Q400 Immersion

USER MANUAL

V. 001

Thank you

First and foremost, thank you for purchasing Q400 Immersion. Lots of passion and hardship went into this project to develop a one-of-a-kind product. We hope you will have as much amazement and fun as we had developing the product. What follows is a comprehensive explanation guide of what is included in this package, along with the conditions in which the effects are displayed. Enjoy your beautiful flights with Q400 Immersion!

Table of Content

vfx central

VFX Central is the best solution for Activating, Installing and Managing our products. It launches in parallel to your simulator to check for any changes made to the configuration, fixing potential issues on the fly so that everything is working on your next takeoff. The application also updates itself without any user interaction, so you can focus on what really matters in the cockpit!

Adding a product

To add a product, simply click the "ACTIVATE A SERIAL NUMBER" tile in the products grid of VFX Central. You can also do the same on the website.

Automatic Launch with your simulator

VFX Central will check the integrity of supported products when it is launched with your simulator. You can change you simulator configuration by going in the Preferences menu of VFX Central.

Automatic Updates

VFX Central will check and install updates automatically. You will be notified once a new update was installed.

Compatibility

Supported models

For now, Q400 Immersion is compatible exclusively with the Majestic Software MJC8 Q400 available on the Majestic Software website (majesticsoftware.com).

Compatibility with other Add-ons

This package works with other FSFX Packages products including PrecipitFX. It also works with common add-ons like Active Sky Next, ORBX products, REX products, FS2Crew products, common custom airports/ sceneries and texture replacement packages.

Installing custom touchdown or contrails effects on a generic scale should not affect your Q400 Immersion installation.

DirectX 10 (FSX)

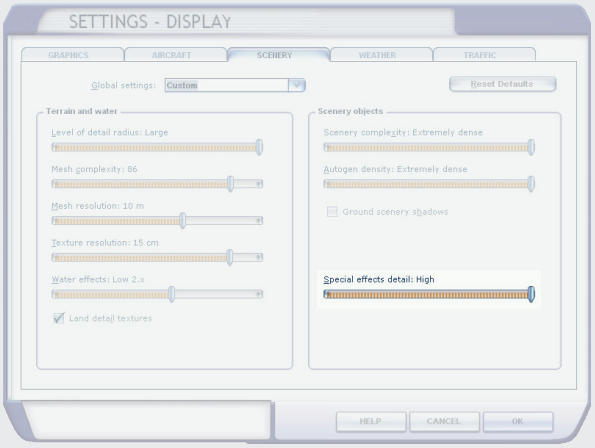
This package fully supports FSX in DirectX10 mode without conversions.

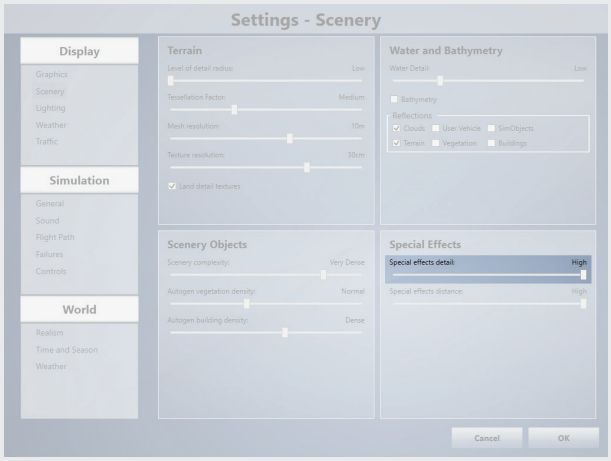
Optimal Settings (1/2)

Special Effects Slider

To ensure every effects are displayed as they are intended to, make sure the Special Effects Detail slider in the Scenery tab is set to High in Flight Simulator X or Prepar3D v2, v3 settings.

Setting this slider otherwise, some effects might look dim, or even invisible.





Anti-aliasing and screen resolution

Anti-Aliasing and screen resolution are important factors affecting the performance of your sim, specifically when visual effects are visible close to the camera. Make sure you tune those to balance your need.

Optimal Settings (2/2)

DirectX 10 (FSX)

Using DirectX 10 in FSX will result in much smoother volumetric lighting.

HDR (P3D v2, v3)

Using HDR in P3D v2 and v3 will result in much smoother and brighter volumetric lighting.

Weather presets

Weather engines

To make your life easier, we compiled a list of METARs you can use to see various effects bundled in this package. You can replicate them in your Simulator's build-in weather engine or in any other third-party weather engine.

Cold Weather

GLOB 000000Z 12010KT 2SM -SN SCT030 **M30**/M34 A3015

In these conditions, you will be able to see low-level contrails after takeoff and cold start smoke when starting the engines.

Low Visibility

GLOB 000000Z 00000KT **1/2SM** FG BKN018 OVC050 13/13 A2961

Low visibility will trigger volumetric lighting effects at dusk, night and dawn. This weather is often linked with saturated, slow moving air. You might also see various condensation effects with this weather.

Performance

Our tests

Q400 Immersion has been tested by several people using various hardware configurations. We developed each effect with the balance of quality and performance in mind. We always made certain the performance impact would be as minimal as possible. The VAS footprint is also very low, less than 5MB. Textures are compressed, and are no larger than necessary.

Limitations

Effects will not show if the aircraft is loaded from a Saved Flight.

Effects may not function properly if the aircraft is loaded from a Saved Flight. Make sure you start a new flight with the Majestic Q400 to see the effects as intended.

Effects will not show if all engines are shutdown.

The technique used to display effects around the aircraft depends on the airplane's smoke system which does not work when all engines are off. This is a Flight Simulator limitation.

Effects are not visible during instant replay.

Flight Simulator X's replay system is very limited and does not allow the replay of advanced effects systems. A great solution is to use FSRecorder (http://www.fs-recorder.net) with the smoke replay option turned off.

Effects physics might be wrong in some situations.

The Majestic Software Q400 uses a custom, external flight model.
Some effects may show incorrectly during takeoff after rotation.
For this reason, we labeled the propeller vortices effect as experimental.

Support

AVSIM Forums

User-to-user support is offered through our official AVSIM Forums.

http://www.avsim.com/forum/723-official-fsfx-packages-support-forum/

Customer support

Support is also offered on our website. Frequent issues are listed with solutions. If nothing suits you in this list, it is also possible to contact us through this page.

https://fsfxpackages.com/en/support/

Majestic Software

Majestic Software will not offer support for Q400 Immersion.

Visual Effects (1/3)

Contrails

Our contrails can be observed when the air is at very low temperatures, most of the time being at higher altitudes. With Q400 Immersion, contrails are visible even at low altitude when the temperature goes below -25*C (-13*F) or lower. Denser contrails can be observed up to -35*C (-31*F).

Wheels effects on wet and snow covered pavements

Landing gear tires effects on water and snow has been greatly enhanced. The effect will disperse water in case of rain, and leave dry marks on the ground behind the wheels. The intensity of the effect will gradually increase with an increase in airspeed.

Engine cold start smoke

Igniting the engine in a cold environment may cause a condensation vapor cloud to occur when the temperature is below -5*C (23*F). The colder it gets, the more the effect will show.

Engine Jet Wash Effects on Water and Snow

Engine jet wash effects can be seen under rain and snow conditions. These effects will change depending on the thrust applied to each engine. Custom water effects around the engines in Beta range are also included.

Visual Effects (2/3)

Volumetric lights

Volumetric taxi, flare and landing lights can be observed at dusk, night, and dawn when the visibility is lower than 5SM. The effects will be more pronounced when the visibility drops below 3/4 SM. Moreover, these lights are fading in when turned on and fading out when turned off, just like on the real aircraft.

Volumetric logo lights can be observed on the horizontal stabilizer at dusk, night, and dawn when the visibility is lower than 1/2 statute miles (SM).

Volumetric strobe lights can be observed on each wing, below and above the aircraft at dusk, night, and dawn when the visibility is lower than 1/2 statute miles (SM).

Volumetric navigation lights can be observed at the end of each wing at dusk, night, and dawn when the visibility is lower than 1/2 statute miles (SM).

Volumetric beacon lights can be observed as flashing red lights on the top and bottom of the fuselage at dusk, night, and dawn when the visibility is lower than 1/2 statute miles (SM).

Volumetric rain

Raindops are visible when passing in front of the landing lights and recognition lights. Above 20kts, lateral motion of the droplets will be observed.

Visual Effects (3/3)

Touchdown smoke

The touchdown effect is visible when the wheels come into contact with the runway pavement. The effect has been greatly enhanced to increase realism.

Propeller vortices (Experimental)

High speed propellers may produce condensation spirals when the air is saturated. Opacity of the effect will change depending on the blades' speed. Thrust physics have been disabled because of issues with the flight model.

Credits

Beta testers

Ryan Dunlop
Kevn (Noodz)
Dave Hodges
Simeon Richardson (Majestic Software)

Video producers

Jonah Snoei (youtube.com/user/JRSchiphol)

Effects development (visual & behavior)

Keven Ménard

VFX Central

Keven Ménard
Michaël Villeneuve-Normand

Documentation

Keven Ménard

Website & Server management

Keven Ménard
Michaël Villeneuve-Normand

Q400
Immersion