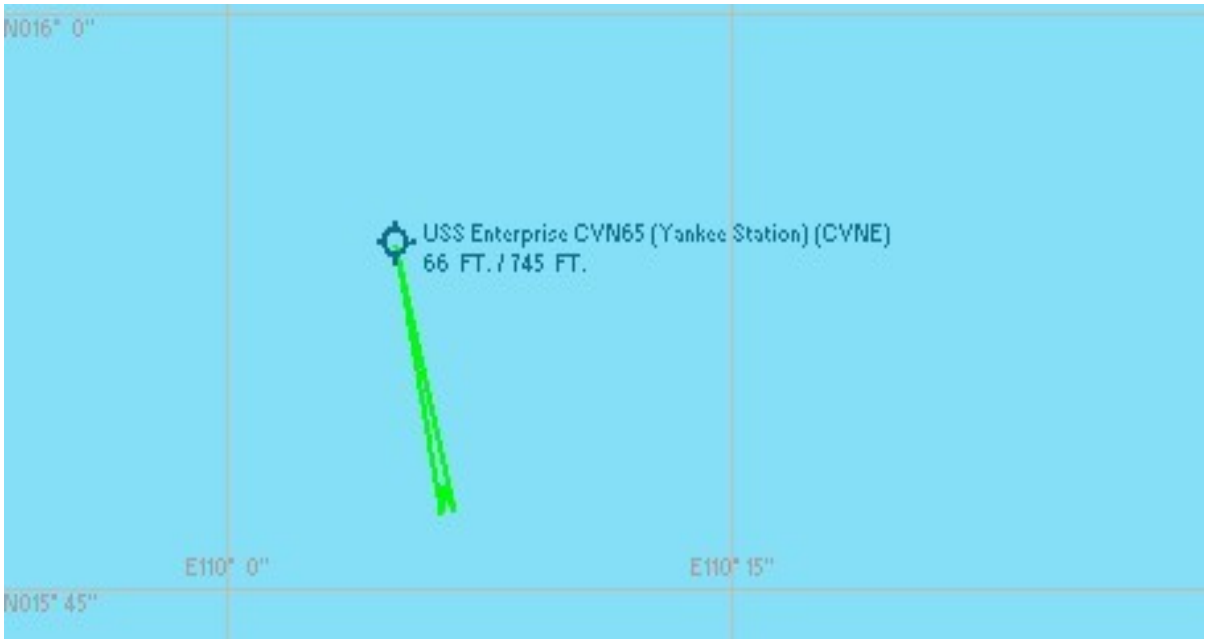
Location: N25* 06.00' E58* 35.02'
Angle Deck (ILS Course) Heading: 087

East of Sicily (CVN8)

Location: N37* 29.99' N37* 29.99'
Angle Deck (ILS Course) Heading: 087

Yankee Station (CVNE)

Location: N15* 53.99' E110* 05.01'
Angle Deck (ILS Course) Heading: 349

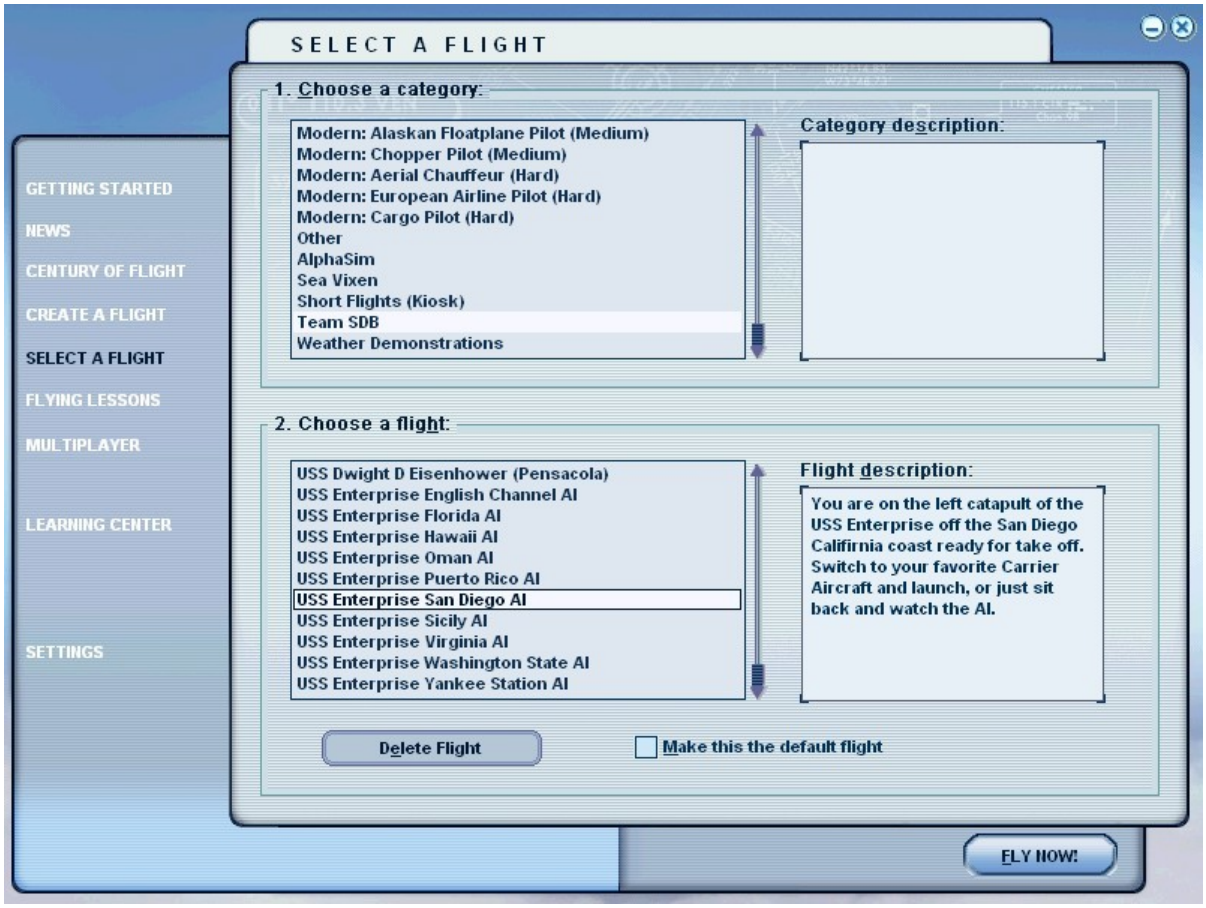


Hawaii (CVNH)

Location: N21* 59.98' W158* 00.00'
Angle Deck (ILS Course) Heading: 017

Flights

Flight files are included for each location. When the flight loads your aircraft will be located on the left catapult of the USS Enterprise and ready for take off. From here you can switch to your favorite Navy aircraft and launch, or just sit back and watch the AI aircraft begin their flights.



Navigation Aids

The static carriers are equipped with several navigation and communication aids. Because they are associated with the same carrier they are obviously the same for all eight locations. A list of the navigation and communication frequencies is below.

NDB: 255.0
VOR/DME: 114.0
ILS: 110.90
Tower: 119.70
ATIS: 119.20

By consulting the table below you can see what the ILS Course is at each location. This is a line down the center of the angled deck. By reversing that (add/subtract 180 degrees) you can adjust the User Defined Weather to add a 30-35 knot surface wind to simulate the carrier steaming into the wind for launch and recovery operations.

Airport ID	Location Name	ILS Course	Wind Direction
CVN1	San Diego	264	84
CVN2	Norfolk	358	178
CVN3	English Channel	264	84
CVN4	Washington State	217	37
CVN5	Florida	082	262
CVN6	Puerto Rico	069	249
CVN7	Oman	287	107
CVN8	Sicily	087	267
CVNH	Hawaii	017	197
CVNE	Yankee Station	349	169

Credits:

Carl Edwards - Original designer of the Alphasim CVN-65 "Big-E" package
Robert Baum - AI Aircraft Traffic and beta testing
Michael Dews - beta testing
Frank Safranek - User Manual, texture updates and beta testing
Cmdr. Bill Mackay (USN retired) - Naval Operations Consultant and beta testing

Technical Support

A forum area for Technical support has generously been provided 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 section. Please search and review any previous questions as your issue may have already been addressed. If so please add you comments to the existing thread.

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Appendix A: Suggested Add-ons

See the "Addon Scenery/ Team SDB CVN-65 (Big E)/Arrestor Cable Files" folder for Arrestor Cables and Cat Launch Data files for use with several third party add-on programs. Listed below are three such programs that are available as freeware.

ArrCab 2.5

File Name: arrcab25.zip **Size:** 2.4MB **Release Date:** 02-04-2008
Arrestor Cables 2.5 from Abacus, by Richard Hogen.

3wire Aircraft Carrier Simulator

File Name: 3wirev2.zip **Size:** 538KB **Release Date:** 02-18-2006
3wire is an aircraft carrier simulation add-on for FS2004. It allows you to launch and recover any aircraft aboard an aircraft carrier. Requires FSUIPC (registration not required) and .NET Framework v1.1. By Rhys Eddy.

RCBCO Carrier Operation Package v2.0

File Name: rcbco-20.zip **Size:** 1.5MB **Release Date:** 01-04-2005
This archive contains a set of gauges, effects and sounds which you can add to existing military aircraft in FS2004, and enables you to perform takeoff and approach/landing on aircraft carriers. It features (1) A catapult gauge, enabling a catapult-launch takeoff; (2) An arrester gauge, enabling a cable trap landing; (3) A "meatball" HUD gauge, enabling accurate approaches and landings. Includes extensive installation/usage documentation, with examples for several very popular aircraft. V2.0 of this package contains a large number of additions, like catapult/arrester zones and a revised HUD. By Rob Barendregt and Doug Dawson, with special input from Nick Needham.