BeleuchtungV3

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Content:

Overview

- **Farlights (press and hold the lights-key for some seconds to activate the farlight)**
- **Brakelights**
- **Reverselights**
- **Direction lights left/right**
- **Hazardlights**
- **Parkinglights left/right (leave the direction lights on when leaving the vehicle)**
- **Parkinglight for the vehicle (if you set the option lightsStayOn true)**
- **Seperate switchable workinglights**

All lights will also support

- **Staying on on leave**
- **Replacing real lightsources by virtual lightbeams in multiplayer**
- **Unlimited amount of lights of the same type (like 2 separate brakelights)**
- **full multiplayer-ready**

Notes for reading this documentation:

- **Gray colored parts of XML-Codes may be already exist in your file. In this case the other parts should be added to your existing code.**
- **Blue colored parts of XML-Codes will be further explained.**

Modifications to the moddesc.xml

First you need to import the specialization:

```
<specializations>
   <specialization name="additionalLights" className="BEL3" filename="beleuchtungV3.lua"/>
</specializations>
```

Then you should – unless it´s already done – create a new vehicle type. The following example describes a tractor. You can use this lights-script on all vehicle types. The needed specializations for other vehicle-types you can find at the Wiki:
http://wiki.landwirtschafts-simulator.de/index.php/LS11_vehicleTypes_der_Originalfahrzeuge_und_Tools

```
<vehicleTypes>
   <type name="X720B3" className="Vehicle" filename="$dataS/scripts/vehicles/Vehicle.lua">
            <specialization name="motorized" />
            <specialization name="steerable" />
            <specialization name="hirable" />
            <specialization name="aiTractor" />
            <specialization name="honk" />
            <specialization name="additionalLights" />
   </type>
</vehicleTypes>
```

As you can see the lights-script should be the last in the list of specialization. The choosen name in the <vehicleTypes> part must be the same as in the <specializations> part.

Depend on which types of lights you will use it could be needed to add additional informations for inputBindings and language-translations (l10n)

```
<inputBindings>
   <input name="frontwork" key1="KEY_KP_5" button="" />
   <input name="BEL3LEFT"  key1="KEY_KP_1" button="" />
   <input name="BEL3WARN"  key1="KEY_KP_2" button="" />
   <input name="BEL3RIGHT" key1="KEY_KP_3" button="" />
</inputBindings>
```

The following 3 entrys are mandatory if you use turnlights :
BEL3LEFT : InputBinding for left turnlight
BEL3RIGHT : InputBinding for right turnlight
BEL3WARN : InputBinding for hazard lights

Additional inputBindings for worklights can be added. Remember the name of the inputBinding needs to be the same as in the parameter inputName= of the specific worklight.

```
<l10n>
      <text name="BEL3LEFT">
            <de>Blinker links</de>
            <en>left turnlights</en>
      </text>
      <text name="BEL3RIGHT">
            <de>Blinker rechts</de>
            <en>right turnlights</en>
      </text>
      <text name="BEL3WARN">
            <de>Warnblinker</de>
            <en>hazard lights</en>
      </text>
</l10n>
```

For every input binding you should also add a translation text. This will help to correctly show the inputBinding in the general game-settings.

Modifications to the .xml of the vehicle

General structure:

```
<lightsaddon lightsStayOn="false">
        <light type="highbeam" index="37|0" real="37|0|2" beam="37|0|1" />
        <light type="dirLeft" index="37|3" />
        <light type="dirRight" index="37|4" />
        <light type="parkLeft" index="37|5" />
        <light type="parkRight" index="37|6" />
        <light type="brake" index="37|7" />
        <light type="reverse" index="37|8" />
</lightsaddon>
```

Parameter in the main branch <lightsaddon> :

- **lightsStayOn="[true|false]"**
  this parameter is optional. The default setting is „false"

  If set to true the lights will stay on when leaving the vehicle. If the lights of the vehicle are configured correctly then the real lightsources and lightbeams will shut down and only the coronas will stay visible.

- **blinkSpeed="0.75"**
  this parameter is optional. The default setting is „0.75"

  Using this parameter you can change the blinkingspeed of the turnlights. The value should be given in seconds for one phase. Our law says 1.5 seconds for turning on an off one time – that's why default setting is 0.75

- **modDirection="[1|-1]"**
  this parameter is optional. The default setting is „1"

  If your mod was built in the wrong direction it could happen that brake and/or reverse lights will show up in the wrong situations. In this case set the value of this parameter to -1.

Parameters of the single <light> entries:

- **type="[...]"**
  this parameter is mandatory. There is no default setting

  possible values are :
  - **highbeam : farlights**
  - **dirLeft : left turnlight**
  - **dirRight : right turnlight**
  - **parkLeft : left parking light**
  - **parkRight : right parking light**
  - **brake : brake lights**
  - **reverse : reverse lights**
  - **work : working lights**

  You can use as many lights of same type as you want. Some of the following parameters are not available on every type of light.

- **index="[...]"**
  this parameter is mandatory. There is no default setting. Can be used on every type.

  This is the counted object index to the main light component. The index should point to the lit surfaces and coronas. It will be the main object which is set to visible/invisible.

- **real="[...]"**
  this parameter is optional. There is no default setting. Can be used at: work, highbeam

  this index should point at the real lightsource. In multiplayer this light will be invisible to other players. Also this light is shut down even when "stayon" is set to true.

- **beam="[...]"**
  this parameter is optional. There is no default setting. Can be used at: work, highbeam

  This index should point at the virtual light beams which are also used by the AI. In multiplayer this beam will be visible to the other players instead of the real lightsource.

- **stayOn="[true|false]"**
  this parameter is optional. Default setting is „false". Can be used at: work

  If this parameter is set to "true" then the light will stay on when leaving the vehicle. Real light and beam will be set to invisible – only corona (index) will stay visible.

- **inputName="[...]"**
  this parameter is optional. There is no default setting. Can be used at: work

  Here you should write down the name of the inputBinding for this worklight. If you don't set this value the working light could not be switched on/off.

- **helptext="[...]"**
  this parameter is optional. There is no default setting. Can be used at: work

  For worklights you can define the name of the helptext which should be displayed ingame. The easiest it would be to write down the same name as you used for inputName.

Hints for the structure of the model

Worklights and the Farlights can be more complex in FS11. This means additional to the normal lit surfaces and coronas you can also define the real lightsource and a virtual lightbeam which is shown to the other players in multiplayer-mode. It´s useful to cascade the different types and set all to visible. You can use the sampleMod "AgroX720B3" as reference.

Light (TransformGroup)
- **Lightsource (light)**
- **Coronas (TransformGroup)**
  - **Corona (Shape – lit surface)**
- **Beams (TransformGroup)**
  - **Beam (Shape – virtual light beam)**