REX SKY FORCE 3D

TOTAL ATMOSPHERIC IMMERSION

USER MANUAL

Updated May 17, 2022

REX SIMULATIONS
FLIGHT SIMULATION SOFTWARE

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What is Sky Force 3D?

- 3D Cloud Model Structures, based on real-world cloud classification
- Intelligent Weather Engine with Real-Time Weather and Cloud Model Synchronization
- Photo-Based Global Environment Texture and Effects
- Flight Center
- Interactive Weather Mapping System
- Local & Shared Community Integration
- Advanced Customization

Sky Force 3D is a complete overhaul of the weather and environmental experience while bringing dimension to FSX, FSX Steam, and Prepar3D v1, 2, 3, 4 and 5. This is accomplished through a single platform by:

- Redoing the 3D cloud model structure and SDK and patterning it after **real-world cloud classifications** with their own specifications, positions and heights.

- Developing real-world cloud model system including (but not limited to) c**loud streets, super cells, wall clouds, funnel, shelf, rain shaft and tornadoes.**

- Integrating a weather engine that harnesses **over 70,000 points of weather data globally. The weather engine reads and interprets live model data to sample the atmosphere and therefore will sync the appropriate clouds structures, allowing for more accuracy.**

- Incorporating **synchronization technology which dynamically syncs 3D cloud model structures in real-time during flight.**

- **Increasing frame rates** by eliminating unnecessary cloud sprites for all cloud types.

- Restructuring the cloud SDK for true formation realism. **No more upside down clouds in bizarre and unrealistic positions, or cloud bases that are presented with repeating patterns.**

- Elevating the visual experience through our new **natural, photo-based environment texture technology.**

- Developing **single-session cloud texture variation, allowing more variety during a flight session**, increasing the overall realism.

...and much more! Read on.

WE HAVE SUCCESSFULLY CREATED SUPERIOR CLOUD AND WEATHER FORMATIONS.

The simulator will now be able to display soft and more robust detailed clouds structured together within the SAME session. In addition, we have developed close to **3,000 new cloud model structures and cloud types, nearly 20GB of natural photo-based environmental textures as well as hi-definition atmospheric sound effects.**

Sky Force 3D also simulates real-world cloud classification; from uniform clouds to full and complete mature stage cloud structures... all while being able to be synced in real-time in sim.

Even with costly similar aftermarket products installed, weather systems severely lack due to the constraints of the simulator SDK.

WHAT IS LACKING IN P3D AND FSX?

The current cloud model system within the simulator, misrepresents real-world cloud classification and formations. The randomly created cloud sprites **cause a severe frame rate hit** especially with more dense cloud cover. Because of this we **notice upside down clouds in bizarre and unrealistic positions, cloud bases that are presented with repeating patterns,** all of which affect the overall realism in flight.

THE FIX.

REX Sky Force 3D corrects these problems (and more) and even increases the frame rates by eliminating unnecessary cloud sprites for all cloud types. The 3D Cloud structures are now correctly and accurately displayed, and detailed clouds will NEVER be represented upside down. In addition, we have added NEW cloud types to the SDK, including; altocumulus, stratocumulus, humilis, mediocris, congestus, tower cumulus, cumulonimbus calvus, supercell and rainshaft, tornado, stratus, nimbostratus, altostratus and cirrus class.

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REX SKY FORCE 3D IS COMPATIBLE WITH THE FOLLOWING FLIGHT SIMULATORS:

Microsoft FSX
Microsoft FSX Steam Edition
Prepar3D v.1
Prepar3D v.2
Prepar3D v.3
Prepar3D v.4
Prepar3D v.5

ALL Weather Engines - *When not using the Sky Force 3D Weather Engine. (Freeware, payware, default simulator)*

IMPORTANT NOTE: If using another weather engine besides the one that is included within Sky Force, and you want the Sky Force 3D cloud structures to adjust based upon weather conditions within the simulator as you fly, you must make sure the "Enable real-time 3D cloud model (structures) sync mode function is enabled in the Cloud Sync settings. Sky Force must remain opened in the background for this process to work.

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Software Update History

Don't have the latest version? Visit our support page at http://www.rexsimulations.com/support.html.

Technical Update 1

FIXED – Step 2 registration validation issue
FIXED – Language and regional settings
FIXED – No mapping issue
FIXED – PFPX file export issue locally and on the server when data is not available
FIXED – Community shared themes missing data item
FIXED – Minimum altitude missing value
FIXED – Processing objects missing when weather engine resets or reprocesses
FIXED – Favorite airport .net Framework error
FIXED – Various .net Framework issues

Technical Update 2

FIXED – Freezing of application when user confirms removal of favorite airport
FIXED – Scaling issue with Windows 10
FIXED – Overlapping community theme notification
FIXED – Notifications causing P3D 4.1 to reload
FIXED – Issue of overwriting last entered favorite airport during registration
FIXED – CTD issue when some users right-click the interactive map
FIXED – Aircraft and precipitation positioning on the map
FIXED – Failure when Pilot2Atc flight plan is imported into Sky Force
FIXED – Naming conventions for Sun/Atmospherics sets 08 and 13
FIXED – "Theme completed" popup when adding a new set
FIXED – Issue where weather was not showing in the Weather Center due to foreign date/time
FIXED – Searches within the Weather Center for stations/airports not in the database
FIXED – Texture sets not showing due to missing folder sets
FIXED – .net error messages within the In-Sync Cloud Engine
FIXED – Toggle button "Enable Quick Start" not being aligned with other buttons
FIXED – Issue where Sky Force was causing P3D to go directly into "Load" mode
FIXED – Major jumps of altimeter
FIXED – Accuracy of weather injections
FIXED – Visibility causing complete reduction including the cockpit
FIXED – .net errors with the weather engine
FIXED – OAT/TAT/SAT erratic temperatures increasing with altitude
FIXED – No weather showing
FIXED – Visibility too low for FSX, FSXSE when at 10SM

FIXED – Weather injection issue causing errors with GSX and ChasePlane
FIXED – Weather engine continuing to inject weather after it was turned off
FIXED – In-sim green status bar not showing during weather engine injection
FIXED – Network mode for weather injection
FIXED – Installer stating "Organization" instead of "Email" during user registration
FIXED – Issue with Sky Force working with FSUIPC autosave
FIXED – Long named favorite airports cutting off on Favorite Airport panel within the Dashboard
FIXED – Sky Force resolution issue with Windows 10
FIXED – In-Sim briefing not reporting flight plan data
FIXED – In-Sim briefing not showing clouds reported
FIXED – Issue with textures sets not being saved when creating themes
FIXED – Issue of application hang while changing a theme within the PTA window
FIXED – Double popup alert window when installing a preset theme from the PTA window
FIXED – Default airport not being saved after restart
FIXED – Preventing duplication favorite airports from being added
FIXED – Weather not reporting CAVOK properly within the Weather Center
FIXED – "Precip" button on the mapping still showing precipitation if turned off
FIXED – Latest TAF report is included in the Weather Center data
FIXED – Bank numbers did not change when selecting a category in My Saved Themes or Community Shared Themes
FIXED – Toggle button within the Engine setting grayed out when not active
FIXED – Search for weather stations with winds over 30kts+
FIXED – Length of notification text on successful texture install being cut off
FIXED – Step 2 grammatical error during registration
FIXED – Disabling the In-Sync Cloud function was not disabling all functions
FIXED – Weather engine was showing DISCONNECTED instead of ON. Changed global variable
FIXED – Issue where clicking Currently In Sim was causing Sky Force to CTD
FIXED – Altitude of roll clouds showing at higher altitudes
FIXED – Issue with cirrus not showing

FIXED – Weather engine continued to load when disabled
FIXED – Load time of weather injections in-sim
FIXED – Inaccurate HDR read-only settings per sim type causing textures to not install correctly
FIXED – Close icons on system and community notification areas. Incorporated buttons instead of icons as some users would quit the application by mistake.
ADDED – Function to minimize Sky Force to system tray
ADDED – Option to overwrite default backup of flight sim files
ADDED – Fade in/out of generic alert system
ADDED – Function to save latest map settings when application is closed and restarted
ADDED – 3 levels of density related 3D stratus overcast model sets for user control over performance impact
ADDED – 7 levels of density related 3D cumulus overcast model sets for user control over performance impact
ADDED – Feature within the Weather Center to add a custom airport into the database when not found
ADDED – Feature to set default favorite weather station/airport to show in the Weather Center and Favorite Airports
ADDED – View buttons to replace ID numbers within My Themes and Community Themes
ADDED – Better handling of the user's system profile to help optimize texture resolution
ADDED – Encrypted serial key field to the Profile Settings window
ADDED – Function within General Settings to give the user the ability to start up Sky Force in the system tray
ADDED – Flight sim validation location validation
ADDED – Full support for weather injection for Prepar3D v4.0
ADDED – Tool tips rollovers to 3 buttons on top right of main window
ADDED – Weather Refresh button to engine status window
ADDED – Disabling feature when changing between Enable Performance Optimizer and Auto tune
ADDED – Code that prevents duplicate airports from being added to the Favorite Airport list from the Weather Center and Dashboard windows
ADDED – Confirmation of Favorite Airport being added when set from the Weather Center window
ADDED – Download of the metar_report.xml file for ProAtc users
ADDED – Code to prevent users from starting more than one version of Sky Force at a time
ADDED – Examples of the required lat/lon degrees when adding an airport to the database
ADDED – Note to Flight Center details that winds are provided via the GFS model on the 12 and 00Z times
ADDED – Text to Favorite Airports stating to wait patiently as we download data from our servers
ADDED – Text to Most Recent Community Themes stating to wait patiently as we download data from our servers

ADDED – Added new button synchronization window to track aircraft location
ADDED – Disable notifications button for session to community notifications screen
REMOVED – Support for PFPX export flight plans
REMOVED – Additional popup alert when deleting a favorite airport
STREAMLINED – Weather engine
STREAMLINED – Cloud model sync engine
RECODED – In-Sim weather briefing
UPDATED – Software User Manual

Technical Update 2.1.0
FIXED – HDD activity at startup
FIXED – Looped precipitation sound
FIXED – Automatic flight plan import into simulator (FSX Steam does not allow this feature through simconnect)
FIXED – Minimum altitude weather engine limit
FIXED – Issue with in-sim audio briefings remaining read-only have enabling audible weather briefings
FIXED – Issue of failed weather injection after first injection
FIXED – Issue of numerous openings/closings of simconnect
FIXED – Erroneous reports of air pressure during weather injection
FIXED – Issue of right-click on mapping system causing CTD
CHANGED – Default core file installs to be set to minimum for sake of meeting minimal requirements of machines
CHANGED – Note statement on Step 2 of registration
CHANGED – Error message reporting email
ADDED – Control for users to select weather injection refresh rate
ADDED – Control for users to select male/female voice for in-sim weather briefings
IMPROVED – Performance of the weather engine
IMPROVED – Weather injection accuracy
IMPROVED – Performance of the mapping system
IMPROVED – Application launch speed
REMOVED – Product website link on setting page

Technical Update 2.2.0
FIXED – 3D models folder
IMPROVED – Performance of the weather engine
IMPROVED – Performance of the mapping system

Technical Update 2.3.0
FIXED – Network remote computer connection issue

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Technical Update 2.3.1
FIXED – Cloud model in-sync issue
FIXED – Odd cloud patterns
FIXED – Error issue with a missing icon
ADDED – New weather rendering engine (Preview)
ADDED – Cloud shader fix to improve cloud coloring
IMPROVED – Performance of mapping
IMPROVED – Performance of the weather engine

Technical Update 2.4.0
FIXED – Mapping upper level winds greater than 100kts depiction
FIXED – Upper level winds greater than 100kts with weather injection
FIXED – Green bar showing when disabled
FIXED – Cloud shader brightness
FIXED – Weather briefing connection
ADDED – Function to prevent re-registration after software update
ADDED – Function to save themes to server
ADDED – Function to save user settings to server
ADDED – Functions for preparation of Creative Update 1.0 content
ADDED – Support for PMDG weather file
ADDED – New weather data export json file for 3rd-party developer SDK

Technical Update 2.5
ADDED – Support for Prepar3D v5
FIXED – Improved visibility and haze effect rendering for Prepar3D v5
FIXED – PMDG wind file missing folder issue
FIXED – Optimization risk negative numbers with higher-end graphics cards
FIXED – Registration failures
FIXED – Cloud brightness modification for Prepar3D v5
FIXED – Overcast cloud models for Prepar3D 5 (Non-trueSky™)
FIXED – Green bar rendering when disabled
FIXED – Backup files will not overwrite with both 64bit and 32bit installed
FIXED – Export file not updating
FIXED – Export JSON file not being downloaded
FIXED – Flight plan not being cleared within the application
IMPROVED – Rendering moderate rain handling when BR is recognized within the metar report

Technical Update 2.6
FIXED - Weather rendering in Enhanced Atmospherics of Prepar3D v5+
FIXED - Auto load of flight plan into Prepar3D v5+
FIXED – Weather engine not injecting weather into P3D v5.2 +
FIXED – Error occurring when installing individual textures after resolution options changed
FIXED – PMDG wind export throwing error message during creation
FIXED – Registry issue with use with Environment Force
FIXED – Mapping not showing key weather elements
FIXED – Error with splash screen load
FIXED – General performance issues
REMOVED – Current installed theme function
REMOVED – International SIGMETS option in mapping window
IMPROVED - Visibility handling in non-Enhanced Atmospherics weather rendering
IMPROVED - Metar weather rendering of the weather engine

! IMPORTANT

■ BELOW ARE IMPORTANT FACTORS IN CONSIDERATION FOR INSTALLING AND OPERATING REX SKY FORCE 3D WITHIN FSX AND/OR PREPAR3D:

1. Sky Force is compatible with Microsoft Flight Simulator X with SP2 or Acceleration Pack, FSX:Steam and Lockheed Martin's Prepar3D v.1 through v.5.

2. NEVER install REX into the main FSX or P3D folder.

3. If REX, FSX or Prepar3D are installed into the program files (x86) directory, UAC (User Account Control) MUST be turned OFF in Windows to allow the proper communication between the two.

4. IF FSX or Prepar3D is installed in the Program Files folder you may need to set Permissions and Sharing so that REX may write the necessary files into the simulator.

5. We recommend turning OFF all virus scanners while the simulator is running.

6. If you wish to view high-definition textures within FSX, you must make sure to set this value in the FSX.cfg file. Add **TEXTURE_MAX_LOAD=4096** within the GRAPHICS section of the cfg file. This can be located in your c:\Users\<your account name>\AppData\Roaming\Microsoft\FSX. If the AppData folder is hidden, you will need to change the VIEW settings as outlined below: Open Folder Options by clicking the Start button, clicking Control Panel, clicking Appearance and Personalization, and then clicking Folder Options. Click the View tab. Under Advanced settings, click Show hidden files and folders, and then click OK.

! PERFORMANCE CONSIDERATIONS

BELOW ARE IMPORTANT FACTORS IN CONSIDERATION FOR IMPROVING PERFORMANCE WITHIN THE SIMULATOR:

1. Anti-aliasing settings have a MAJOR influence on P3D performance. SGSS set in NVIDIA Inspector is a real performance killer when clouds are present. If you have FPS issues, please disable SGSS!

2. Because each system configuration is different, we strongly recommend you start with lower texture resolution settings and increase the resolution until you reach a happy medium of quality vs. performance.

3. We HIGHLY recommend the use of the DXT5 compression algorithm for clouds. DXT5 is the most flexible general purpose compression codec, so if problems are experienced using REX clouds at higher resolution, select the DXT5 setting on the main Settings screen under the "Resolution" tab. You must reinstall textures after changing this setting.

4. We have optimized our new 3D cloud models in the latest Technical Update 2, so please take advantage of this new feature on the main 3D Cloud Model Structures screen! There are 2 sliders that control these, Overcast Density under Stratus and Cumulus. Simply select your desired setting, then click the "Install Now" button to apply these changes. The less density the better FPS you will experience.

The following is the procedure on how to install Sky Force.

Before Installation and Operating

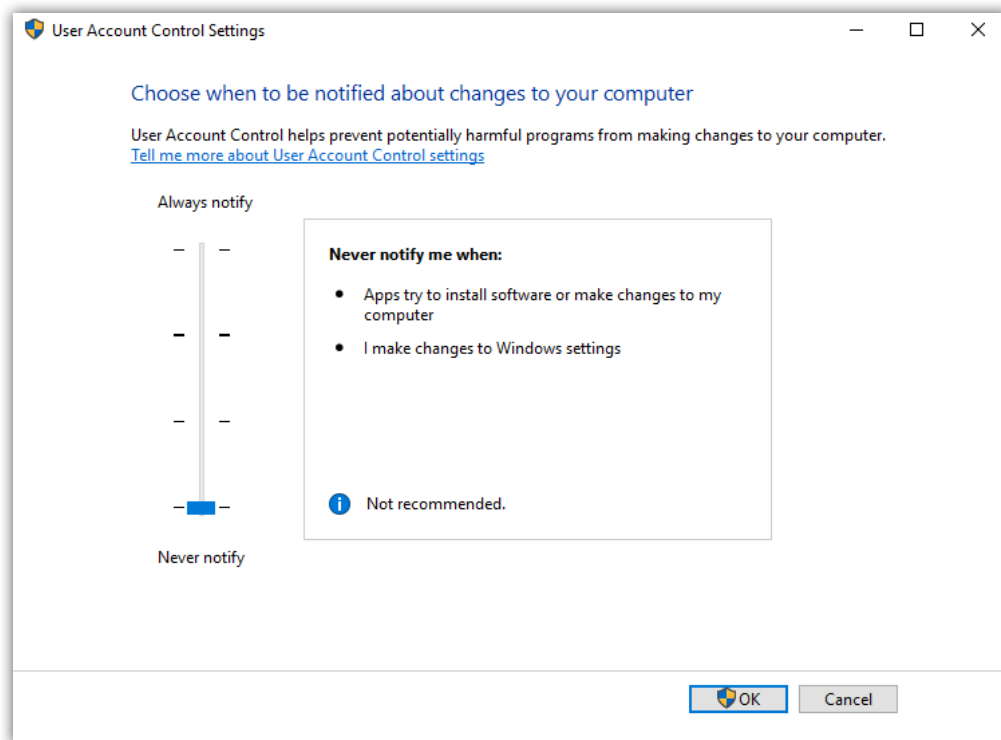The following is **STRONGLY RECOMMENDED** before installing.
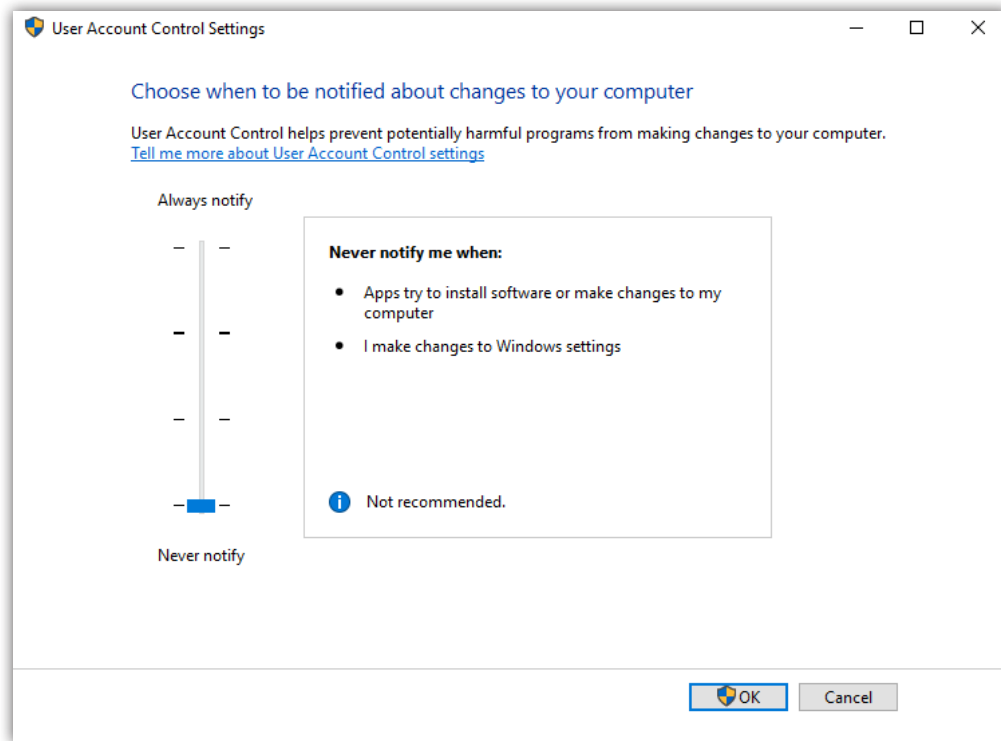
Figure 1.0 – UAC (User Account Control) Screen

1. **Please set your UAC (User Account Control) to "Never Notify" (Fig 1.0).** This will prevent Windows from stopping Sky Force from moving files to and from your simulator and system.

2. **Please turn off your Antivirus software.** All REX files are safe and have been inspected prior to upload and while they sit on the server. After Sky Force is installed, please give the REX Sky Force 3D folder "exclusion" rights.

3. **Make sure you NEVER install Sky Force directly into your Flight Simulator Folders. This could cause MAJOR damage to your flight simulator.**

INSTALLATION PROCEDURE

Figure 1.1 – Install Files

If using Windows 7:

Step 1 – Right-click "rexinstaller.exe" and select "Run-As-Administrator" to begin installation.

If using Windows 8, 8.1, or 10:

Step 1 – Click the "rexinstaller.exe" file to begin installation.

Step 2 – Once the installer starts, follow the prompt windows by clicking "NEXT".

NOTE: Not all installation windows are represented in the following images.

Figure 1.2 – Install Welcome Screen

Step 3 – Click "NEXT" to start the installation (Fig. 1.2).
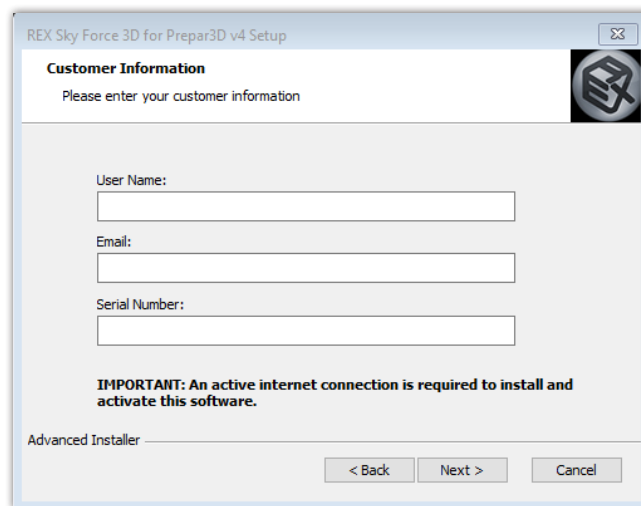
Figure 1.3 – Customer Registration Screen

Step 4 – Enter your information: Username, Email Address, and Serial Key (Fig 1.3).

IMPORTANT NOTE: It is important to have an active internet connection to install and activate your software.
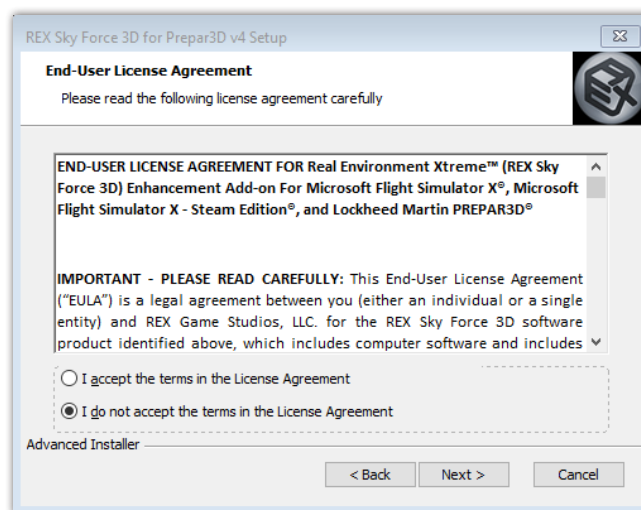
Figure 1.4 – EULA License Agreement Confirmation Screen

Step 5 – To continue installation you must accept the End-User License Agreement (Fig 1.4).
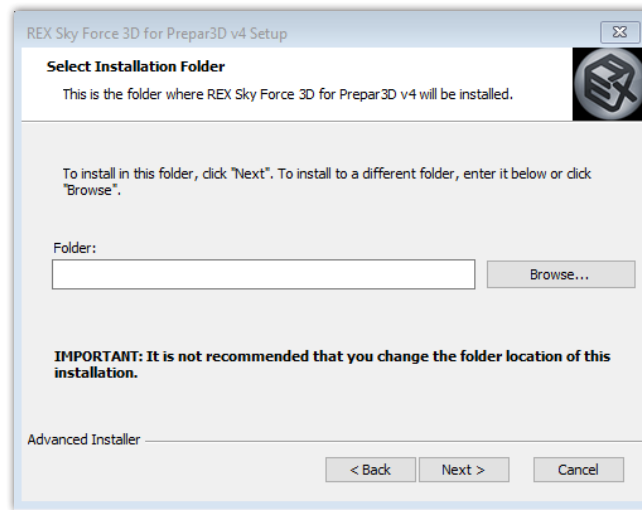
Figure 1.5 – Installation Folder Screen

Step 6 – The installer will select the RECOMMENDED default location for installation. It is important that you do not change this location unless it is absolutely necessary. (Fig 1.5).

IMPORTANT NOTE: DO NOT INSTALL SKY FORCE INTO YOUR MAIN FLIGHT SIMULATOR FOLDERS OR THIS MAY CAUSE SERIOUS DAMAGE TO YOUR SIMULATOR FILES.
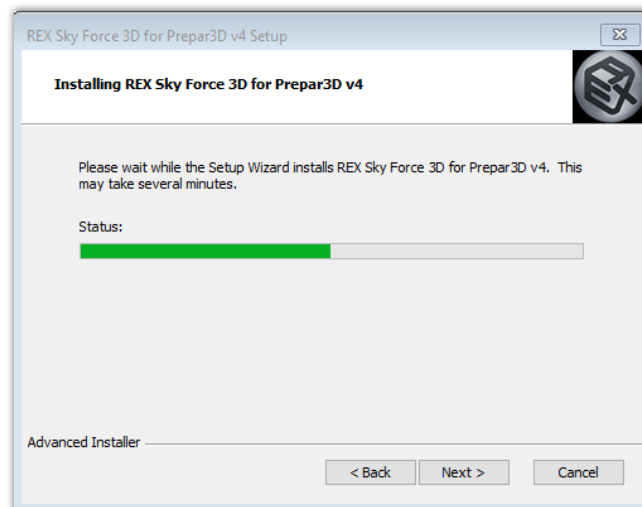
Figure 1.6 – Installation Process Window

Step 7 – Please give the installation process several minutes to complete (Fig 1.6).
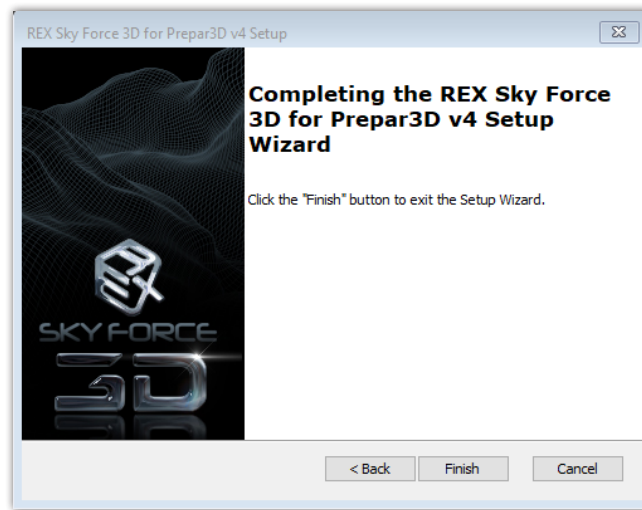
Figure 1.7 – Finish Installation Window

Step 8 – After installation is complete, click "Finish" to finalize installation (Fig 1.7). **Although you may not be required, it is always recommended to reboot your computer after installing software.**

The following is the procedure on how to startup, register, and setup Sky Force.

Before Startup

The following is **STRONGLY RECOMMENDED** before you start Sky Force.

Figure 2.0 – UAC (User Account Control) Screen

1. **Please set your UAC (User Account Control) to "Never Notify" (Fig 1.0).** This will prevent Windows from stopping Sky Force from moving files to and from your simulator and system.

2. **Please turn off your Antivirus software.** All REX files are safe and have been inspected prior to upload and while they sit on the server. After Sky Force is installed, please give the REX Sky Force 3D folder "exclusion" rights.

3. **Make sure flight simulator is not running. For proper installation of files, it is important that you do not have your flight simulator running.**

Startup Operations
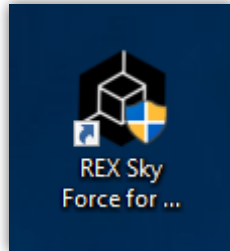
Figure 2.1 – Desktop Icon

If using Windows 7:

Step 1 – To start, right click on the Sky Force icon and select "Run As Administrator" (Fig 2.1).

If using Windows 8, 8.1, 10:

Step 1 – To start, click on the Sky Force icon (Fig 2.1).
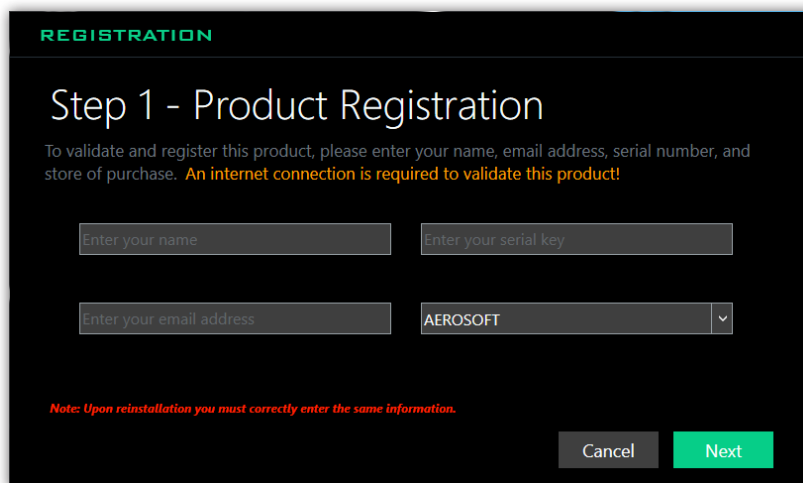
Figure 2.2 – Splash Screen Window

Step 2 – After the icon is clicked, the application splash screen appears during startup and initialization (Fig 2.2).

AUTHOR'S NOTE: No action is needed during this step.
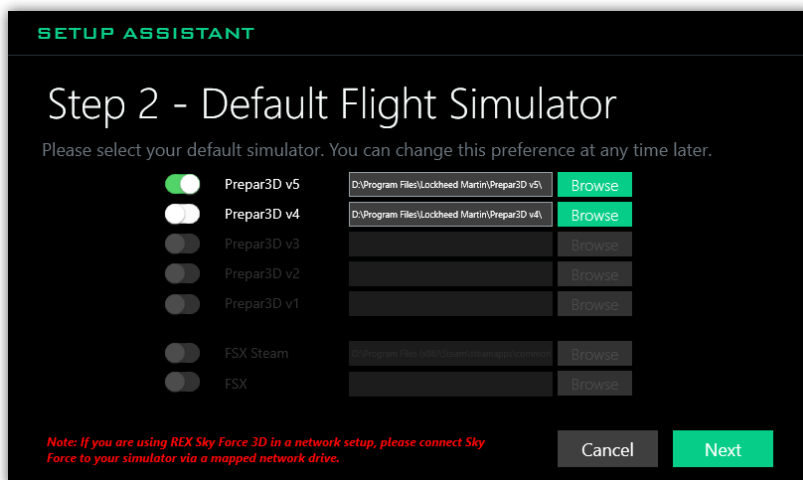
Figure 2.3 – Registration Window

Step 3 – On first startup of Sky Force you will be required to register your product (Fig 2.3). This will only be required one time. Please fill out the fields accordingly. Click "NEXT" to continue.

IMPORTANT NOTE: Upon re-installation of Sky Force, you will need to register again using the SAME EXACT information. Otherwise your registration process will fail. Please keep your registration information in a safe place for future use.

Figure 2.4 – Setting the Default Flight Simulator Window

Step 4 – Click the toggle button next to the flight simulator you would like to use (Fig 2.4). Click "NEXT" to continue.

AUTHOR'S NOTE: This procedure may be changed later within the Settings Windows.

IMPORTANT: Sky Force is able to read the system registry to recover the locations of your installed flight simulator(s). If nothing is found, click "BROWSE" next to the simulator you plan to use, then select the main folder of that flight simulator.
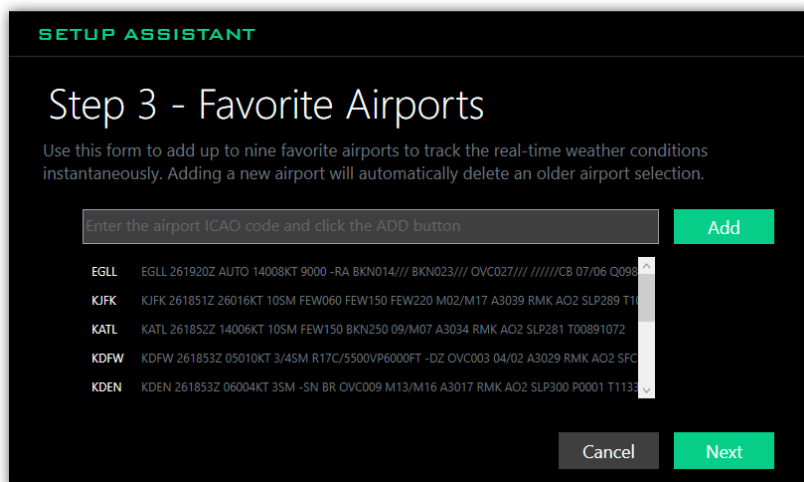
Figure 2.5 – Favorite Airport Setup Window

Step 5 – *(Optional)* Enter an airport ICAO code to add to your Favorite Airports list for fast access (Fig 2.5). Click "NEXT" to continue.

AUTHOR'S NOTE: This procedure is optional and may be changed later within the Settings Windows.

IMPORTANT NOTE: If you have trouble locating a specific ICAO, it's because the airport doesn't contain current valid metar data.
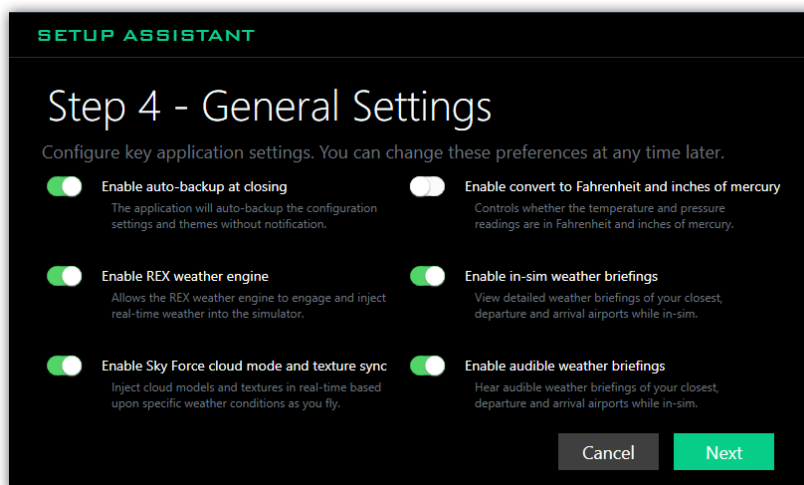

Figure 2.6 – General Settings Window

Step 6 – *(Optional)* Enable/Disable any of these settings by adjusting toggle buttons (Fig 2.6). Click "NEXT" to continue.
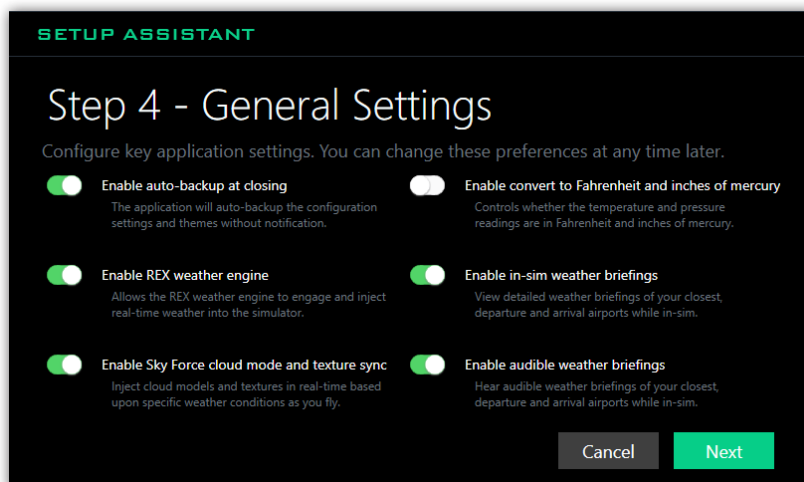
Figure 2.6 – General Settings Window

CONTROL	FUNCTION	REQUIRED
Enable auto-backup at closing	Enabling this will allow the application to auto-backup the configuration settings and themes without notification.	Recommended
Enable REX Weather Engine	Enabling this feature will set the REX weather engine as the default weather engine and will inject real-time weather into the simulator.	No
Enable Sky Force cloud mode and texture sync	Enabling this feature will allow Sky Force to inject cloud models and textures in real-time. This is based upon real-time weather specific conditions. **The REX weather engine is not required for this function.**	Recommended
Enable convert to Fahrenheit and inches of mercury	Enabling this feature will cause all temperature and pressure reading to be reported in Fahrenheit and inches of mercury.	No
Enable in-sim weather briefings	Enabling this feature will allow a detailed list of real-time weather data to be viewable while in-sim.	No
Enable audible weather briefings	Enabling this feature will cause an audible version of the detailed weather data to be available while in-sim. This feature requires the "Enable in-sim weather briefing" to be enabled.	See Notes

AUTHOR'S NOTE: This procedure is optional and may be changed later within the Settings Windows.

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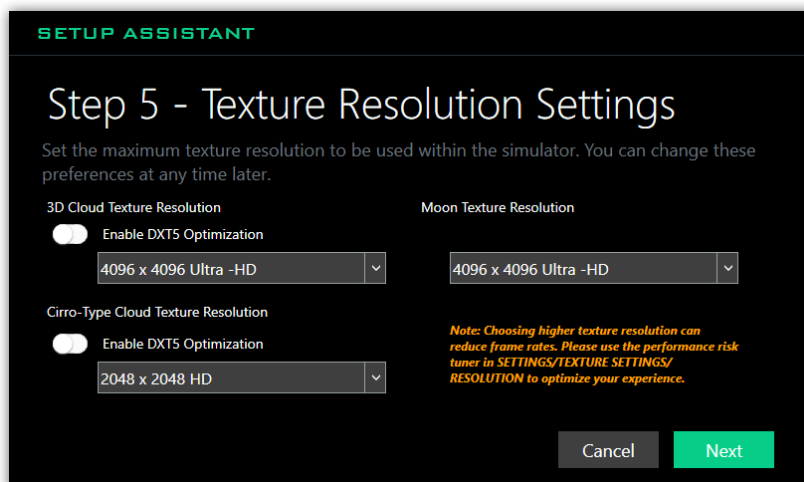
Figure 2.7 – Texture Resolution Settings Window

Step 7 – *(Optional)* Enable/Disable and/or change texture options here (Fig 2.7). Click "NEXT" to continue.

AUTHOR'S NOTE: This procedure is optional and may be changed later within the Settings Windows.

IMPORTANT NOTE: Choosing higher texture resolutions will always affect frame rates. It is recommended that you use the Texture Resolution Optimization Engine in the General Settings section to optimize your texture settings.
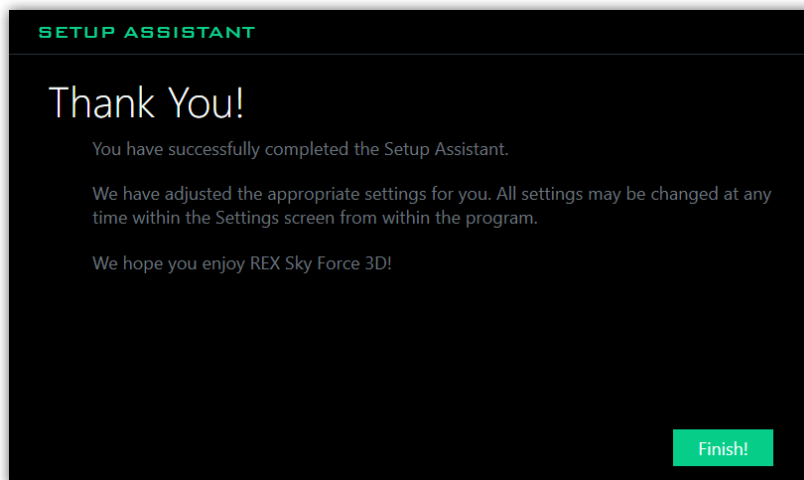

Figure 2.8 – Thank You Window
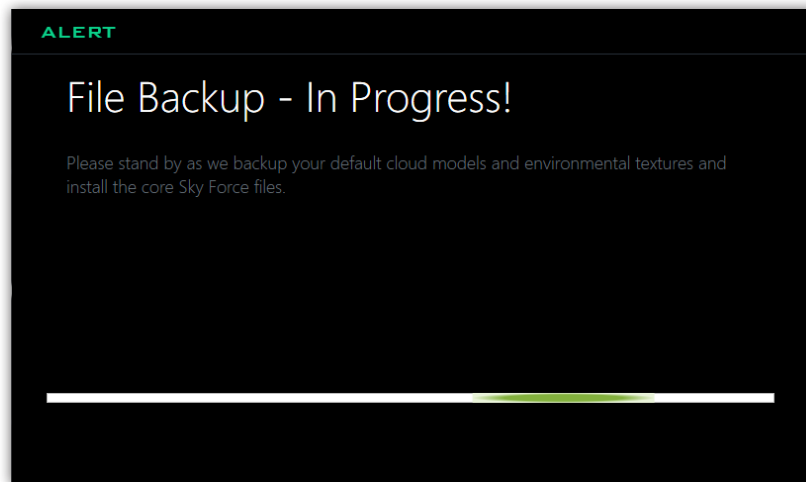
Figure 2.9 – File Backup Process Window
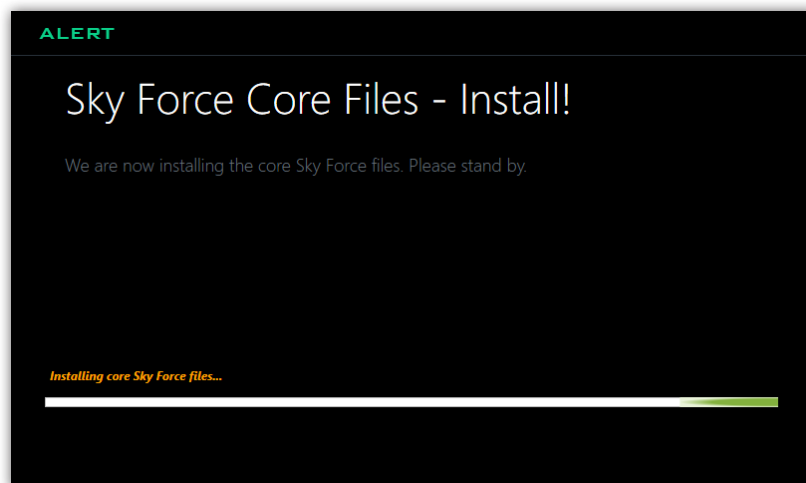
Figure 3.0 – Install Core Sky Force Files Process Window

Step 8 – Click "FINISH" to finalize the registration and setup procedures (Fig 2.8). During finalization, Sky Force will backup your default flight simulator files (Fig 2.9) and install core files required for use with Sky Force. (Fig 3.0).

Quick Start Procedures
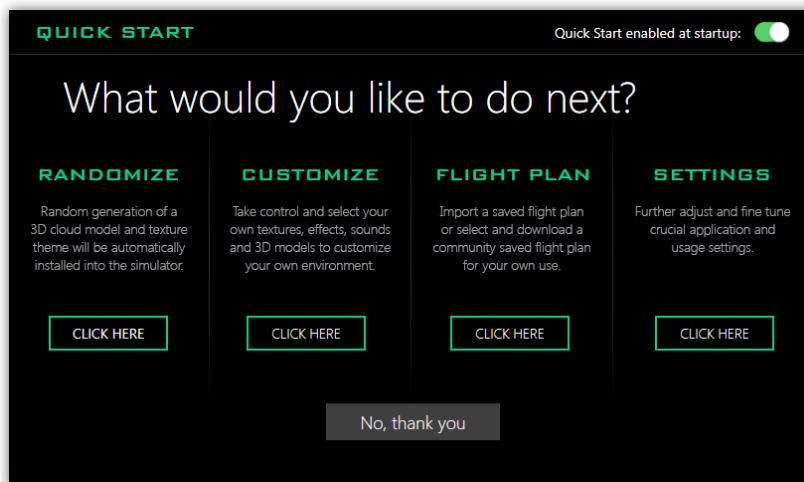
Figure 3.1 – Quick Start Window

Operating Sky Force is very simple and doesn't require a lot of effort. However, it does offer a lot of features to customize your experience within flight simulator (Fig 3.1).

CONTROL	FUNCTION	REQUIRED
Randomize	This will automatically randomize a model, texture, effects and sound theme and install it into the flight simulator.	No
Customize	This will direct you to take control and select your own textures, effects, sounds, and 3D cloud models.	No
Flight Plan	This will allow you to import a saved flight plan or download a community shared flight plan. You can use this information to view real-time weather conditions during your flight.	No
Settings	This will allow you to fine tune crucial application features and settings.	No

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THE FOLLOWING ARE SUGGESTIONS FOR QUICK OPERATING PROCEDURES AFTER SKY FORCE HAS BEEN CONFIGURED.

OPTION 1
JUST START YOUR SIM AND FLY

With the REX weather engine:
Step 1 – Start REX Sky Force and minimize.
Step 2 – Start your flight simulator and enter flight. The REX weather engine will automatically engage during your flight.

Without the REX weather engine or using a 3rd-party weather engine:
Step 1 – Start Sky Force. Click the Settings "gear" icon on the navigation bar. If the REX weather engine has been disabled, skip to Step 4.
Step 2 – Click on the engine button and disable the weather engine.
Step 3 – Keep Sky Force open during the flight so Sky Force can sync the proper cloud models/structures.
Step 4 – Start your 3rd-party weather engine.
Step 5 – Start your flight simulator.

OPTION 2
TRACKING YOUR IN-FLIGHT WEATHER

With OR without the REX weather engine:
Step 1 – Start Sky Force and navigate to the Flight Center.
Step 2 – Either import a flight plan or click on the Community Shared Flight Plans to import.
Step 3 – Once a flight plan has been imported, start your flight simulator.

Step 4 – Once the simulator is setup properly and you want to track your flight in real-time, click the "Follow Aircraft" toggle button on the **Interactive Map** window or the "Follow Aircraft" button on the new **Synchronization System Status** screen accessible from the **View More** button located on the Dashboard strip from the top screen.

IMPORTANT NOTE: If you want Sky Force to automatically import your flight plan into your flight simulator you will need to engage the REX weather engine. Otherwise, this will need to be manually done if using a 3rd-party weather engine.

OPTION 3
3D CLOUD SYNC DURING FLIGHT

With OR without the REX weather engine:
Step 1 – Start Sky Force and minimize.
Step 2 – Start your flight simulator and fly. The 3D cloud model sync function will automatically engage during flight.

IMPORTANT NOTE: If you want the clouds to adjust based upon weather conditions within the simulator, you must make sure the "Enable real-time 3D cloud model (structures) sync mode and texture sync" function is enabled in the Cloud Sync settings.

The following is an overview of each section within Sky Force as well as how to operate the Latest Shared Themes and Real-Time Airports panels within the Dashboard.

Navigation

To navigate throughout Sky Force you will utilize the Navigation Bar located along the left side of the application. To view what each icon represents, click the hamburger icon.

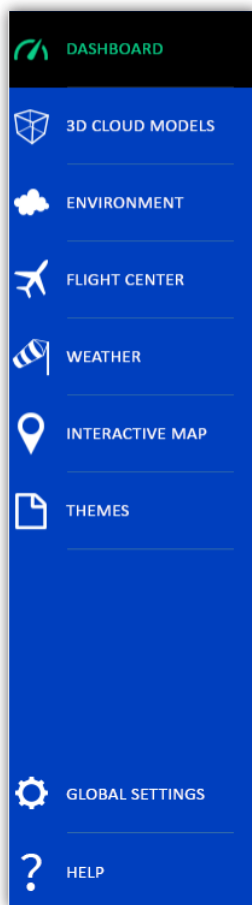This expands the navigation bar (Fig 4.0) containing more information about each icon.

Figure 4.0 – Navigation Bar

AUTHORS NOTE: It is not required to expand the Navigation Bar to navigate.

Dashboard

The Dashboard (Fig 4.1) allows a general jump off point to key areas of the application. It also provides a quick highlight of valuable information about the application as well as other facets to your flight simulation experience.
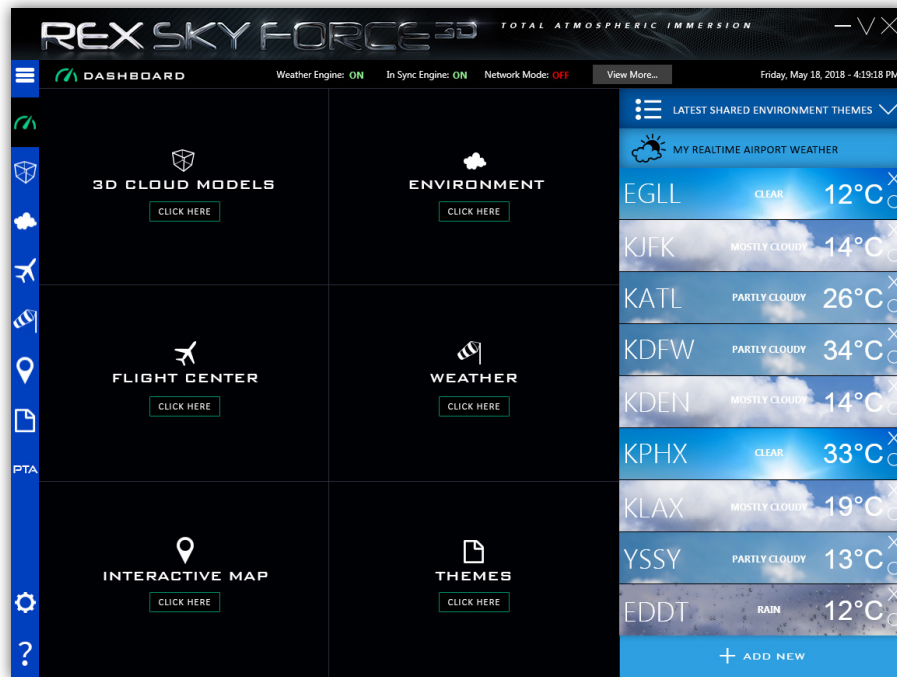
Figure 4.1 – Dashboard Window

System Status Messages

Global system status messages will be communicated with you through a variety of status bars appearing at the top of the application. Each message will be accompanied with a way to either disregard, close, accept or navigate for further communication. Below are a couple examples of what you may encounter (Fig 4.1a).
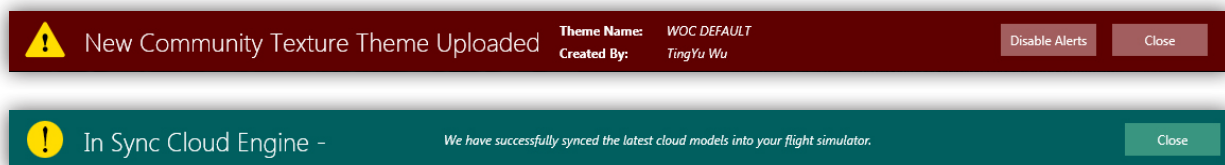
Figure 4.1a – System Status Messages

Weather or Not

This section of the Dashboard (Fig 4.1b) informs you if the Sky Force weather and sync engines are currently communicating with your flight simulator, as well as the status of your network if you are using Sky Force in a network configuration.

The **VIEW MORE** button navigates you to the new **Synchronization System Status** screen included in the latest Technical Update 2. *(See page 33)*

Weather Engine: ON   In Sync Engine: ON   Network Mode: OFF   View More...

Figure 4.1b – Weather & Sync Engine and Network Mode Status Bar

The following is a list of status messages and their meanings contained on this status bar:

STATUS	DEFINITIONS
OFF	The REX weather engine and/or sync engine is disabled and will not operate.
INITIATING	The REX weather engine and/or sync engine is currently in the process of injecting weather and/or cloud models into the flight simulator.
COMPLETED	The REX weather engine and/or sync engine has completed its cycle of injecting weather and/or cloud models into the flight simulator.
ON	The REX weather engine and/or sync engine is enabled and is awaiting the next cycle to refresh and/or update.

Buttons to Push

There are six primary areas of Sky Force that are represented by large buttons on the Dashboard (Fig 4.1c). Clicking a button will bring you to that area.
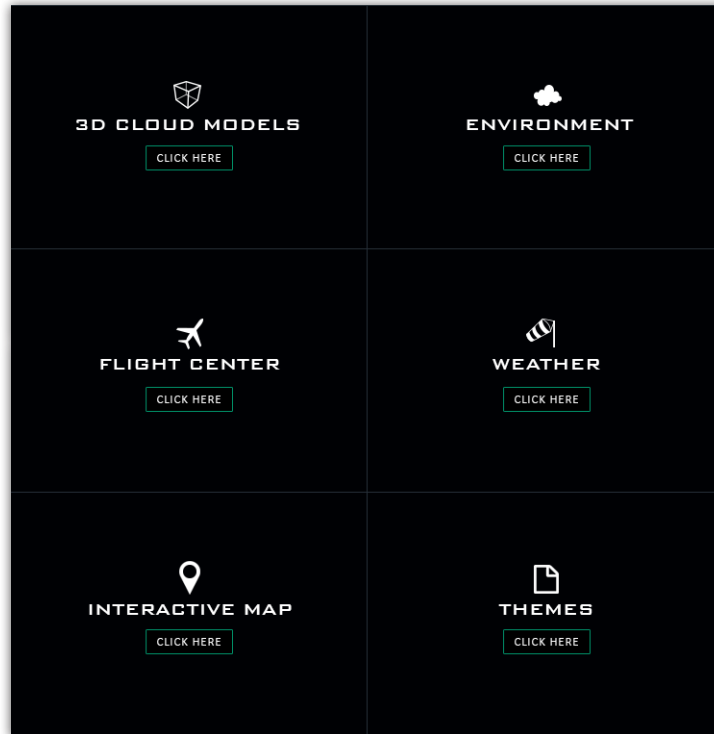
Figure 4.1c – Dashboard Buttons

BUTTON	FUNCTION
3D Cloud Models	Navigates to the 3D cloud models screen, where you can manage 3D cloud model specific settings.
Environment	Navigates to the Environment screen where you can select which environment variables to install or add to environment themes.
Flight Center	Navigates to the Flight Center, where you can import a flight plan from your local drive or download/import a flight plan from the REX community 'cloud' server.
Weather	Navigates to the Weather Center, where you can view a detail report of specific airport weather or search for specific weather conditions.
Interactive Map	Navigates to the Interactive Map, where you can view crucial flight, weather and navigational information.
Themes	Navigates to the Themes screen where you manage your own personal environment themes or import and install many shared community themes from the REX community 'cloud' server.

Latest Themes and Airport Weather

The panel on the right of the Dashboard provides a wealth of information.

This panel (Fig 4.1d) allows you access to the latest shared environment themes from the community, as well as your favorite airports and a high-level view of their weather conditions.

Figure 4.1d – Dashboard Panel

Latest and Greatest Themes

The Latest Shared Environment Themes panel (Fig 4.1e) displays all the latest created community themes. You can view the details of them by clicking "VIEW", or immediately install that theme into your simulator by clicking "INSTALL". This is a great way to change up your environment for different looks.
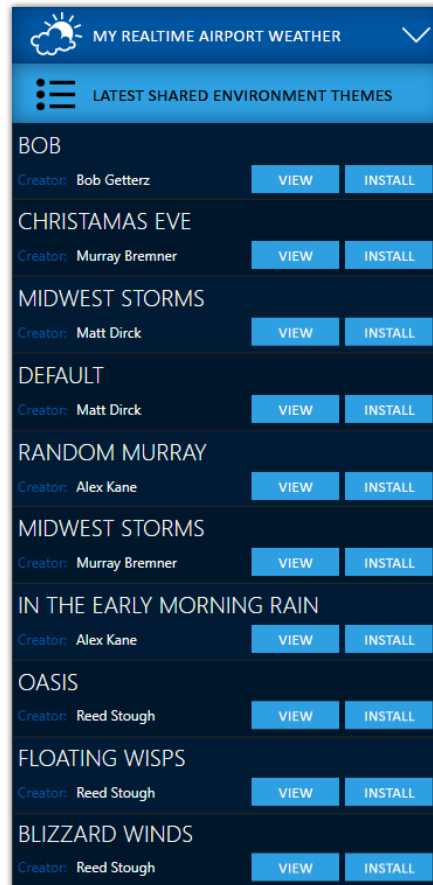
Figure 4.1e – Latest Shared Environment Themes Panel

CONTROL	FUNCTION
View	Navigates you to the My Saved Themes screen to display which environmental variables are a part of that community theme.
Install	This will immediately install the environmental theme into the flight simulator.

Favorite Airports

This panel (Fig 4.1f) provides a snapshot view of the current weather conditions at your favorite airports.

Figure 4.1f – My Real-time Airport Weather

View More Information or Delete

Each airport label provides the airport ICAO, current weather, and current temperature (Fig 4.1g).
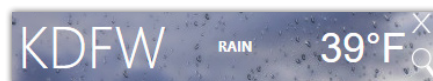
Figure 4.1g – Specific Airport Label

CONTROL	FUNCTION
"X" icon	Removes the airport from your favorite airport list as well as from this panel.
Magnifying Glass icon	Opens a detailed view of the airports weather conditions inside the Weather Center.

REX SIMULATIONS

Add a New Airport

+ ADD NEW

Figure 4.1h – Add New Button

Step 1 - To add a new airport to the Real-time Airport Weather list, click the Add New button (Fig 4.1h) at the bottom of the list.

ALERT

Add Favorite Airport

Enter the ICAO code of the airport you want to add to your favorite airports, then click OK to continue.

Enter ICAO code: KFFZ

Cancel   Ok

Figure 4.1i – Add Favorite Airport Popup Window

Step 2 – Enter your favorite airport ICAO code and click "OK" to add it to the list. Once complete you should see your new airport added to the list with its latest weather conditions (Fig 4.1j).

KFFZ   MOSTLY CLOUDY   70°F
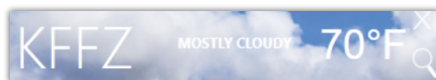
Figure 4.1j – New Favorite Airport

Synchronization System Status

THE SYNCHRONIZATION SYSTEM STATUS CONTROLLER (FIG 5.0) IS A NEW FEATURE CONTAINED IN THE LATEST SKY FORCE TECHNICAL UPDATE 2 RELEASE.

We have streamlined all of the processes of controlling weather injection, cloud model syncing, sim briefing status and network mode into one, easy-to-use area!
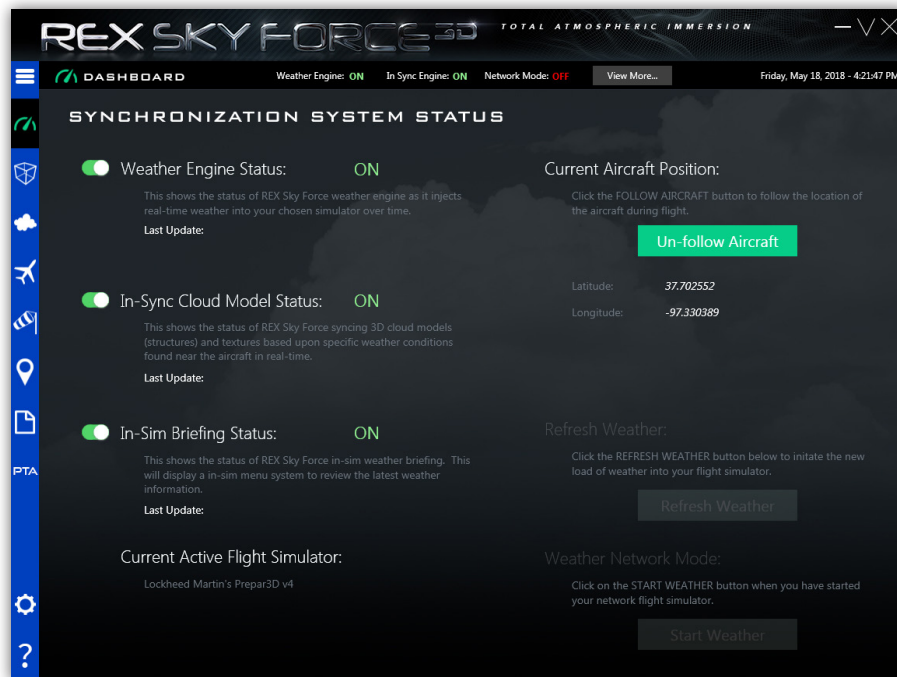
Figure 5.0 – Weather & Sync Engine and Network Mode Status

The following is a list of status messages and their meanings contained on **Synchronization System Status** screen.

STATUS	DEFINITIONS
OFF	The REX weather engine and/or sync engine is disabled and will not operate.
INITIATING	The REX weather engine and/or sync engine is currently in the process of injecting weather and/or cloud models into the flight simulator.
COMPLETED	The REX weather engine and/or sync engine has completed its cycle of injecting weather and/or cloud models into the flight simulator.
ON	The REX weather engine and/or sync engine is enabled and is awaiting the next cycle to refresh and/or update.

The following is a general overview of each setting and their function provided on the **Synchronization System Status** screen.

SETTING	FUNCTION
Weather Engine Status	Displays the status of the REX Sky Force weather engine as it injects real-time weather over time. Once weather has been successfully injected, the **LAST UPDATE** reflects the timestamp. **TOGGLE BUTTON OFF:** Disables the weather engine and status. **TOGGLE BUTTON ON:** Enables the weather engine and status.
In-Sync Cloud Model Status	Displays the real-time syncing status of the REX Sky Force 3D cloud model structures based upon the weather conditions around the aircraft. Once synced, the **LAST UPDATE** reflects the timestamp. **TOGGLE BUTTON OFF:** Disables cloud model syncing. **TOGGLE BUTTON ON:** Enables cloud model syncing.
In-Sim Briefing Status	Displays the status of the REX Sky Force in-sim weather briefing. This will display an in-sim menu system to allow you to review the latest updated weather information. Once updated, the **LAST UPDATE** will reflect the timestamp. **TOGGLE BUTTON OFF:** Disables the in-sim menu. **TOGGLE BUTTON ON:** Enables the in-sim menu.
Current Active Flight Simulator	Displays which flight simulator REX Sky Force is communicating with. This can be changed at any time in SETTINGS/GENERAL.
Current Aircraft Position	Displays the latitude/longitude of the aircraft, as well as the latest injected weather metar (**Follow Aircraft** *must be activated)*. This **Follow/Un-follow** feature is tied directly to the **Follow Aircraft** toggle button within the interactive map control area. In other words, Follow/Un-follow selected on/off from either area will directly impact the other.
Refresh Weather	Click the **Refresh Weather** button to initiate a new loading of the latest real-time weather data. Please give this a minute to complete, as the program must update the real-time weather data from the servers.
Weather Network Mode	If you are using REX Sky Force in a network configuration, click **Start Weather** after you have started your network flight simulator.

3D Cloud Models

The following is the procedure on how to control, install, and sync the 3D Cloud Models.

Figure 6.0 – 3D Cloud Models Button

Step 1 – Click the 3D Cloud Models button to enter the 3D Cloud Models manager. (Fig 6.1)
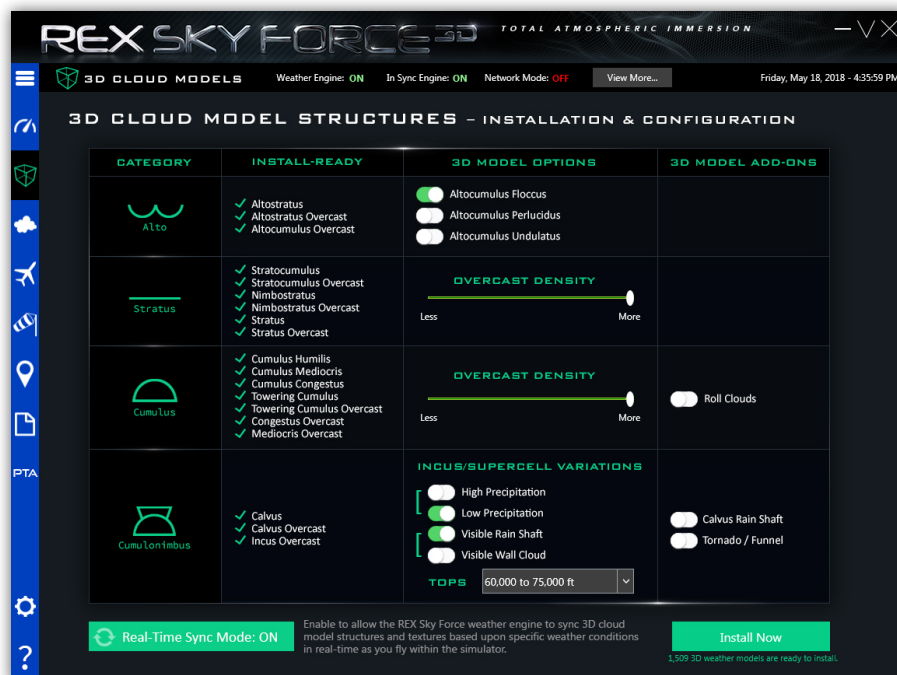
Figure 6.1 – 3D Cloud Models Window
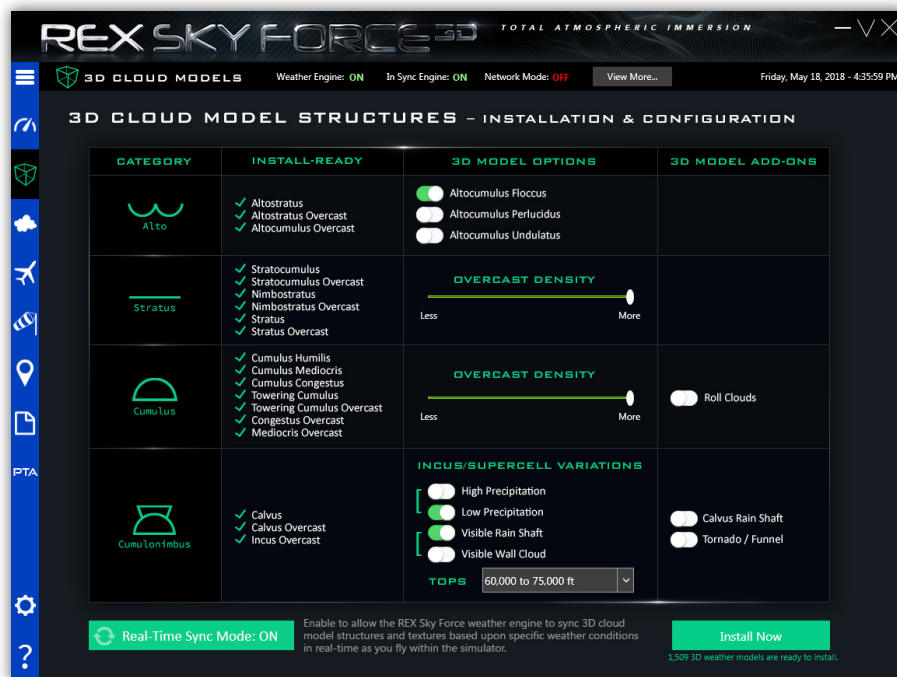
Figure 6.2 – 3D Cloud Models Window

HOW TO INSTALL 3D CLOUD MODELS

Step 1 – Select the 3D Model Options you want to install (Fig 6.2).
Step 2 – Select which additional 3D Model Add-ons you want to install.
Step 3 – Click "INSTALL NOW" to install the 3D Cloud Models.
Step 4 – Minimize Sky Force and start your flight simulator.

HOW TO ENABLE REAL-TIME SYNC MODE

Running the Real-Time Sync Mode WITH the REX weather engine
Step 1 – Enable Real-Time Sync Mode.
Step 2 – Make sure the REX weather engine is enabled via the settings window.
Step 3 – Start your flight simulator and minimize Sky Force.

Running the Real-Time Sync Mode WITHOUT the REX weather engine
Step 1 – Enable Real-Time Sync Mode.
Step 2 – Make sure the REX weather engine is disabled via the settings window.
Step 3 – Start your flight simulator and minimize Sky Force.

AUTHOR'S NOTE: The REX weather engine is not required to use real-time sync mode.

IMPORTANT NOTE: Sky Force must remain open during flight operations so that Real-Time Sync Mode will operate.

IMPORTANT INFORMATION ABOUT THE SKY FORCE 3D CLOUD MODEL STRUCTURES

3D MODEL OPTIONS VS. 3D MODEL ADD-ONS

Prior to Sky Force there were only four cloud types for flight simulation. With Sky Force we can cover most true world cloud classifications. Most of these cloud types are automatically installed into the simulator as a part of the Sky Force core install.

In addition, we have provided the option to include additional variations of these cloud types to be installed and synced.

The 3D Model options are required models to be installed, but you can select different variations of each cloud section – except for stratus type clouds.

Incus/Supercell thunderstorms provides a few more options to select from.

You can experience high/low precipitation storms and/or visible rain shafts or visible wall clouds. In addition, you can select a range of top heights of storms. There are two levels: 45,000 to 60,000 feet or 60,000 to 75,000 feet tops.

3D Model Add-on clouds are clouds models that can be added for additional variation and special weather phenomena such as roll clouds, funnel clouds, and tornadoes.

REAL-TIME SYNC MODE

Some 3rd-party weather add-ons require additional textures to be synced to cover the cloud classifications. But because they are not able to change the models in real-time, you will notice repeat after repeat of textures with patterned cloud bottoms to the horizon. But because of the new Sky Force cloud models, this process is no longer necessary, as we are able to cover all cloud specifications within the new model structures.

IMPORTANT NOTE: THE REX WEATHER ENGINE IS NOT REQUIRED TO RUN TO ENJOY REAL-TIME MODEL SYNC CAPABILITIES.

The real-time sync mode of Sky Force is more tied to certain key weather conditions. For example, other 3rd-party weather engines may read a thunderstorm at an airport and then display that via the flight simulator injected weather. To that weather engine a thunderstorm is a thunderstorm, nothing more.

Utilizing real-time model data and our weather engine we can generate weather at a whole new level. From this data, we can determine the atmosphere's stability. This allows Sky Force to sync the correct 3D cloud models and weather to generate the proper thunderstorm structures.

The beauty of Sky Force is that you can still receive the benefit of close to real-world cloud classification and key weather elements even without the use of the REX weather engine being enabled.

For example, if the weather conditions report a wall cloud or funnel cloud, then Real-Time Sync Mode will automatically inject the models that support those conditions while you are sim – no matter which weather engine you use.

REX SIMULATIONS

Environment

The following is the procedure on how to operate the Environment section of Sky Force.
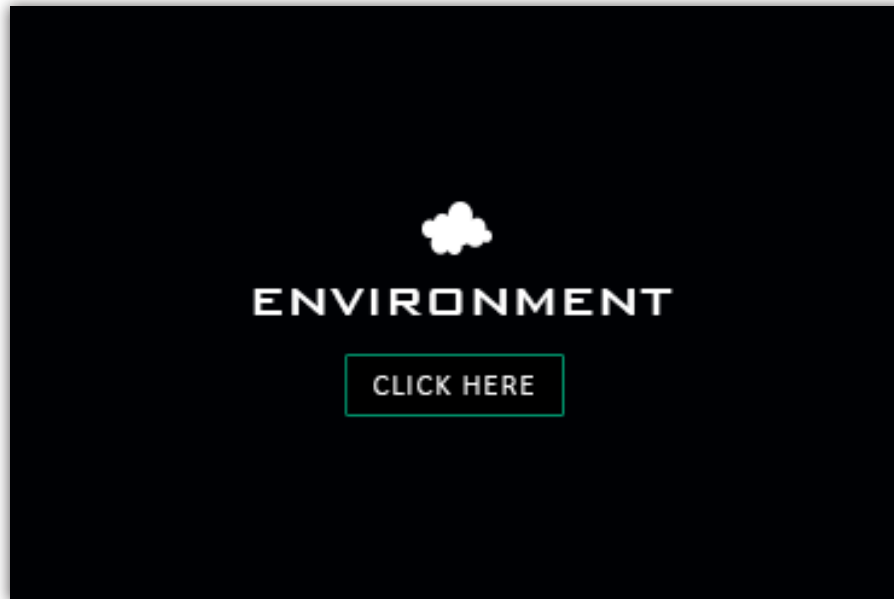
Figure 7.0 – Environment Button

Step 1 – Click the Environment Button on the dashboard window (Fig 7.0).

ENVIRONMENT CATEGORIES

Figure 7.1a – Environment Categories

Figure 7.1b – Environment Sub-Categories

Step 1 – In the Environment section, navigate to different categories via the buttons at the bottom of the screen (Fig 7.1a).

Step 2 – Some categories contain sub-categories, separated by tabs. (Fig 7.1b).

NAVIGATING CATEGORY SETS

This is the procedure on how to navigate through environment category sets.
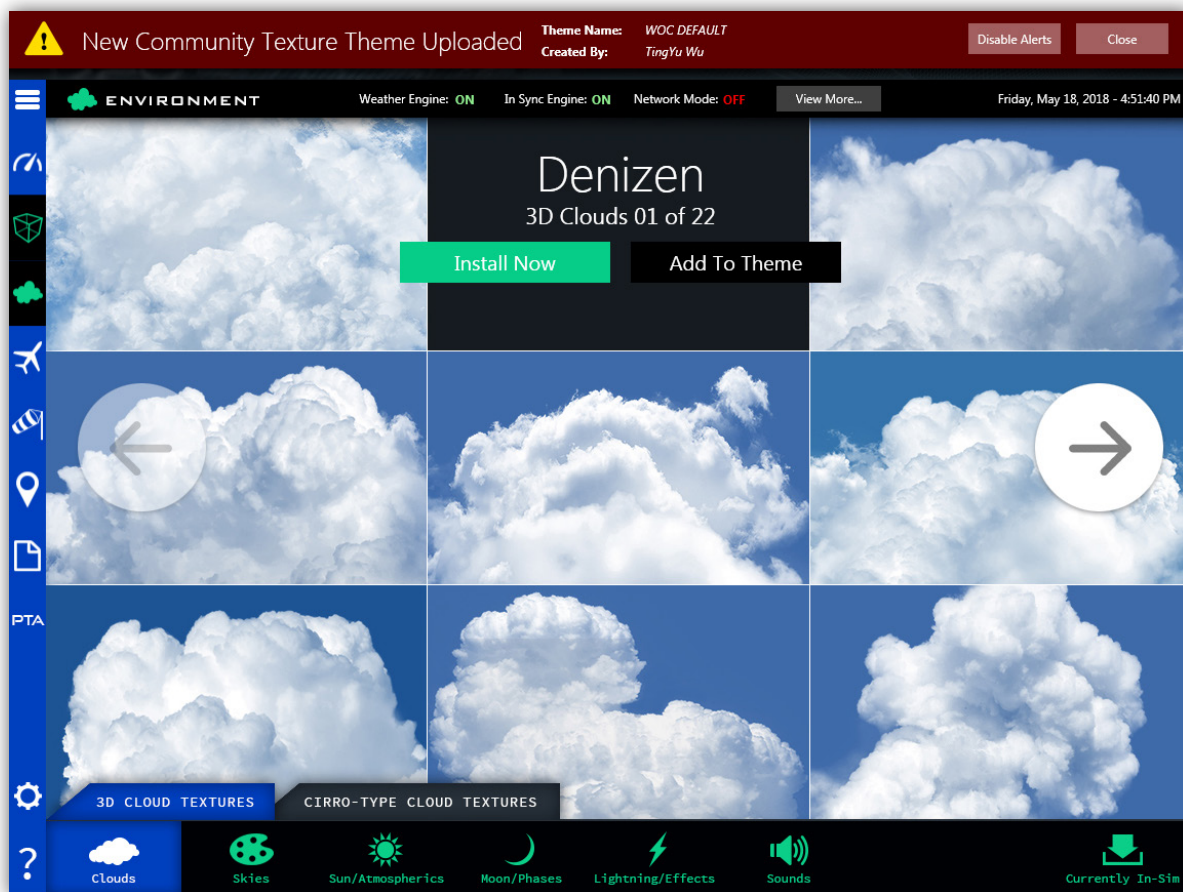
Figure 7.2 – Environment Category Sets

Step 1 – Use the left/right buttons to navigate through the different sets (Fig 7.2).

IMMEDIATE INSTALL

Step 1 – Once you have decided on a set to try, click "INSTALL NOW" to immediately install this set into the flight simulator (Fig 7.2).

AUTHOR'S NOTE: A log file named installindividualtextures.txt can be found in the main Sky Force folder. This file confirms if the file(s) were in fact installed.

ADD TO THEME

Creating an environmental texture theme is customary practice and easy to do.
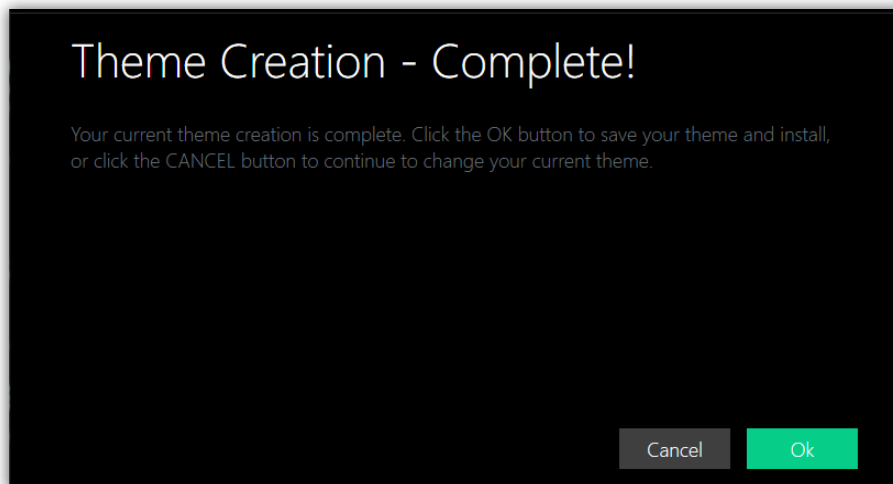
Figure 7.2a – Theme Creation Complete Popup

Step 1 – Navigate through each Environmental category and sub categories. While navigating through each set, click "ADD TO THEME" to add that set to a Theme (Fig 7.2).

Step 2 – Once you have selected all the required sets for a theme, you will be alerted by a popup window that the theme is complete (Fig 7.2a). Click "OK" to continue.
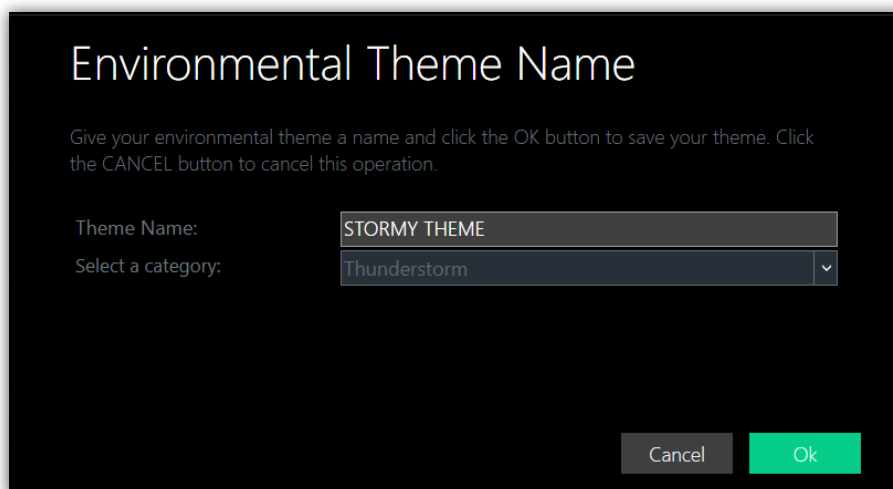
Figure 7.2b – Environmental Theme Name Popup

Step 3 – Once an environmental theme has been created you will be asked to give the theme a name (Fig 7.2b). Enter a name for your theme as well as select a category for your theme. Click "OK" to create your theme.
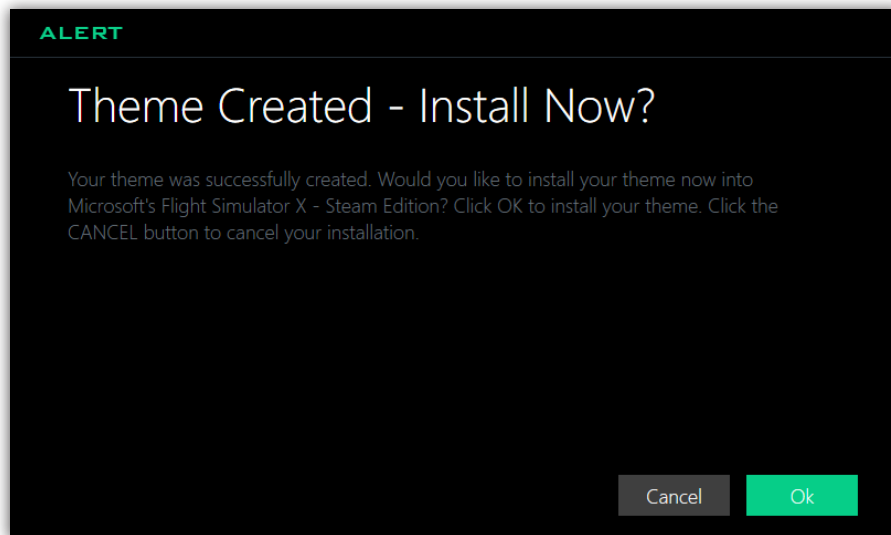
Figure 7.2c – Install Created Environment Texture Theme Popup

Step 4 – Once the theme has been created, you will be asked to install your theme into your flight simulator. Click "OK" to install the theme or click "CANCEL" to cancel this process (Fig 7.2c).
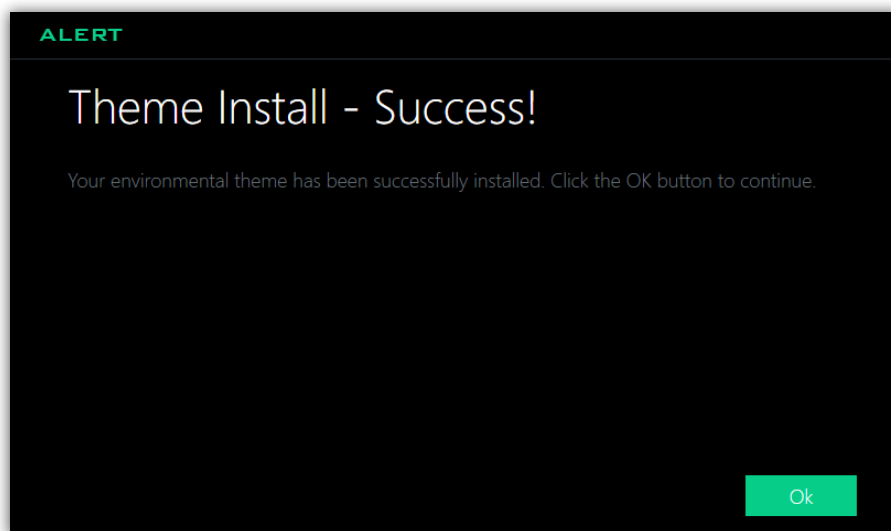
Figure 7.1d – Environment Texture Theme Install Success Popup

Step 5 – After the theme has been installed you will receive an install success popup. Click "OK" to continue (Fig 7.2d).

ADDITIONAL INFORMATION ABOUT ENVIRONMENTAL TEXTURE SETS

NO TEXTURES ARE THE SAME

In this current age of flight sim, we have seen an explosion of both freeware and payware texture sets on the market.

However, the Environmental Texture Sets within Sky Force are unique and a huge advancement over previous REX products and other 3rd-party products on the market.

SAME CLOUDS HARD TO FIND

Even with 3rd-party products currently on the market, it's easy to notice repeated textures on clouds, massive repeating cloud bottoms to the horizon, and the dreaded upside down clouds.

Now, with the introduction of our new cloud model system we can double the texture sheets on the cloud model structures in ONE scene. No 3rd-party program can do this. Sure, they can add more 'textures', but not in a given scene. They are stuck with one texture per scene.

This new technology allows us to cover all cloud classifications, and also dramatically reduce the number of cloud repeats in a given scene. Also, this eliminates the upside down clouds and repeated cloud bottoms!

VBLEND AND VAPOROUS SKIES

New techniques create a smoother, realistic and natural sky color blending at dawn and dusk as well as newly improved visibility and fog. With VBlend have achieved more realistic horizontal and vertical day, dawn and dusk fog generation and sky visibility blending.

In addition, the sky is not always a palate of straight hues. This can be broken up by different layers of water vapor that slightly condense, but not enough to form a cloud. Thus, we have introduced into our skies the ability to model this vapor. This creates what we call "Vaporous" skies.

Flight Center

The following are the procedures on how to utilize the Flight Center.
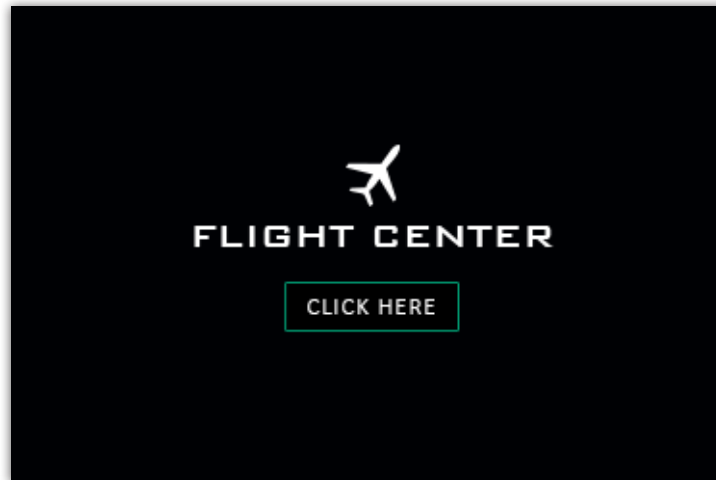
Figure 8.0 – Flight Center Button

Step 1 – Click the Flight Center button on the dashboard (Fig 8.0).
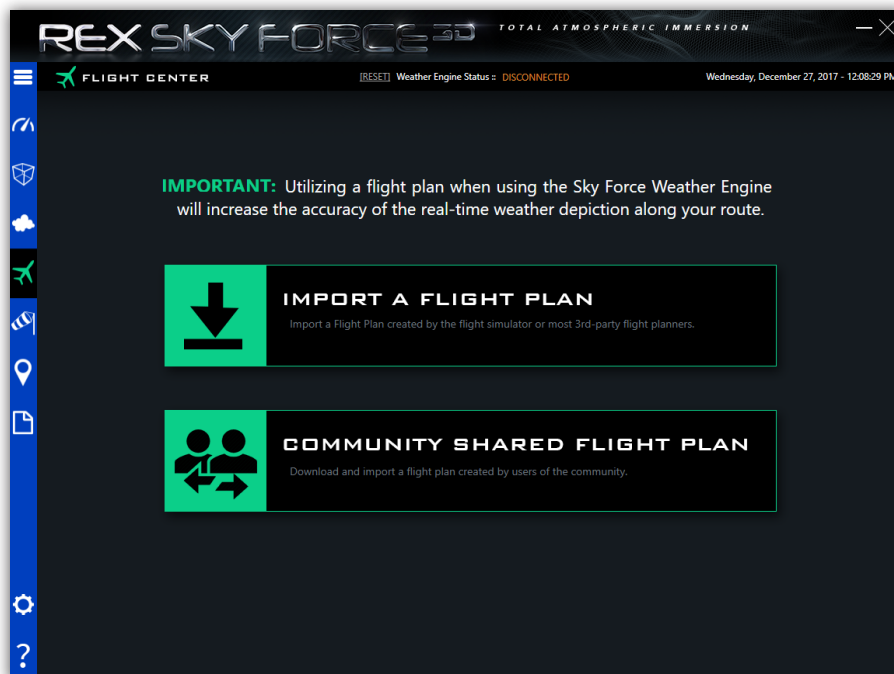
Figure 8.1 – Flight Center Main Window

You can either import a (LOCAL) flight plan or select a community shared flight plan to import (Fig 8.1).

IMPORTING A FLIGHT PLAN
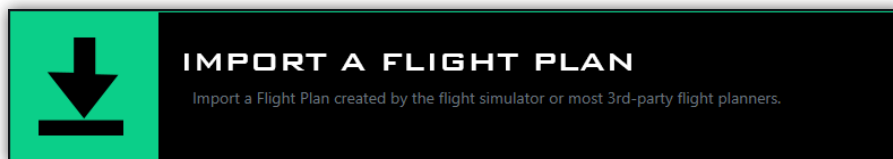
Figure 8.1a – Import A Flight Plan button

Step 1 – Click "Import a Flight Plan" (Fig 8.1a).
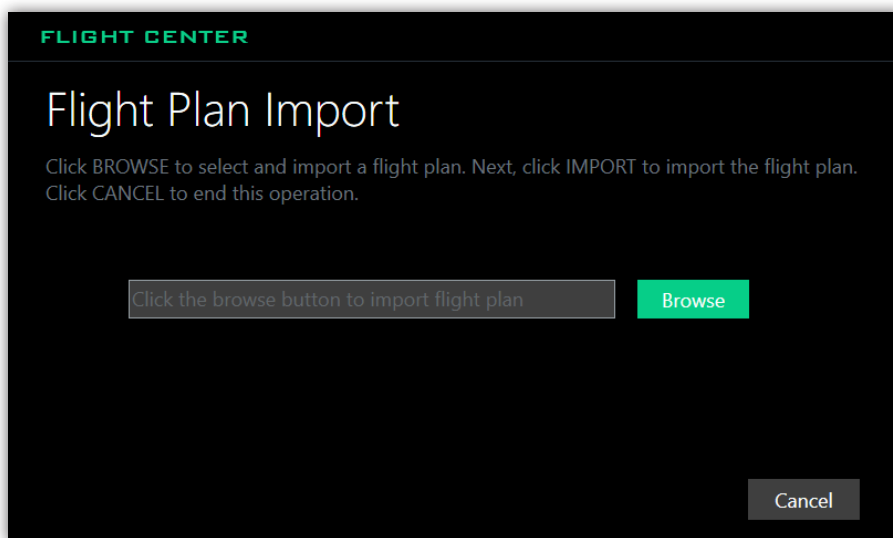
Figure 8.1b – Flight Plan Import Popup

Step 2 – A popup window will display (Fig 8.1b). Click "BROWSE" to select a standard format flight plan to import (Fig 8.1.c). Once the flight plan has been selected it will be imported into Sky Force and formatted for the application.
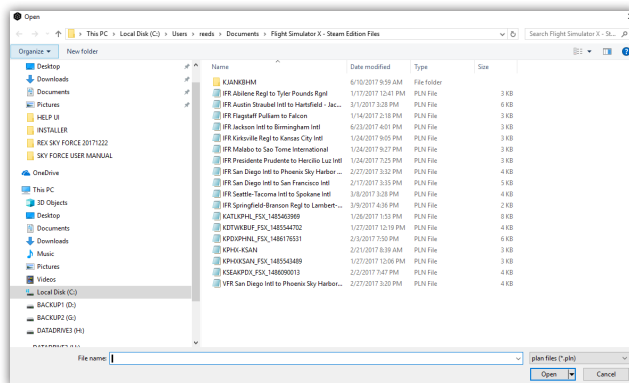
Figure 8.1c – Flight Plan Selection Popup
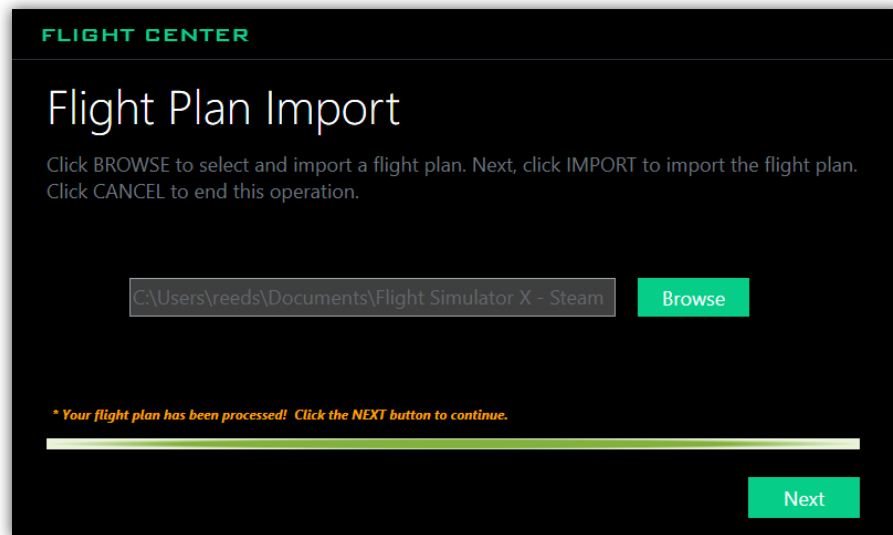
Figure 8.1d – Flight Plan Import Success Popup

Step 3 – Once the import of the flight plan is completed (Fig 8.1d), click "NEXT" to continue.
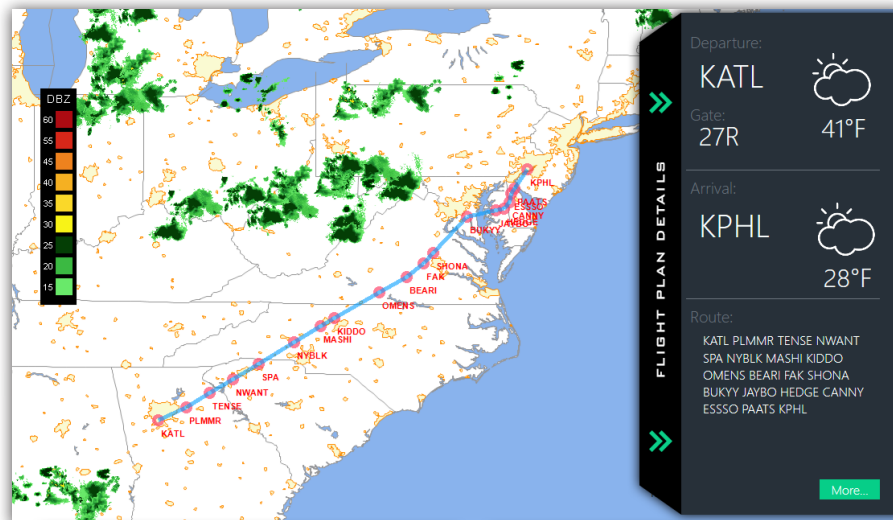
Figure 8.1e – Visual Flight Plan Window

Step 4 – *(Optional)* If you want to view a detailed overview of your imported flight plan with its waypoints, click the "FLIGHT PLAN DETAILS" panel and click "MORE" (Fig 8.1e).
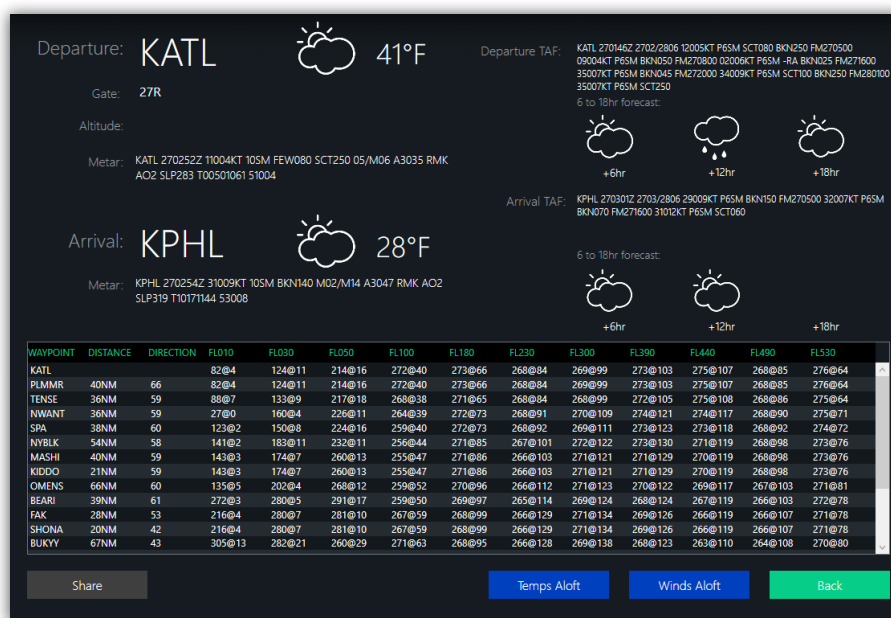
Figure 8.1f – Flight Plan Details Window

The Flight Plan Detail's window offers a detailed view of the entire flight with its waypoints (Fig 8.1f). You can view the temperatures and winds aloft from departing airport, to each waypoint to your arrival airport.

In addition, *(if available)* you can view a complete forecasted view of the departure and arrival airport weather conditions.

SHARE A FLIGHT PLAN WITH THE COMMUNITY

You might want to share your adventure with a friend or another virtual pilot.

Step 1 – Click "SHARE" on the Flight Plan Details window (Fig 8.1f).
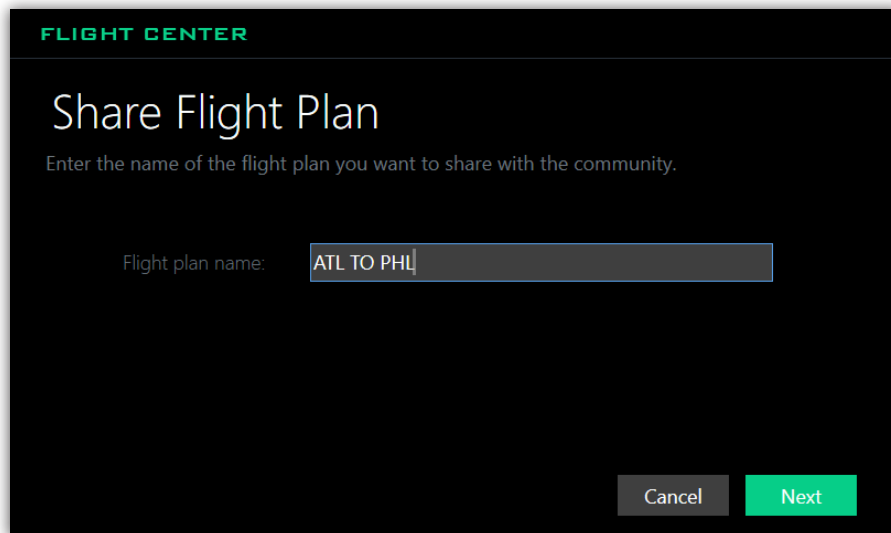
Figure 8.1g – Share Flight Plan Enter Name Popup

Step 2 – Assign a name to the flight plan (Fig 8.1g). Click "NEXT" to continue.
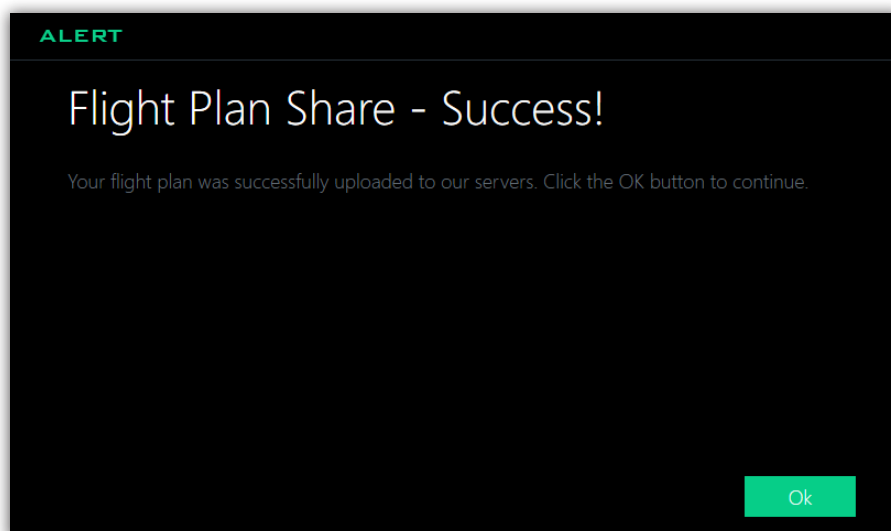
Figure 8.1h – Shared Flight Plan Success Popup

Step 3 – Once the flight plan has been uploaded to the REX 'cloud', an alert will display advising of a successful upload. Click "OK" to continue (Fig 8.1h).

IMPORTING A SHARED COMMUNITY FLIGHT PLAN
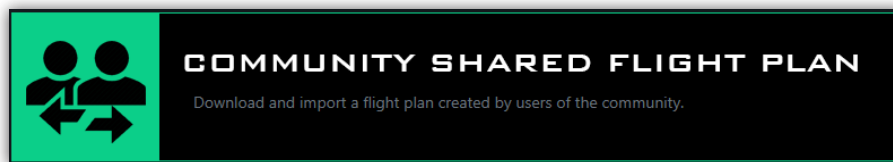
Figure 8.2 – Community Shared Flight Plan Button

Step 1 – Click "Community Shared Flight Plan" (Fig 8.2) to view the listed flight plans available for import (Fig 8.2a).

Figure 8.2a – Community Shared Flight Plan Window

Figure 8.2b – Search Community Shared Flight Plans

Step 2 – *(Optional)* Enter a flight plan name, departure, or arrival airport into the search field to search for a specific flight plan to import (Fig 8.2b). Click "SEARCH" to activate your search.

Figure 8.2c – Flight Plan #

Step 3 – Click the Plan # to import the community flight plan into Sky Force (Fig 8.2c).

Weather Center

The following are the procedures on how to operate the Weather Center.
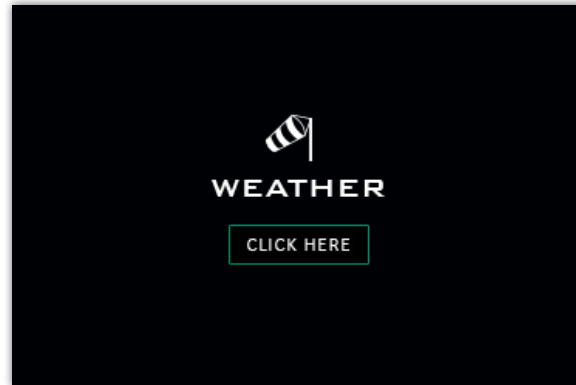
Figure 9.0 – Weather Center Button

Click the Weather Center button on the dashboard (Fig 9.0).

DETAILED VIEW OF THE WEATHER CONDITIONS
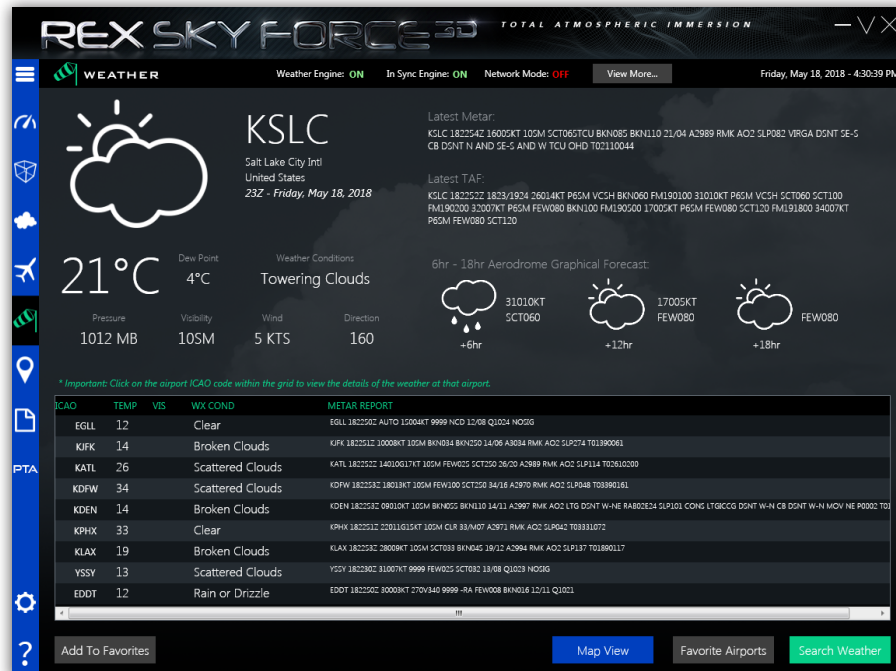
Figure 9.1 – Detailed Weather Conditions Window

Here you can view weather conditions for an airport, enter the interactive weather map, view favorite airport weather, and search for more specific weather conditions (Fig 9.1).

VISUAL VIEW OF THE AIRPORTS WEATHER
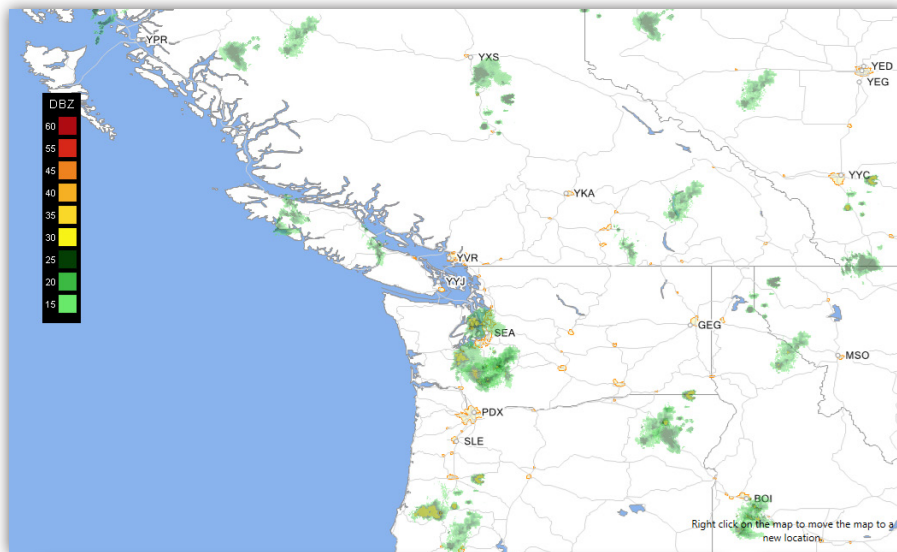
Figure 9.1a – Interactive Map View of the Airports Weather

Click "MAP VIEW" to view the airport's location and surrounding weather conditions on the Interactive Map (Fig 9.1a).

SEARCH FOR SPECIFIC WEATHER CONDITIONS
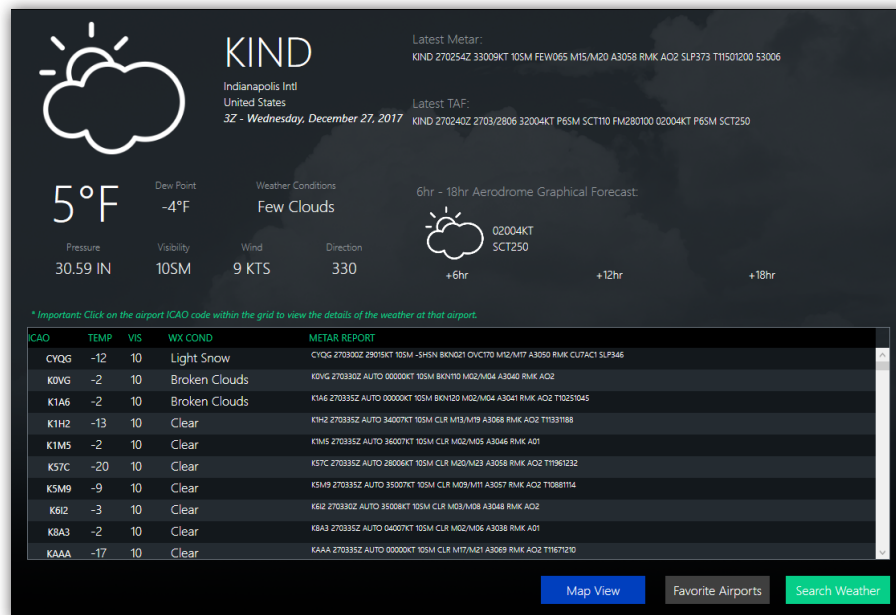

Figure 9.1b – Search By Airport ICAO Code

Figure 9.1c – Airport ICAO Search Results

(Optional) You can search for weather at a specific airport ICAO or up to a radius of 400nm from an airport ICAO (Fig 9.1b). The results will include the main airport and list of airports weather conditions (Fig 9.1c).

Figure 9.1d – Search By Specific Weather Condition

(Optional) You can also search by a specific weather condition by using the filters provided by the Search Weather screen (Fig 9.1d).

Figure 9.1e – Specific Weather Search Results

When the search is complete, a list of airports reporting the specific weather conditions will be displayed in a list (Fig 9.1e). Click the ICAO code to view the details of that specific airport.

ADD CUSTOM AIRPORT WHEN AIRPORT NOT FOUND

In **Technical Update 2** of Sky Force we have included a new feature within the Weather Center to add a custom airport into the Sky Force database when an airport could not be located (Fig 9.1f).

Step 1 – Click "Add" (Fig 9.1f)

Figure 9.1f – Add Custom Airport

Figure 9.1g – Add Custom Airport

Step 2 – Enter the ICAO code, airport name, and the latitude and longitude. Click "OK" when complete or "Cancel" to cancel the operation.

Interactive Map

The following are the procedures on how to operate the Interactive Map.
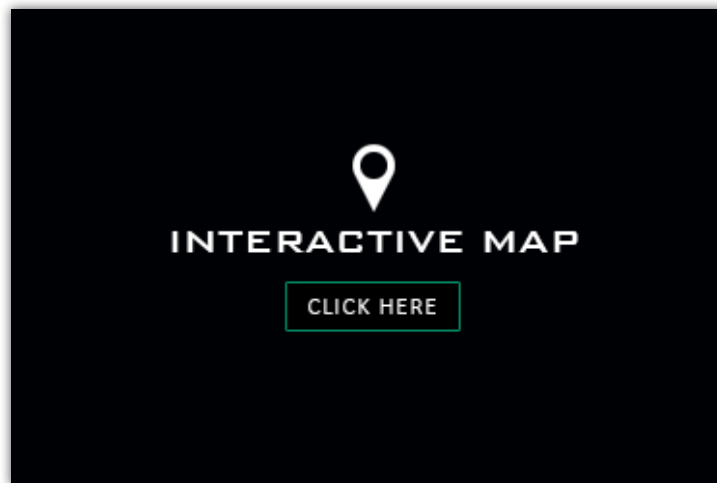
Figure 10.0 – Interactive Map Button

Step 1 – Click on the Interactive Map button on the dashboard (Fig 10.0).

WEATHER OVERLAYS

Figure 10.1 – Weather Overlay Buttons

To display different weather overlays on the Interactive Map, click the corresponding button to initiate the overlay (Fig 10.1). The following is a list of the optional overlays and their functions.

Each overlay can be turned on/off by clicking its corresponding button.
The "Precip" button is one overlay that can remain on with each other weather overlay.

Figure 10.1a – Precip Overlay

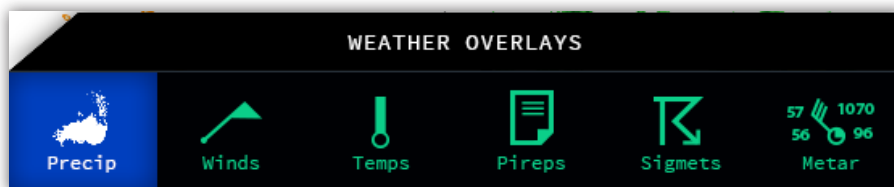| WEATHER OVERLAY	FUNCTION
Precip	This overlay displays a data-link radar view of the various weather echoes and their intensity levels (Fig 10.1a).
Winds	This overlay displays the wind direction and speed at heights of the atmosphere (Fig 10.1b).
Temps	This overlay displays the temperatures at different heights of the atmosphere (Fig 10.1c).
Pireps	This overlay displays a visual view of various pilot reports and their location (Fig 10.1d).
Sigmets	This overlay displays multiple airmets/sigmets areas (Fig 10.1e).
Metar	This overlay displays a graphic view of metar data at various airports across a region. This includes cloud coverage, temperature, dewpoint, wind direction, wind speed, pressure, and weather condition (Fig 10.1f).
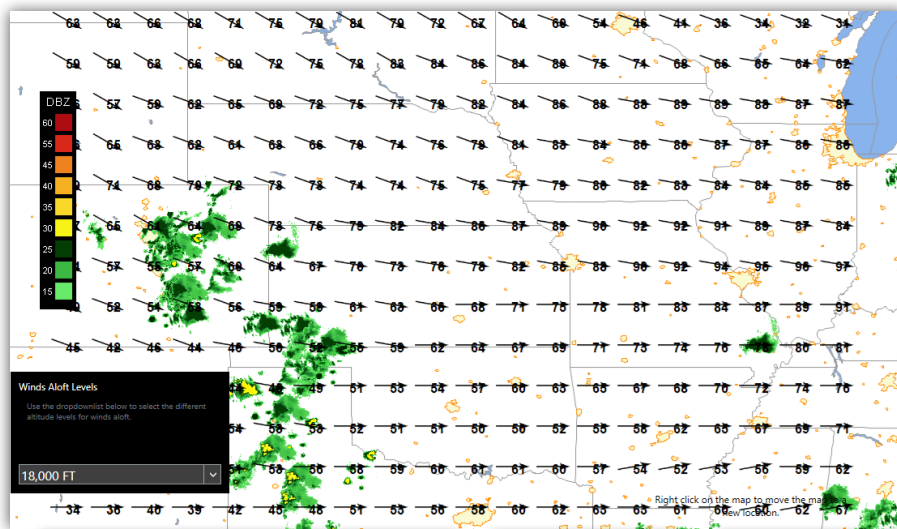
Figure 10.1b – Winds Overlay
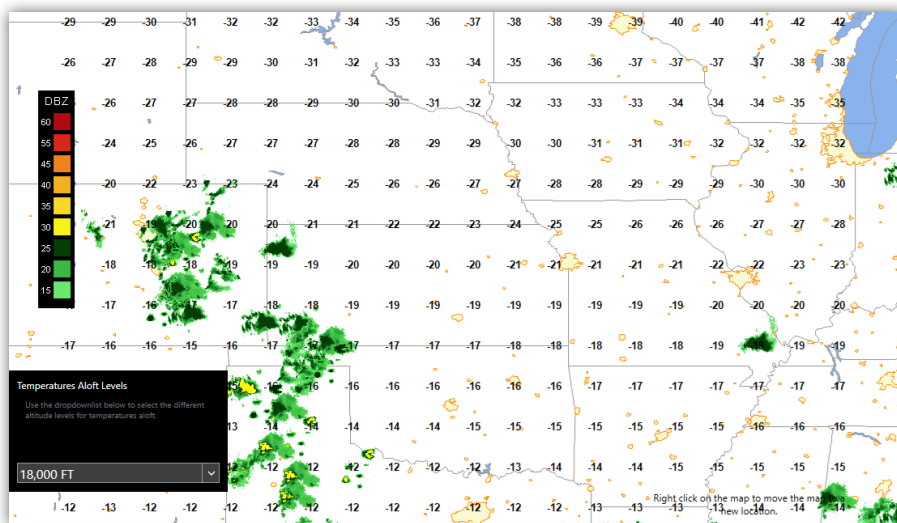
Figure 10.1c – Temperature Overlay
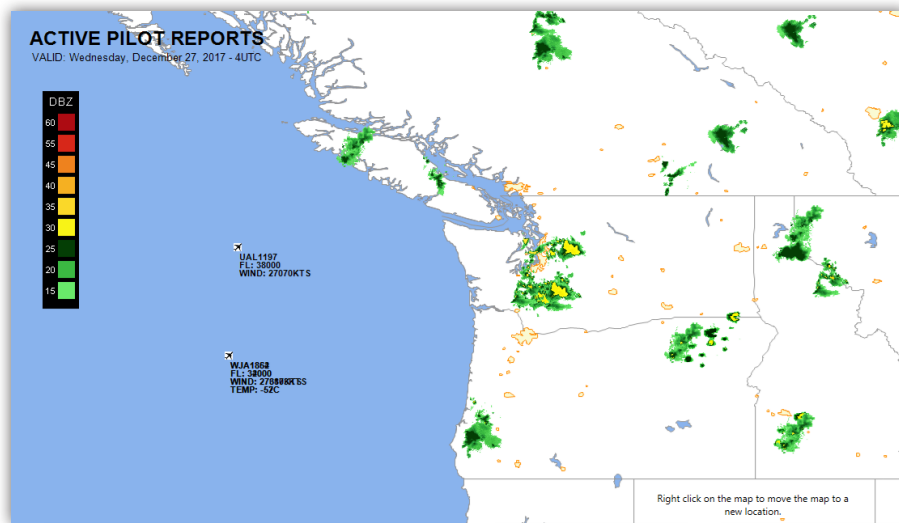
Figure 10.1d – PIREPS Overlay
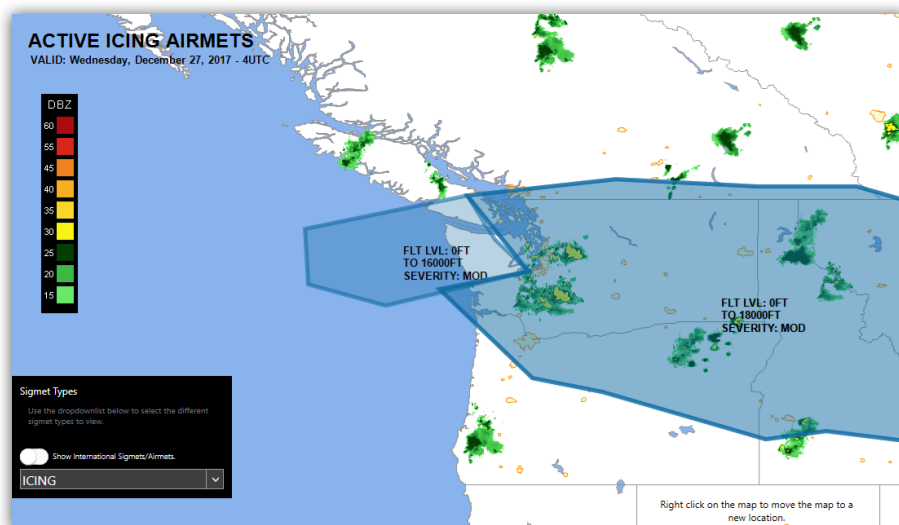
Figure 10.1e – SIGMETS Overlay
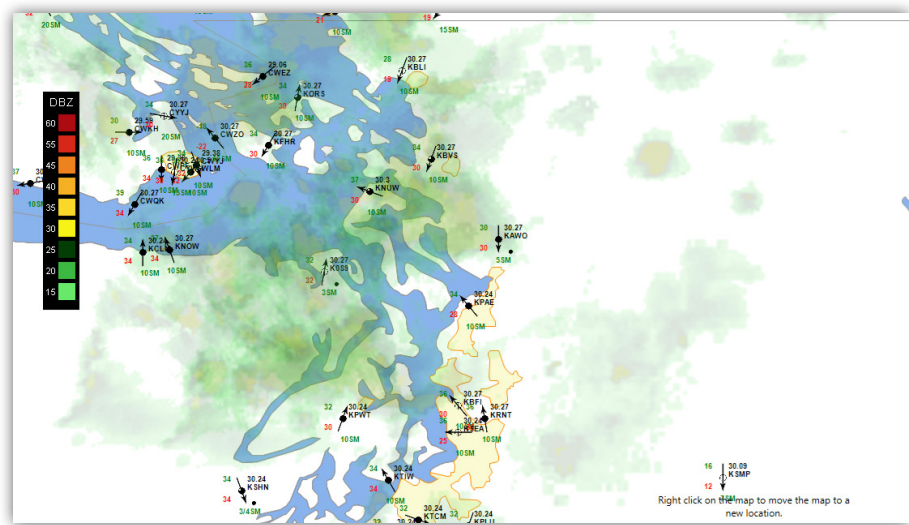
Figure 10.1f – METAR Overlay

MAP OVERLAYS
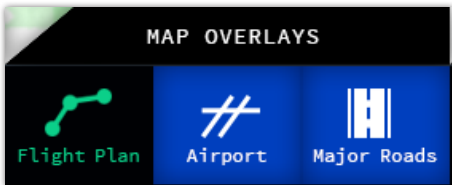
Figure 10.2 – Generic Map Overlays

The map overlays (Fig 10.2) help with point of reference within the map. These overlays can be enabled or disabled and can coexist with weather and map overlays.

MAP OVERLAY	FUNCTION
Flight Plan	This overlay displays an imported flight plan with its waypoints on the map.
Airport	This overlay displays all major airports across the world on the map (Fig 10.2a).
Major Road	This overlay displays all major highways or water ways across the world on the map (Fig 10.2a).
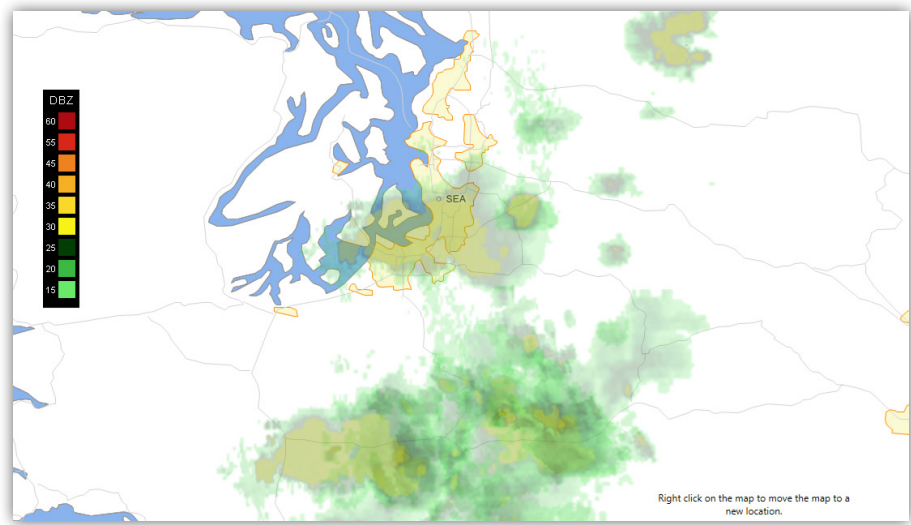
Figure 10.2a – Airport and Major Road Overlays

MAP CONTROLS

Figure 10.3 – Map Controls

The Map Controls allow you to modify the mapping system for better viewing or tracking needs.

MAP CONTROL	FUNCTION
Zoom	The Zoom control enables zooming in/out of a region on the map (Fig 10.3).
Precip Opacity	The Precip Opacity control enables the ability to change the opacity of the precipitation echoes on the map (Fig 10.3).
Follow Aircraft	The Follow Aircraft control enables the map to follow the aircraft while in flight (Fig 10.3).

Themes
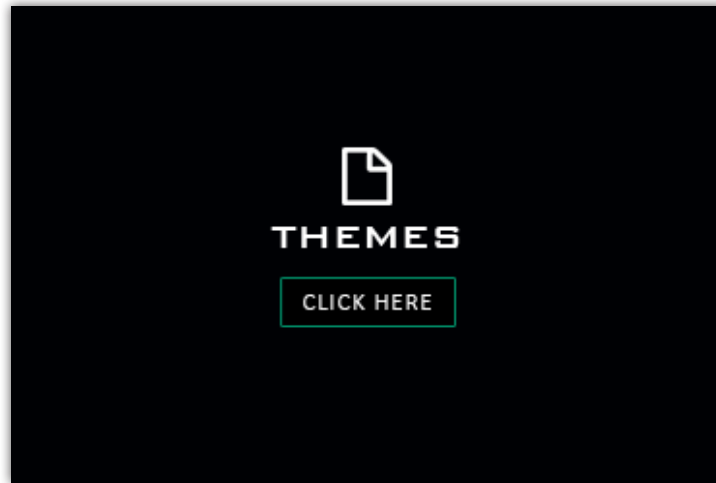
Figure 11.0 – Themes Button

Step 1 – Click on the Themes button on the dashboard (Fig 11.0).
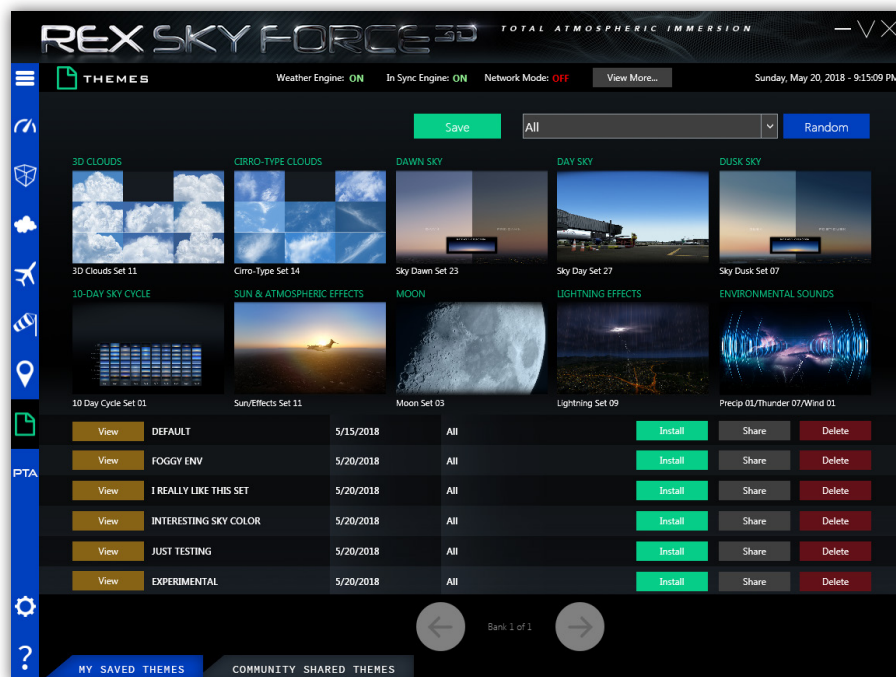
Figure 11.1 – Main My Saved Themes Window

HOW TO RANDOMLY CREATE A THEME

Step 1 – Click "RANDOM" on the top right side of the "My Saved Themes" window (Fig 11.1). This process will create a new "Temp" theme set.

AUTHOR'S NOTE: You may modify any theme texture set by clicking on a specific image preview. This will take you to that texture set to make your changes.
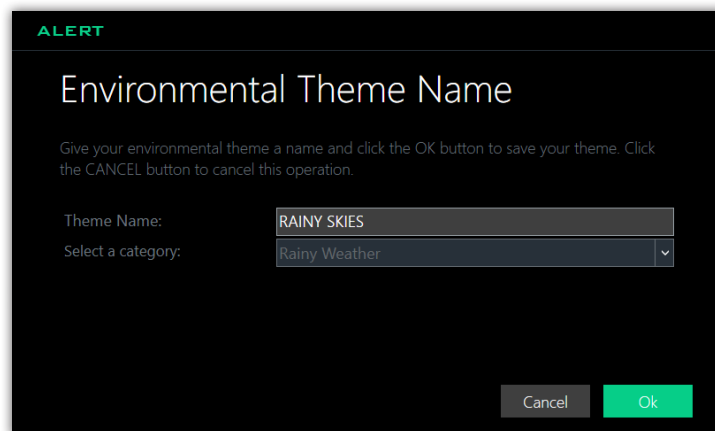
Figure 11.1a – Theme Name Popup

Step 2 – Click "SAVE" and give your randomized theme a name (Fig 11.1). You will be presented with a popup window to give your theme a name and assign it to a category (Fig 11.1a). Click "OK" to continue.
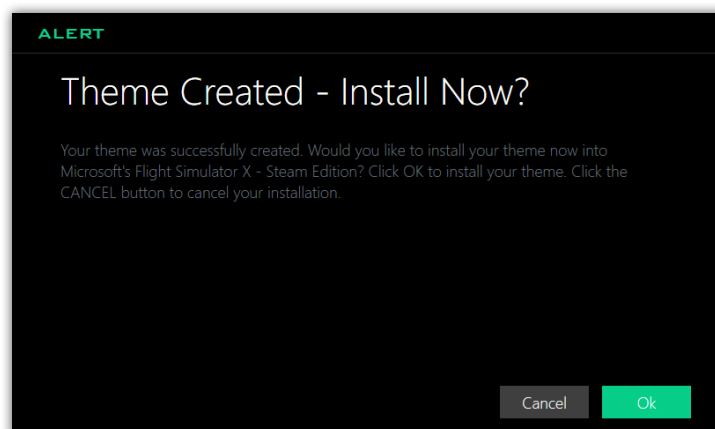
Figure 11.1b – Install Created Theme Popup

Step 3 – *(Optional)* You will be presented with the option to install your theme or cancel. Click "OK" to install and "CANCEL" to cancel the installation (Fig 11.1b).

REX SIMULATIONS

FILTER MY SAVED THEMES BY CATEGORY

To filter your list of themes that you created, you can use the category filter provided at the top of the screen.
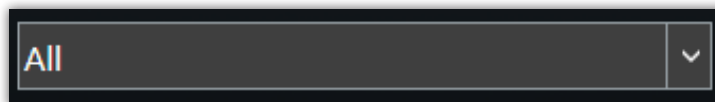
Figure 11.2 – Filter your saved themes by category

Step 1 – Use the category drop down list to filter your My Saved Theme list (Fig 11.2).

FURTHER ACTIONS WITH YOUR SAVED THEMES

You can do several things to your "My Saved Themes". You can view the contents, install them into your simulator, share them with the community, or delete them.

Figure 11.2a – List of My Saved Themes

VIEW THE CONTENTS OF A SAVED THEME

Step 1 – Click "View" to view the contents of your saved theme (Fig 11.2a).

**AUTHOR'S NOTE: You may modify any theme texture set by clicking on a specific image preview. This will take you to that texture set to make your changes. Then you will need to click the "SAVED" button to save your newly modified theme.**

INSTALL YOUR SAVED THEME

Step 1 – Click "INSTALL" on the line of the theme you want to install into your flight simulator (Fig 11.2a).

SHARE YOUR SAVED THEME WITH THE COMMUNITY

Step 1 – Click "SHARE" on the line of the theme you want share. This will allow you to upload your theme to the REX 'cloud' to share with the community (Fig 11.2a).

DELETE YOUR SAVED THEME

Step 1 – Click "DELETE" on the line of the theme you want to delete from your saved theme list (Fig 11.2a).

COMMUNITY SHARED THEMES

Sometimes you may not feel as creative and would like to install a friend's or another virtual pilot's creation.

Figure 11.3 – Themes Tabs

Click on the "COMMUNITY SHARED THEMES" tab at the bottom of the Themes window to access the various uploaded themes.
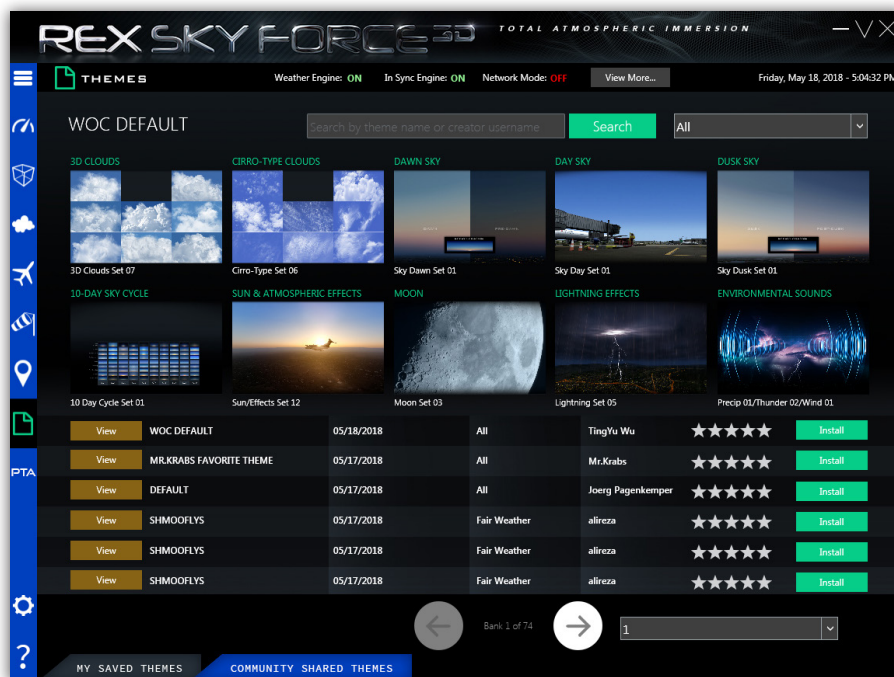
Figure 11.3a – Community Shared Themes Window

The Community Shared Themes window is very similar to the My Saved Themes window, but with some differences (Fig 11.3a).

SEARCH FOR A COMMUNITY SHARED THEME

You can search for a community shared theme by name or theme creator.

Figure 11.3b – Search Function of Community Shared Themes

Step 1 – *(Optional)* Type in a theme name or creator name, then click "SEARCH".

Step 2 – *(Optional)* OR use the drop-down to filter the list by category.
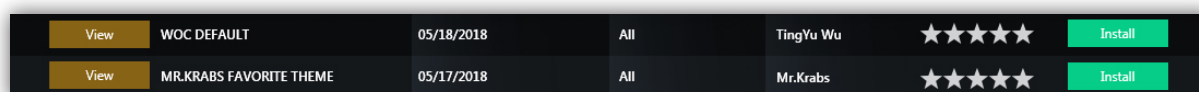
Figure 11.3c – View, Rate, and/or Install a Theme

VIEW THE CONTENTS OF A COMMUNITY THEME

Step 1 – Click "View" to display a preview of the community theme (Fig 11.3c).

AUTHOR'S NOTE: You may modify any theme texture set by clicking on a specific image preview. This will take you to that texture set to make your changes. Then you will need to click the "SAVE" button to save your newly modified theme.

RATE A COMMUNITY THEME

Step 1 – Click the appropriate star to rate a theme (Fig 11.3c).

INSTALL A COMMUNITY THEME

Step 1 – To install a community shared theme, click "INSTALL" (Fig 11.3c). This procedure will immediately install the content of that theme into your simulator.

PAGING THROUGH MULTIPLE COMMUNITY THEMES
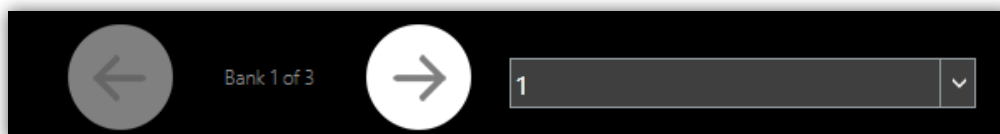
Figure 11.4 – Community Bank Paging or Filter

To page through community themes, use the left/right arrow buttons to navigate (Fig 11.4), or use the drop-down to access a bank of community themes immediately.

REX SIMULATIONS

Settings

The following is a general overview of each setting and their functions provided within Sky Force (Fig 12.0).

Figure 12.0 – General Settings Window

| SETTING	FUNCTION	REQUIRED
Flight Simulator Folder Location	This is where you select your default simulator and main folder location.	Yes
Backup / Restore Configuration Settings	This is where you manually backup your current configuration settings or manually restore you last configuration settings, saved themes, and flight plans.	Yes
Enable application sounds	This turns on/off sounds within the application. IMPORTANT: Does not affect sounds within the simulator.	No
Enable community notifications	This turns on/off notifications of new community themes or flight plans uploaded to the REX 'Cloud'.	No
Enable internal logging	This turns on/off internal logging of files that are being moved between Sky Force and the simulator. This is helpful for debugging possible errors.	No
Enable auto-backup at closing	This turns on/off the auto backup function of the current saved themes list, flight plans, and configuration settings.	No
Enable network usage	This turns on/off the feature to set the Sky Force weather engine into a network setup mode.	No
Enable quick start pop-up	This turns on/off the Quick Start pop-up window at start up of Sky Force.	No
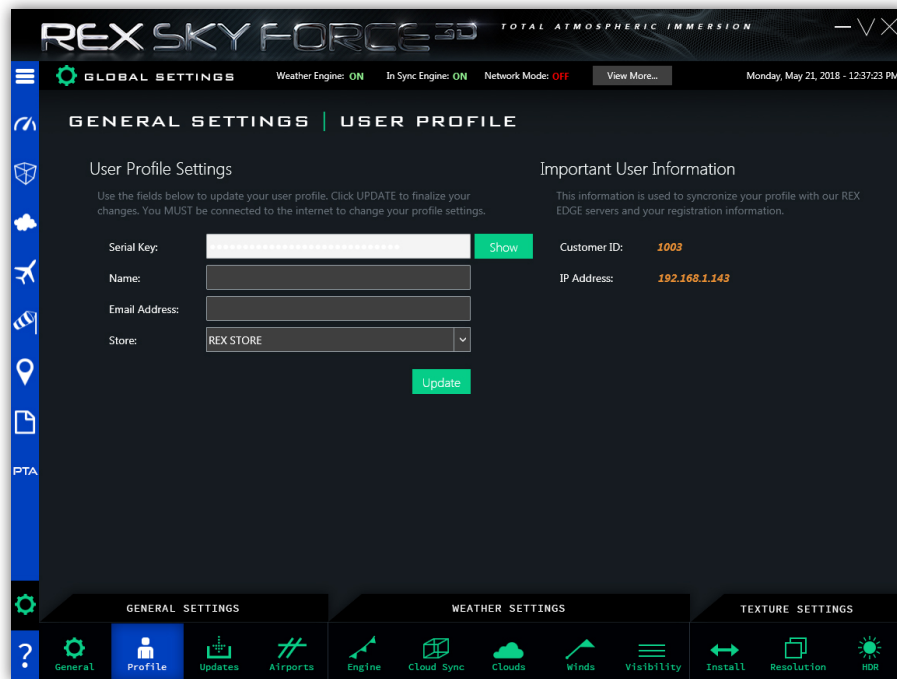
Figure 12.1 – Profile Settings Window

SETTING	FUNCTION	REQUIRED
Serial Key	This is the serial key that you received after purchase. This serial key is locked to your account only.	Yes
Name	This is your user name, and is locked to your account profile and serial key.	Yes
Email Address	This is your email address, and is locked to your account profile and serial key.	Yes
Store	This is the store where you purchased REX Sky Force, and is locked to your account profile and serial key.	Yes

IMPORTANT NOTE: You may only make changes to the Name, Email, and Store fields on this window and update them on our servers. These changes will be associated with the serial key you received. Please review EULA for licensing policies.

Figure 12.2 – Updates Setting Window

SETTING	FUNCTION	REQUIRED
Enable auto update at startup	This turns on/off the ability to start the download and update process of the application at startup.	No
Enable update notification	This turns on/off the notification at start up to alert of a new update for the application.	No
Update manually	This will cause the application to check the REX Edge servers for any new application updates available.	No

Figure 12.3 – Favorite Airports Management Window

SETTING	FUNCTION	REQUIRED
Add Button	This enables you to add a new airport to your favorite airport list.	No
Delete Button	This deletes the corresponding airport from your favorite airport list.	No
Default Button	This allows the selected airport to be displayed by default on the main WEATHER screen.	No

12.4 – Weather Engine Settings Window

SETTING	FUNCTION	REQUIRED
Enable REX Sky Force Weather Engine	Turning this on/off will enable/disable the REX weather engine injection process into the flight simulator.	No
Enable in-sim weather briefings	Turning this on/off will enable/disable detailed textual weather briefings while in-sim.	No
Enable audible weather briefings	Turning this on/off will enable/disable detailed audible weather briefings while in-sim.	Requires Enable In-Sim Weather Briefings to be enabled.
Enable auto-load flight plan	Turning this on/off will enable/disable the ability for Sky Force to automatically load the flight plan into the simulator. NOTE: This does not work with FSX Steam.	No
Enable convert to Fahrenheit and inches in mercury	Turning this on/off will enable/disable all temperatures and pressure to be reported in F and IN.	No
Enable in-sim green bar alert	Turning this on/off will enable/disable the green bar alert of the weather injection process while in-sim.	No
Enable minimum altitude injection limit	Turning this on/off will enable/disable the weather injection process above a minimum altitude.	Dependent upon the weather engine being enabled.

Figure 12.5 – Cloud Model Sync Setting Window

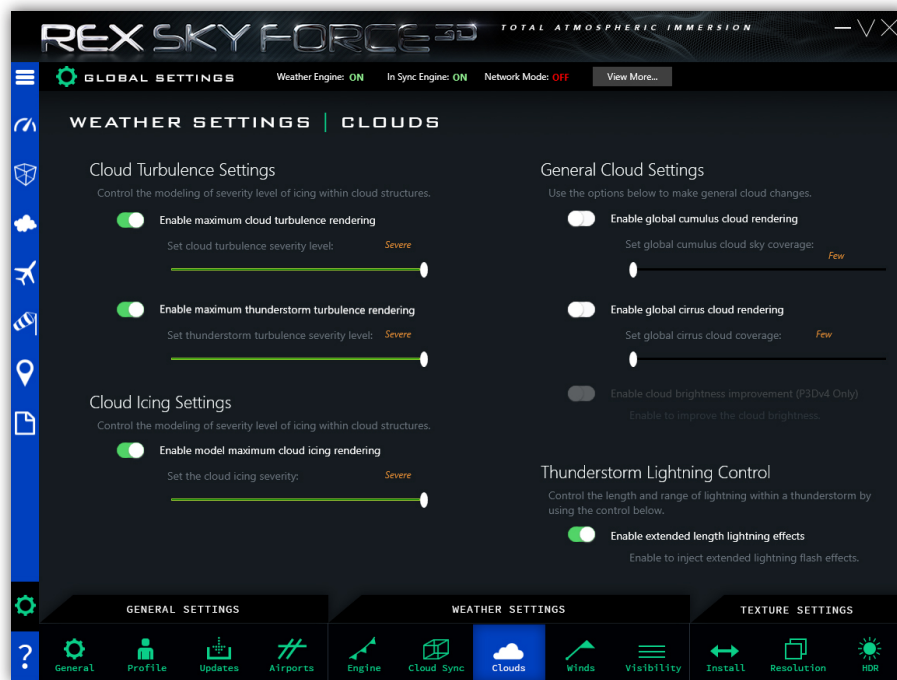| SETTING	FUNCTION	REQUIRED
Enable real-time 3D cloud model (structures) sync mode and texture sync.	Turning this on/off will enable/disable the means to sync cloud models in real-time while in-sim.	No
Sync rain shaft renderings	Turning this on/off will enable/disable the ability for the engine to sync cloud models with rain shafts.	REX Sync Engine Required
Sync super cell thunderstorm renderings	Turning this on/off will enable/disable the ability for the engine to sync supercell thunderstorm cloud models.	REX Sync Engine Required
Sync tornado cloud renderings	Turning this on/off will enable/disable the ability for the engine to sync cloud models with various tornado formations.	REX Sync Engine Required
Sync roll cloud renderings	Turning this on/off will enable/disable the ability for the engine to sync roll could formations.	REX Sync Engine Required

Figure 12.6 – Cloud Setting Window

SETTING	FUNCTION	REQUIRED
Enable maximum cloud turbulence rendering	Turning this on/off will enable/disable the maximum level of turbulence within clouds.	REX Weather Engine Required
Enable maximum thunderstorm turbulence rendering	Turning this on/off will enable/disable the maximum level of turbulence within thunderstorm clouds.	REX Weather Engine Required
Enable model maximum cloud icing rendering	Turning this on/off will enable/disable maximum icing levels within cloud structures.	REX Weather Engine Required
Enable global cumulus cloud rendering	Turning this on/off will enable/disable a global cumulus field outside of the weather injection region.	REX Weather Engine Required
Enable global cirrus cloud rendering	Turning this on/off will enable/disable a global cirrus field outside of the weather injection region.	REX Weather Engine Required
Enable extended length lightning effects	Turning this on/off will enable/disable the length which the lightning shows during thunderstorms.	No

Figure 12.7 – Wind Settings Window

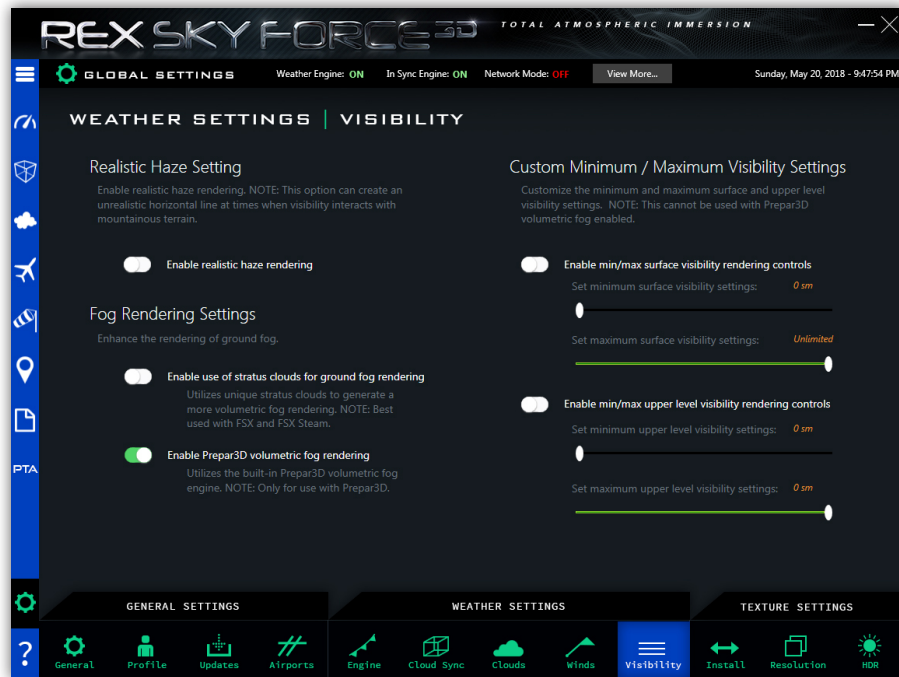| SETTING	FUNCTION	REQUIRED
Enable wind turbulence rendering	Turning this on/off will enable/disable setting maximum levels of wind turbulence.	REX Weather Engine Required
Enable wind shear rendering	Turning this on/off will enable/disable setting maximum levels of wind shear.	REX Weather Engine Required

Figure 12.8 – Visibility Settings Window

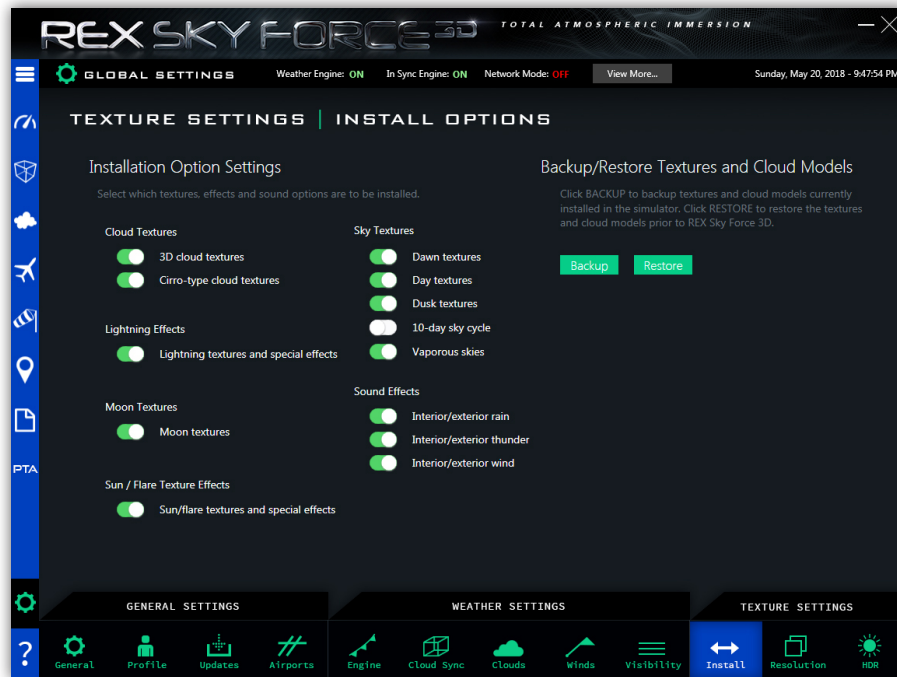| SETTING	FUNCTION	REQUIRED
Enable realistic haze rendering	Turning this on/off will enable/disable the haze effect in the simulator. However, this will cause a harsh line in the mid to upper atmosphere.	No
Enable use of stratus clouds for ground fog rendering	Turning this on/off will enable/disable the use of stratus clouds to render ground fog.	REX Weather Engine Required
Enable Prepar3D volumetric fog rendering	Turning this on/off will enable/disable the ability for fog to be rendered properly by the REX weather engine for Prepar3D only.	REX Weather Engine Required
Enable min/max surface visibility rendering controls	Turning this on/off will enable/disable the ability to set the minimum/maximum levels for surface visibility.	REX Weather Engine Required
Enable min/max upper level visibility rendering controls	Turning this on/off will enable/disable the ability to set the minimum/maximum levels of upper-level visibility.	REX Weather Engine Required

Figure 12.9 – Install Texture Settings Window

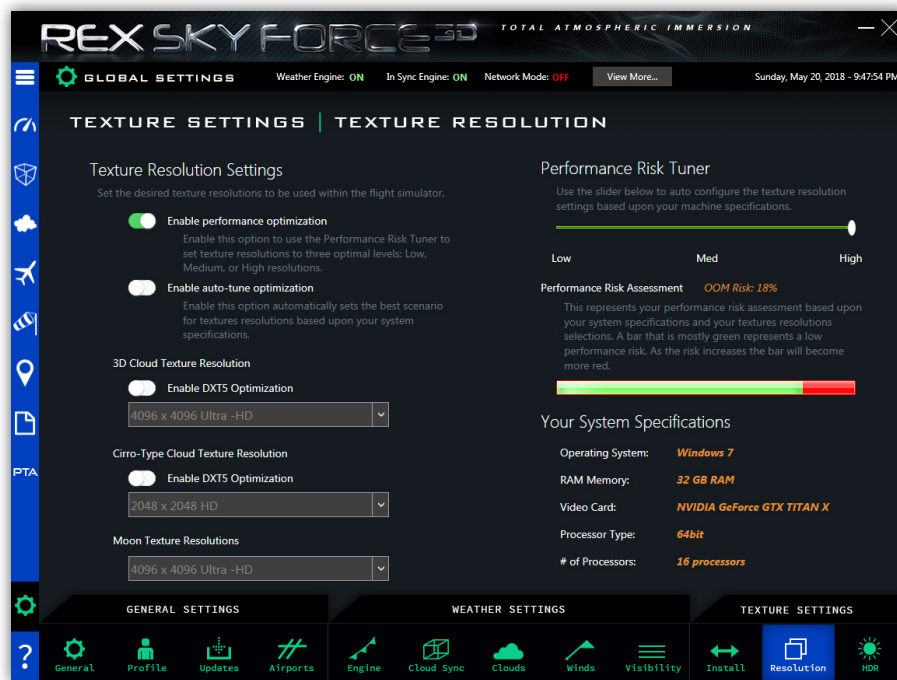| SETTING	FUNCTION	REQUIRED
Install Options Settings	Turning on/off the various texture options will enable/disable the ability for the textures to be installed into the simulator.	No
Backup / Restore Textures and Cloud Models	Clicking the Backup button will manually backup the current textures and cloud models from your flight simulator. Clicking the Restore button will manually restore your textures and cloud models to your flight simulator from the backup that was created.	No

Figure 12.10 – Texture Resolution Settings Window

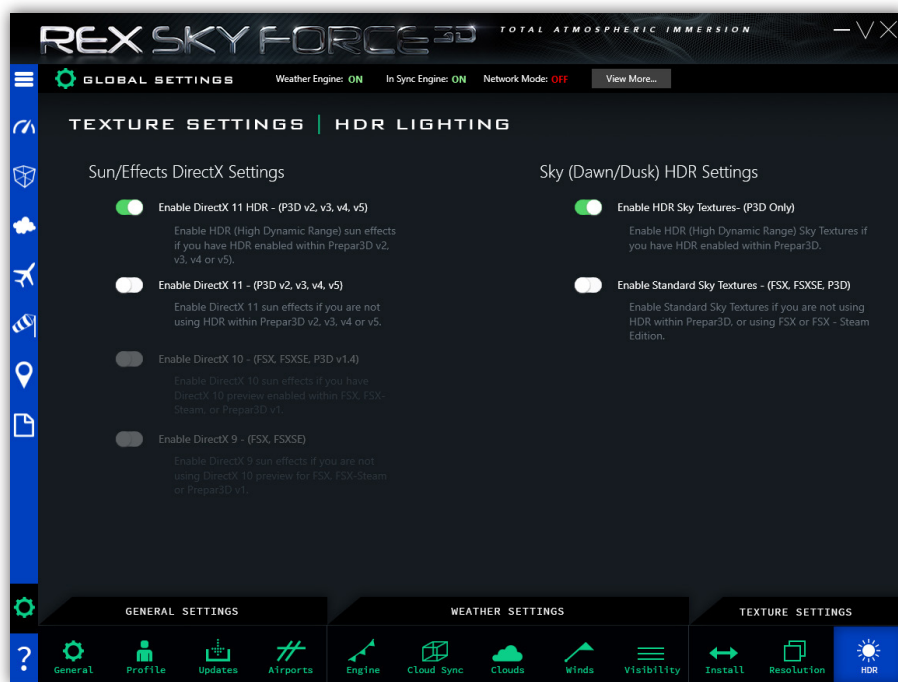| SETTING	FUNCTION	REQUIRED
Enable performance optimization	Turning this on/off will enable/disable the ability for Sky Force to allow you to fine tune your Performance Risk by using the slider to the right.	No
Enable auto-tune optimization	Turning this on/off will enable/disable the ability for Sky Force to automatically determine and set the best settings for Texture resolutions based upon your computer specifications.	No
Enable DXT 5 Optimization	Turning this on/off will enable/disable the ability to install DXT5 optimized 3D Clouds and Cirro-Type Cloud textures.	No

Figure 12.11 – HDR Settings Window

| SETTING	FUNCTION	REQUIRED
Enable DirectX 11 HDR	Turning this on/off will enable/disable the ability to install Direct X 11 HDR textures into the simulator.	P3D v2, v3, v4+
Enable DirextX 11	Turning this on/off will enable/disable the ability to install DirectX 11 textures into the simulator.	P3D v2, V3, V4+
Enable DirectX 10	Turning this on/off will enable/disable the ability to install DirectX 10 textures into the simulator.	ALL
Enable DirectX 9	Turning this on/off will enable/disable the ability to install DirectX 9 textures into the simulator.	FSX, FSXSE
Enable HDR Sky Textures	Turning this on/off will enable/disable the ability to install HDR sky textures.	P3D
Enable Standard Sky Textures	Turning this on/off will enable/disable the ability to install standard sky textures.	ALL

Important Simulator Settings

Cloud Detail is the single most important setting in regards to cloud visuals. If **Simple clouds** is checked ON within the simulator, the simulator will NOT correctly utilize the REX texture and cloud SDK. **Select Detailed clouds for full functionality!**

The **Cloud coverage density** slider presents a VERY important roll in terms of visuals. Below is a visual demonstration of what each setting represents. Each screenshot represents the same exact weather, the only difference is the **Cloud coverage density** slider setting.

IMPORTANT NOTE: Since the Sky Force 3D cloud models have been highly optimized, you can use full density settings with little to no affect.
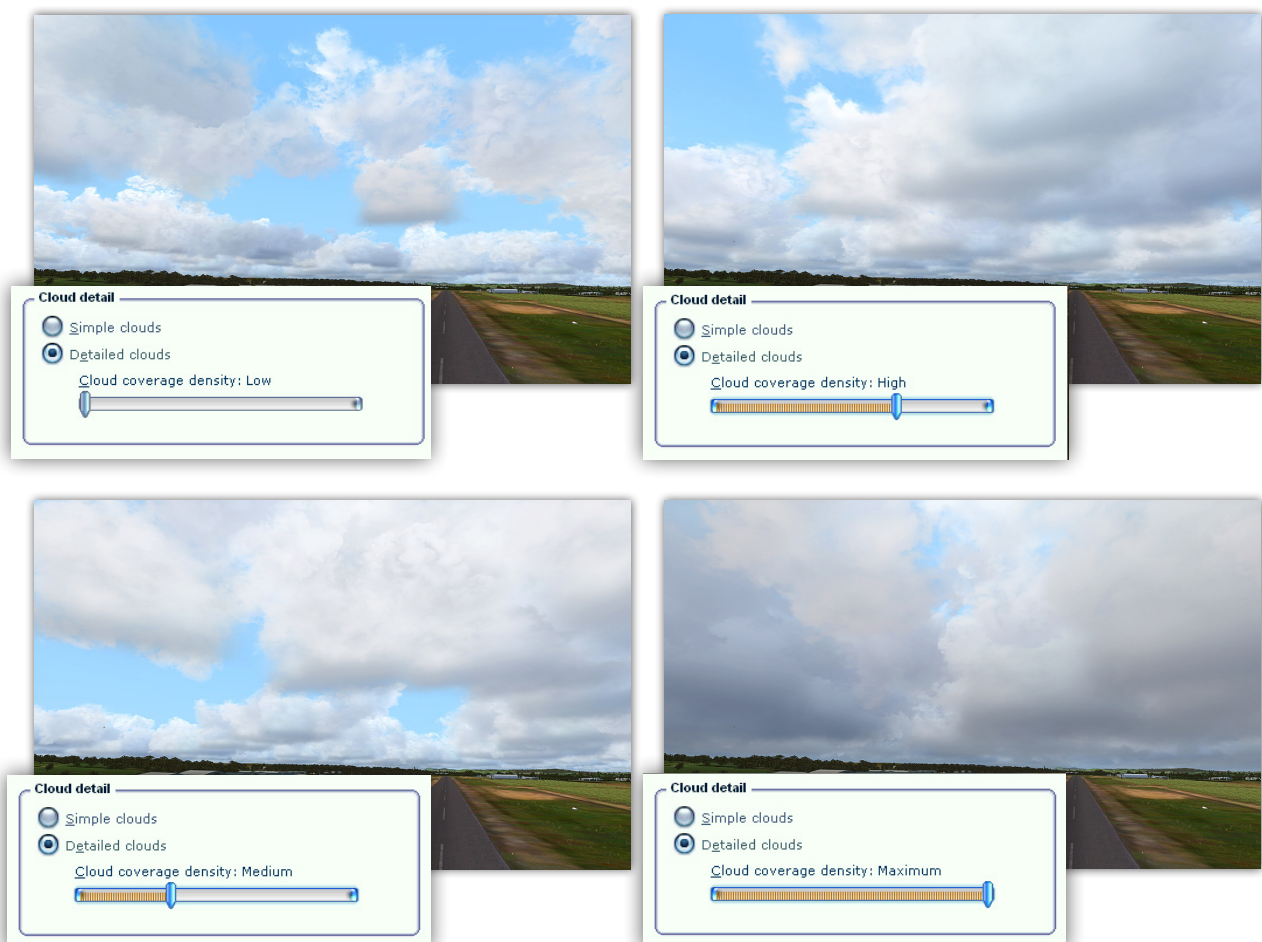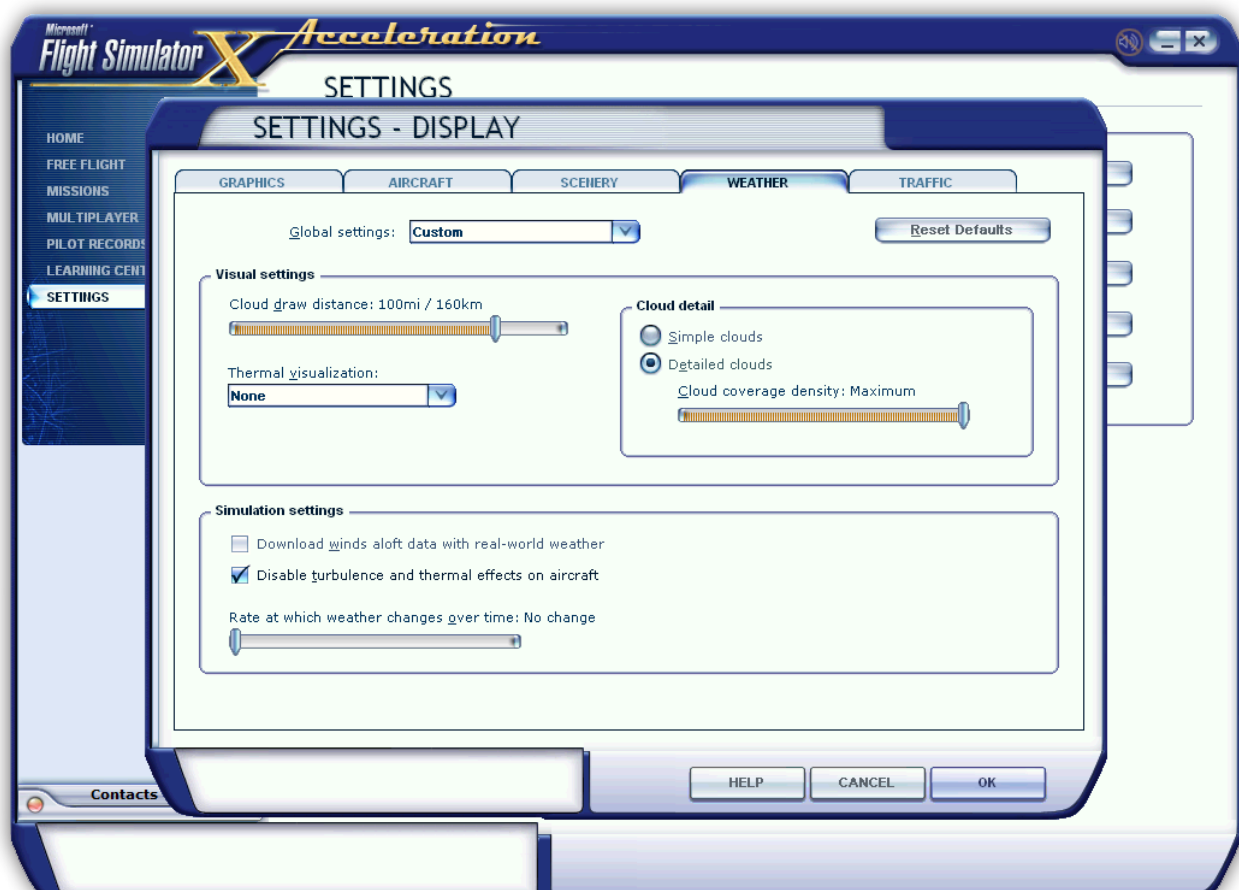
The most critical settings within FSX in regards to REX interaction is the SETTINGS / DISPLAY / WEATHER screen.
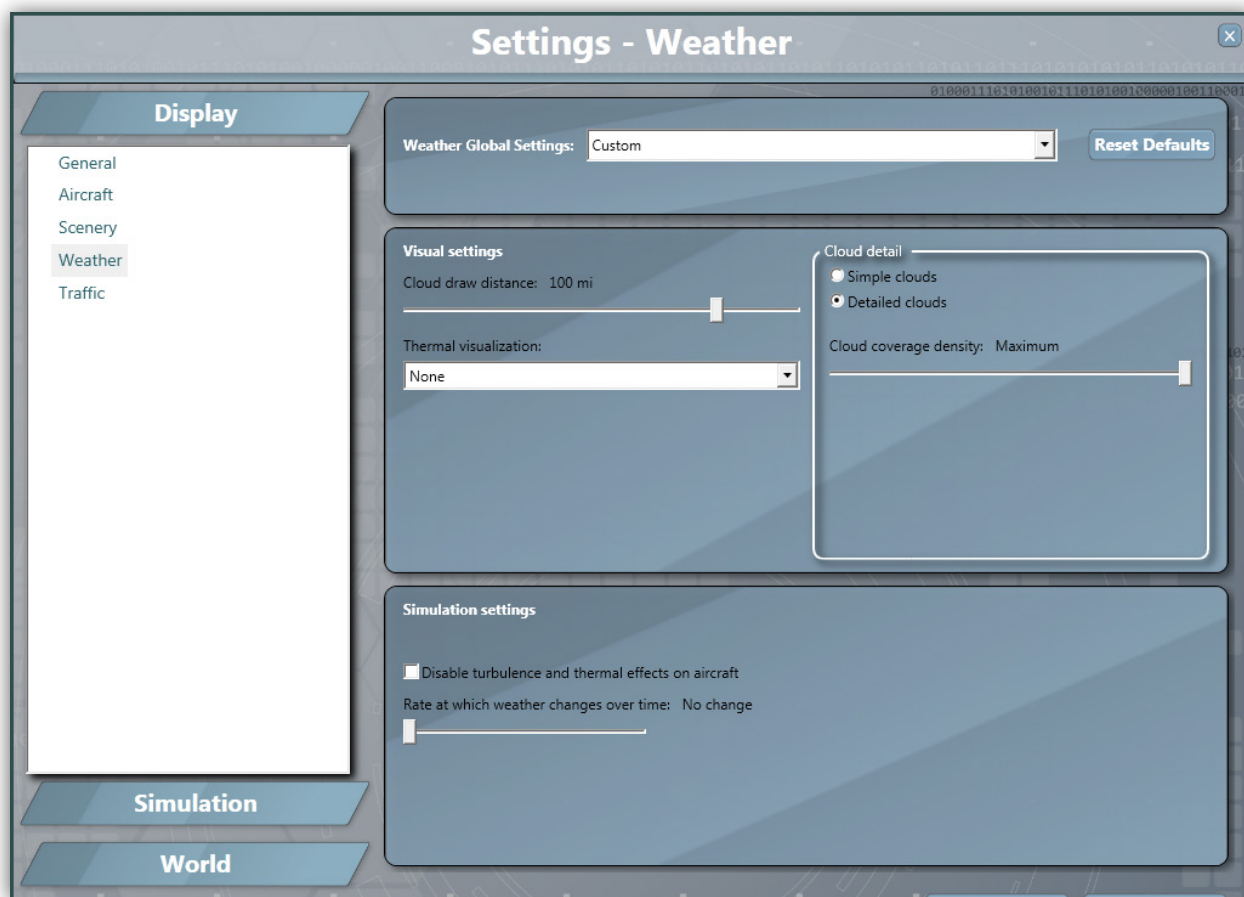
We recommend the following settings:

Cloud draw distance instructs FSX how far to draw clouds. If the setting is set to full-right (110mi), the cirrus clouds will appear cut-off in the distance. Backing this off to 100mi will rectify this issue, still giving a great distance to view clouds.

Cloud Detail is the single most important setting in regards to cloud visuals. If **Simple clouds** is checked ON within the simulator, the simulator will NOT correctly utilize the REX texture and cloud SDK. **Select Detailed clouds for full functionality!**

The **Cloud coverage density** slider presents a VERY important roll in terms of visuals. Page 75 displays a visual demonstration of what each setting represents. Each screenshot represents the same exact weather, the only difference is the **Cloud coverage density** slider setting.

IMPORTANT NOTE: Since the Sky Force 3D cloud models have been highly optimized, you can use full density settings with little to no affect.

The most critical settings within Prepar3D v.1 in regards to REX interaction is the SETTINGS/DISPLAY/WEATHER screen.

We recommend the following settings:

Cloud draw distance instructs Prepar3D how far to draw clouds. If the setting is set to full-right (110mi), cirrus clouds will appear cut-off in the distance. Backing this off to 100mi will rectify this issue while still giving a great distance to view clouds.

Cloud Detail is the single most important setting in regards to cloud visuals. If **Simple clouds** is checked ON within the simulator, the simulator will NOT correctly utilize the REX texture and cloud SDK. **Select Detailed clouds for full functionality!**

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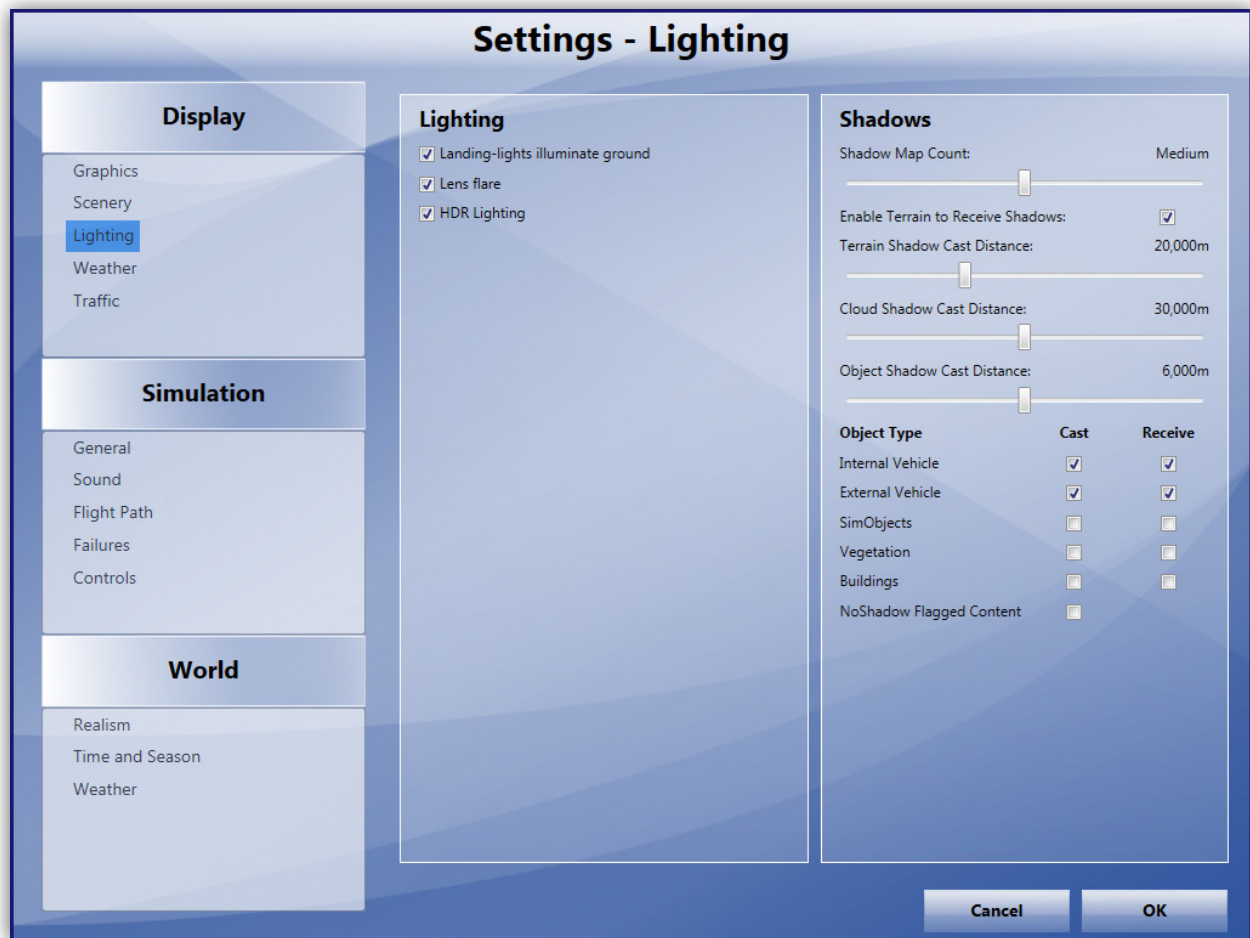
REX SIMULATIONS

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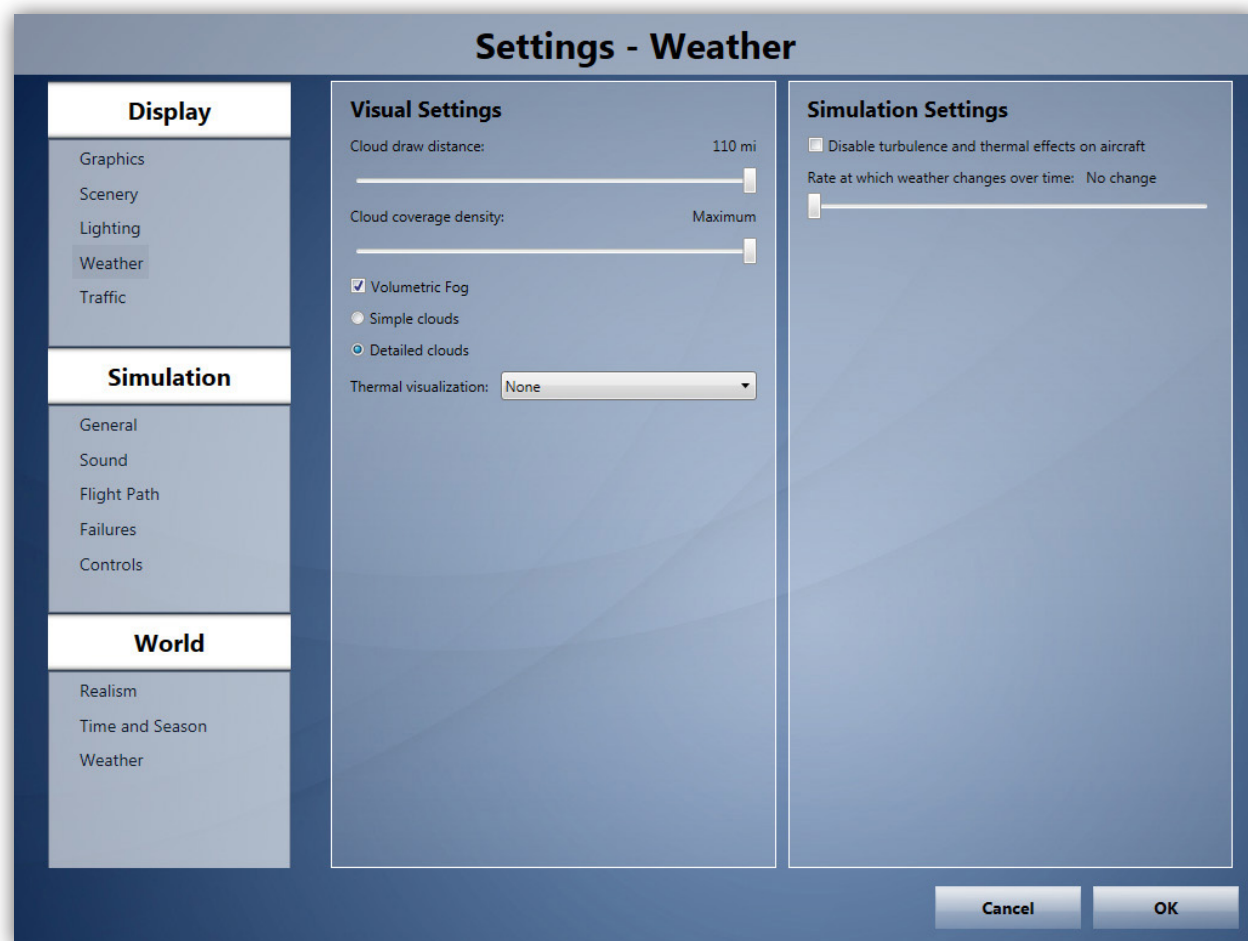
IMPORTANT NOTE: Since the Sky Force 3D cloud models have been highly optimized, you can use full density settings with little to no affect.

HDR Lighting - Whether to use HDR lighting is down to user choice, however make sure to use the **HDR Textures** option in REX when using HDR.

Lens Flare - Whether to display the lens flare is down to user choice, we strongly advise turning this option **ON** to experience the enhanced realism of the REX atmospheric effects.
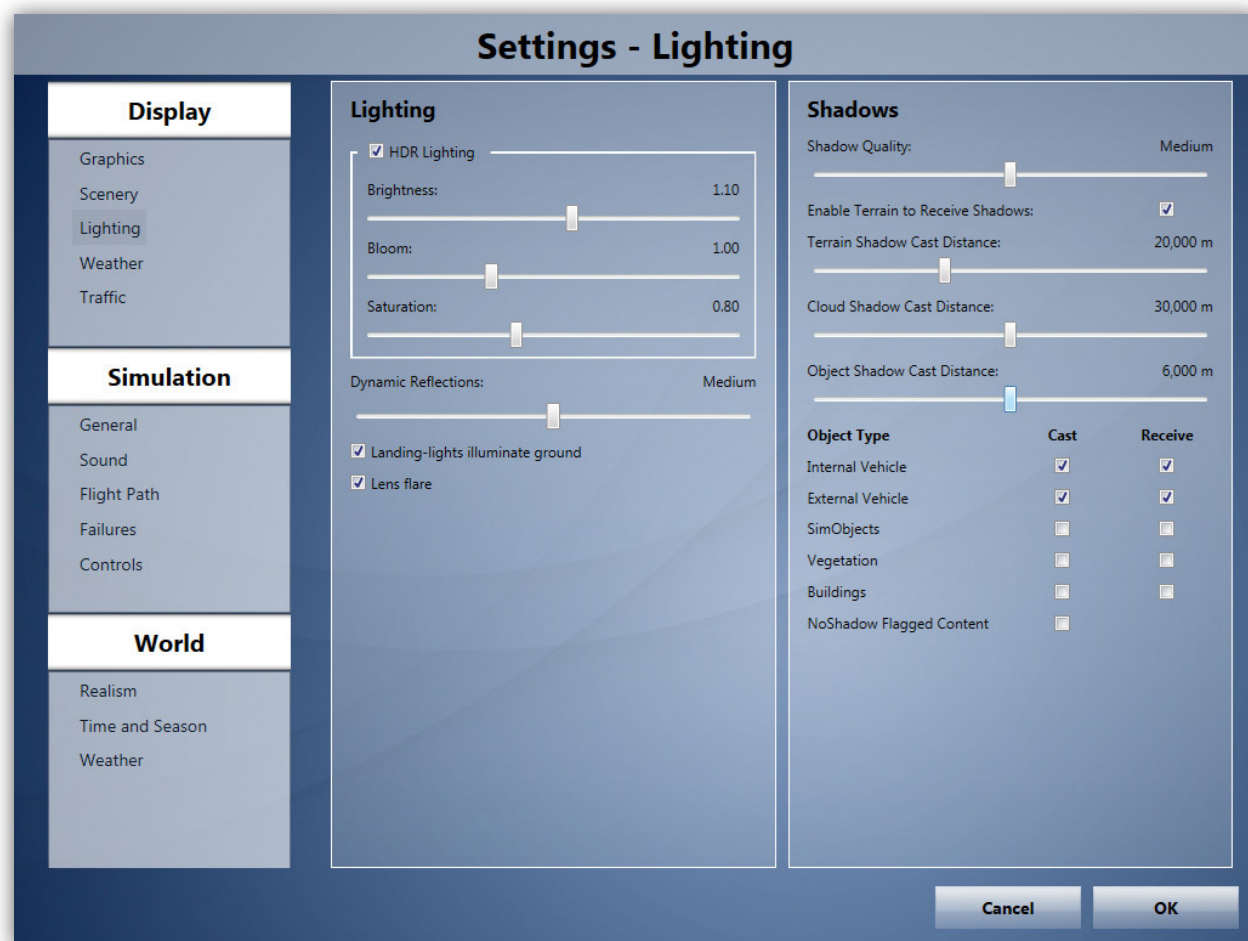
We recommend the following settings:

Detailed Clouds is the single most important setting in regards to cloud visuals. If **Simple Clouds** is checked ON, the simulator will NOT correctly utilize the REX texture and cloud SDK. **Select Detailed Clouds for full functionality!**

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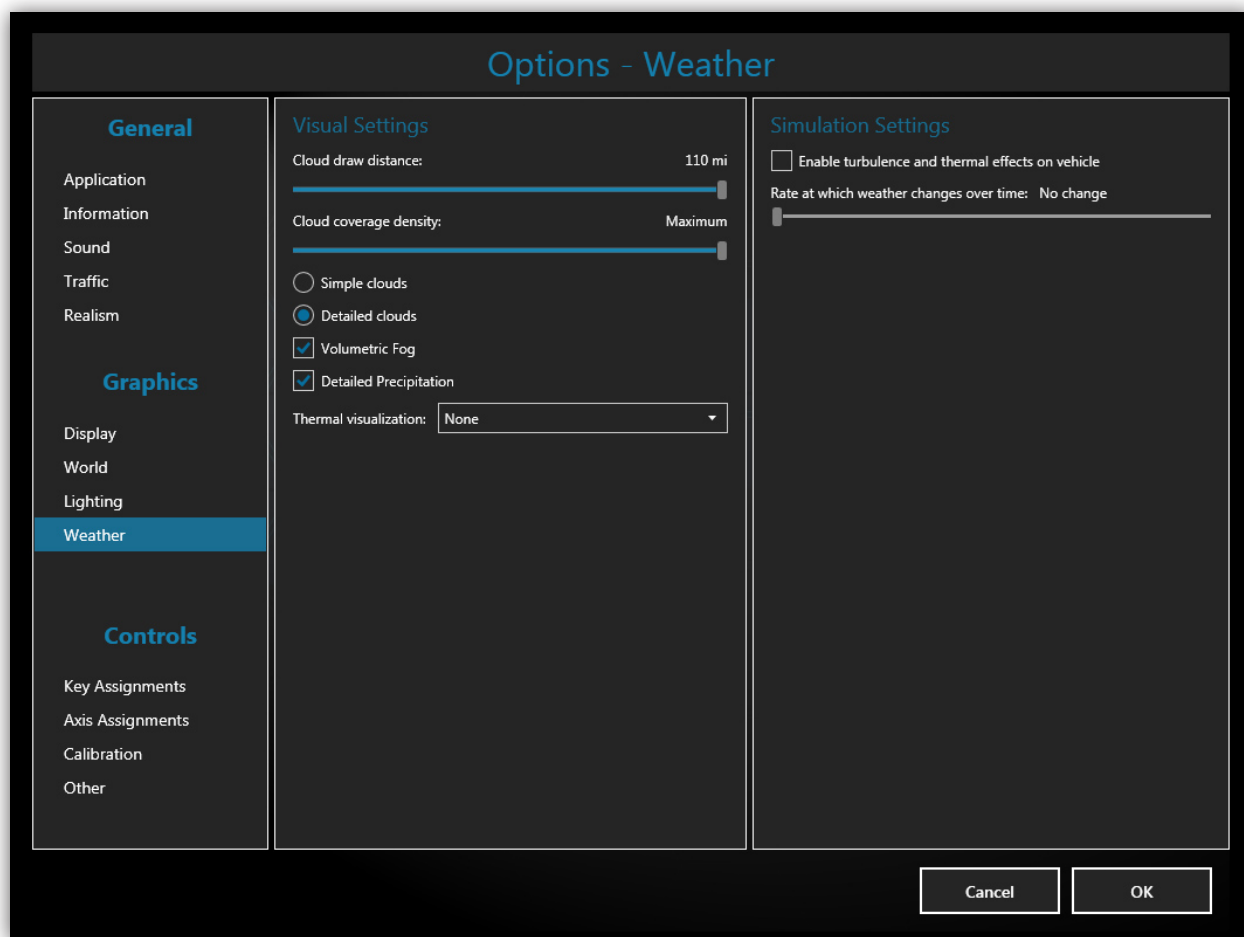
IMPORTANT NOTE: Since the Sky Force 3D cloud models have been highly optimized, you can use full density settings with little to no affect.

HDR Lighting - Whether to use HDR lighting is down to user choice, however make sure to use the **HDR Textures** option in REX when using HDR.

Lens Flare - Whether to display the lens flare is down to user choice, we strongly advise turning this option **ON** to experience the enhanced realism of the REX atmospheric effects.

**We recommend the following settings:**

Detailed Clouds is the single most important setting in regards to cloud visuals. If **Simple Clouds** is checked ON, the simulator will NOT correctly utilize the REX texture and cloud SDK. **Select Detailed Clouds for full functionality!**

The **Cloud coverage density** slider presents a VERY important roll in terms of visuals. Page 75 displays a visual demonstration of what each setting represents. Each screenshot represents the same exact weather, the only difference is the **Cloud coverage density** slider setting.

IMPORTANT NOTE: Since the Sky Force 3D cloud models have been highly optimized, you can use full density settings with little to no affect.

IMPORTANT NOTE: Volumetric fog must be checked ON. P3D4 has an inherent flaw with Volumetric Fog turned OFF and will force zero visibility sky textures, and you will not experience any color in the skies.
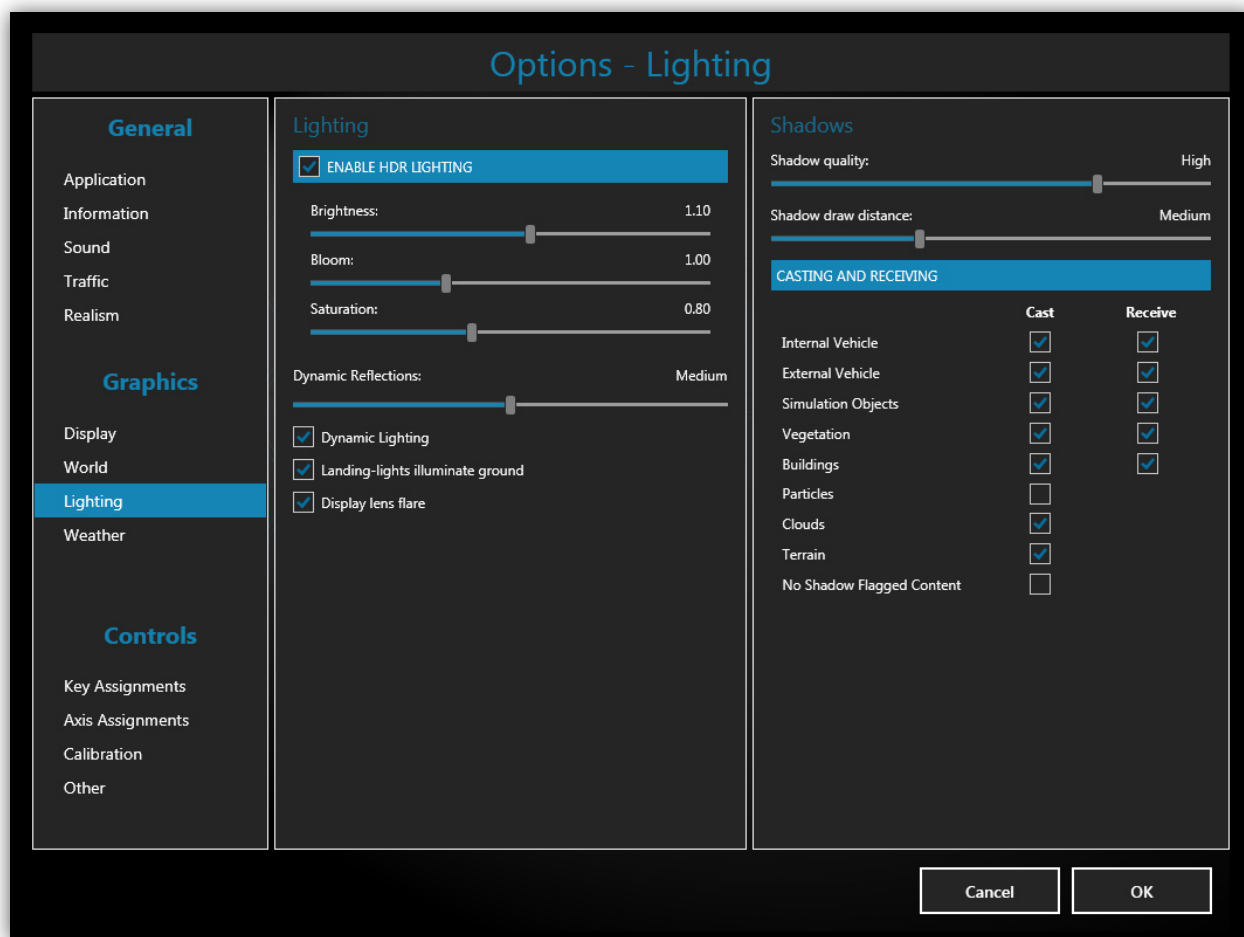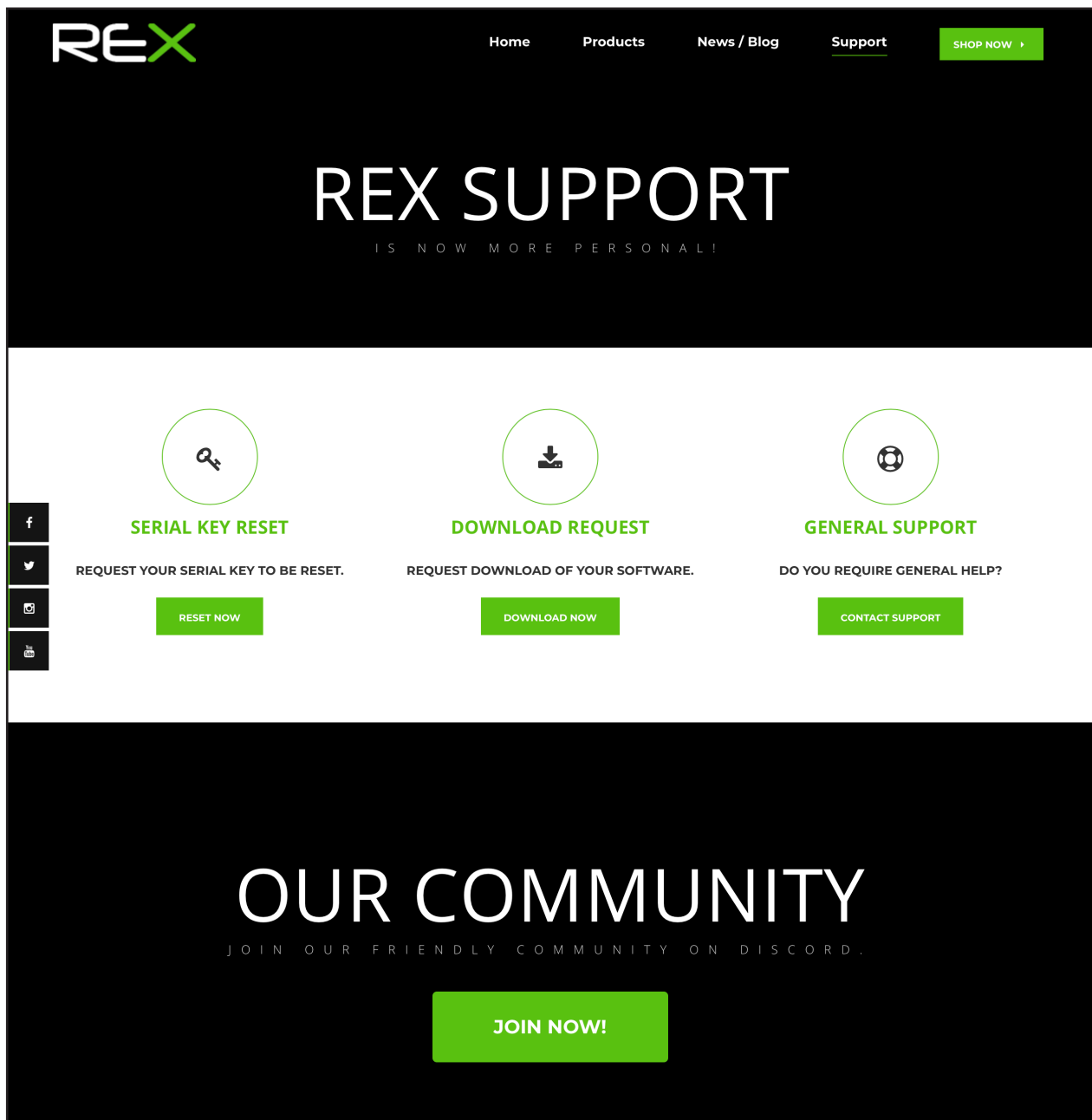
Lighting - Whether to use HDR lighting is down to user choice, however we advise using the **HDR Textures** option in REX when selecting this option ON.

Display Lens Flare - Whether to display the lens flare is down to user choice, we strongly advise turning this option **ON** to experience the enhanced realism of the REX atmospheric effects.

Support and Assistance

For product support, please visit our support page:
http://rexsimulations.com/support.html

EULA

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