



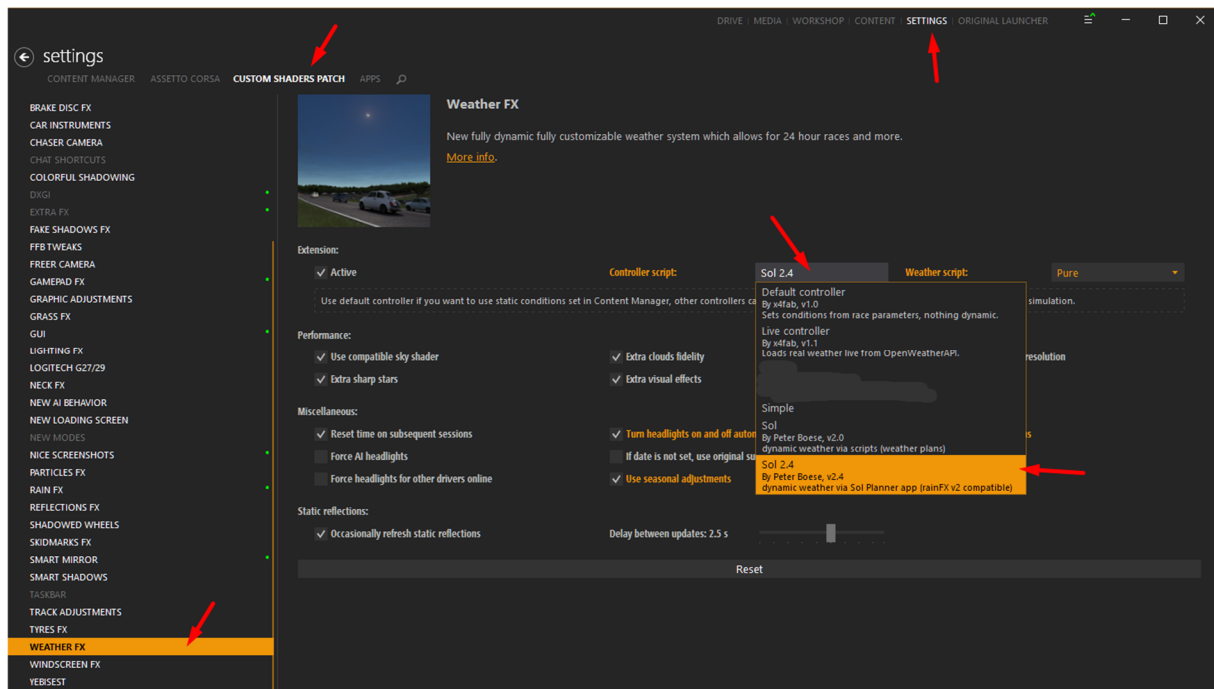
Sol Planner 3.7

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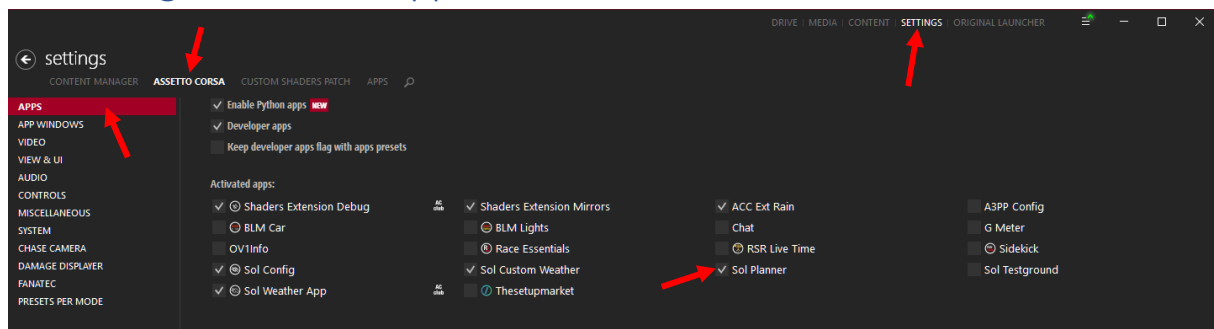
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Weather controller

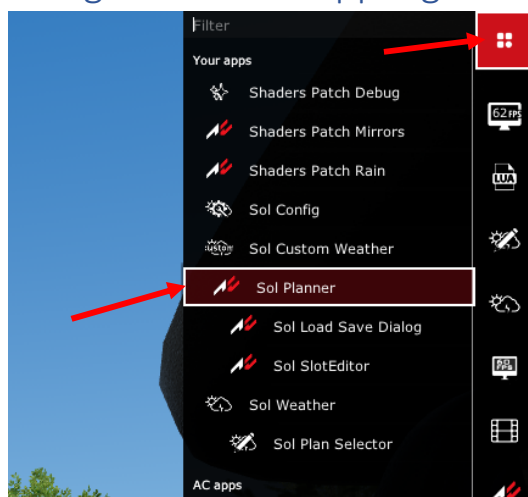
To use Sol Planner app, select "Sol 2.4" weather controller!



Activating Sol Planner app



Using Sol Planner app ingame



Overview

The image shows the Sol Planner 3.7 interface with several annotations:

- Import/Export**: Points to the top bar containing icons for importing and exporting data.
- Wiper Control**: Points to the 'auto wipers' control, which has a slider set to -1.
- RainFX Difficulty**: Points to the 'real' difficulty control, which has a slider set to 4.
- Time/Date Control**: Points to the 'reset Sol' button and the time/date display showing 16:06 on 23.08.2022.
- Presets**: Points to the row of five preset buttons (Preset 1 to Preset 5).
- Modes**: Points to the row of weather mode buttons (Heavy Rain, Overcast Clouds, Random Rainy, Broken Clouds, Overcast Clouds, Fog, Scattered Clouds, Broken Clouds, Broken Clouds).
- Weather slots**: Points to the grid of weather slot icons. A callout box states: "Click on a weather slot to edit/change a weather".
- Slot Editor**: Points to the right-hand panel. A callout box states: "Here you can change all parameters of the slot".

The Slot Editor panel displays the following parameters for the selected 'Heavy Rain' slot:

- rain amount, %: 30 (modulated 0.256)
- probability, %: 100
- variance, %: 40
- wetness, %: -1 (modulated 0.279)
- puddles, %: -1 (modulated 0.080)
- Unscaled CSP rainFX values:
 - Rain: 9 mm/h (3.89%)
 - Wetness: 4.47%
 - Puddles: 8%
- humidity, %: 100 (modulated 0.970)
- fog, %: 10 (modulated 0.085)
- wind strength: 30
- wind direction: 270
- ambient temp.: 19
- road temp.: 25

Full Day weather plan

A full day weather plan is a plan, which uses the 9 weather slots to cover a full day/night cycle.

There are slots which represents a fixed time like:

Night = 0:30, Noon = 12:30

Then there are slots, which represents sun angles:

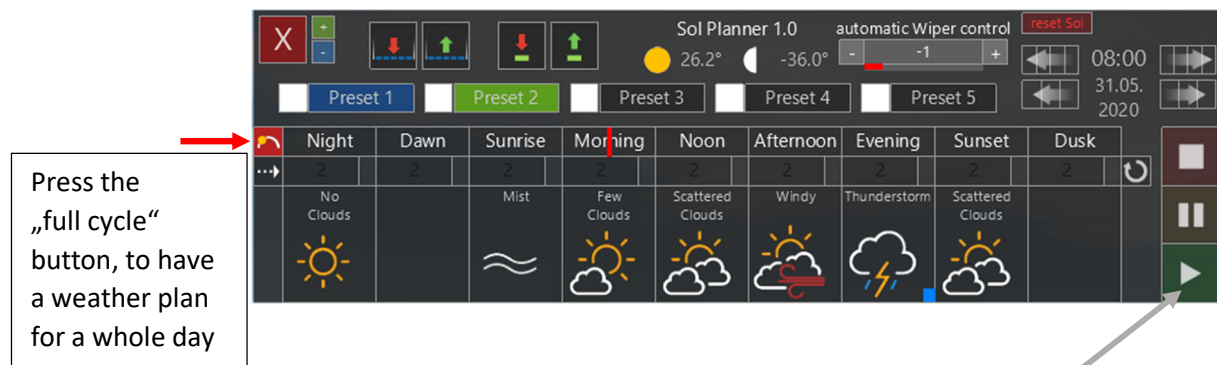
Dawn + Dusk = -9° , Sunrise + Sunset = 2°

And then there are Slots which represents a time, if that time is possible:

Morning = 8:00, Afternoon = 16:00, Evening = 19:00

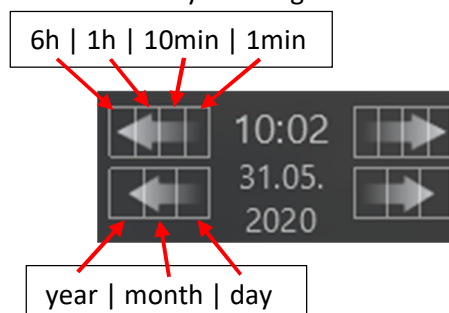
But if those time are not possible, because of the sun's trajectory, those times are adjusted to fit in the sequence.

With later versions of the Sol Planner app, I will build in a logic, where those slots are shifted in the right sequence.



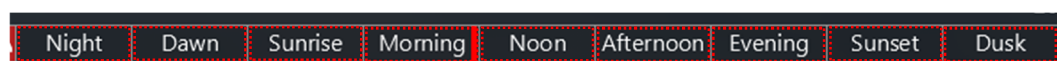
If you switched to „Full Day“, the position of the weather plan is bound to the time of day! Therefore you can't use the "Play" controls.

You can use the Date and Time control to cycle trough the times and dates

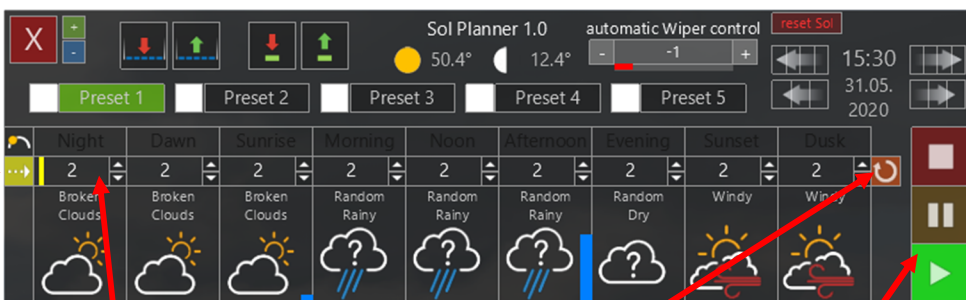


! The date is actually not shown right, because of a missing function in CSP !
But you can shift the date already...

You can also just click in the slots header to jump to that certain time:



Timed weather sequence



Press the „timed“ button, to have a timed weather plan

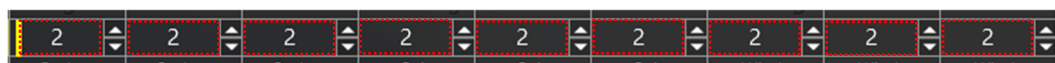
Use the arrows to increase or decrease the time for a weather slot.
The time is shown in minutes

Use “repeat” to have a repeating plan.

Use the transport buttons to control the timed sequence.

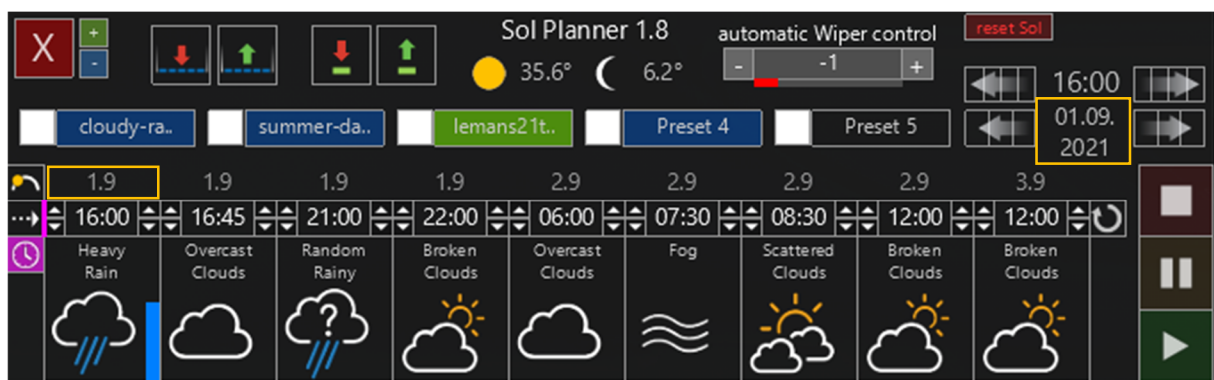
The timed weather plan is not bound to the time of day. You can freely adjust the date and time.

Just click in the time field to jump to that position in the weather sequence.



Time stamp mode

Added with version 1.8

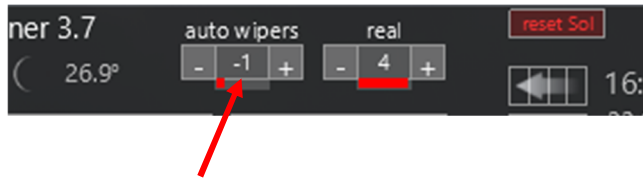


Use the “time stamp” mode, to set the slots to exact day times. This plan is not able to loop!

If the plan is activated, the date of all slots will be updated according to the current date!
The dates are shown above the times.

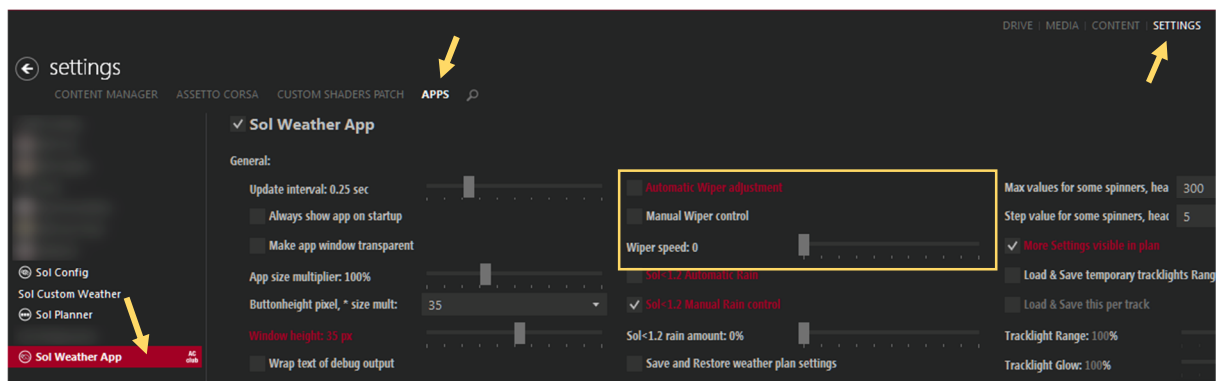
If you change the time or date, the plans time stamps are fixed and you will move through the plan.
If you change a date or click the “time stamp” mode button again, the dates will be updated.

Wiper control



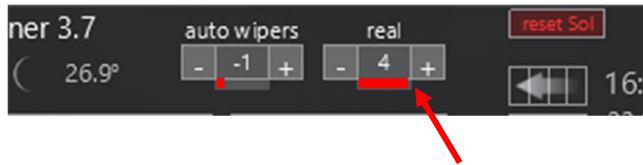
- 2: Wipers are not controlled by Sol Planer
- 1: Wipers are controlled by Sol Planner automatically
- 0: Wipers are off
- 1: Wiper stage 1
- 2: Wiper stage 2
- 3: Wiper stage 3
- 4: Wiper stage 4

If Sol Planner's wiper control is not working correctly, maybe some other wiper control is still active, like from Sol Weather app. Please go in CM's settings page and go to "Apps" -> "Sol Weather App":



And deactivate Sol Weather's wiper control completely, like in the screenshot.

RainFX Difficulty



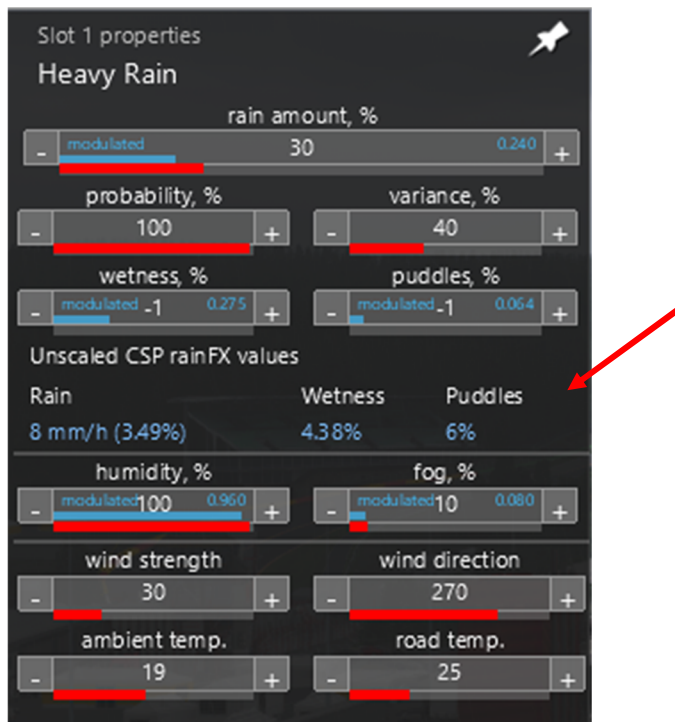
This only works with CSP 1.80p115 or later!

With CSP 1.80p115 the new rain physics were introduced. Wetness was completely changed. If you struggle to drive in rainy conditions, you can reduce the amount of wetness, which the rain is generated.

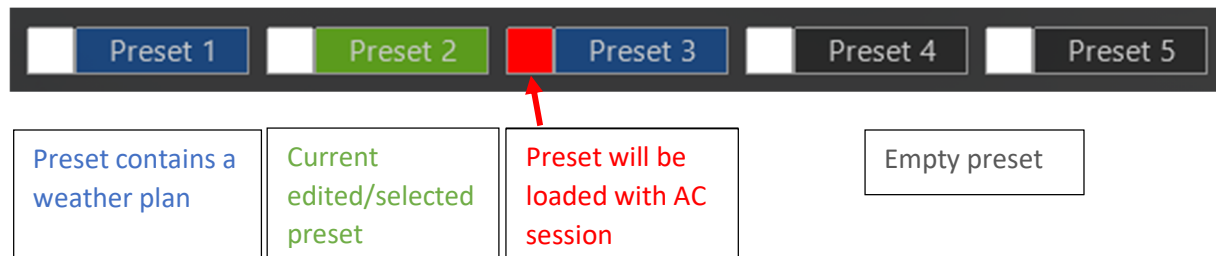
In the default theory of CSP RainFX, a 20% amount of rain will generate a 20% amount of wetness. The new rain physics are meant to simulate real track-tire-slip. Maybe this hardcore level of slippery will make you unhappy for the first time. Use this “Difficulty” slider, to scale the wetness.

Difficulty	Real wetness level	Scaled wetness level
real	100%	100%
hard	100%	50%
medium	100%	25%
easy	100%	10%

The new RainFX rain and wetness amounts are scaled differently. A serious rain fall is like 20% rain amount in CSP RainFX. A light drizzle is like 0.5% rain amount. This is not really practical to set it with a slider. That’s why Sol Planner 3.7 has its own scaling, which is known from the former versions of Sol Planner or RainFX. But to show the real CSP RainFX values, I integrated an output of these values.



Presets



Presets will be save automatically with quitting AC.

If a timed weather plan was playing or paused, the plan will be started automatically, if the preset is loaded!

Import/Export a whole preset-bank

Use the Preset-Import and Export button to save a complete preset bank. A complete preset bank includes all 5 preset slots and the autoloader preset state.

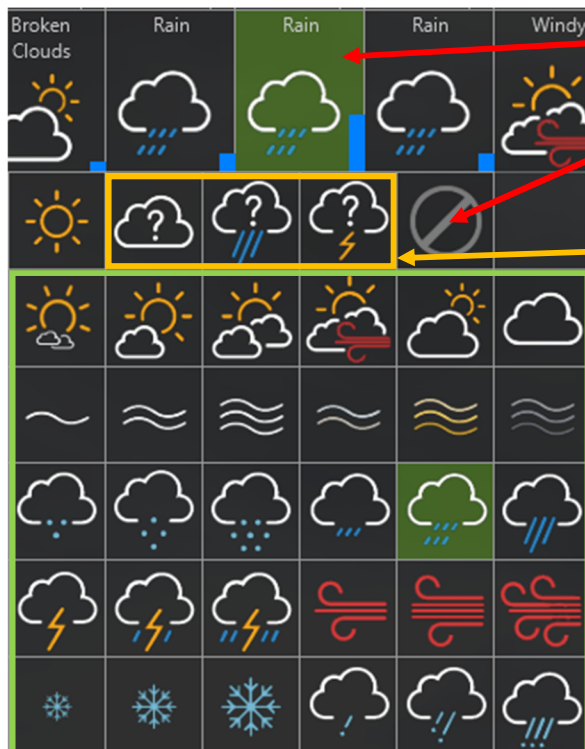


Import/Export a single weather plan (single preset)

Use the Plan-Import and Export button to save a single weather plan. You must select a preset before! The Plan is then imported to this preset / exported from this preset.



Edit a weather slot



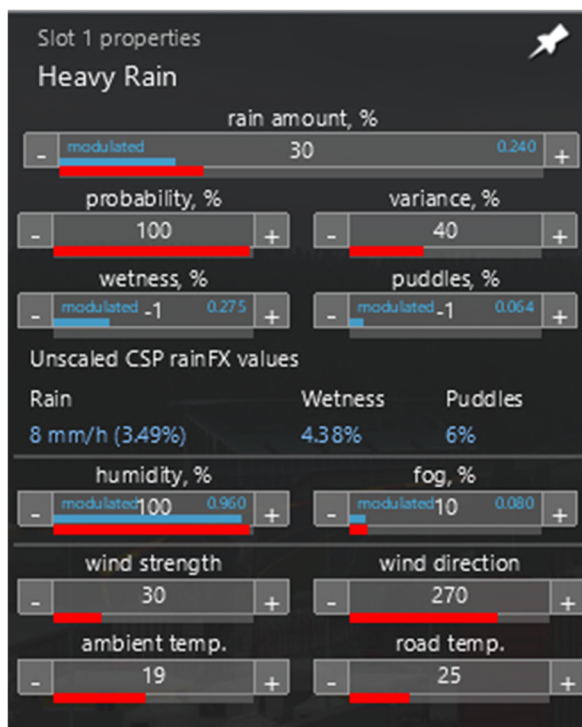
Just click the slot to edit it. Its green then.

Select the "empty" icon, to clear the slot.

"Random weather" functions

Single weather icon. Select a single weather, to have exactly that weather, if the plan reaches that slot.

If the weather parameters are not touched before, they will be set with the weather's defaults.



Adjust the weather's parameters here.

Those parameters are not really bound to the weather type. The weather type just defines the way the weather will look in general.

But the graphics will also change according to the values of those parameters.



The blue value represents the calculated rain amount for the single weather slot.

The red value is the maximum achievable rain amount.



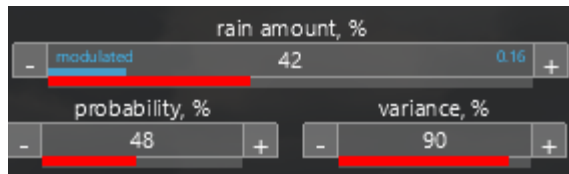
For humidity and fog, the blue value represents the actual values of the global humidity and fog.

Humidity and fog are dynamically adapted to the weather situation, but can be preset for a single slot.

Special weather parameter

Rain calculation

The rain amount is calculated randomly. A higher probability value will cause a more often rise of the rain amount. A higher variance value will cause a higher fluctuation.



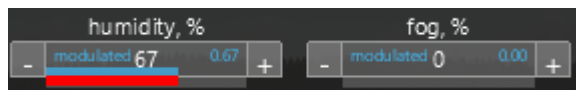
Wetness and puddles

Here you can set fixed rainFX parameters by yourself for every weather slot. F. e. you can start with a dry weather, but with a wet track, with much puddles. If wetness or puddles is set to -1, the calculation is automated by the Sol controller.



Humidity and fog

If those values are not touched, default values will be set by the weather type. Humidity and fog are also calculated values. If there is a high evaporation of water after rain, caused by high temperatures or/and high sun irradiation, those values are rising and falling after the area is dry.



Random weather

To have a dynamically changing random weather, you need at least **3** used weather slots!

If a weather slot is set to random, it can only change its state if its not in use. Its not in use if its not the current weather or the following weather. So you need at least 3 defined weather slots, to have a random weather for a dynamic session weather.

But you can just use 1 or 2 weather slots, to have a randomness with the start of a AC session.

If you choose a random weather icon and there was no “random weather editing” before, a preset of weathers is selected according to the type of random weather.

Hit the icon again (it becomes orange) and you are now in the multi weather selection mode. Now you can choose the weather you like to be randomized with this weather slot. (selected weathers are shown blue)

Note! The weather parameters are set with the weather’s defaults.
E.g. if you have “Rain” in the selection and “Rain” is randomly chosen in the weather sequence, all rain parameters, humidity and fog will be set to Rain’s defaults.

The 3 random weather icons have just a preset selection of weathers. You can freely select what weather you want to be randomly chosen.