

Smart Light Controller Instructions

Eagles View Aerial L.L.C.

Thank you for purchasing the Eagles View Motorsports "Smart Light Controller". This electronic device will allow control of any LED based lighting system for RC cars, trucks, aircraft and boats. The Rev1 controller includes software developed for standard 3 channel RC controllers but can be used with any RC transmitter and receiver combination which uses and drives standard hobby type servos.

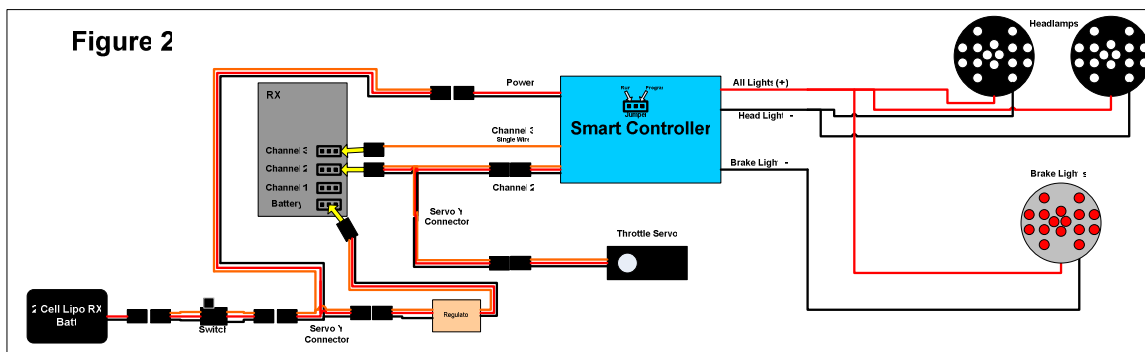
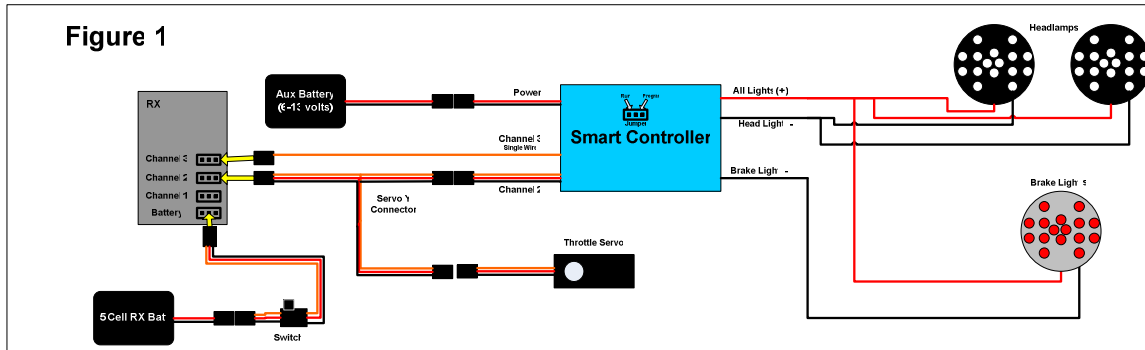
The controller comes with the output leads un-terminated since the controller will be used to drive a variety of lighting systems all of which use different plugs and connectors, the user will need to terminate these wires using the appropriate plug or solder connection to use this controller with standard light sets.

Specifications:

Inputs:	2 Servo inputs: - Channel 3 has a single wire with standard servo connector plug - Channel 2 has the full 3 wire lead with standard servo connector plug 1 Power Input: 5-14 volts standard servo connector plug Both servo inputs are optically isolated to reduce radio noise and interference
Outputs:	1 (+) Positive wire for all devices to be driven 2 (-) Wires one for Head/ Aux light control and one for brakes Output: Equal to Raw input voltage up to 5 amps current draw

Connections and Wiring

There are several ways to setup and use the lighting controller, the following diagram depicts two common methods for connecting and wiring the controller.



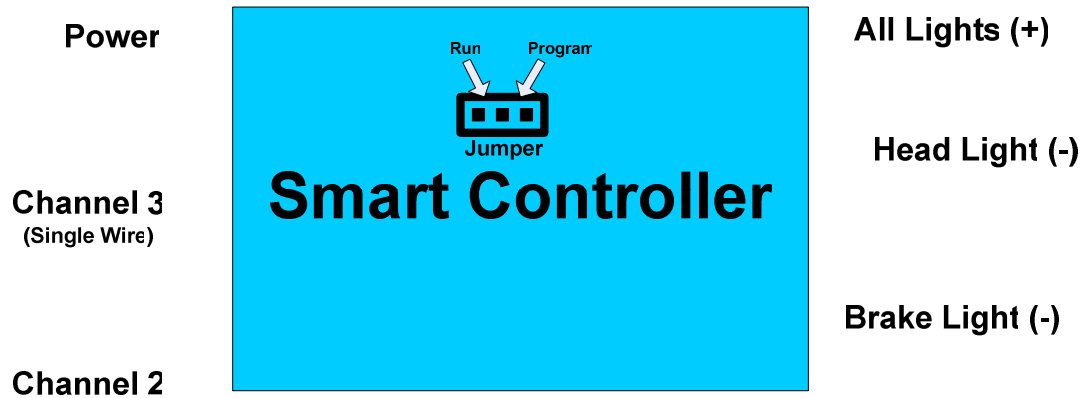
In [Figure 1](#) above, two separate batteries are used. This is optional and not required. The controller can be setup to use a separate battery to power the lights. The voltage of the “Aux Battery” will be fed directly to the lights, so it is required that the user match the battery used in this situation to the specification of the lights. For example, if the lights require 5 -6 volts for operation, only a 4-5 cell NiCD/NiMH or 2 Cell Lipoly battery can be used. The receiver in [Figure 1](#) still uses the standard RX battery.

In [Figure 2](#), the controller is setup to use the same battery as the RX uses for power. A “Y” connector is used immediately *after* the switch to connect the light controller and the RX to the battery through the switch. If a regulator is used as shown in the picture, the “Y” connector for the light controller power should go before the regulator if the actual battery voltage (for example 7.4 volts nominal) is to be delivered to the lights when they are on. This is useful in delivering slightly more voltage to the lights (for example 6v lights) to ensure the maximum brightness. The “Y” connector can be connected after the regulator to reduce the voltage to the regulated voltage fed to the RX.

Note that over driving LED or filament type bulbs past their rated capacity can shorten the life of these components!

Programming Instructions

In the picture below, the controller is illustrated with a set of jumper pins near the middle of the board. Placing the jumper to the right puts the controller in programming mode, placing it on the left puts it in normal/run mode.



First setup and connect the controller as per the block diagrams and instructions above.

NOTE! Before programming your controller, it is recommended that you temporarily set the channel endpoints on your transmitter for the channel you intend to use for controlling the head/aux lights on/off functionality to approximately %75 on each end. In most cases this will be channel 3 on surface based transmitters.

Ensure the transmitter is turned on and set for the proper model.

Place the controller in programming mode by setting the jumper to the right.

If using separate RX and light batteries, turn the RX battery on *FIRST*, and then connect the auxiliary battery to the controller, otherwise just turn on the switch if using a single battery setup.

Ensure that the TX is undisturbed during the power on of the controller; it will take an initial reading for the TX neutral points and then begin the headlight programming sequence.

The headlights will flash 3 times about 1 second apart and then stay lit. While the headlights are lit, move the Ch3 (or appropriate aux channel switch) to the "On" position to be used for the headlights.

The controller will blink the headlights 3 times quickly if the programming was successful, if not, it will blink several times slowly, and restart the programming sequence to try again.

If the headlight programming was successful, the controller will blink the brake lights 4 times and then stay lit.

Once the brake lights are lit, move the throttle/brake trigger slightly to the position where you want the brake lights to come on. It must be somewhere besides the neutral point but it doesn't have to be very much. Hold that position until the brake lights blink 3 times quickly to indicate that they have been programmed correctly.

If the brake programming did not find a suitable reading, the brake lights will flash several times slowly and restart the brake programming sequence again.

Once both channels have been programmed successfully, turn off the receiver, and disconnect (if using one) the auxiliary battery from the controller.

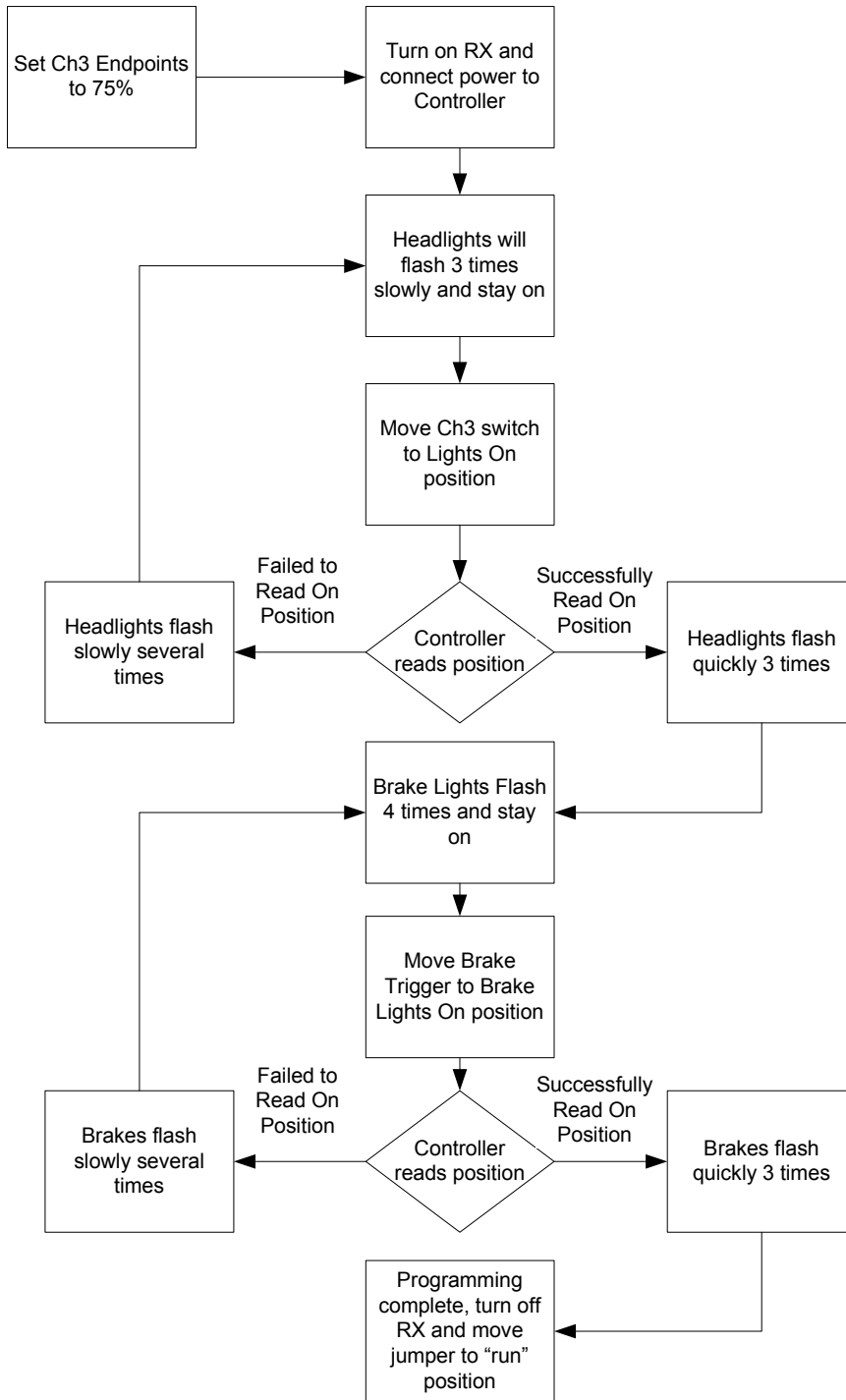
Move the Jumper from right to left on the controller to put it in "run" mode.

Reset the endpoints on the transmitter (in most cases channel 3) from 75% on each end to 100% on each end.

Turn on the receiver, (and if necessary, connect the aux battery to the controller) and check the functionality of the controller. Pushing the throttle/brake lever towards the brake area should turn on the brake lights as the brakes are engaged. Moving the Channel 3 switch on and off should turn the headlights on and off.

Your setup is complete!

Flowchart for programming:



Contact Information and Troubleshooting

If you have problems with your controller, please contact Eagles View Aerial L.L.C. Directly:

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