



**MiLight**

# MiLight Plugin for HomeSeer HS4 Manual

## Introduction

Thank you for using the MiLight Plugin for HS4! This plugin can be used to locally control MiLight LED lights via one or more MiLight W-Fi controllers. Please see *Requirements* for more info.

This is my second plugin of – now 3 - for HS4. My other plugins are the Horizon Remote Plugin and Volvo Plugin.

I have tested this plugin thoroughly, but if you find bugs anyway, please let me know.

## Requirements

To use this plugin, you will need the following:

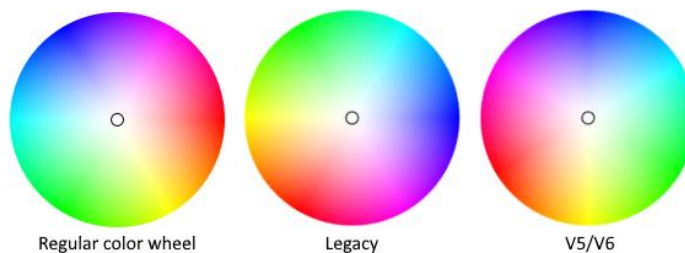
- HomeSeer HS4. The plugin has only been tested on Windows, but there is no reason why it should not work on Linux.
- A MiLight Wi-Fi controller and at least 1 light (a bulb, downlight, LED strip controller & strip, etc.). Other compatible systems should be LimitlessLED, AppLamp, EasyBulb, FutLight, AppLight, LEDme, Dekolight Rocket LED, s.LUCE, iLight, iBulb, Kreuzer, Home-Wize, ThorFire, SureCart. This list was composed with information collected from various internet sites. Please let me know if you think any brand does not work, so I can remove it from the list. Also, for this reason I strongly recommend to make use of the trial period before you buy the plugin.
- The controller has to be connected to the same Local Area Network (LAN) as your HomeSeer system. Follow the manual of the Wi-Fi controller to connect it to your Wireless LAN, if you haven't done that already.
- You will need to know its local IP (IPv4) address. It's useful if you can make sure the IP will not change in future, for instance by fixing it. See your router manual on how to do this.

## Installation & Setup

1. Install and activate the plugin like any other plugin. If you're new to HS4, here is how:
  - Go to your HomeSeer *Web Control page*.
  - Use the *Plugin* dropdown and choose *Add*.
  - Use the (2<sup>nd</sup>) Search bar, or scroll to *MiLight Plugin*.
  - Choose *Install*.
  - In *Plugins > Manage* use the toggle to turn on the plugin.
2. Configure:
  - Go to *Plugins > MiLight Plugin > Add a Wi-Fi controller*.
  - Follow the steps:
    - Choose *Continue* at the introduction step.
    - Enter the IPv4 IP address of your MiLight Wi-Fi controller and choose *Continue*.
    - Select the combination of version, number of zones and command set that matches your setup.
  - Please check the settings you entered, as the next step can create up to 10 devices and 94 features(!). Then to confirm chose *Create Devices*.
  - In the background the IP address you entered will be checked to make sure it is a valid IPv4 address (no typos, etc.). If it's not valid, the devices/features will not be created. This process will NOT check if there is an actual MiLight Wi-Fi controller behind the IP address. Also, this process checks to make sure that devices or features with the same version/IP combination do not already exist.
  - In the next step you can either go back 'home' (Devices page) or to the Log, in case you want to check if everything went well.

## Noteworthy

- There is no config (.ini) file.
- You can add as many Wi-Fi controllers as you want.
- You can add a Wi-Fi controller more than once, if the command set is different. This is also how you add controls for the bridge light.
- You can modify the names and locations of the devices and features as much as you want. They will keep working. For instance, instead of Zone 1, 2, 3, etc. you could consider naming them Living Room, Bed Room, etc.
- In case you deleted redundant feature values and you want them back after all, you can find the values in Appendix A (iBox command sets) or Appendix B (Legacy command sets).
- In case you created too many zones (8 instead of 4, or a bridge light) you can delete the devices/features you don't need. If you're not sure, consider hiding them instead. Renaming is safe, too. Do NOT delete the ID and Zone features of the 99 zone remote.
- In case you can't figure out how the colors work, consider a (HSV) color wheel. The colors correspond to the (H)UE component. But instead of 0-359°, the scale goes from 0-255. I choose to not convert this scale, so the result will be exact. If you find this confusing, you could consider adding the other scale under Status/Graphics and enter a scaled value as status text for 0-255. The Legacy MiLight color wheel seems to be rotated -120° (or 240°), while the V5/V6 (iBox) color wheel seems to be mirrored horizontally and then rotated 30° (or mirrored vertically and rotated -150°).



- You may want to consider limiting access to the (Un)Link feature(s) by clicking on each feature and under *User Access* remove the *Any* checkmark, chose your admin account(s) instead and then *Save*.
- Note that all traffic is one way. In other words, you can only send commands and features will not be updated if you change lights outside the plugin (for example with a MiLight remote, or cut power).
- Looking for link/unlink commands for V3/V4? Try the (Long) ON/OFF command after power on.
- Confused about the values for Disco Effect modes? This plugin follows the documentation, which says 1-9. However, the app(s) seem to be using 0-8. But also, the mode pictures in the app(s) do not match the lights. So I figured the app uses the wrong values. If you found a mismatch, feel free to manually modify Mode 1 to value 0, Mode 2 to value 1, etc.

## Long Key Presses

In version 1.0.0.4 long key presses were added. This act as if the button was held, like in the MiLight apps. Here is what you should know about long key presses:

- In the app a long key press always only comes after the non-long key press. In this plugin this is not the case. So, if you need it, please build it with a macro.
- The plugin only sends the long key press 1 time. If you need it more often, which could be the case when linking lights, please build a macro in which the long key press is repeated (or if you only need it once, press the Long button repeatedly).
- Long On seems to be the same as White mode for several/most/all command sets.
- Long Off seems to be the same as Night Mode for several/most/all command sets.
- If you don't see a Long button do anything, you may delete it. It will not break any functionality. If you need it back after all, please look it up in Appendix A for V5/V6 (iBox) command sets, or Appendix B for Legacy command sets.
- Updating to version 1.0.0.4 from an older version will not automatically add the Long buttons. If you need them, please add their values manually. You can look them up in Appendix A or B.

## Artificial extra zones

The Wi-Fi controllers are not actually quite limited to 4 (or 8) zones.

For example, the V5/V6 Wi-Fi controllers (iBox1 and iBox2) seem to be able to each control:

- Up to 4 RGBWW zones
- Up to 4 WW/CW zones
- Up to 4 RGBWW/CW full color zones
- Up to 8 RGB+CCT zones
- (1 RGB zone)
- Etc.

This is possible because if you link a light within a certain command set, it will only listen to commands from that set, not from another set. In other words, these controllers can\* virtually be 129 zones(!).

This, of course, can only be achieved if you have these type of lights, or don't care about some functionality (For example you can link a RGB+CCT light as RGBWW light). You can add a controller more than once and set command modes differently for each occurrence.

Controllers with older versions have less command sets and can therefore handle less total zones.

\* Tested with available iBox2 hardware. Different versions may give different results.

## Presets & Macros

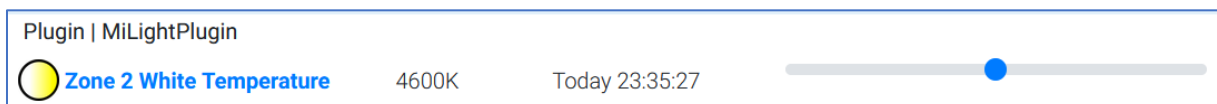
The plugin does not support macros by default, but there are a few things you can do to make life easier:

### Presets

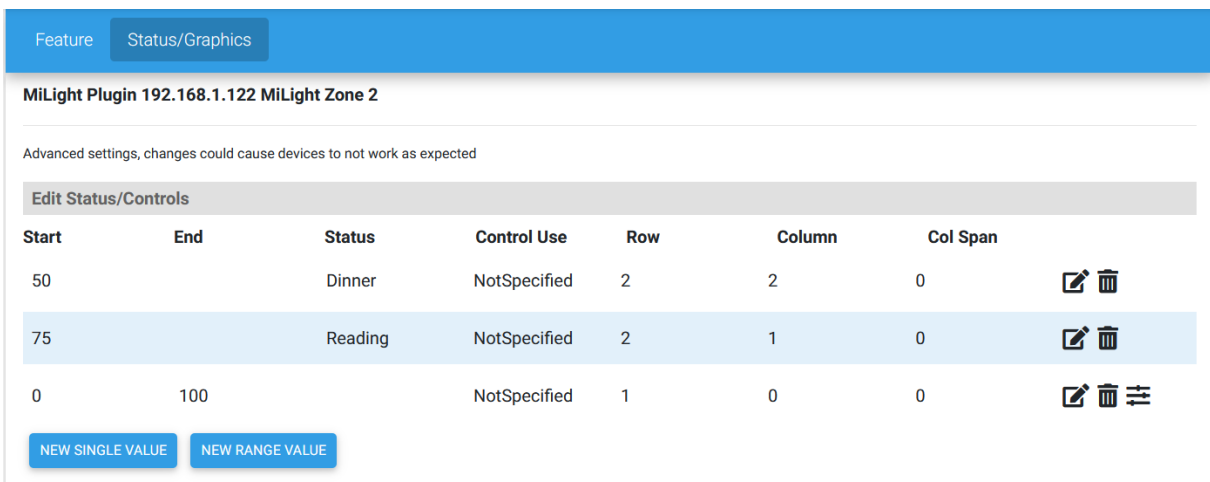
If you've figured out which setting works for you for any of the slider features, you can add extra buttons so that you don't have to remember the value and you can easily set the value in one go.

### Preset example

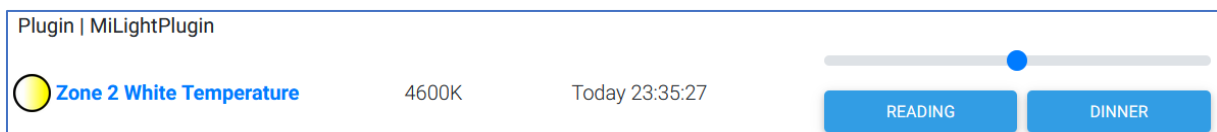
Say you figured out that 4600K is the perfect setting for Zone 2 for dinner.



Click the feature name (in this case Zone 2 White Temperature) and go to the *Status/Graphics* tab. Lookup the *Value* on the bottom of the page. In this case it turns out to be 50.



Now chose New Single Value and *Edit* it to give this preset your value of 50 and a god name, in this case Dinner. Consider editin the *Rows* of both the slider and the button, so they don't end up on the same line (which would make the slider smaller and harder to manipulate). Don't forget to save.



### Macros


If you want to be able to set several features at "the same time" you can use a virtual device and an event to do so.


### Macro example

Say while watching movies you want to dim Zone 1 lights to 10% brightness and switch Zone 2 and Zone 3 lights off.

Create a virtual device (from the *Devices* page + in the right top corner). Then create one or more features with unique macro names and values.

Virtual | Virtual

 MiLight Macros

 Control






MOVIE TIME

CLEANING

Now go to *Events*, add a new event (+). Name the event group, for example MiLight Macros. Then add a *New Event* (+), name it (in this case Movie Time. Set the trigger to your Virtual button (Movie Time).

Then set all the features to the values you wanted:

Groups / MiLight Macros / Movie Time

If

Trigger

A Device's Value is...

▼

Trigger Type

This Device Changes and Becomes...

▼

Device

Virtual-Virtual-MiLight Macros

▼

Feature

Control

▼

Changes and becomes:

Trigger Value

Movie Time

▼





THEN

Set Devices:

Plugin MiLightPlugin MiLight Zone 1 Zone 1 Brightness to 10

Plugin MiLightPlugin MiLight Zone 2 Zone 2 Switch to Off

Plugin MiLightPlugin MiLight Zone 3 Zone 3 Switch to Off

## Modify configuration

### Modify IP address and/or port number

If you have already added a controller earlier and you need to modify its IP address and/or port number, because you've made a typo or you had to change the controller's IP address, do the following:

- Go to *Plugins > MiLight Plugin > Modify IP address and/or port*.
- Follow the steps:
  - Choose *Continue* at the introduction step.
  - Select the controller you want to modify and choose *Continue*.
  - Select whether or not the room should be modified, too. Initially, when you added a controller, the plugin will set the room to the IP address and port number. But if you have meanwhile modified the room you may want to set this to *Leave room(s) as they are*. Choose *Continue*.
  - Enter the new IP address if applicable. Enter the new port number, if applicable. Choose *Modify*.
  - The controller settings will now be changed.

If you made a mistake you can use the page again to fix it.

### Remove a Wi-Fi controller

You can completely remove a controller by manually removing its devices and features. But to make it easier for you, you can use the dedicated page. Note that this process is irreversible. To remove a controller:

- Go to *Plugins > MiLight Plugin > Remove a Wi-Fi controller*.
- Follow the steps:
  - Choose *Continue* at the introduction step.
  - Select the controller you want to remove and choose *Continue*.
  - Confirm if you are sure and choose *Remove*.

That's it. The devices and features of the selected controller should now be removed. If you have made a mistake you will have to add the controller again and if events were tied to the deleted features you will have to modify these events.

Please note that to remove only 1 (or several) command set of a controller you will still have to delete its devices and features manually. So this is only the case if you have added a controller more than once, with different command sets. The easiest way to achieve this is to *Enable Bulk Edit* and select the devices you want to delete. HS4 will automatically select all related features. Choose *Bulk Action > Delete* and confirm.



## Support

If you have a question or want to report a bug, please use the dedicated sub-forum on <https://forums.homeseer.com/>

## Changelog

Version	Remark
1.0.2.0	Implemented device polling Added page to modify IP and/or port number of a controller Added page to remove a controller Updated manual accordingly
1.0.1.0	Reverse engineered and added all remaining (3x legacy, 7x V5/V6) command sets Optimized code
1.0.0.4	Added remote names to command set configuration Added long presses of supported buttons (see chapter Long Key Presses) Fixed Legacy RGB On Fixed iBox Bridge Effect Modes Renamed RGBWW/CW Full Color to RGB+CCT
1.0.0.3	Fix plugin enabling for Linux
1.0.0.2	Improved check for double devices, slightly better logging
1.0.0.1	Minor fix
1.0.0.0	Initial release



## Appendix B: Legacy command sets

MiLight 2.0 App						
	FUT020	FUT025 FUT027 FUT098	FUT007 FUT006 FUT005	FUT095 FUT096	FUT021	FUT022
Resembles remote						
MiLight 2.0 App	N/A				N/A	N/A
Type	1 zone RGBW	1 zone RGB	4 zone WW/CW	4 zone RGBW	1 zone Single Color	1 zone WW/CW
Supported since	V1.0.1.0	V1.0.0.0	V1.0.0.0	V1.0.0.0	V1.0.1.0	V1.0.1.0
Values for Switch features (address contains ON)						
Off (0)	-	✓	✓	✓	✓	✓
Long Off (10)	-	✓	-	-	✓	✓
On (100)	-	✓	✓	✓	✓	✓
Long On (110)	-	✓	-	-	✓	✓
On/Off Toggle (200)	✓	-	-	-	-	-
Long On/Off Toggle (210)	✓	-	-	-	-	-
Night Mode (50)	-	-	✓	✓	-	-
White Mode (99)	-	-	-	✓	-	-
Color/White Toggle (150)	✓	-	-	-	-	-
Long Color/White Toggle (160)	✓	-	-	-	-	-
Values for Brightness features (address contains BR)						
2-29	-	-	-	✓	-	-
1-59	-	-	-	✓	-	-
0-255	-	-	-	-	✓	-
Values for Brightness Buttons features (address contains BB)						
Up (254)	✓	✓	✓	-	-	-
Long Up (244)	✓	✓	✓	-	-	-
Down (255)	✓	✓	✓	-	-	-
Long Down (245)	✓	✓	✓	-	-	-
Low (20)	-	-	-	-	✓	✓
Long Low (30)	-	-	-	-	✓	✓
Medium (50)	-	-	-	-	✓	✓
Long Medium (60)	-	-	-	-	✓	✓
Max (100)	-	-	✓	-	✓	✓
Long Max (110)	-	-	-	-	✓	✓
Values for Color features (address contains CO)						
0-255	✓	✓	-	✓	-	-
Values for Effect (Disco/Mode) features (address contains EF)						
Mode (253)	✓	-	-	✓	-	-
Long Mode (243)	✓	-	-	✓	-	-
Previous (254)	-	✓	-	-	-	-
Long Previous (244)	-	✓	-	-	-	-
Next (255)	-	✓	-	-	-	-
Long Next (245)	-	✓	-	-	-	-
Values for Effect (Disco/Mode) Speed features or Saturation (address contains SS)						
Speed Up (254)	-	✓	-	✓	-	-
Long Speed Up (244)	-	✓	-	✓	-	-
Speed Down (255)	-	✓	-	✓	-	-
Long Speed Down (245)	-	✓	-	✓	-	-
Values for White Temperature features (address contains WT)						
0-255 (K=value*3800/255+2700)	-	-	-	-	-	✓
Values for White Temperature Up/Down Buttons features (address contains WB)						
Warmer (254)	-	-	✓	-	-	-
Long Warmer (244)	-	-	✓	-	-	-
Cooler (255)	-	-	✓	-	-	-
Long Cooler (245)	-	-	✓	-	-	-