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(Drop Support)[1.6.1] Crew Light : An Automatic Light Manager [v1.19] (29 Jan 2019)



# (Drop Support)[1.6.1] Crew Light : An Automatic Light Manager [v1.19] (29 Jan 2019)

By Li0n, January 12, 2017 in Add-on Releases







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Li0n

**Bottle Rocketeer** 

 $\bullet \bullet \bullet \bullet$ 



Members 477 618 posts

Posted January 12, 2017 (edited)

Hi fellow kerbonauts

After years of downloading and enjoying mod from the great KSP community it's time I do something myself, so here it is: **Crew Light** 

The goal of this mod is to automatize, as much as possible, the lights of your vessels (and of kerbal's helmet).

Every part that currently hold crew gets its lights turning on



Lights react to the sunshine



And to depth

GIF incoming...

When approaching a distant vessel its lights will blink, sending you a welcoming message in Morse code



Kerbal on EVA can toggle lights

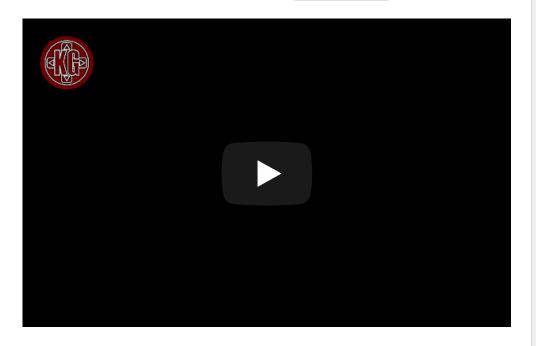


Lights can have a motion detector set up





# Youtube review by @Kottabos :



# How does it works?

Vessel's lights are divided into 3 groups :

- Lights of crew-able part :
  - They will remain off until a kerbal gets onboard
- Lights NOT in the light action group : (and kerbal's

# helmet light)

 They'll go on when the sun's fall, off when it rises

# • Other Lights:

 They will work as usual, toggling by the light action group

This mod rely on the light action group to determine which light belongs to which group, in stock KSP you can change action group only in the editor, so no lights on all crafts already launched will react to the sun rising/falling. To change action group in flight you will need the mod <u>Action Groups Extended</u>, by <a href="mailto:openstable">openstable</a> ODiazo.

And an enhanced support of the mod <u>Aviation Lights</u> by @BigNose , maintained by @MOARdV :

- By default its navigation and strobe light will get turned on at night using the custom blinking light provided by AviationLights, flash, double flash, interval. This is configurable, per light, in the setting file.
- The beacon light will stay off until you push the throttle, acting as a real warning light

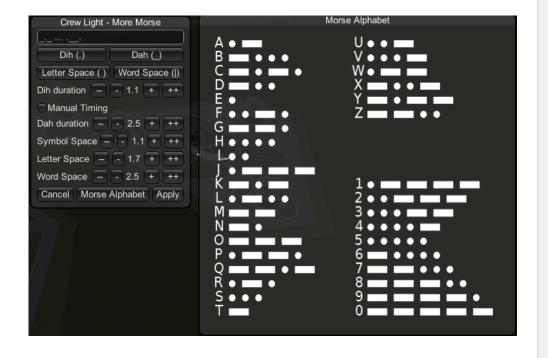
**And it now support Kerbal Electric** (a set of tweak-able and very cool lights):

# How to modify how it works?

Most of the function can be disabled, or tweaked, directly from the in-game settings screen :



There's also some extra option for the Morse Code message.



Due to limitation of the stock settings menu (or limitation

to my modding skill :p ) it's a bit tricky to access it : in the settings screen enable the "More Morse Settings", hit accept, twice, and you got it.



Here you can change the morse message send by distant vessel as you approch them. And the timing for the different symbol (they are sync to the dit duration unless you check manual timing).

### What is needed?

ModuleManager is the only dependency, all credits go to @ialdabaoth and @sarbian

### **Know issues:**

Lights on kerbal's helmet don't turn on/off as the sun rises/falls. Lights will be turned on if the kerbal disembark in the dark but status of the sunlight won't be checked after that.

The range sphere of the Motion Detector is offset from the light position only for the stock light, for others the sphere center is at the light position.

### What to do if it doesn't work?

Report it to <u>Github</u> or on this thread.

This is my first mod for KSP and one of my first working C# code, I've tested it on every situation I could think of but it

may have bugs left.

And a big thank you to @Diazo , @Nereid , @Crzyrndm , @RealGecko , @Skalou for helping me, and to every modders out there who wrote good code for learning @

# **Download on SpaceDock**

### **Download on Github**

Last 1.5.1 version

Last 1.4.3 version

Last 1.4.2 version

Last 1.4.1 version

Last 1.4.0 version

Last 1.3.1 version

Last 1.3 version

Last 1.2.2 version

Source on Github

License is MIT

Dev thread, now closed

# **Edited August 24 by Li0n**

severedsolo, carlorizzante, TiktaalikDreaming and 28 others like this

**<u>Crew Light</u>**: automatize the lightning of your ship

<u>Antenna Helper</u>: Math your antenna range and signal

strength

**Real Time Clock**: in-game clock



 $\times$ 



Members

1,024
3,082 posts
Location: Via Láctea (Milky

Very cool idea, the blinking when approaching stuff.

Cheers commander!

Li0n likes this

Report post



**LiOn**Bottle Rocketeer

Way)



Members **477** 618 posts

Posted January 12, 2017

@Climberfx Thank you very much 📀

It should be available on <u>CKAN</u> not before long, my PR has just passed the test.

Climberfx likes this

 $\times \neg$ 

**Crew Light**: automatize the lightning of your ship

<u>Antenna Helper</u>: Math your antenna range and signal

strength

Real Time Clock : in-game clock

# RealGecko

Junior Rocket Scientist



Members

• 642
626 posts

Posted January 13, 2017

I like this Morse code blinking, really cool!

Li0n likes this

Report post

Seeking for new maintainers

 $\times -$ 





Members **477** 618 posts



On 1/13/2017 at 7:23 AM, RealGecko said:



I like this Morse code blinking, really cool!

You're welcome, thanks again for the idea of the lights responding to the sunshine, now the coolest part of the mod IMO.

**<u>Crew Light</u>**: automatize the lightning of your ship



<u>Antenna Helper</u>: Math your antenna range and signal strength

Real Time Clock : in-game clock

# RealGecko

**Junior Rocket Scientist** 





Members **O** 642 626 posts

Posted January 13, 2017



On 1/13/2017 at 7:27 AM, Li0n said:



You're welcome, thanks again for the idea of the lights responding to the sunshine, now the coolest part of the mod IMO.

And I liked the idea of Morse code, that's why I suggested autolights to you instead of writing JAKSPM 🚰 🎇 🧱

Li0n likes this

Seeking for new maintainers



# ZooNamedGames

A Frequent Commenter

00000

Posted January 13, 2017

Report post



Seems like a good quality of life mod. Might get added to my stock save.



Members **3**,000 5,062 posts Location: Leaning on the Flight Director's Console



# ioresult

Curious George



Members **Q** 47

82 posts

Location: Québec, Canada

Posted January 13, 2017

Can you detect if a kerbal is in shadow? I like to turn on the helmet lights if I'm working in the shadows, in orbit or on the surface.

# Li0n **Bottle Rocketeer**



Members **Q** 477 618 posts

Posted January 13, 2017



### On 1/13/2017 at 12:26 PM, ioresult said:



Can you detect if a kerbal is in shadow? I like to turn on the helmet lights if I'm working in the shadows, in orbit or on the surface.

Yes and no: depends on where the shadows are coming from, shadow from terrain/planet/moon are detected but those from vessels are not.

And helmet's light won't be updated while on EVA, I couldn't figure out how to make it working while time-warping so I disabled it. They are toggled on/off depending on the sun only when a kerbal disembark (and when (re-)loading a save).

Personally I like to have them always on while in space (because you know, space is dark and full of terrors 2 ). always on in space = True do that automatically (False by default).

<u>Crew Light</u>: automatize the lightning of your ship

 $\times$ 

<u>Antenna Helper</u>: Math your antenna range and signal

strength

Real Time Clock : in-game clock

# Dr. Wolfram

Space Architect



Members

**4**0

56 posts

Location: Drifting around VAB

Posted January 13, 2017 (edited)

This mod has passed the test! Aaaand now it's allowed to stay in my heavy GameData folder 🥸

Kongrats with your first mod, and also Kongrats cos' it was just reviewed by <u>Kottabbo</u>🧛

Edited January 13, 2017 by Dr. Wolfram

link correction

pslytely psycho and Li0n like this

# Li0n

**Bottle Rocketeer** 





Members **Q** 477 618 posts

Posted January 13, 2017



# On 1/13/2017 at 3:43 PM, Dr. Wolfram said:

This mod has passed the test! Aaaand now it's allowed to stay in my heavy GameData folder 🧛

Kongrats with your first mod, and also Kongrats cos' it was just reviewed by Kottabbo

that was quick 🚳 (actually the first version of the mod is from October 21, a little more than 3 hours ago 🤷 ).

In the review/beta-testing you noticed some issues:

The lights who respond to the sun are toggled too

late: I'm worried about performance so I check for the sun position every 1.5s, it feels good without time-warp but I agree it feels off at high time-wrap, I can expose the settings for the delay easily but it would be better to change the delay to 0.1s or so when in time-warp.

- Lights get added back to action group when reloading a ship in the editor: good catch, I've done most of my test with AGX installed so I may have missed something for stock game, or is it a stock bug?
- Toggling lights while on EVA toggle all symmetrical lights: I wanted to take care of that before release but completely forgot, will do.
- Lights related to the sun light go off on the middle of the night: I'm pretty sure you lack proper battery (happened to me numerous time during development, <u>RTG</u> is your friend
- Morse Code isn't a proper message: Actually it is, but the delay for the "ti" and the "taah" are too close, it's configurable but I'll change the default setting.

Thanks again and please keep reporting bug / suggestion / feedback

 $\times \neg$ 

Report post

**Crew Light**: automatize the lightning of your ship

<u>Antenna Helper</u>: Math your antenna range and signal

strength

Real Time Clock : in-game clock

# **TheRagingIrishman**

Missions Operative Director

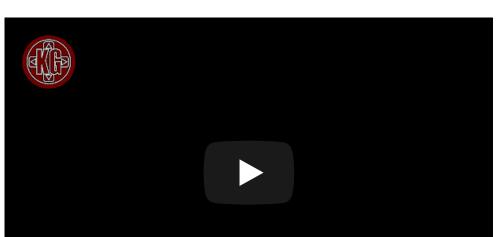




Members **4 1,144** 1,364 posts

Posted January 13, 2017





Location: Tír na nÓg

Li0n likes this

Report post

**SmartActuators** 



# WuphonsReach

Sr. Spacecraft Engineer



Members **◆ 230** 1,013 posts Posted January 14, 2017

Can the dusk/dawn light toggle be slightly randomized, so that not all the lights turn on at the exact same time?

pslytely psycho, Kerbal007, Li0n and 1 other like this

# garwel

Veteran KSP newbie



Members **472** 834 posts

Posted January 14, 2017

Report post



On 1/13/2017 at 5:06 PM, Li0n said:

Thanks to you and to @Kottabos for the review, that was quick (actually the first version of the mod is from October 21, a little more than 3 hours ago (2).

In the review/beta-testing you noticed some issues:

 The lights who respond to the sun are toggled too late: I'm worried about performance so I check for the sun position every 1.5s, it feels good without time-warp but I agree it feels off at high time-wrap, I can expose the settings for the delay easily but it would be better to change the delay to 0.1s or so when in timewarp.

- Lights get added back to action group when reloading a ship in the editor : good catch, I've done most of my test with AGX installed so I may have missed something for stock game, or is it a stock bug?
- Toggling lights while on EVA toggle all symmetrical lights: I wanted to take care of that before release but completely forgot, will do.
- Lights related to the sun light go off on the middle of the night: I'm pretty sure you lack proper battery (happened to me numerous time during development, RTG is your friend 🥸
- Morse Code isn't a proper message : Actually it is, but the delay for the "ti" and the "taah" are too close, it's configurable but I'll change the default setting.

Thanks again and please keep reporting bug / suggestion / feedback 🚳

Sounds like a good mod to me. Will check it out now. As to the delay, how hard would it be to scale it according to timewarp, so that it would be checked every, say, 1 gameminute (every 6 seconds under 10x, 0.6 seconds under 100x etc.)? It should also probably be switched off completely under very high timewarp (10000+), because it would make no sense when time of day changes almost every tick.

Li0n likes this

Kerbal Health | Space Age | Signal Delay | Timekeeper | <u>Urgent Contracts</u> | <u>My Discord</u>

# Li0n

**Bottle Rocketeer** 



Posted January 14, 2017

Report post





On 1/14/2017 at 12:32 AM, WuphonsReach said:



Can the dusk/dawn light toggle be slightly



Members

477
618 posts

randomized, so that not all the lights turn on at the exact same time?

Not sure what you mean exactly, should all vessel's lights be toggled at the same time after a random delay when the sun goes down? Or do you mean each individual light should be toggle one after another with a random delay between them?

I like the first, not sure about the second, I'll try, see how it looks.

# $\bigcirc$

### On 1/14/2017 at 6:28 AM, garwel said:



Sounds like a good mod to me. Will check it out now. As to the delay, how hard would it be to scale it according to timewarp, so that it would be checked every, say, 1 game-minute (every 6 seconds under 10x, 0.6 seconds under 100x etc.)? It should also probably be switched off completely under very high timewarp (10000+), because it would make no sense when time of day changes almost every tick.

On my last build, not released yet, I use a 1.5s delay between Raycast when time-warp is less than x5 and a 0.1s delay after that. I don't disable it when time-warping at more than 10000 but it's a good idea.

Thanks for the feedback 🚳

<u>Crew Light</u>: automatize the lightning of your ship



<u>Antenna Helper</u>: Math your antenna range and signal strength

**Real Time Clock** : in-game clock



Members **◆ 230** 1,013 posts

Just an idea that if you have 20-30 lights in the scene, that maybe they should toggle in a staggered fashion over a period of a few minutes instead of 20-30 lights toggling at the exact same instant. Not sure if it's feasible to do or not.

Enceos and Li0n like this

# **LiOn**Bottle Rocketeer



Members **477** 618 posts

Posted January 14, 2017

Report post



On 1/14/2017 at 9:18 AM, WuphonsReach said:

Just an idea that if you have 20-30 lights in the scene, that maybe they should toggle in a staggered fashion over a period of a few minutes instead of 20-30 lights toggling at the exact same instant. Not sure if it's feasible to do or not.

It is possible, I think a period of few minutes is too much tho, a few seconds between each light will be better.

Enceos and pslytely psycho like this

**<u>Crew Light</u>**: automatize the lightning of your ship

 $\times$   $\triangle$ 

<u>Antenna Helper</u>: Math your antenna range and signal strength

**Real Time Clock**: in-game clock

# **Enceos**Fluffy Engineer

••••



Members **1,737** 2,124 posts

Posted January 14, 2017 (edited)

Report post



On 1/13/2017 at 5:06 PM, Li0n said:

I'm worried about performance so I check for the sun position every 1.5s

From what I know the suncatcher of the solar panels is very robust in this field. I don't know the code, but solar panels always know when sunlight is available, and they do Location: SPH rooftop

it at superwarp speeds.

**Edited January 14, 2017 by Enceos** 

Li0n likes this

 $\times -$ 

**Kerbal Hacks** (Procedural Part textures, Asphalt Tiles,

Unusual parts, other hacks) Wearable KIS

**Props** (Customize your Kerbals)



**LiOn**Bottle Rocketeer



Members

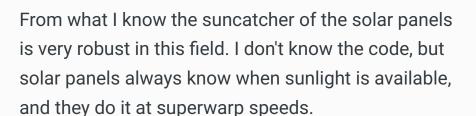
• 477
618 posts

Posted January 14, 2017 (edited)

Report post



## On 1/14/2017 at 2:30 PM, Enceos said:



True that. I think solar panel rely on Vessel.sunLight (return true if the sun is up). I don't use it because it doesn't take into account the terrain, so I wrote my own raycast which cast on the layer I wanted to (scaled and Local Scenery).

Anyway there is no point to check for the sun at a high rate while on low time-wrap, in the next update I'll add somethings similar to what <a href="mailto:ogarwel">ogarwel</a> said here :



### On 1/14/2017 at 6:28 AM, garwel said:



Sounds like a good mod to me. Will check it out now. As to the delay, how hard would it be to scale it according to timewarp, so that it would be checked every, say, 1 game-minute (every 6 seconds under 10x, 0.6 seconds under 100x etc.)? It should also probably be switched off completely under very high timewarp (10000+), because it would make no sense when time of day changes almost every tick.

# Edited January 14, 2017 by Li0n

**Crew Light**: automatize the lightning of your ship

Antenna Helper: Math your antenna range and signal

strength

Real Time Clock : in-game clock

Li0n **Bottle Rocketeer** 



Members **Q** 477 618 posts

Posted January 14, 2017 (edited)



 $\times \neg$ 

# Version 1.1 is up! On SpaceDock and Github



### **Quote**

- \* Adjust the delay between two check of the sun position according to the warp-time speed
- \* Settings.cfg : delay\_in\_low\_timewarp (value get divided by the current time-warp speed) and delay\_in\_high\_timewarp
- \* Change the default settings for the morse code, light will stay on longer
- \* Toggling a vessel light on EVA will no longer toggle its symmetry counter parts
- \* Can be changed in the settings
- \* Also add a setting to disable light interaction on **EVA**
- \* Add a setting to disable lightning of a part when a crew is inside, if used crewed part 's light will be toggled as the sun rises / fall
- \* Enhance settings behavior, adding new settings no longer force the whole settings.cfg file to be reset

For the issue about light action group being reset when reloading a craft in the <u>VAB</u>, noted by <u>@Kottabos</u> in his review, I couldn't reproduce it. If someone can, please share how.

I'll try to randomize the lightning a bit in the next release as suggested earlier.



PS: I have forgot to mention it: the light that respond to the position of the sun are also toggled when reaching a certain depth (20m by default). I've made that in anticipation of the future awesomeness of KSP's undersea-world, that's a long shot I know...

Edited January 15, 2017 by Li0n

**<u>Crew Light</u>**: automatize the lightning of your ship

Χv

<u>Antenna Helper</u>: Math your antenna range and signal

strength

**Real Time Clock** : in-game clock

# pslytely psycho

Spacecraft Engineer



Members

• 90

155 posts

Location: Washington State,
where fun is now legal.

Posted January 23, 2017

Report post

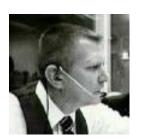
Ten out of Ten! And throwing in a vote for WuphonsReachs idea of staggered lighting. I think them coming on in a staggered fashion as different systems trigger slightly out of sync with each other would just look so authentic as the automated lighting in our building here at work does just that. The outer building lights come on, then the entrance, then the parking lot and finally the rear of the building over the course of about five minutes. Now, I like the idea of a few seconds as in a game reality would be tedious. Maybe some type of extended grouping by function or type?

Oh, by the way, on <u>CKAN</u> where I saw this mod pop up the homepage link just goes to the forum landing page, and not to this page. Thankfully the name was so perfect for this mod I just knew it would be worth the search!

It's the little things like this that really add to the game. Thank you.

Li0n likes this

# **Bottle Rocketeer**



Members **Q** 477 618 posts

Posted January 23, 2017

# On 1/23/2017 at 9:50 AM, pslytely psycho said:



Ten out of Ten! And throwing in a vote for WuphonsReachs idea of staggered lighting. I think them coming on in a staggered fashion as different systems trigger slightly out of sync with each other would just look so authentic as the automated lighting in our building here at work does just that. The outer building lights come on, then the entrance, then the parking lot and finally the rear of the building over the course of about five minutes. Now, I like the idea of a few seconds as in a game reality would be tedious. Maybe some type of extended grouping by function or type?

Oh, by the way, on <u>CKAN</u> where I saw this mod pop up the homepage link just goes to the forum landing page, and not to this page. Thankfully the name was so perfect for this mod I just knew it would be worth the search!

It's the little things like this that really add to the game. Thank you.

### Thanks.

I haven't got to the randomize lightning yet, <u>I'm struggle on</u> something else I would like to finish first, but it will be there, soon<sup>tm</sup> 🚳

For <u>CKAN</u> you right, I messed up my netkan metadata. I'll reach CKAN people, see how they can update it.

pslytely psycho likes this

**Crew Light**: automatize the lightning of your ship

 $\times$   $\neg$ 

Antenna Helper: Math your antenna range and signal strength

Real Time Clock : in-game clock



Members **Q** 477 618 posts

Posted February 4, 2017

Report post

# **Version 1.2 is up!** On <u>SpaceDock</u> and <u>Github</u>

### Quote

- \* Light triggered by the sun are now lighted in a staggered way, can be disabled/tweaked in settings.cfg
- \* Some quality of life improvement of the code

@WuphonsReach thanks for the idea of the staggered light 🚳

At a time wrap of 10 000x or more it won't work very good (not much I can do about that) but the light should go to their correct state when time slow down.

Please report any issues or suggestions and enjoy 🥸



Skalou and WuphonsReach like this

**Crew Light:** automatize the lightning of your ship



Antenna Helper: Math your antenna range and signal strength

Real Time Clock : in-game clock

# **FellipeC** Litobraking expert



Members **Q** 86 373 posts

Posted February 4, 2017

Report post



Can anybody confirm that it works with this mod lights?

# My screenshoots

 $\times \neg$ 

My Youtube KSP Channel

# WuphonsReach

Sr. Spacecraft Engineer





Members **Q** 230 1,013 posts

Posted February 5, 2017

Report post <

I was about to ask if you could add a function to remove a light form the "Lights" action group, but then realized that there's a link to "Action Groups Extended" in the OP. Which does all that and more.

5

**NEXT** 

**>>** 

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**A** This topic is now closed to further replies.



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