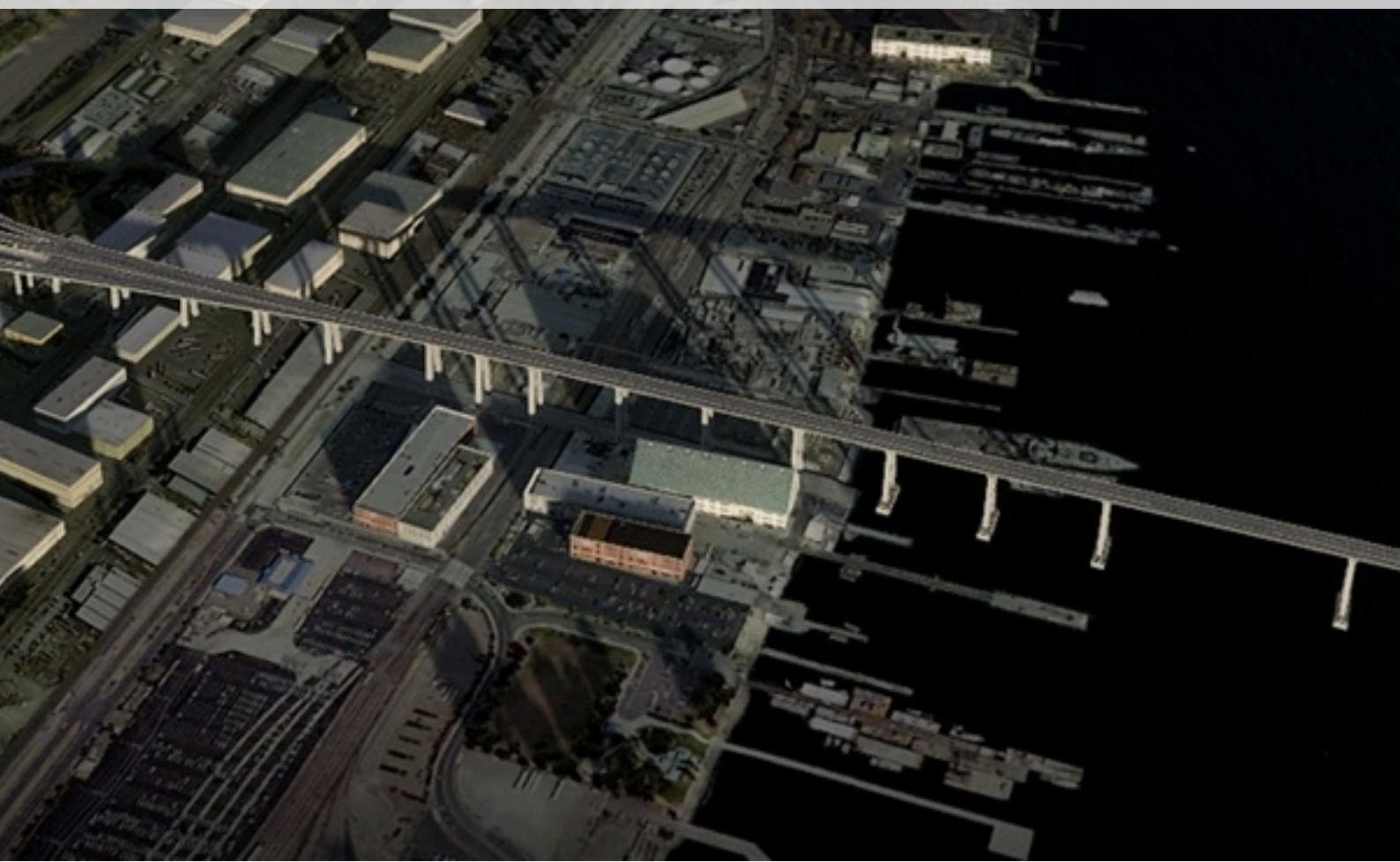


North America

Southern California

USER GUIDE SEPTEMBER 2016



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Thank you!

Orbx would like to thank you for purchasing FTX NA SCA – Southern California. FTX NA SCA has taken a team of developers many months to complete. It is the seventh region in our North America series and we hope you'll enjoy its wide range of carefully modelled features.

Product Features

Southern California is synonymous with beaches and the vast metropolitan areas of the Los Angeles Basin and Greater San Diego. However there's much more to explore in FTX SCA than just shorelines and urban sprawl. Please make use of the Google Earth kmz file included with this product ("FTX SCA Coverage and Features Map.kmz", in the \ORBX\User Documents folder) as it provides geographic markers and additional information for the large number of airports, airstrips, and landmarks throughout this diverse region, which actually extends some distance into Nevada, Arizona, and Mexico as well.

FTX Southern California covers ~140,000 square miles (~365,000 sq km), from the boundary with FTX Northern California south of Monterey to Tijuana in Mexico, and from the Channel Islands to Las Vegas in Nevada and Kingman in Arizona. Explore a wide variety of landscapes -- the scenic coastlines and offshore islands; the urban metropolises of Los Angeles, San Diego, and Las Vegas; the mountains of the Sierra Nevada and the Transverse and Peninsular Ranges; the vast agricultural areas of the southern Interior Valley and Salton Sea; the salt flats, dunes, colorful rocks, and military ranges of the Mojave and Colorado Deserts -- all of which have been recreated with great detail and accuracy. Hand-placed custom landclass (=land use type) along with the road and railroad networks, powerlines, wind and solar farms, observatories, and major vertical obstructions are included for true-to-life VFR flying. Many key points of interests, urban/industrial as well as natural, are featured with local photoreal coverage that are fully annotated with autogen buildings and vegetation.



Downtown San Diego has been upgraded with 17 landmark buildings and custom models of other important structures throughout FTX SCA include the Hoover Dam east of Las Vegas, half a dozen major bridges, many of the large wind and solar farms, and thirteen lighthouses. Just like with our other region titles we've given each of the 312 (!) listed airports a major upgrade, with more accurate placements of runways and taxiways as well as buildings, hangars, static aircraft, moving people (and creatures), and lots of "clutter". We also added 53 unlisted airstrips that don't exist in FSX/P3D by default. Last but not least all ground textures are hand-annotated with our custom autogen objects including the spectacular and frame-rate friendly FTX Global-style night lighting.

Other features:

- * Superb ground textures from local sources
- * Hand-placed landclass covers every sq mile
- * Custom autogen textures and objects
- * FTX Global 3D night lighting effects
- * Accurate roads, rivers, lakes, powerlines
- * 365 airports have been upgraded or added
- * Custom models of bridges, dams, lighthouses
- * Photoreal beaches and marinas
- * Enhanced San Diego waterfront and downtown
- * 17 additional San Diego landmark buildings
- * >50 photoreal natural and industrial areas
- * Customized 10-m resolution terrain mesh



Product requirements

This scenery airport addon is designed to work in the following simulators: **Microsoft Flight Simulator X, Lockheed Martin Prepar3D v1, Lockheed Martin Prepar3D v2 and Lockheed Martin Prepar3D v3**

Quick Installation Guide

Installing Orbx FTX NCA is all managed by our FTX Central application. This app is responsible for many aspects in maintaining your Orbx installation. Please visit the support forums to learn more.

Once you have purchased NCA it will be added to your account and you can have FTX Central download and install it for you. The appropriate scenery library entries will also be managed by FTX Central.

You may also manually download NCA and then have FTX Central manage the installation for you once downloaded.

An internet connection is required for FTX Central to validate your license.

Please note that the above all refers to FTX Central 3. Earlier versions of FTX Central are no longer supported but will still function as before. The integration of FTX Central with your OrbxDirect account is only available with FTX Central version 3 and above.



Additional Steps to consider before your first flight

If FTX NA SCA is your first Orbx product please visit our support page and download and install the current version of our Orbx Libraries, which are essential for the complete and correct display of the components of SCA: <https://www.fullterrain.com/support#Orbxlibs>

If you are using Orbx Global Vector please start its Configuration Tool, switch to the [Airport Elevation Corrections] tab, and select [Run Auto-configuration]. Doing so will ensure that Vector files for airports-within the SCA coverage area will be properly deactivated.

If you already have installed third-party airport or scenery add-ons that overlap spatially with FTX NA SCA -- including some of the global AI airplane traffic add-ons, like MyTraffic -- please see the next page and visit our compatibility forum for specific information.

If you are using the Gold, Acceleration, or Steam-Edition versions of FSX, or any of the P3D versions, you'll have two default entries in your scenery library menu named "Edwards_AFB" and "Las Vegas", respectively. Both contain local photoreal ground textures. You should deactivate the "Edwards_AFB" entry as FTX NA SCA includes much larger and more recent photoreal coverage of the Air Force Base (KEDW). Deactivating the "Las Vegas" entry is optional; the default photoreal coverage doesn't blend well with the surrounding SCA landclass textures but better matches the location of the default casino models and also has brighter nightlighting. Note: if the checkbox for either entry is greyed out you will first need to load the active scenery.cfg file into either Wordpad or Notepad, search for the entry, and change the [Required=TRUE] line to [Required=FALSE]; the active scenery.cfg file is located in C:\ProgramData\Microsoft\FSX or C:\ProgramData\Lockheed Martin\Prepar3D v{#}, respectively).



Compatibility Notes

For an in-depth introduction as to how the different categories of Orbx/FTX add-ons -- Global Base/Vector, openLandClass, FTX Regions, and FTX airports -- work together and should be managed in the FSX/P3D scenery library menu please download and read our extensive "Definitive Guide to FTX Products", available at <http://www.orbxsystems.com/forum/topic/74345-the-definitive-guide-to-ftx-products-the-go-to-source-of-ftx-information/>

Please visit <http://www.orbxsystems.com/forum/forum/80-ftx-compatibility-forum/> for the latest compatibility information regarding FTX NA SCA and **third-party** add-ons, including airports developed by Blueprint, LatinVFR, FSDreamTeam, sim720, and 29 Palms.

FLIGHT1 - ULTIMATE TERRAIN X North America (UTX)

Ultimate Terrain X North America (current version 2.x) is a commercial add-on developed by Scenery Solutions (Allen Kriesman) and distributed by Flight One. It replaces the default water bodies, road/railroad network, and other landscape components with more detailed renditions. FTX Southern California makes the UTX components redundant within its coverage area and is coded so that local exclude files will suppress the display of all UTX features while leaving UTX undisturbed outside the FTX coverage areas.

The current version of UTX may contain elevation correction files for airports in the FTX SCA overlap area. These would need to be deactivated to prevent floating or sunken runways and other airport elevation issues within FTX SCA. Once available we'll post the list of files to be deactivated in our compatibility forum.

Third Party Terrain Mesh

FTX NA SCA comes with a complete set of high-resolution terrain mesh files compiled at 20m grid spacing. Third-party add-on terrain mesh files are compatible as long as they do not provide a higher grid resolution and their scenery library position is of lower display priority than SCA.

REX Simulations - REAL ENVIRONMENT XTREME

FTX NA SCA is 100% compatible with the sky and airport texture replacements offered by REX and you do not need to do anything special to use REX whilst flying over NA SCA. In fact, most of the Orbx developers and beta testers use REX, and it is an Orbx recommended add-on.

The Southern California Control Panel

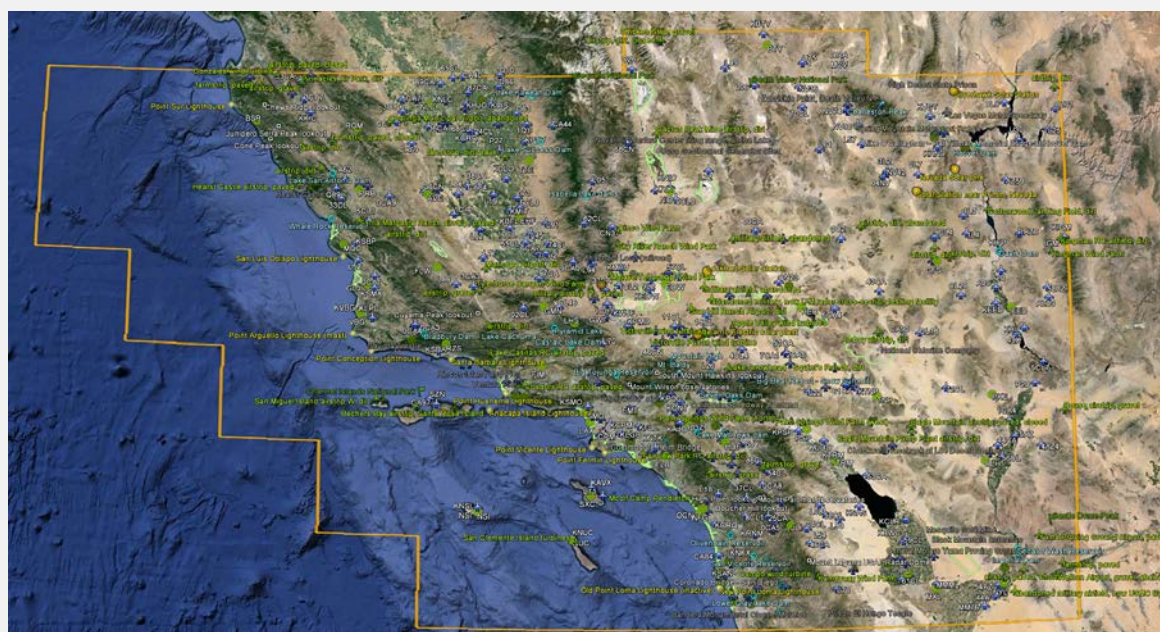
After FTX NA SCA is installed you can use **FTX Central** to access the "ORBX Southern California Control Panel" from its main interface using the "Configure" button.

The Control Panel will enable you to disable or enable a number of scenery features. The first four options are useful to experiment with if your PC struggles with frame rates or smooth display. The fifth option will add much more GA AI flights at SCA airports; it does require that our NA GA AI freeware package is installed already, available at <https://fullterrain.com/freeware/ai>

To disable or enable any feature, simply click the tick box. Any changes are made instantly and no additional steps are required.

Scenery Coverage Area

The screenshot from Google Earth below shows the extent of the FTX NA SCA region coverage area.



You can view the coverage and features map shown on the previous page interactively in Google Earth by loading the **FTX SCA Coverage and Features Map.kmz** which you will find in your *ORBX\User Documents* subfolder in your FSX/P3D root folder. Once loaded into Google Earth, you can select all or some of the features included in the scenery, and the corresponding icons will appear inside the map boundary. You can click on each item on the map for a popup balloon which provides details for that airport or POI. This is a useful tool to begin to explore the features and points of interest included in FTX NA SCA

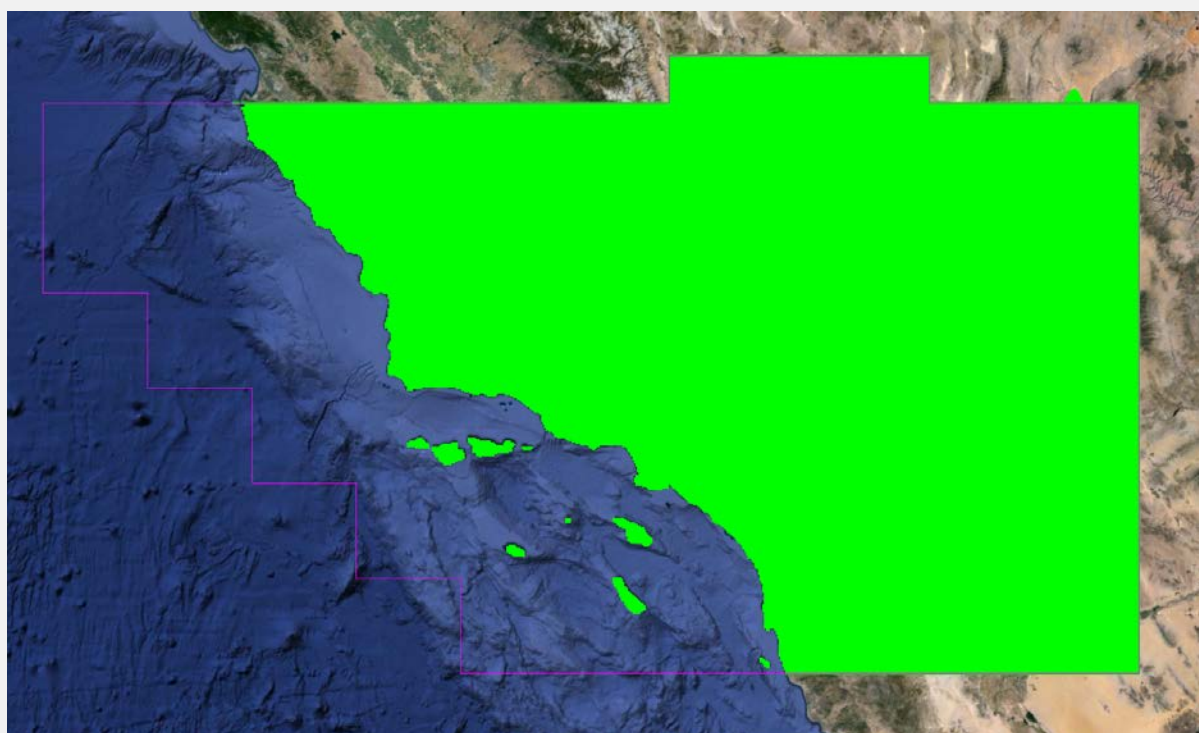
What is Custom Landclass?

Landclass are special files which reside in the scenery layer “pie”, and their role is to tell FSX/P3D what type of ground texture to place in any given square kilometre cell. In other words, landclass files tell the simulator to place a field here, a township there, forest here, and a railway yard there, and so on.

As far as we are aware, FTX is the first flight simulation product to feature totally **hand-crafted** landclass on such a large scale. Many global or country-specific add-on landclass products for FSX/P3D are created using various data sources and compiled using automated scripts and then manually rectified for obvious errors.

This is not so with FTX. The diagram below gives you an idea of the custom landclass which was shipped with FTX NA SCA. Every single square mile in the **green** highlighted areas was hand placed by our team, using a combination of many sources, including street maps, aerial photos, and topography charts to name a few.

The result is nothing like you have ever experienced before, with an almost photoreal feel to all areas which have been edited, but with the added benefit of faster loading times, full five seasons’ support and hand-placed custom autogen and library objects in every single kilometre of the region.



Quick Reference Simulator Settings

Firstly, dragging all your sliders to the right, even with current hardware, will probably result in poor visuals, low frame rates, and potentially crashes. We suggest that you begin your exploration of FTX NA SCA using the settings suggested below. Then, if you find performance to be acceptable, experiment with moving certain sliders to the right, although we recommend you only move one slider at a time to objectively gauge its effect. Also, keep in mind the SCA control panel options discussed previously. The table below lists the minimum recommended settings required in FSX/P3D to enjoy FTX NA SCA the way Orbx designed it. These settings run well on most PCs and take particular advantage of the custom mesh and photoreal imagery used in the scenery area.

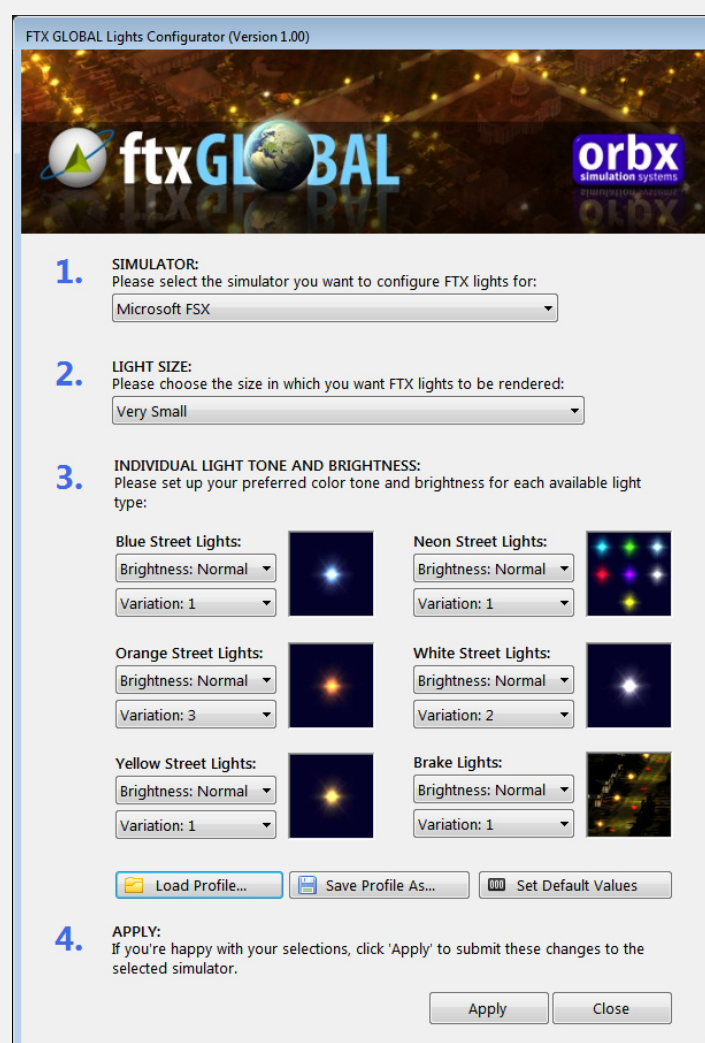
Setting	Value	Why?
Global Texture Resolution	Very High	Enables maximum display quality of object textures
Level of detail radius	Large	Influences sharpness of textures with increasing distance
Mesh Complexity	100	Better terrain definition (= interpolation between adjacent grid elevation points)
Mesh Resolution	5m	5m terrain mesh resolution is the slider setting that all Orbx regions and airports are designed for. That being said, using either 10m or 2m are also unlikely to lead to any major display issues unless you look very closely. Since the slider setting governs the horizontal spacing of mesh grid points this value primarily affects the steepness of slopes adjacent to flattened areas at airports or lakes and rivers. If objects are placed on or next to such slopes they can shift a bit.
Texture Resolution	7cm	Enables maximum display quality of vector textures meaning roads, freeways, railroads, and shorelines
Scenery Complexity	Extremely Dense	Lower settings mean fewer custom objects are displayed
Autogen Density	Normal	Regulates the overall density of autogen buildings and trees
Aircraft AI Traffic	15-20%	Plenty of AI traffic given the many airports within SCA
Road Vehicles	15-20%	Good road traffic density; higher settings cost performance!

The 3D Lighting System

FTX NA SCA uses a 3D night lighting system developed by Orbx and exclusive to our products. This system creates multi-colored lighting for all roads in urban areas as well as on major highway interchanges. The same lighting system is also implemented as autogen objects in the landclass textures themselves, so you will find cities, towns, and rural areas depicted very accurately during your dawn/dusk and night flights.

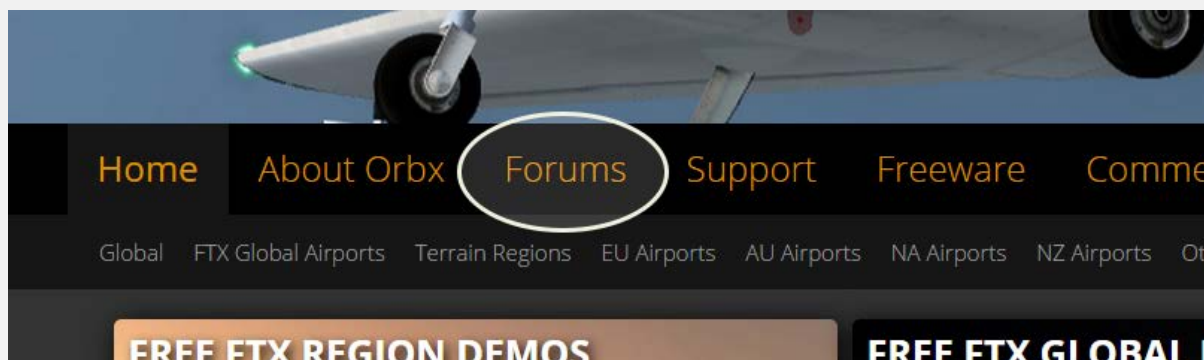
Since earlier this year we're using a new version of this system, referred to as "FTX Global Night Lighting", that has a much lower frame rate impact than the previous version, is more visually appealing, and doesn't require the external Day/Night switcher utility. Instead, these 3D lights will display during dusk, night, and dawn, and will automatically turn off during the day (except for intersection traffic lights that remain visible all day).

To provide you with the most flexibility, we decided to create an optional control utility, called the "FTX Global Lights Configurator", which is available from our Freeware page -- <https://www.fullterrain.com/freeware> -- and will allow you to adjust the size, coloring, and brightness of the light points via several different presets. Its interface looks like the screenshot below. Note that you can save different profiles and also use different settings for P3D and FSX.



Product Technical Support

Orbx has a very simple support policy: no question unanswered. That means, should you have any questions about NA SCA or its use, please feel free to register on the forums at fullterrain.com and then log a support question in the FTX Payware Support Forum section. Orbx FTX experts will be available to review your support questions and you will usually get a reply on the forums within 12 hours, often much sooner than that.



To visit our support forums, click on the “Forums” button shown on the homepage of fullterrain.com.

Please do NOT email support requests

Orbx provides world-class support on our forums, and it's the only way in which you can receive support for NA SCA. Provided you adhere to the forum terms of use and have a legitimate copy of NA SCA, you will always be offered our support at no cost as we work toward a resolution to your problem each time.

Use the forum search function

Before you post a question, please try searching for the answer first, using the forum's built in search function located on the forum menu bar.

What to include in your support requests

If at all possible, this is what we'd like to see provided for each request you log:

- A separate post on the FTX support forums for each issue (don't tag new issue reports onto existing threads).
- Include your ORDER NUMBER from your NA SCA purchase in your post or forum signature section.
- A screenshot to highlight what you are talking about.
- A descriptive post title which clearly states what the issue is.
- Detailed comments in your post about what you are reporting on.

The Orbx support team is always on standby to assist you with any problems you may have, or will comment on your issue reports. Please remember, our priority is fixing any urgent issues first, and addressing bug reports second. Clearly though, any “show stopper” bugs will be given top priority though.

FTX Community Forums

FTX already has quite a thriving and active user community on the forums, with over 63,000 members as of September 2016. To visit the forums, just point your web browser to fullterrain.com and from the front page click the “Forums” menu item.

You don’t need a user account to view other people’s posts and information posted by Orbx staff, but if you’d like to join in on the discussion there, simply create an account. It’s instant and no validation email is required. We like to keep things simple☺.

We hope to see you there soon!

Thanks for reading!

You’ve stuck with us through all these pages of information, and we appreciate you taking the time to read the user guide. We hope it gave you some tips and insights. See you on the forums!

The Southern California Team



The FTX NA SCA Team

Lead Developers

- **Holger Sandmann (Project Manager):** Geospatial data processing including vector roads and railroads, rivers, lakes, and coastlines; vector textures; photoreal areas preparation and color adjustments; custom seasons file; landclass base files and details; photoreal areas preparation; terrain elevation mesh; moving road traffic; road and railroad extrusion bridges; tunnel portals; vertical obstructions; Google Earth .kmz file; manual; team management.
- **Eugene Krikunov:** Landclass ground textures including seasonal variations and blendmasks; custom autogen textures; night lighting system on ground textures and road vectors; autogen core files management.
- **Neil Hill:** Initial enhancements of airports and airfields, including unlisted airstrips; landclass placement.
- **Todd Harrell:** Initial enhancements of airports and airfields.
- **Chris Clack:** Further refinements of all airports and airfields, including scenery objects, terrain shaping, and AI ground movement; GA AI traffic file.
- **Justin Tyme:** Photoreal areas processing, including autogen and library objects placement.
- **Martin Pahnev:** Custom bridges, Hoover Dam, San Diego landmarks, and lighthouse models; additional "generic" object libraries: piers, solar panels, beacon towers, hangars, and offices.
- **Alex Goff:** Photoreal areas night textures and light objects placement.

Specialist Roles

- **John Venema:** Business management
- **Ed Correia:** Production Management
- **Ben McClintock:** FTX Central and website

Beta Testing Team

Mark Abdey, Rob Abernathy, Rob Ainscough, Edward Boyte, Richard Bui, Ross Casey, Friedi Gulder, Eberhard Haberkorn, John Lovell, Phil Manhart, Jarrad Marshall and Rob Newman.



End User License Agreement (EULA)

For the most recent version of the EULA, see fullterrain.com/eula.

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