

# *Ascension International Aerospace*

Readme Documentation for:

# **WIDEAWAKE INTERNATIONAL**



**Welcome to Ascension Island!**  
(Ascension Island Version 3 - Addon for Orbiter 2006)

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# Introduction



Thank you for downloading Wideawake International, Phase 2 of AIA's Ascension project.

This addon represents the ultimate AIA space facility on Ascension Island. The base is geared for all manner of space vessels, with extensive facilities for both vertical and wheeled launch. It is especially aimed at the DG and XR class vessels. Facilities have also been specifically designed to accommodate dbeachy and RussH's huge XR-5 Vanguard.

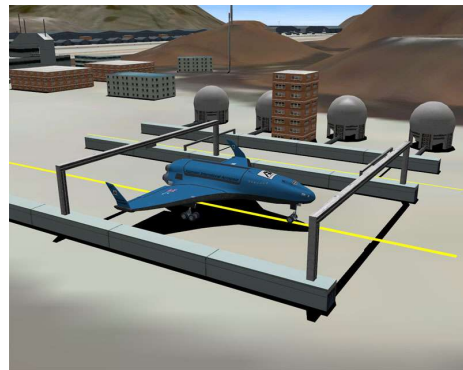
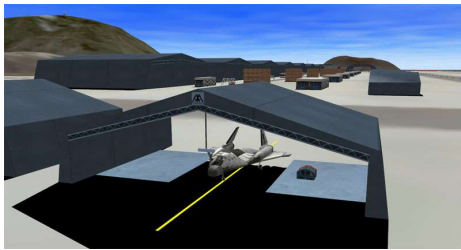
Also included are some customizable textures so that you can put your own company logos on your own hangars!

This version is not backward compatible with version 1 or 2. The Timeline feature of version 2 has been removed, so if you want the Cold War era base, then you must use v2. This version sees new surface tiles used, preventing the ability to backdate the base.

**Please read the Installation Instructions carefully.**

## Changes/additions since v2.1:

- 21 x light hangars, for DG/XR1 class vessels
- 7 x Heavy hangars for XR5 class vessels
- Loading and unloading facilities for all winged craft
- 2 new runways
- Domestic Airport
- New Central Command Centre
- Fueling depot for winged vessels
- Numerous other miscellaneous buildings and custom meshes
- A second (smaller) General Purpose Launch Pad and VAB extension
- New surface tiles for base layout
- Over 30 scenarios
- Timeline Feature removed



Phase 2 of the Ascension Project is now complete! AIA is proud to present Wideawake International. The base has seen a drastic overhaul and massive investment, truly taking it into the 21<sup>st</sup> century.

The Vertical Launch Complex has been expanded, with a second launch pad added. The VAB and support buildings have also seen a heavy renovation and expansion. (Read the GPLP section for more details on configurations and operation of the vertical launch pad.)

The base's most significant transformation is aimed at the next generation of winged space vessels. 2 new runways and a broad range of infrastructure has been added to allow for high-traffic operations. This includes Freight Logistics, Storage & Maintenance, fueling, domestic passenger transfer, Sensitive Materials loading and an all new Central Command Centre.

A domestic airport has also been added, as has radar facilities and many other miscellaneous support buildings.

A concerted effort has been made to keep the polygon count of the base low, whilst maintaining a decent level of detail.

# Installation

It is important you follow these steps carefully for all the features of the addon to load. This installation does not over-write any stock Orbiter files.

## **STEP 1. – Clear previous versions**

If you have Version 1 or 2 installed, it is best you delete it before installing Wideawake International. The complete list of files installed with Version 1&2 can be found in the Miscellaneous section of this pdf.

## **STEP 2. - Install the files**

Copy all the unzipped addon folders into your Orbiter directory, making sure to maintain the folder names and structure.

## **STEP 3. - Activate custom textures**

Open the **Base.cfg** file in the Orbiter **Config** folder and add the list below into the file's texture list.

Copy the list and paste it between **BEGIN\_TEXTURES** and **END\_TEXTURES**.

```
roof_blue  
roof_fan  
roof_hangar  
wall_corr  
wall_door  
wall_door_n  
wall_hq  
wall_hq_n  
wall_logo  
wall_logo_n  
wall_obs  
wall_obs_n  
wall_office  
wall_offwin  
wall_offwin_n  
wall_plant  
wall_window  
wall_window_n  
concretetex
```

**STEP 4.** - \*OPTIONAL functions\* - The following are optional extras that you may wish to add to the base

### Observation Points

To add fixed observation points to the base, open Config/Earth.cfg then copy & paste the following lines after the **BEGIN\_OBSERVER** line:

```
WIN:Tower: -14.425918 -7.963578 110  
WIN:VAB: -14.436325 -7.969488 220  
WIN:GPLP: -14.426174 -7.967410 25  
WIN:Airport: -14.413447 -7.955028 85  
WIN:Runway12R: -14.431959 -7.958898 10  
WIN:Mountain: -14.351229 -7.941256 1281
```

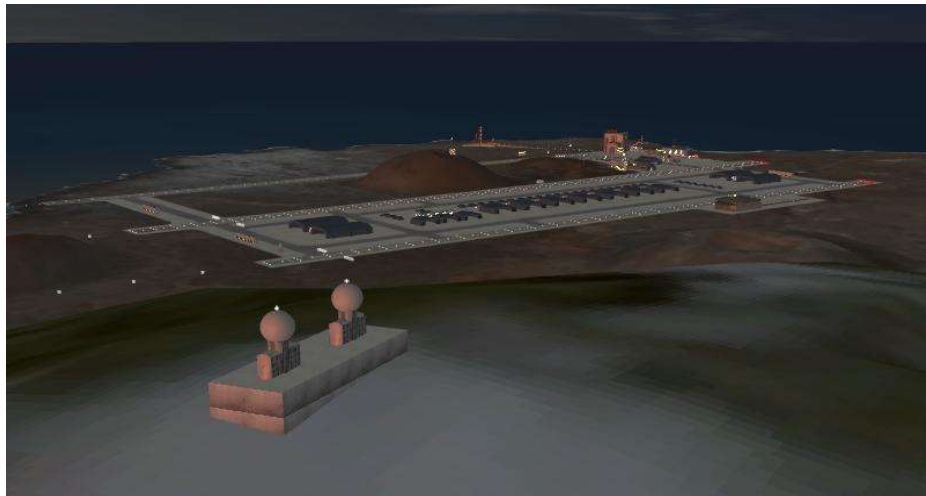
### Navigation Beacons

To update the Island's Navigation Beacons, open Config/Earth.cfg. In the **BEGIN\_NAVBEACON** section, search for the line:

```
VOR ASI -14.3967 -7.9697 112.20 270 ; ASCENSION AUX AF
```

and replace it with:

```
VOR WIN -14.43 -7.95 113.00 1000 ; WIDEAWAKE INTERNATIONAL
```



# Renting Facilities at Wideawake

Wideawake International has a large number of storage and maintenance facilities for winged vessels. Both AIA and Altea have permanent facilities in their name, but there are 3 extra sites available for rent to outside agencies. Each site comes with 3 small hangars (DG/XR1 class) and 1 large hangar (XR5 class) as well as a few admin and support buildings.

## Custom Textures

Each hangar site can be assigned a custom company logo and a company sign. To add your own logos and signs to your hangars, do the following.

1. Choose which site you wish to rent: 1, 2 or 3. See the map in the miscellaneous section of this pdf.
2. Create a company logo in bmp format, which should have a 1-1 ratio (e.g.128x128 pixels). Convert this to dds format, saving the name as: **co\_logoX.dds**, where X is the number of the site you wish to rent.
3. Create a company sign in bmp format, which should have a 1:4 ratio (e.g.256x1024pixels). Convert this to a dds, saving the name as: **your\_companyX.dds**, where X is the number of the site you wish to rent.
4. Copy your files to the textures/AIAtex/ForRent folder. This will over-write the existing default textures for that hangar site.



# General Purpose Launch Pad (GPLP)

The GPLP is designed to be a flexible launch platform with interchangeable MLPs and 130m tower. The MLP and animated gantry are a spacecraft3 vessel loaded in the scenario file. Two different MLPs are included in this release: The General Purpose MLP and the Resolve Specific MLP. The gantry that 'connects' the Vessel to the tower can be controlled with spacecraft 3 robotic arm controls. Therefore it can be raised and extended to the desired height for whatever launcher you are using. In future I might release more custom MLP's for specific craft if there is demand.

The new, smaller, GPLP is not animated like the larger one.



## Pad Controls

CTRL + = Activate Noise Supression System

This is just a dummy white smoke thruster. Once it is switched on it will not burn out, so must be switched off manually (or left to merrily puff indefinitely).

## Gantry Controls

SPACE BAR = Activate controls

SHIFT-num4 or Shift-num6 = Select Elevation or Extension of gantry

SHIFT-num2 or SHIFT-num8 = Actuate Elevation or Extension.

# Scenarios

The addon includes over 30 scenarios based around Ascension. They cover a number of craft in a number of situations, some of which will require additional addons to run. There should be at least enough variety for you to be able to customize them to your own needs.

## **The Grande Tour**

Simple scenarios that put a default DG next to all the major buildings of the base, to help orientate yourself with WI operations.

## **Pre-Flight**

Places relevant craft at the relevant pre-flight facilities: Sensitive Materials Loading, Freight Loading, Fueling, Roll-out.

## **Vertical Launch**

Various scenarios using several third party addons, illustrating the GPLP and it's smaller brother in operation.

## **Winged Launch**

Various Scenarios using the default DG and third party addons with vessels prepped and ready for Launch from the Wideawake launch runway.

## **Landing**

Various scenarios using the default DG and other third party addons with vessels on final approach to Runway 12R.



## Third Party Addons

Many scenarios require third party addons to be installed before they will run. Any addons required are stated in the scenario description.

## A note on Guidance Files

Please also bare in mind that scenarios using multistage vessels will load that vessel's default guidance file. I can't say how effective this will be at getting into orbit from Ascension, they will need tweaking. The Resolve International guidance files are however designed for an Ascension launch.

## Vertical Launch Vessel Height

For best vertical alignment to the GPLP pad, it is likely you will have to change the CoG value of spacecraft.dll or multistage.dll vessels.

This is easy to do, just look for the *vessel/name.ini* file in the relevant config folder and change the CoG value accordingly.

### **Here are a few I have worked out for the main GPLP:**

Donomy's Resolve/Resolve International: CoG = 32.5

Jekka&momo's Ariane6: CoG = 29

Well & Nomatter's Ariane 5: CoG = 33

Well & Nomatter's Ariane 4: CoG = 18 - secondary GPLP

Adrew MCSorley's JupiterIII Cog=32.5



# Miscellaneous

## Cloud shadow anomaly

The topography meshes (hills etc.) have a strange lighting issue. They look fine in daylight and at night, but their material colour is too light when in the shadow of a cloud. Despite my best efforts I could not rectify this, so if this bothers you (like it does me) the work around is to simply turn off the cloud shadows in the Visual Effects tab.

## Touch of mesh flicker

For some reason there is some occasional flicker on the logos included around the AIA base. It only happens when zoomed out. Also, the VAB launch track can show splits at some angles. I think both these minor problems are due to the Orbiter engine and my .msh converter.

## The Great Split

Unfortunately, the orbiter earth texture system has a visible split across part of the base. It is only visible from the west, and with good AA it doesn't really show. I was going to cover it with meshes but, quite frankly, I didn't think it worth the effort.



## Wideawake International Map



1. Heavy Freight Unloading Facility
2. Light Freight Unloading Facility
3. Domestic/Auxillary Hangars
4. Light Freight Loading Facility
5. Heavy Freight Loading Facility
6. Sensitive materials Loading Facility
7. Fueling Facility
8. VAB
9. Primary GPLP
10. Secondary GPLP
11. CCC
12. Airport
13. AIA Storage Hangars
14. Altea Storage Hangars
15. Hangar Site 3 (For Rent)
16. Hangar Site 2 (For Rent)
17. Hangar Site 1 (For Rent)
18. Runway 12L/30R, Domestic/Auxiliary
19. Runway 12R/30L, Main Landing
20. Runway 12RR/30LL, Launch Runway

## Copyright

As Orbiter is free, my addons are free – to do with as you will. Feel free to use the contents of this addon however you like. Just remember that the meshes and textures in this addon are my intellectual property, so if you use them, throw a little credit my way. Thanks.

If you want to get in touch for whatever reason, PM me on the orbiter forum or email me. You can visit my blog to see the latest development news for all my addons.

### With special thanks to:

Russ Hicks

Doug Beachy  
&



### and lots of thanks to:

Martin Schweiger

Donamy

Steve Tyler

The Orbiter Community

and all fans of my Ascension Island addons

## Version1 file list

List of files installed by Version 1.

Doc/ UKSSP_AP/ AI_ReadMe.txt	Textures/ UKSSP_AP/ crater1.dds crater2.dds crater3.dds crater4.dds crater5.dds hill_80.dds hill_228.dds hill_north.dds hill_plain.dds hill_small.dds mountain.dds
Config/ Earth/Base/ Ascension.cfg	
Scenarios/ Ascension Island/ Wideawake Default.scn	
Meshes/ UKSSP_AP/ crater1.msh crater2.msh crater3.msh crater4.msh crater5.msh hill_80.msh hill_228.msh hill_north.msh hill_plain.msh hill_small.msh mountain.msh	Textures2/ Earth_4_wo326_s180.dds Earth_4_wo326_s181.dds Earth_4_wo326_s182.dds Earth_4_wo327_s180.dds Earth_4_wo327_s181.dds Earth_4_wo327_s182.dds Earth_4_wo328_s179.dds Earth_4_wo328_s180.dds Earth_4_wo328_s181.dds Earth_4_wo328_s182.dds Earth_4_wo329_s180.dds Earth_4_wo329_s181.dds Earth_4_wo329_s182.dds

## Version 2 file list

Complete file list for Version 2 Installation.

Doc/

AIAdoc/

Alv2\_ReadMe.pdf

Config/

Earth/

AIABase/

Ascension.cfg

Base/

Ascension.cfg

Spacecraft/

GPLP\_gpmlp.ini

GPLP\_resmlp.ini

Scenarios/

Ascension/

Cold War Era/

TAL Abort Final Approach.scn

Wideawake CW Default.scn

AIA 2010/

Ariane5 Launch.scn

Ariane6 Launch.scn

DG Emergency Landing.scn

DG on runway.scn

GPLP General MLP.scn

Resolve Launch.scn

XR-1 on runway.scn

Meshes/

AIAmsh/

crater1.msh

crater2.msh

crater3.msh

crater4.msh

crater5.msh

hill\_80.msh

hill\_228.msh

hill\_north.msh

hill\_plain.msh

hill\_small.msh

mountain.msh

launch\_base.msh

GPLP.msh

VAB.msh

GPLP\_gpmlp.msh

GPLP\_resmlp.msh

Textures/

roof\_blue.dds

roof\_fan.dds

wall\_corr.dds

wall\_door.dds

wall\_door\_n.dds

wall\_hq.dds

wall\_hq\_n.dds

wall\_logo.dds

wall\_logo\_n.dds

wall\_obs.dds

wall\_obs\_n.dds

wall\_office.dds

wall\_offwin.dds

wall\_offwin\_n.dds

wall\_plant.dds

wall\_window.dds

wall\_window\_n.dds

AIAtex/

crater1.dds

crater2.dds

crater3.dds

crater4.dds

crater5.dds

hill\_80.dds

hill\_228.dds

hill\_north.dds

hill\_plain.dds

hill\_small.dds

mountain.dds

wall\_logo.dds

GPLP\_uv.dds

VAB\_uv.dds

Textures2/

Earth\_4\_wo326\_s180.dds

Earth\_4\_wo326\_s181.dds

Earth\_4\_wo326\_s182.dds

Earth\_4\_wo327\_s180.dds

Earth\_4\_wo327\_s181.dds

Earth\_4\_wo327\_s182.dds

Earth\_4\_wo328\_s179.dds

Earth\_4\_wo328\_s180.dds

Earth\_4\_wo328\_s181.dds

Earth\_4\_wo328\_s182.dds

Earth\_4\_wo329\_s180.dds

Earth\_4\_wo329\_s181.dds

Earth\_4\_wo329\_s182.dds