

## MakeMyLed MML-5CH-AUTO – 5 Channel Auto Controller



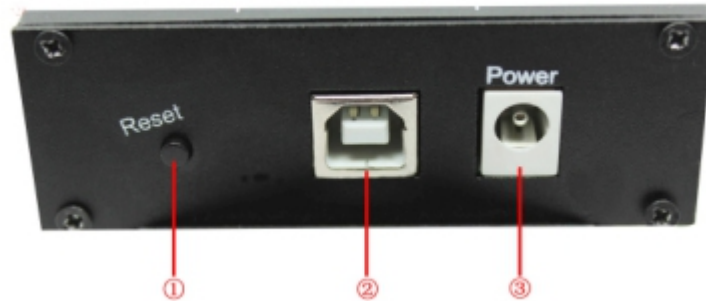
### Specifications

Supply voltage:	12V/24V DC (MakeMyLed systems are 24V)
Output:	5 channels @ 4A ( <a href="#">60W@12V</a> 96W@24V Max per channel)
Programming:	From Windows PC/Laptop

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## Connections



1. Reset button To restore to factory default settings
  2. USB socket: To download timing patterns from Windows PC or to run simulations, also used to power the device for programming.
  3. Power This 5.5/2.5 power jack is not used for MakeMyLed lighting systems, power is applied via the V+/V- terminals on the other side of the controller.
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# **MakeMyLed MML-5CH-AUTO – 5 Channel Auto Controller**

## **General Information**

The MakeMyLed 5 channel auto controller a versatile programmable 5 channel controller with battery backup that can control up to five output lines independently.

Programmable from a Windows PC/Laptop via the supplied USB cable.

The unit comes preprogrammed with the popular MakeMyLed Sunrise/Noon/Sunset/Moonlight patterns in 8 flavours, suna100, suna75, suna50 and suna25 for ramping with a 5 hour max peak at 100%, 75%, 50% and 25% respectively, sunb100, sunb75, sunb50 and sunb25 for ramping with a 3 hour max peak at 100%, 75%, 50% and 25% respectively and also includes other handy pre-programmed modes like all100, all75, all50, all25 and moonlight to override the sunrise pattern and force all leds on at 100%, 75%, 50%, 25% and 1% respectively.

The preprogrammed patterns are stored on the device when you receive it and you can't modify them directly, If you want to change them first re-create them on your PC using the PLED software provided and then upload them to the device.

You can use a Windows PC/Laptop to create new patterns, test them on fast forward and then download them to the controller for future use and switch between them as required using the buttons on the control box.

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## **Software Installation**

You can run the pre-programmed patterns without using a PC but if you want to change the dimming patterns, add or remove patterns you'll need to install software on your PC to do so.

Software for PC/Laptop is available for download from [makemyled.com.au](http://makemyled.com.au) or [makemyled.com](http://makemyled.com) in the Downloads section at the bottom of the page.

Run “Pled.exe” to install the software, a “Pled” launch icon will appear on your desktop after installation.

## **Controller operation**

This controller is preprogrammed with the popular Sunrise/Noon/Sunset/Moonlight pattern in 8 flavours, suna100, suna75, suna50 and suna25 for ramping with a 5 hour max peak at 100%, 75%, 50% and 25% respectively, sunb100, sunb75, sunb50 and sunb25 for ramping with a 3 hour max peak at 100%, 75%, 50% and 25% respectively and also includes other handy pre-programmed modes like all100, all75, all50, all25 and moonlight to override the sunrise pattern and force all leds on at 100%, 75%, 50%, 25% and 1% respectively.

For example suna100 will ramp up to 100% and stay like that for 5 hours and ramp back down, suna75 will ramp up to 75% and stay like that for 5 hours and ramp back down. Sunb100 will ramp up to 100% and stay like that for 3 hours and ramp back down, sunb75 will ramp up to 75% and stay like that for 3 hours and ramp back down. All50 will turn all leds on the 50% intensity and stay like that.

If you are not sure which “sun” pattern to use on your tank, start with suna100 and if to get too much algae due to excessive light you can switch down to suna75 and further switch down if required.

The pre-programmed patterns were created on our PC and uploaded to the controller, if you want to change them you will also have to re-create them on your PC and upload them to replace the patterns that are there already. From then on you can edit your copy at any time and upload again.

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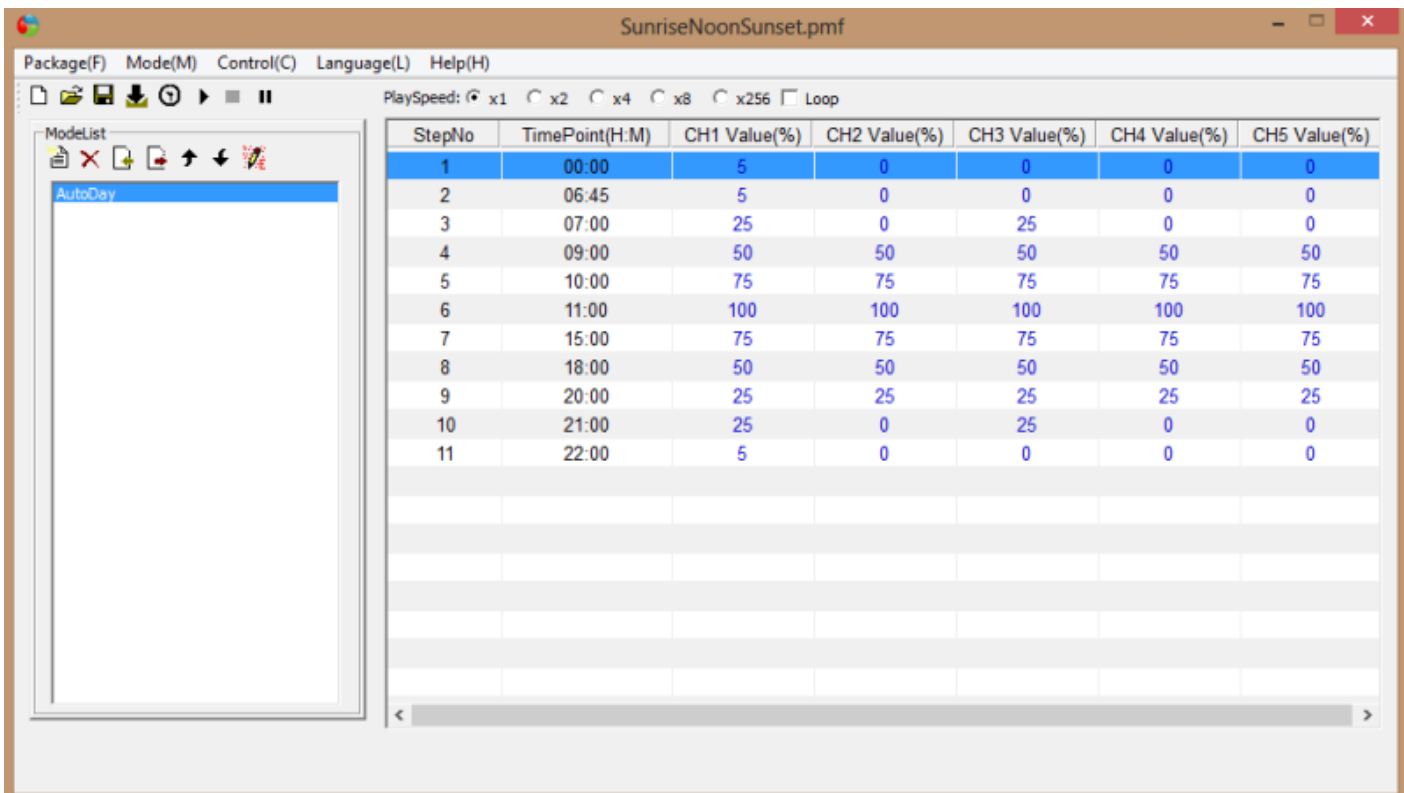
## The Pre-Programmed patterns

suna100	Starts at 6am at 1%, progressively ramps up to 100% by 10am, at 3pm progressively ramps down to 1% by 9:30pm, off at 10pm
suna75	Starts at 6am at 1%, progressively ramps up to 75% by 10am, at 3pm progressively ramps down to 1% by 9:30pm, off at 10pm
suna50	Starts at 6am at 1%, progressively ramps up to 50% by 10am, at 3pm progressively ramps down to 1% by 9:30pm, off at 10pm
suna25	Starts at 6am at 1%, progressively ramps up to 25% by 10am, at 3pm progressively ramps down to 1% by 9:30pm, off at 10pm
sunb100	Starts at 6am at 1%, progressively ramps up to 100% by 12pm, at 3pm progressively ramps down to 1% by 9:30pm, off at 10pm
sunb75	Starts at 6am at 1%, progressively ramps up to 75% by 12pm, at 3pm progressively ramps down to 1% by 9:30pm, off at 10pm
sunb50	Starts at 6am at 1%, progressively ramps up to 50% by 12pm, at 3pm progressively ramps down to 1% by 9:30pm, off at 10pm
sunb25	Starts at 6am at 1%, progressively ramps up to 25% by 12pm, at 3pm progressively ramps down to 1% by 9:30pm, off at 10pm
All100	Turn all channels on 100% intensity
All75	Turn all channels on 75% intensity
All50	Turn all channels on 50% intensity
All25	Turn all channels on 25% intensity
moon	Turn all channels on 1% intensity

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## Using Pled to create, change and delete lighting packages

**NOTE:** Dimming patterns (called Modes) are contained inside a project, think of a Project as a folder and the modes are the files in the folder.



StepNo	TimePoint(H:M)	CH1 Value(%)	CH2 Value(%)	CH3 Value(%)	CH4 Value(%)	CH5 Value(%)
1	00:00	5	0	0	0	0
2	06:45	5	0	0	0	0
3	07:00	25	0	25	0	0
4	09:00	50	50	50	50	50
5	10:00	75	75	75	75	75
6	11:00	100	100	100	100	100
7	15:00	75	75	75	75	75
8	18:00	50	50	50	50	50
9	20:00	25	25	25	25	25
10	21:00	25	0	25	0	0
11	22:00	5	0	0	0	0

## Package Menu option

- New** Create a new lighting package
- Open** Open a pre saved lighting package
- Save** Save the current lighting package
- Exit** Close the program

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## Mode menu option

- Insert** use it to create a new mode which can contain up to 50 time points.
- Load** to load an existing mode for editing
- Edit** Change the loaded mode. You can also enable edit by double clicking the display frame.
- Export** save the current mode to a file
- Delete** delete the current mode
- MoveUp** move up to the next mode in the list
- MoveDown** mode down to the next mode in the list
- Rename** rename the current mode
- Empty** Remove all modes in the current package

## Control menu option

- Download** download the current package to the smart controller
- Synctime** Download the PC time to the smart controller
- Clearall** Clear all modes stored in the smart controller
- OnlinePlay** Play the current mode, good for previewing before downloading.
- Stop** Stop online play
- Pause** Pause online play

## Help menu optional

For online help and software updates

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## Adding, Editing and deleting time points in a mode (aka pattern)

You can have up to 50 time points (called steps) programmed into a mode, The mode shown below has 11 time points set.

Double click on the display panel to bring up the Step editor. Click Add to add a new step, delete to delete the current step. For each step you can specify the time and the % intensity of each channel.

The “Fade” button toggles between Fade and Jump. Fade means fade from one time point to the next, Jump means jump from one time point to the next. e.g. Step 1 Channel 1 is 50% brightness, Step 2 channel 1 is 100% brightness, Fade will gradually transition from 50% to 100% until step 2 is reached, Jump will keep the brightness at 50% until step 2 is reached and then the brightness will jump to 100%.

The screenshot shows the software interface for 'SunriseNoonSunset.pmf'. It features a menu bar (Package(F), Mode(M), Control(C), Language(L), Help(H)), a toolbar with icons for file operations and playback, and a 'PlaySpeed' section with options for x1, x2, x4, x8, x256, and a 'Loop' checkbox. On the left, a 'ModeList' panel shows 'AutoDay' selected. The main area contains a table with 7 columns: StepNo, TimePoint(H.M), CH1 Value(%), CH2 Value(%), CH3 Value(%), CH4 Value(%), and CH5 Value(%). The table lists 11 steps, with step 5 highlighted in blue. A 'StepEdit' dialog box is open over step 5, showing 'StepNo: 5/11', 'Time: 10:00', and five channels (CH1-CH5) each with a value of 75 and a 'Fade' button. The dialog also includes 'Add', 'Delete', 'Prev', 'Next', and 'Close' buttons.

StepNo	TimePoint(H.M)	CH1 Value(%)	CH2 Value(%)	CH3 Value(%)	CH4 Value(%)	CH5 Value(%)
1	00:00	5	0	0	0	0
2	06:45	5	0	0	0	0
3	07:00	25	0	25	0	0
4	09:00	50	50	50	50	50
5	10:00	75	75	75	75	75
6	11:00	100	100	100	100	100
7	15:00				75	75
8	18:00				50	50
9	20:00				25	25
10	21:00				0	0
11	22:00				0	0



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## Using the controls



1. Menu button – Return the smart controller back to the main menu
2. Enter - Select the currently displayed menu option
3. Up/Down – move up and down the options in the menu

## Mode menu option

Select which mode (lighting pattern) you want to run

## Setup Menu option

Options available here are for setting the time, date and enable/disable sound on the smart controller.

## Run menu option

Options are On or Off. Use the Up/Down buttons to toggle. On means run the selected mode, Off means turn the lights off.