

RCLightsKits.com 3CH RC CAR LED CONTROL MODULE

Instructions sheet

INTRODUCTION

The 3 channels RC LED Control module for RC Cars & Trucks is the premium lights control device on the market, designed to fit virtually any rc car or truck with a degree of flexibility never seen before that allow every drivers to personalize the way the module operate the lights. Be it for more bling for your shelves queen or for serious night racing, this control module will surely satisfy your needs.

Key Features:

- Support up to 3 input channels (servos)
- Connect between receiver and servos or speed controller (No additional hardware needed)
- 10 LED Output Channel each supporting 2 LED for up to 20 LED total, each output channel is individually controlled
- 5 models memory allowing you to save settings for up to 5 cars/bodies
- Working Brake, Reverse and Turn Signals lights that automatically respond to your throttle and steering inputs
- Can remotely toggle Headlights, Fogs, Tail Lights and Extended Lights set between Off, On and Police Like Flashing
- Can setup which LED Bank will flash in police mode (Only front & tail LED, All LED, Only Extended LED)
- Channel 3 can be used to toggle lights or to toggle reverse on nitro
- When Channel 3 cant be used to toggle lights, throttle channel will be used instead
- Brake & Reverse controls configurable for virtually any electric or nitro vehicles
- Automatically find throttle and steering channels centers on startup
- Configurable Hazard Lights
- Low power consumption
- Safe to use with LiPo battery

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INSTALLATION

Connecting the Led Control Module to the Receiver and Servos / ESC:

The Led Control Module is design to make a bridge between the receiver channel and corresponding servo or electronic speed control.

Disconnect your servos and ESC if applicable from your receiver.

The CH1, CH2 & CH3 Pins header on the Led Control Module each have 2 row of 3 pin, One row is use for the Receiver Wire and the other for the matching Servo or ESC, both row are internally connected to act as a Y connection so you can use any row for receiver wires or servo/esc.

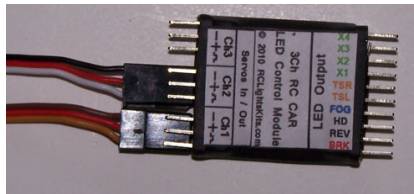
Use the included Servos Wires to connect the LED control module to your receiver as follow:

- Led Control Module CH1 Pin Header to your receiver Throttle channel (usually channel 1 but can vary from brand to brand)
- Led Control Module CH2 Pin Header to your receiver Steering channel (usually channel 2 but can vary from brand to brand)
- If applicable, Led Control Module CH3 Pin Header to your receiver Switch channel (usually channel 3 but can vary from brand to brand)

Connect your servos (and ESC) to the Led Control Module as follow:

- Throttle Servo or ESC to Led Control Module CH1 Pin Header
- Steering Servo to Led Control Module CH2 Pin Header
- If applicable, Reverse Servo to Led Control Module CH3 Pin Header

*** WARNING: When connecting your Servos, ESC, and Servos wires that goes to receiver, take care of the polarity. JR Style wires use the Brown Wire for Negative (-), Red for Positive (+) and Yellow for Signal. Futaba Style wires use the Black Wire for Negative (-), Red for Positive (+) and White for Signal.**



Connecting LEDS to the Led Control Module

There is two way to connect leds to your control module, the first is to connect leds directly on the output pins, this is nice for cars or truck that have their leds installed on the chassis itself and not on the body, you connect them once and rarely need to disconnect them. If you have installed your leds on the removable body, then you need to connect and disconnect the leds each time you install or remove your body, this is why we have come up with the EZCable assembly kit where you can easily connect or disconnect all you leds at once.

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Connecting LEDS directly to the module:

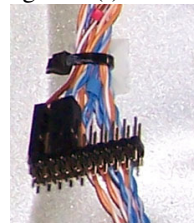
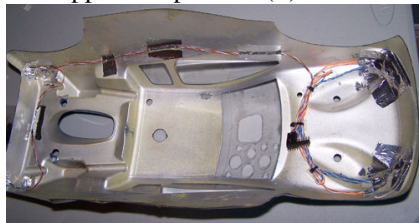
Each LED Output consist of 2 pins, the upper row (sticker side) which is negative (-) and the lower row which is positive (+).

Connect the LED so that the whitish wire connect to positive (+) and the color wire connect to negative (-).



Using the EZCable assembly kit:

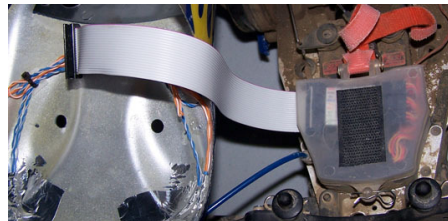
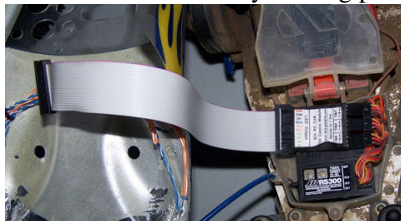
First you would need to assemble your EZCable, to do so, start by installing the LED Control Module where you want it in your chassis and install your leds on the body. Gather all led connector from the body together and setup your wiring so that the connectors will be relatively close to where the module will be installed on the chassis and install your leds to the included male-male adaptor, use the long side of the connector to connect the leds as if it were the led control module itself but reverse to polarity (the use of the ribbon cable now make the upper row positive (+) and lower row negative (-).



Put your body close to your chassis and measure how long a cable you need to be able to connect the body to the chassis, a too short cable will make it hard to connect your body, while a too long cable may move around while the body is installed and may get to moving parts or hot parts. Cut the ribbon cable to the desired length.

Install a 20 conductor connector on each end of your ribbon cable already cut to correct size. To install the connector without breaking them, you need to close them evenly, the best way to do this is to use a vice, trap the connector with the cable in into the vice and slowly close the vice until the cable and closing part are correctly pressed in. Another way to do this is to trap the connector top and bottom between two wood pieces and apply your weight on top of the wood pieces until you hear to connector click in place.

Now you can easily connect your body to your chassis, when using the EZCable, connect the red wire side to the brake pin side on the module so that you can use the red wire as a guide to know which side to connect male-male adaptor. Make sure that when you put the body on, that the ribbon cable cant get to hot parts like motor or muffler and any moving parts.



* Connecting the led with the polarity inverted wont damage the control module or led but the led wont light up, if your led don't light up, you must likely have the polarity not in the correct way, try reversing the polarity.

Pins definitions:

BRK = Tail/Brakes LED

REV = Reverse LED

HD = Headlights LED

FOG = Fogs LED

TSL = Turn Signal Left LED

TSR = Turn Signal Right LED

X1 = Extended LED 1

X2 = Extended LED 2

X3 = Extended LED 3

X4 = Extended LED 4

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PROGRAMMING

Programming the module:

There's 2 programming sequence that are available on the 3CH RC Car Led control Module, the Main Programming Sequence that will program your CH1 and CH2 centers and directions as well as all the Module parameters, and the CH3 Programming Sequence that will allow you to program the CH3 center and direction.

Main Programming Sequence:

Before entering the main programming sequence, make sure to disconnect CH3 servo and CH3 receiver cable, If electric, disconnect the motor from the ESC, if Nitro, have your motor not running.

- Make sure the receiver cables for CH1 & CH2 are correctly connected (If you don't plan on using the turn signals outputs, you can leave CH2 unplugged).
- To Enter the Main programming sequence, place the jumper on the CH3 + and SIGNAL pins while the Module is not powered.
- Power On your Transmitter.
- Power On the receiver with the jumper in place on the module, the module will enter into programming mode, make sure you keep your CH1 and CH2 centered from the power up until the module ask for full throttle and full right steering.
- The LEDs output will then all switch on, at this time you need to apply and hold full throttle and full right steering until the LEDs all turn off.
- The LEDs will then rapidly flash 1 time and ask for control parameter 1, immediately apply and hold the desired setting (Low, Neutral or High throttle) to program the 1st parameter, LEDs will then Flash 2 times to ask for the 2nd parameter, again, apply and hold the desired setting using the throttle position until the module ask for next parameter, repeat for each parameter until you reach the last parameter.
- Remove the jumper and restart the module.

* At any time during the programming sequence, if you remove the jumper, the module will exit programming mode after the current parameter is done, if you remove the jumper right after you enter into programming mode, the module will wait until centers and full positions are recorded and then will stop before entering the control parameters programming, this can be useful if you only need to tune the centers and direction of the channels without modifying the control parameters that you already program.

** All setting programmed while into the main programming sequence will only affect the currently selected model memory, others models memory will be left intact.

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Main Programming Sequence Table				
<u>Disconnect Servo and receiver cable from CH3, insert jumper on CH3 + and SIGNAL Pins</u>				
<u>Power ON your TX, keep throttle and steering at neutral, Power ON your receiver and Hold Neutrals</u>				
<u>When all leds turn ON, apply full throttle and full right steering and hold until leds turn OFF</u>				
Program each control parameter by positioning the throttle to the desired setting (1-Low, 2-Neutral, 3-Full)				
Number of Flash	Setting Name	HOLD Throttle position corresponding to desired setting		
		1- Low Throttle	2- Neutral Throttle (default setting)	3- High Throttle
1	CH1 – Brake & Reverse mode	Brake on neutral, Immediate Reverse when throttle is lower than neutral	Brake first, return to neutral and push brake again to engage reverse	Disable Reverse control from CH1 (For car without Reverse or Nitro that use CH3 for Reverse)
2	Turn Signal Lights Mode	Stay on (Indicator) and Flash side when turning	Stay Off and Flash side when turning	Follow Lights Mode and Flash side when turning
3	CH3 Mode	Use with 2 or 3 Positions switch to toggle lights mode (Off / On / Flashing)	Disable CH3	Use as Reverse switch (Nitro Reverse)
4 - a	Lights Mode a – Use switch to toggle (when setting 3 is set to 1)	2 Positions switch (Off – On toggle)	2 Positions Switch (Off – On – Flashing Toggle)	3 Positions Switch (Off – On – Flashing Toggle)
4 - b	Lights Mode b – Use 3 fast Neutral to Full Throttle to toggle (when setting 3 is set to 2 or 3)	Off – On toggle only (No Flashing)	Off – On – Flashing Toggle	On – Flashing Toggle only (No Off)
5	Extended (X1 to X4) Led mode	Always Off	Follow Lights Mode	Always On
6	Flashing Lights Settings	Only X1 to X4 will flash	All Lights will flash	All but X1 to X4 will flash
7	Extended Flashing Pattern (This setting will be ignored if X1 to X4 are setup to not flash)	Round Loop	Zig Zag	Random Flashing
8	Hazard Setting	Disabled	Hazard On After 6 sec of no input on CH1 & CH2	Hazard On After 15 sec of no input on CH1 & CH2
Wait for the End of Programming flashing signal. Power OFF, Remove Jumper, Reconnect CH3 Servo and Receiver cable if needed, power On and test your new settings				

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CH3 Programming Sequence:

Before entering the CH3 programming sequence, make sure to disconnect CH2 servo and CH2 receiver cable, If electric, disconnect the motor from the ESC, if Nitro, have your motor not running.

Make sure the receiver cable for CH3 is correctly connected.

To Enter the CH2 programming sequence, place the jumper on the CH2 + and SIGNAL pins while the Module is not powered.

Power On your Transmitter. If using a 2 positions switch for Reverse function on nitro car, position it for forward transmission, otherwise place the switch on Middle position for a 3 positions switch or Low position for a 2 positions switch.

Power On the receiver with the jumper in place on the module, the module will enter into programming mode.

When all leds turn On, Toggle the switch to the High position and keep it there till the leds turn Off.

Wait for the End of Programming flashing signal. Power OFF, Remove Jumper, Reconnect CH2 Servo and Receiver cable.

Power On and test your new settings.

* All setting programmed while into the CH3 programming sequence will only affect the currently selected model memory, others models memory will be left intact.

MODEL MEMORY:

The RC Car LED Control Module feature 5 models memory banks, that you can use to store different settings for other vehicles or bodies you may have, each with their respective settings saved into a memory bank, allowing you to easily switch a 2nd body on that have a different lights setup or to switch the module into your 2nd vehicle which may have different channels centers and directions as well as a different lights setup.

How to switch Model Memory:

To switch to another memory bank, First make sure the receiver is powered off, **Disconnect the CH1 Servo or ESC as well as CH1 receiver cable from the LED control module and have at least one other channel (CH2 or CH3) connected to the receiver** (doesn't matter to which receiver channel, as long as the LED control module can receive power it's good)

- Place the jumper on the CH1 + and SIGNAL pins while the Module is not powered.
- Power On the receiver with the jumper in place on the module, the module will enter into Model Memory Bank Selection Mode.
- The module will now cycle every 3 seconds to the next memory bank, the number of flash from the LED output represent the current Memory bank, for example, the LED output will flash once, mean it's memory bank 1, wait 3 sec., then flash 2 time, it's now in memory bank 2... until it reach memory bank 5 and then will switch back to memory bank 1.
- To select a memory bank, wait for the module to be in the desired memory bank and disconnect the jumper, when you disconnect the jumper, it will save the current memory bank as the new default memory bank and LED will flash rapidly to indicate the save was successful.
- Power off the receiver, Reconnect your servos/esc and receiver cables as they should be, and power back on your receiver, it will start in the newly selected memory banks.

* To program settings into a particular memory bank, first follow the Switch Model Memory procedure to select the memory bank you want to program, then follow the Main and/Or CH3 Programming procedure, each programming procedure only affect the currently selected memory model.