



# FS-FlightControl

## Manual

### **Instructor Operator Station**

for Microsoft Flight Simulator, Prepar3D and X-Plane



**FS-FlightControl · AB-Tools GmbH**

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# CONDITIONS

Define and save detailed custom weather conditions, enable real-time weather, set ILS visibility for all categories and set season, time and simulation rate.

## Current Weather

Current Weather Provided by Flight Simulator

Current METAR: **EDDM 061404Z 24005KT 210V270 9999 CLR 05/M07 Q1029**

Translated to Text:

☒ Show as Table

☒ Show Only Official METAR

**Location**

**Report Date and Time**

**Surface Wind**

**Visibility**

**Clouds**

**Temperature**

**QNH**

Weather station Munich, Munich, Germany (EDDM)

Thursday, February 6, 2020 at 14:04:00 UTC

With 5 kt from 240° true. Wind is varying between 210° and 270° true.

100,000.0 m in all directions

No clouds below 12,000 ft

5°C with a dew point of -7°C

1,029 hPa (mean sea level pressure)


Load in Custom Weather

Name:

Save as Weather Preset

In this section the current weather is displayed as METAR code and translated text.

You can choose if the translated text is displayed as continuous text or structured table. Additionally you can decide if all or only official weather METAR data is displayed.


 **Note:** The flight simulator uses the official METAR format, but extends it with additional extensions. FS-FlightControl can decode both, the official METAR data as well as the flight simulator extensions.

You can load the current weather into the **custom weather** section or save it as **weather presets**.

## Weather Themes



Here all themes that are available in the flight simulator are listed and can be activated with just one click.


 Note: This section does not appear if Active Sky is enabled as weather engine in the **Settings** module.

## Weather Mode for Active Sky Weather Engine

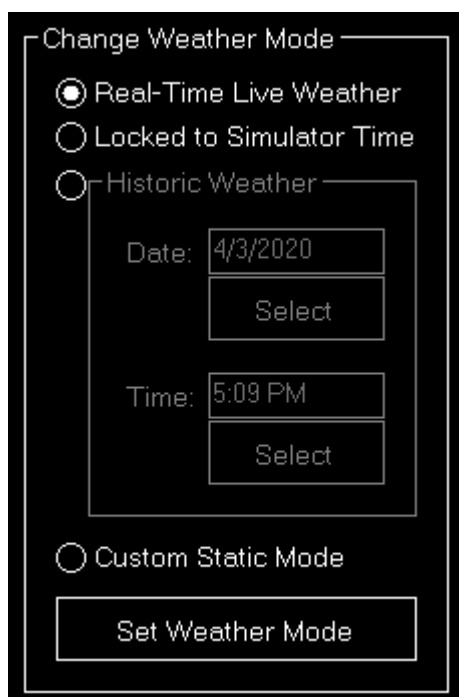


The screenshot shows a 'Weather Mode' settings panel. At the top, it says 'Current Weather Mode: Real-Time Live Weather'. Below this is a 'Change Weather Mode' section containing three radio buttons: 'Real-Time Live Weather' (which is selected), 'Locked to Simulator Time', and 'Historic Weather'. The 'Historic Weather' option is expanded, showing a 'Date' field with '4/3/2020' and a 'Time' field with '5:09 PM', each with a 'Select' button below it. At the bottom of the panel is a 'Custom Static Mode' radio button and a 'Set Weather Mode' button.

In this area you can see the current Active Sky weather mode and change it, too.

 Note: This section only appears if Active Sky is enabled as weather engine in the **Settings** module.

## Change Weather Mode



This screenshot is identical to the one above, showing the 'Change Weather Mode' panel. It highlights the three radio button options: 'Real-Time Live Weather' (selected), 'Locked to Simulator Time', and 'Historic Weather'. The 'Historic Weather' option is expanded, showing the date '4/3/2020' and time '5:09 PM' with 'Select' buttons. The 'Custom Static Mode' option and the 'Set Weather Mode' button are also visible at the bottom.

Select the desired weather mode here and set it with the button Set Weather Mode.

## Historic Dynamic Weather



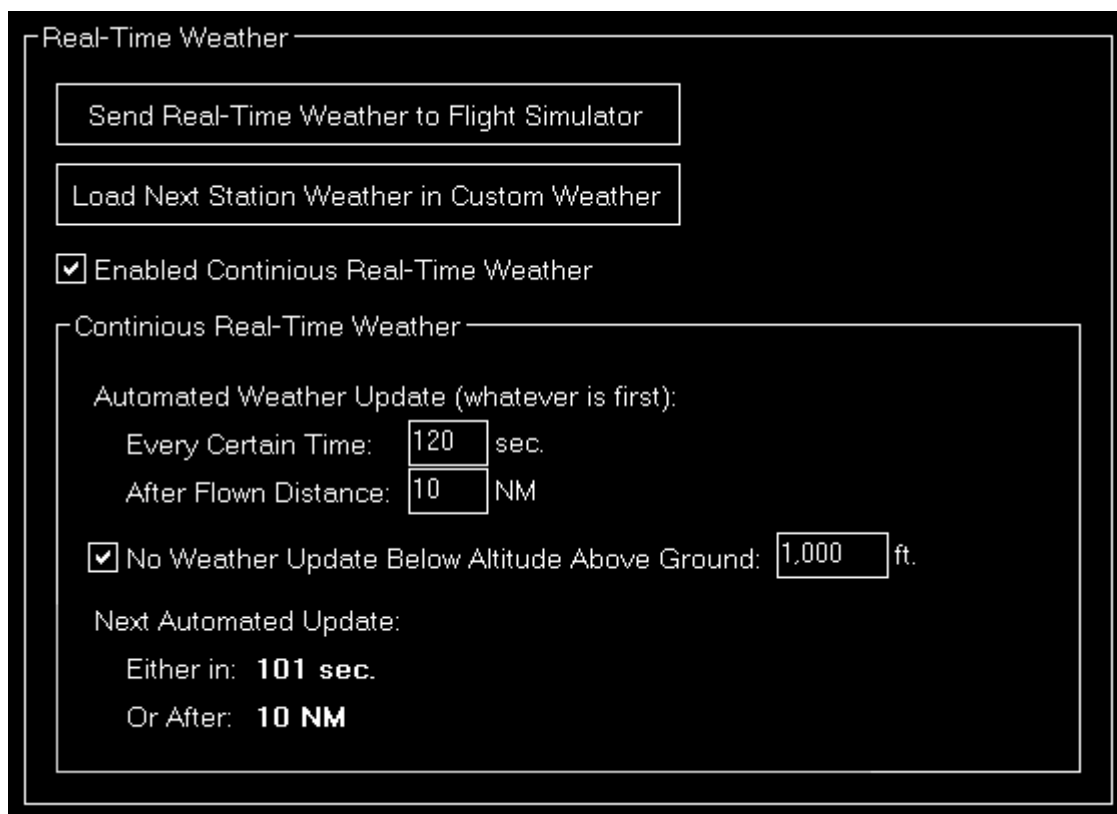
Historic Weather

Date:

Time:

If you have chosen the hisotoric dynamic weather mode you can set the historic date and time here.

## Real-Time Weather



Real-Time Weather

☒ Enabled Continious Real-Time Weather

Continious Real-Time Weather

Automated Weather Update (whatever is first):

Every Certain Time:  sec.

After Flown Distance:  NM

☒ No Weather Update Below Altitude Above Ground:  ft.

Next Automated Update:


Either in: **101 sec.**

Or After: **10 NM**

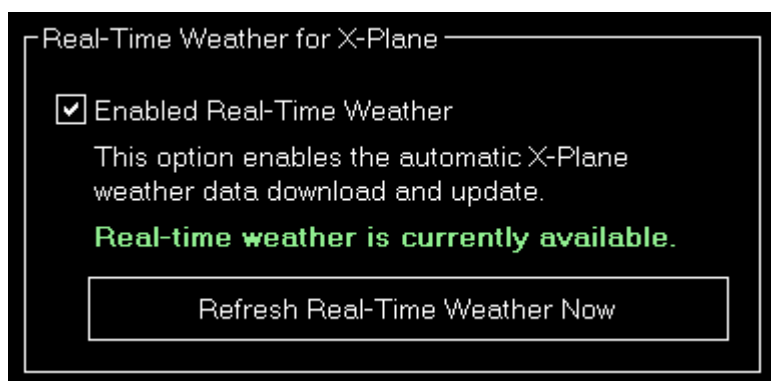
You have the option to enable real-time weather in this section.

Therefore you can either send the current real-time weather directly to flight simulator or load it into the **custom weather** section.

 Note: You can change the used real-time weather source in the **Settings** module.


 Note: This section does only appear if Prepar3D, FSX or FSW is selected as simulator type and Active Sky is not enabled as weather engine in the **Settings** module.

## Real-Time Weather for X-Plane

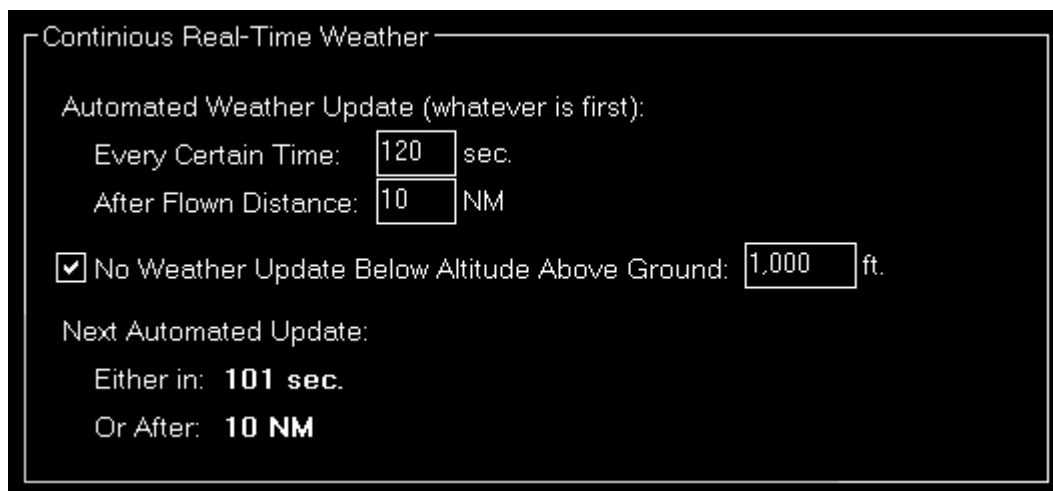


You have the option to enable real-time weather in this section.

Additionally you will see the current availability status of the real-time weather and you have the option to use the button Refresh Real-Time Weather Now to reload the weather at any time.

 Note: This section does only appear if X-Plane is selected as simulator type.

## Continous Real-Time Weather



To enable continues real-time weather just activate the corresponding check box. This will enable automated real-time weather updates for all weather stations around the current aircraft location.

You can choose how often this weather update should be performed by entering a certain time interval or a flown distance (or both).

Additionally you can define that automated weather updates should not be performed when the aircraft is below a certain altitude above ground. This makes sure that the pilot is not disturbed while doing a final approach.

Below that some information is displayed to show when the next automated weather update will be performed.

## Weather Effects for Active Sky Weather Engine

Weather Effects for Active Sky Weather Engine

Existent Weather Effects: Effect1 +

Weather Effect

General

Unique Identifier: Effect1

Effect Type: Thermal

Effect Intensity: 1,000 ft/min.

Effect Altitude

☒ Current Aircraft Altitude

☐ Custom MSL: 0 ft

Altitude Range: 1,000 ft

Send New Effect to Active Sky

Delete Effect Copy Effect

Effect Location

☒ At Current Aircraft Location

☐ Relative to Aircraft Location

Bearing: ☒ Aircraft Heading

☐ Custom: 0 °

Distance: 0 NM


☐ Absolute Location

0 N 0 0 "

0 E 0 0 "

Location Range: 10,000 ft

In this area you can create new and edit existent Active Sky weather effects.

 **Note:** This section only appears if Active Sky is enabled as weather engine in the **Settings** module.

## Weather Effect



**Weather Effect**

**General**

Unique Identifier:

Effect Type:

Effect Intensity:  ft/min.

**Effect Location**

☒ At Current Aircraft Location

☐ Relative to Aircraft Location

Bearing: ☒ Aircraft Heading  
☐ Custom:  °

Distance:  NM

☐ Absolute Location

"  
    "


Location Range:  ft

Send New Effect to Active Sky

Delete Effect Copy Effect

Here different options of the weather effect can be changed.

Use the button **Send New Effect to Active Sky** to active a new weather effect, the button **Delete Effect** to remove an existent one again and **Copy Effect** to create a duplicate of the current selected effect.

 **Note:** An already sent weather effect cannot be changed anymore. Please just duplicate it and then remove the old one.

## General

**General**

Unique Identifier:

Effect Type:

Effect Intensity:  ft/min.

First you can enter a name for the weather effect here and set the effect type as of

- Thermal
- Downdraft
- Updraft
- Turbulence
- Windshear

Then the effect intensity can be defined as vertical speed for thermal, downdraft and updraft effect types and as an intensity between 1 and 5 for the turbulence and windshear effect types.

## Effect Altitude

Effect Altitude

☒ Current Aircraft Altitude

☐ Custom MSL:  ft

Altitude Range:  ft

You can choose here if the current aircraft altitude should be used for the effect or you want to define an altitude (MSL) manually.

Additionally an altitude range can be set: So if you define, for example, an custom altitude of 10,000 ft and an altitude range of 1,000 ft the effect will be active between 9,500 and 10,500 ft.

## Effect Location

Effect Location

☒ At Current Aircraft Location

☐ Relative to Aircraft Location

Bearing: ☒ Aircraft Heading

☐ Custom:  °

Distance:  NM

☐ Absolute Location

N  °  "

E  °  "

Location Range:  ft

Select here if the effect should be placed at the current aircraft location, relative to the aircraft location or at a custom absolute location.

Additionally a location range can be set defining the radius around the location where the effect should be active.

### Relative to Aircraft Location

Relative to Aircraft Location

Bearing: ☒ Aircraft Heading  
☐ Custom:  °

Distance:  NM

If the effect should be placed relative to the aircraft location, you first need to choose if it should be place in the direction of the current aircraft bearing or in a custom direction.

Then you need to define the distance the effect should be placed away from the aircraft.

### Absolute Location

Absolute Location

<input type="text" value="48"/>	<input type="text" value="N"/>	<input type="text" value="19"/>	<input type="text" value="7.52"/>	"
<input type="text" value="11"/>	<input type="text" value="E"/>	<input type="text" value="46"/>	<input type="text" value="56.70"/>	"

In case of an absolute position you can directly enter the latitude and longitude of the position where the weather effect should be located.

## ILS Visibility

ILS Visibility

CAT I	CAT I LTS	CAT II
CAT IIIa	CAT IIIb	CAT IIIc

Custom Visibility  
 Decision Height:  ft  
 Runway Visibility:  m

Reference Airport  
   
  
 Airport: **Munich (EDDM)**  
 Runway: **08R**

Use this section to set a pre-defined visibility condition for any of the ILS categories.

Following values are the default for decision height and runway visibility:


	Decision Height	Runway Visibility
<b>CAT I</b>	200 ft (60 m)	1,800 ft (550 m)
<b>CAT II</b>	100 ft (30 m)	1,000 ft (300 m)
<b>CAT IIIa</b>	50 ft (15 m)	600 ft (180 m)
<b>CAT IIIb</b>	30 ft (10 m)	150 ft (46 m)
<b>CAT IIIc</b>	0 ft (0 m)	30 ft (10 m)

 Note: You can customize these values in the **Settings** module to your needs.

## Custom Weather



In case you want to define a completely custom weather situation you can do so in this section.

 Note: This version of the custom weather section appears if Prepar3D, FSX or FSW is selected as simulator type.

## Load and Send Weather



If you have a METAR string as starting point for your custom weather enter it in the corresponding text field on top of the screen and click on the Load button. This will decode the weather situation defined in the METAR string into the custom weather sections below.

To send the weather define in these custom weather sections to the flight simulator, just click on the Send Weather button.

## Add as Weather Preset



You may also save your custom weather situation as **weather presets**. Just enter a name and then click on the Add Preset button.

## Wind Layers




You can define all wind layers - including the surface wind - in this section.

First you can define the direction where the wind is coming from. You have two additional options regarding the wind direction:

You can define it as Entirely Variable or even enter the from and to direction where the wind is coming from. If the wind should come only from a fixed direction, just keep the Entirely Variable Direction check box unchecked and the variation input fields as .

Next enter the speed and optional gust speed (keep it if not needed) of the wind layer.

Next you can define if the current wind layer is a surface wind or an wind aloft. In case of a surface wind you have the additional option to define a depth/height of the wind and if it is a wind aloft you can define a maximum altitude (MSL) for it instead.

 Note: You may add as many wind layers as you want, but there can be only one of them defined as surface wind.

Finally you can define turbulences in this wind layer as

- None
- Light
- Moderate
- Heavy
- Severe

and wind shears as:

- Gradual (none)
- Moderate
- Steep
- Instantaneous

## Cloud Layers



Here you can define all cloud layers of the custom weather situation.

First enter a base altitude (MSL) for the cloud layer.

Then you can define several additional parameters for like cloud coverage as of

- Few Clouds
- Scattered Clouds
- Broken Clouds
- Overcast
- 1/8 Coverage
- 2/8 Coverage
- 3/8 Coverage
- 4/8 Coverage
- 5/8 Coverage
- 6/8 Coverage
- 7/8 Coverage
- 8/8 Coverage

cloud type as of

- Cirrus
- Stratus
- Cumulus
- Cumulo-nimbus

top of the cloud as of

- Flat
- Round
- Anvil

turbulences in the cloud layer as of

- None
- Light
- Moderate
- Heavy
- Severe

type of precipitation as of

- None
- Rain
- Freezing Rain
- Hail
- Snow

precipitation strength as of

- Very Light
- Light
- Moderate
- Heavy
- Dense

the base altitude of the precipitation as well as the icing rate as of

- None
- Trace
- Light
- Moderate
- Severe

## Visibility Layers




The visibility layers of the custom weather situation can be defined in this section.

First enter the base and maximum (top) altitude (MSL) of the visibility layer.

Then you can define the visibility in this layer itself.

Finally you can decide in which direction this visibility should be effective as of

- All
- North-West
- North
- North-East
- East
- South-East
- South
- South-West
- West

 Note: To set the same visibility for more than one direction, but not for all, just create another visibility layer with the same base and maximum altitude.

## Temperature Layers



Also individual temperature layers can be defined for your custom weather situation.

First enter the maximum altitude (MSL) up to which this layer should be valid.

Then you can enter the temperature and dew point of this temperature layer.

## Atmospheric Pressure



Here you can define the atmospheric pressure for your custom weather situation.

## Custom Weather for X-Plane

Custom Weather for X-Plane

Load from Current Weather

Load from METAR String

Save as Preset

Send Custom Weather

Atmospheric Conditions

Visibility: 35,000 m

Precipitation: 0 %

Storminess: 0 %

Temperature: 59 °F

Dew Point: 45 °F

Pressure: 1,013 hPa

Thermals

Altitude: 32,800 ft

Coverage: 10 %

Climb Rate: 300 ft

2,000 ft

+

Wind Layer

Calculate Direction and Speed

Direction: 120 °

Speed: 10 kt

Altitude: 2,000 ft

Turbulence: 0 (0-10)

Gust Direct. Change: 20 °

Gust Speed Increase: 5 kt

Delete Layer

4,500 - 6,500 ft

+

Cloud Layer

Cloud Type: Cirrus

Base Altitude: 4,500 ft

Top Altitude: 6,500 ft

Delete Layer

Runway Conditions

Runway Wetness: Dry

☐ Patchy

Bodies of Water

Wave Height: 5 ft

Wave Direction: 140 °

In case you want to define a completely custom weather situation you can do so in this section.

 Note: This version of the custom weather section appears if X-Plane is selected as simulator type.

## Atmospheric Conditions

Atmospheric Conditions

Visibility: 35,000 m

Precipitation: 0 %

Storminess: 0 %

Temperature: 59 °F

Dew Point: 45 °F

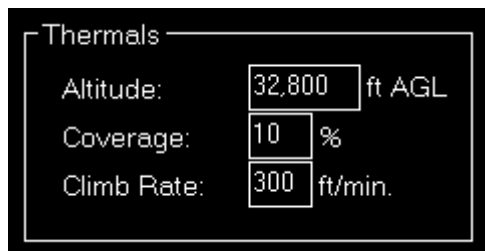
Pressure: 1,013 hPa

Here you can first define the visibility followed by the precipitation and storminess as percentage.

Additionally the temperature, dew point and atmospheric pressure can be set.

## Thermals





Thermals

Altitude:  ft AGL

Coverage:  %

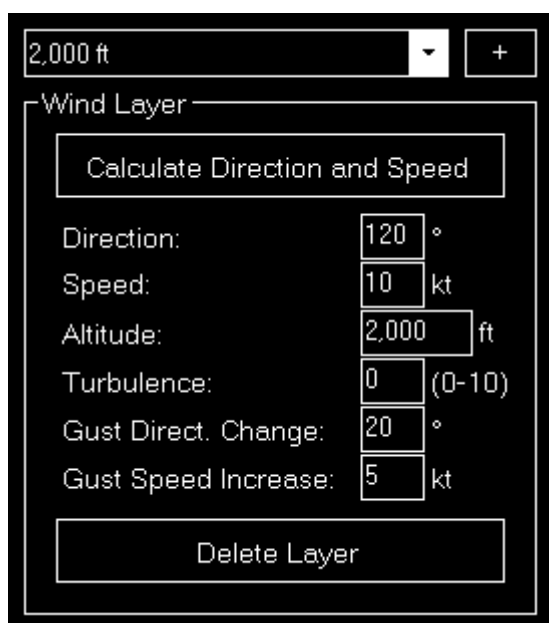
Climb Rate:  ft/min.

You can define thermal effects in this section.

First enter the altitude where the thermal effect should occur.

Then you can set its coverage as percentage as well as the climb rate.

## Wind Layers



Wind Layer

Direction:  °

Speed:  kt

Altitude:  ft

Turbulence:  (0-10)

Gust Direct. Change:  °

Gust Speed Increase:  kt

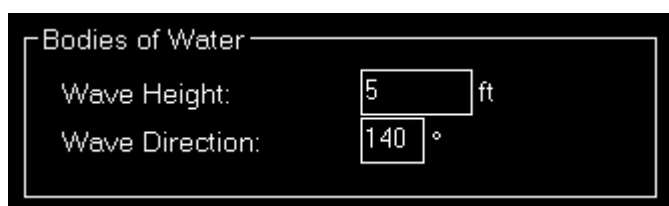
You can define all wind layers in this section.

First enter the direction altitude, and speed of the wind layer.

Next you can define the turbulence intensity between 0 and 10.

Finally the gust direction change and speed increase can be set.

## Bodies of Water



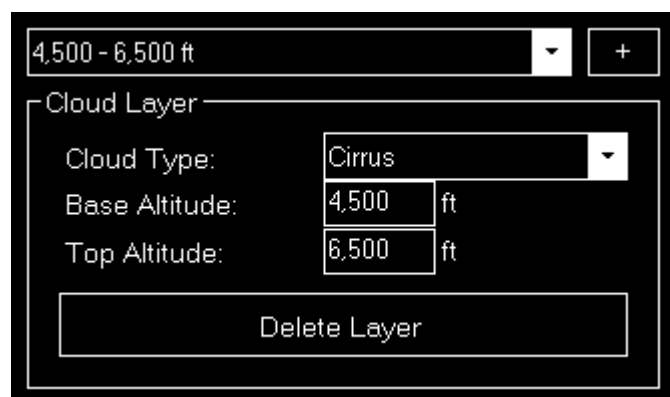
Bodies of Water

Wave Height:  ft

Wave Direction:  °

In this section the water wave height and direction can be defined.

## Cloud Layers



Here you can define all cloud layers of the custom weather situation.

First choose the cloud type as of

- Cirrus
- Few Cumulus
- Scattered Cumulus
- Broken Cumulus
- Overcast Cumulus
- Stratus

Then you can enter a base and top altitude (MSL) for the cloud layer.

## Runway Conditions



Here you can choose the runway conditions as of

- Dry
- Damp
- Wet

If you have chosen Damp or Wet you can additionally decide if the runway surface should be patchy or not.

# Custom Weather for Active Sky Weather Engine

Custom Weather for Active Sky Weather Engine

Load from Current Weather

Load from METAR String

Save as Preset

Send Custom Weather

Surface Wind

Calculate Direction and Speed

Direction:120°

Variance:0°

Wind Speed:10kt

Gust Speed:12kt

Temperature:25°F

Dew Point:1°F

Turbulence:None

Surface Visibility

Base Altitude:0ft

Max. Altitude:10,000ft

Visibility:50,000m

3,000 ft

Wind Aloft Layer

Calculate Direction and Speed

Direction:270°

Speed:5kt

Temperature:15°F

Turbulence:Light

Atmospheric Pressure

Pressure:1,013hPa

39,300 ft

Cloud Layer

Base Altitude:39,300ft

Top Altitude:40,900ft

Cloud Coverage:6/8 Coverage

Cloud Type:Cirrus

Turbulence:None


Type of Precipitation:None

Precipitation Strength:Very Light

Icing Rate:None

Delete Layer

In case you want to define a completely custom weather situation you can do so in this section.

 **Note:** This version of the custom weather section only appears if Active Sky is enabled as weather engine in the **Settings** module.

## Surface Wind

Surface Wind

Calculate Direction and Speed

Direction:120°

Variance:0°

Wind Speed:10kt

Gust Speed:12kt

Temperature:25°F

Dew Point:1°F

Turbulence:None

You can define the surface wind in this section.

First enter the speed and optional gust speed (keep it if not needed) of the wind.

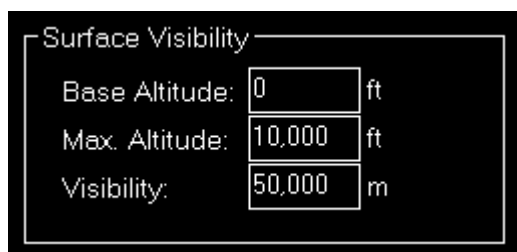
Next you can define the direction where the wind is coming from including a variance.

Also the temperature and the dew point on the surface can be defined here.

Finally you can define turbulences in the surface wind as:

- None
- Light
- Moderate
- Heavy
- Severe

## Surface Visibility



Surface Visibility

Base Altitude:  ft

Max. Altitude:  ft

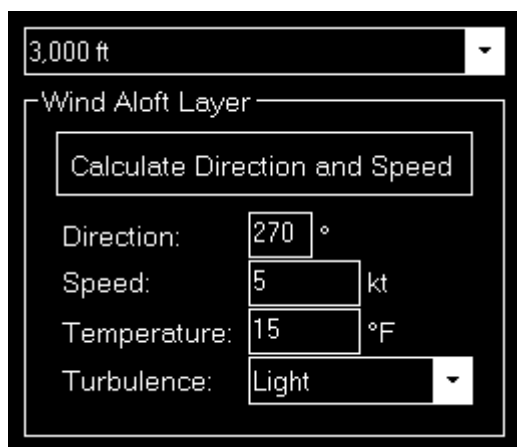
Visibility:  m

The surface visibility of the custom weather situation can be defined in this section.

First enter the base and maximum (top) altitude (MSL) of the visibility layer.

Then you can define the visibility itself.

## Wind Aloft Layers



3,000 ft

Wind Aloft Layer

Calculate Direction and Speed

Direction:  °

Speed:  kt

Temperature:  °F

Turbulence:


You can define all wind aloft layers in this section.

First enter the speed and the direction of the wind layer.

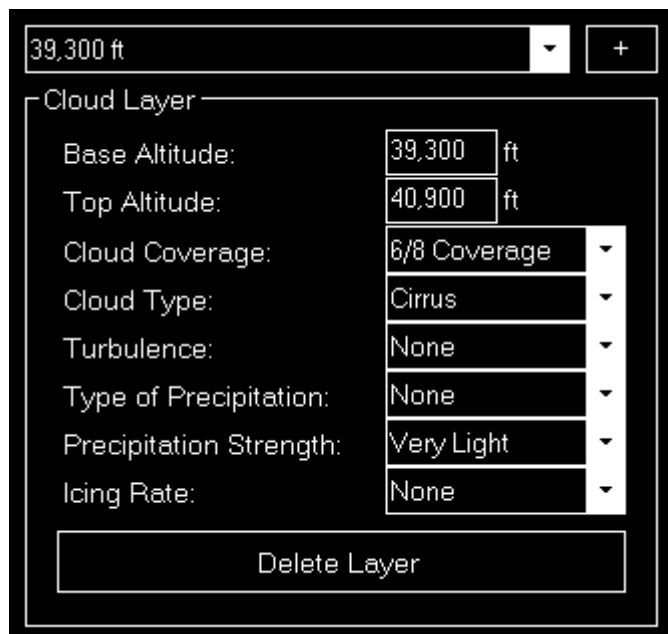
Next you can define the temperature and finally the turbulences in this wind layer as:

- None
- Light
- Moderate

- Heavy
- Severe

 Note: The altitudes of the individual wind layers cannot be changed for Active Sky.

## Cloud Layers



39,300 ft

Cloud Layer

Base Altitude: 39,300 ft

Top Altitude: 40,900 ft

Cloud Coverage: 6/8 Coverage

Cloud Type: Cirrus

Turbulence: None

Type of Precipitation: None

Precipitation Strength: Very Light

Icing Rate: None

Delete Layer

Here you can define all cloud layers of the custom weather situation.

First enter a base and top altitude (MSL) for the cloud layer.

Then you can define several additional parameters for like cloud coverage as of

- 1/8 Coverage
- 2/8 Coverage
- 3/8 Coverage
- 4/8 Coverage
- 5/8 Coverage
- 6/8 Coverage
- 7/8 Coverage
- 8/8 Coverage

cloud type as of

- Cirrus
- Stratus
- Cumulus
- Cumulo-nimbus

turbulences in the cloud layer as of

- None
- Light

- Moderate
- Heavy
- Severe

type of precipitation as of

- None
- Rain
- Freezing Rain
- Hail
- Snow

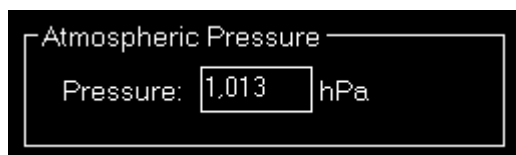
precipitation strength as of

- Very Light
- Light
- Moderate
- Heavy
- Dense

as well as the icing rate as of

- None
- Trace
- Light
- Moderate
- Severe

## Atmospheric Pressure



Here you can define the atmospheric pressure for your custom weather situation.

## Weather Presets



All your saved weather presets are listed here. There is no limit in the number of weather presets you can define.

## Pop-Up Menu



If you right click (long "touch") on a weather preset this pop-up menu will be shown enabling you to rename, delete or edit an existent weather preset again.

### Rename Weather Preset



Here you can set a new name for an existent weather preset.

## Season and Time



In this section you have a quick and easy control of the current season.

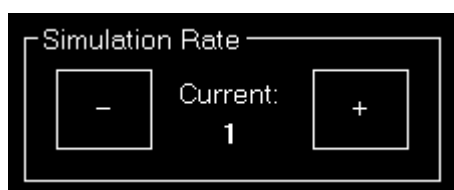
Just click on one of the pre-defined season buttons.

## Set Custom Date and Time



Additionally you can define a completely custom date and time in this section.

## Simulation Rate



Beside a very detailed weather configuration system this module offers here also an easy way to change the current simulation rate of the simulator.

Only for X-Plane additionally the actual simulation rate is shown next to the currently requested one. For Prepar3D, FSX and FSW these two are always identical.

## General Info



Additionally in the bottom right of the screen you always have an eye on the current frame rate and simulator time.

**FS-FlightControl Manual:**  
<https://www.fs-flightcontrol.com/en/manual/>

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