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Thank you!

Orbx would like to thank you for purchasing FTX NA GOLD USA Central Rockies (FTX CRM). FTX CRM has taken many months to produce and builds on the techniques and success of the FTX NA BLUE series of regions, PNW, PFj, and NRM. FTX CRM is the first of the USA GOLD regions that will cover the Interior West of the United States. (Note that "GOLD" is not used in the "Special Edition" sense of the software industry but rather refers to a distinct geoclimatic region, similar to the color codes we used in the ORBX Australia products.)

The Central Rocky Mountains

With this fourth region in our North American series we continue east from the Pacific Northwest, across the central Columbia River Plateau and the rugged mountains and expansive plains of the Rockies all the way to the western prairies of Montana and highlands of northwestern Wyoming. CRM seamlessly attaches to the eastern edge of our Pacific Northwest and the southern boundary of our Northern Rockies regions. It includes a wide variety of natural landscapes, urban and agricultural areas, as well as our trademark airport enhancements.

This region covers about 180,000 square miles of the western USA comprised of the main stem of the Central Rocky Mountains but also large areas to the east and west. It spans ~630 miles east/west from The Dalles, Washington to Billings, Montana, and ~400 miles north/south from Moses Lake, Washington, to Twin Falls, Idaho. Major settlements in the region are Yakima and the Tri-Cities in Washington State, Bend in Oregon, Lewiston, Boise, and Idaho Falls in Idaho, Great Falls, Helena, Bozeman, and Billings in Montana, and Jackson in Wyoming. More than 450 airports, airstrips, and seaplane bases have been enhanced through terrain edits and placement of custom and generic objects to closely match their real-world counterparts.

The following pages will provide more detail of the actual coverage area.

Geography

Several different types of landscape make up the Central Rockies coverage area:

1. Southeastern Washington State and west-central Idaho make up a section of the dry Columbia Plateau region also referred to as the "Palouse", with its distinctive and fertile rolling hills drained by the tributaries of the Columbia and Snake River watersheds. This area is also home to intensive wind farm development and we've included all confirmed turbines with CRM.

2. South-central Oregon, around the city of Bend, is High Desert country with dense dry pine forests and lots of fairly recent volcanic cones and lava flows.

3. Northeastern Oregon's Blue Mountains reach up to 9100ft (2750m) and are home of the Malheur, Umatilla, and Wallowa-Whitman National Forests and several protected Wilderness Areas.

4. East of the Blue Mountains the Snake River has carved out the Hells Canyon valley, North America's deepest gorge at ~8000ft (2400m) height difference between valley bottom and the adjacent mountain peaks. The river in the canyon is blocked by three concrete dams (modeled in CRM), which together provide most of Idaho's hydroelectricity.

5. The Rocky Mountains of Central Idaho, also referred to as the "Idaho Batholith", are home of the rugged Salmon River watershed and its cluster of world-renown
backcountry airstrips - http://www.mountainflying.com/Pages/airstrips/idaho_1.html - most of which are featured in CRM.

6. Southern Idaho, the Snake River Plain, is very dry and mostly flat but with plenty of interesting volcanic features and the site of the 100,000 acre Saylor Creek Bombing Range and the smaller Juniper Butte Range. The Snake River Plain is also where Boise, ID, is located, the largest urban area in CRM.

7. The "Middle Rockies" occupy eastern Idaho, western Montana, and northwestern Wyoming, with north-south trending mountain ranges separated by dry sagebrush valleys. Their most famous features are Grand Teton and Yellowstone National Parks but there are many other spectacular areas in these parts of the Rockies.

8. East of the high mountains are the prairies of western Montana, formally the "Northwestern Great Plains", and the headwaters of the Missouri River System. It's not all flat and boring country here either though because isolated mountain ranges and deep gorges punctuate the more level terrain and Great Falls and Billings are busy urban centers.

Climate

The two dominant climate types of the Central Rocky Mountains are the lowland semiarid steppe climate with its low precipitation, dry summers and cold winters, and the somewhat wetter alpine climate of the mountain ranges. As with the other ORBX regions we've created a custom season file that is elevation-dependent and pretty accurately reflects the changes of the seasons throughout the year complete with "frozen" lakes and rivers during mid winter.

Most of the agricultural areas in the Central Rockies rely on center-pivot irrigation with its typical circular fields so you'll see plenty of those. At the same time, strong and steady winds flowing east-west through the Columbia and Snake River valleys have allowed for the establishment of several large windfarms (many more are planned or under construction), which we included as custom turbine models complete with their mesmerizing rotating blades.
Product requirements

This scenery 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.

Compatibility notes

Please visit http://orbxsystems.com/forums/index.php?board=118.0 for the latest compatibility information between FTX CRM and third party addons.

FLIGHT1 - ULTIMATE TERRAIN X (UTX)

FTX CRM uses a new form of FSX ‘Exclude-All’ to hide UTX from under the FTX CRM scenery. This means that the transition from UTX to CRM should be seamless as you cross the boundaries.

However, the UTX night lighting cannot be excluded using the FTX ‘Exclude-All’, so we will prepare some instructions on the FTX Support forums link shown above. For now, disable the UTX night lights when in CRM.

FLIGHT1 - GROUND ENVIRONMENT X (GEX)

GEX is a default FSX texture replacement product and their textures won't appear inside FTX CRM since we use custom landclass textures which are called from within the ORBX folders only. This means you will see GEX outside the FTX CRM boundaries, and our textures as soon as you cross over into CRM. There is nothing to do when flying inside FTX CRM. However, you may want to use FTX Central to switch to the 'Default' region when flying outside CRM with GEX in different parts of North America.

REAL ENVIRONMENT XTREME (REX)

FTX CRM is 100% compatible with REX and you don’t need to do anything special to use REX whilst flying over CRM. In fact, most of the Orbx developers and beta testers use REX, and it’s an Orbx recommended addon.

THIRD PARTY TERRAIN MESH

CRM comes with a complete set of high-resolution terrain mesh files. Third-party add-on terrain mesh files are compatible as long as they don't provide a higher grid resolution than 10m (the resolution of the CRM terrain mesh files) and their scenery library position is of lower display priority than FTX CRM.
Quick Installation Guide

Installing Orbx FTX CRM 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 CRM 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 CRM 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.
Scenery Coverage Area

The diagram below shows the extent of the FTX Central Rockies (CRM) region scenery coverage area. We’ve also highlighted the outlines of the Orbx FTX Pacific Fjords (PFJ), Pacific Northwest (PNW) and Northern Rockies (NRM) regions which adjoin the north and east of the CRM region. When these four regions are combined, they offer a staggering 760,000 square miles (or 1.67 million square kilometres) of extremely diverse hand-crafted scenery for North America.

You can view the coverage and features map shown on the previous page interactively in Google Earth by loading the FTX CRM Coverage and Features Map.kmz which you’ll find in your ORBX\User \ Documents folder in your FSX 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 CRM.
Seasonal Variations and Lighting

With FTX, we don’t just do an area once, we do it eight times, with unique texture coloring across five seasons and distinct unique FTX lighting which comes into its own at dawn, dusk and night. Here’s an example of one scene across these variations.
Very few scenery products go to this level of depth in a small area, let alone 472,000 square kilometres! We are confident you will be absolutely thrilled with the diversity and depth of FTX CRM across all seasons and times of day.
What is Custom Landclass?

Landclass are special files which reside in the scenery layer “pie”, and their role is to tell FSX what type of ground texture to place in any given square kilometer 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 addon landclass products for FSX are created using various data sources and compiled using automated scripts and then manually rectified for obvious errors.

Not so with FTX. The diagram below gives you an idea of the custom landclass which was shipped with FTX CRM. Every single square mile in the green highlighted areas was hand placed by expert landclass developers, 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 kilometer of the region.

Eventually, like FTX Australia, entire countries will be covered completely with the FTX custom landclass, and photoreal scenery products consuming thousands of GBs of your hard drives will be a thing of the past.
Quick Reference Simulator Settings

The table below lists in a handy reference the minimum recommended settings required in your simulator to enjoy CRM the way Orbx designed it. These settings will run well on most PCs and take particular advantage of the custom mesh and photoreal imagery used in the scenery area.

If you use the settings below you will be guaranteed the highest fidelity experience and the best balanced performance.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Value</th>
<th>Why?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of detail radius</td>
<td>Large</td>
<td>Reduces blurring of textures.</td>
</tr>
<tr>
<td>Global texture resolution</td>
<td>Max</td>
<td>Displays photoreal textures best.</td>
</tr>
<tr>
<td>Mesh complexity</td>
<td>100</td>
<td>Better terrain definition.</td>
</tr>
<tr>
<td>Mesh resolution</td>
<td>5m</td>
<td>5 m is required for CRM</td>
</tr>
<tr>
<td>Texture resolution</td>
<td>7 cm</td>
<td>Sharpest roads and freeways.</td>
</tr>
<tr>
<td>Scenery complexity</td>
<td>Extremely Dense</td>
<td>How Orbx designed FTX CRM.</td>
</tr>
<tr>
<td>Autogen density</td>
<td>Normal</td>
<td>Best FPS vs detail.</td>
</tr>
<tr>
<td>GA AI traffic</td>
<td>16-50%</td>
<td>Recommended for this scenery.</td>
</tr>
<tr>
<td>Road vehicle traffic</td>
<td>16%</td>
<td>No need to set higher for FTX.</td>
</tr>
</tbody>
</table>
Product Technical Support

Orbx has a very simple support policy: no question unanswered. That means, should you have any questions about CRM or its use, please feel free to register on the forums at orbxdirect.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 orbxdirect.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 CRM. Provided you adhere to the forum terms of use and have a legitimate copy of CRM, 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 CRM 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 orbxdirect.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 FTX CRM Team

Lead Developers

- **Holger Sandmann (Project Manager)**: Geospatial data processing, including vector roads, rivers, coastlines, photoreal areas, custom seasons file, landclass meshing tiles, elevation mesh, vertical obstructions, moving traffic, extrusion bridges, terrain.cfg mods, team and beta build management
- **Dr Matt Tomkins**: Lead texture artist including all landclass ground textures, some vegetation textures, M-Tiles, lclookup.bgl mods and overall landclass texture architecture
- **Tim Harris**: All autogen annotation, POI object modeling and placement
- **Martin Lott**: Custom hand-crafted landclass covering nearly the entire region
- **Neil Hill**: Enhancement and correction of all FTX CRM airports and airfields, placement of scenery objects at all airports

Additional Orbx Developers

- **Orbx Team**: Orbxlibs objects
- **Bill Womack**: Custom autogen tree textures
- **Chris Clack**: Jetway and AI gate coding at larger airports

Specialist Roles

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

Beta Testing Team

(Not in alphabetical order) Eberhard Haberkorn, Tim Harris, Butch Mendoza, Phil Hartman, Phil Javens, Scott Armstrong, Patrick Scharnowski, Matt Tomkins
End User License Agreement (EULA)

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

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