How to program your BK controller

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I have fielded several phone calls and tons of e-mails seeking clarification of the BK controller instruction manual. Specifically, the initial set up programming has been a popular topic. I decided it was best to post instructions here, in plain English for everyone that needs the information, as well as some general rules to help users get the most from their system. Here goes:

General Rules: Brushless systems offer high power and efficiency. There are a few general rules I would like to discuss that apply to all users of brushless systems.

Wire Length: For the most reliable, efficient sytem, it is imperative that all wires on the system be as short as possible. This includes wires from the battery to the controller as well as wires from the motor to the controller. Longer wire not only reduces efficiency, it increases resistance and can lead to high voltage spikes, which may damage the controller! It is also a good idea to twist battery leads together and motor leads together to reduce the possibility of radio interference.

Connectors: These systems can draw some power when under full power and it is Highly recommended that only a high quality battery connector be used. Dean's connectors are among the most popular and highest quality for this application.

Solder connections: This is a highly important area. A bad solder joint will have a serious effect on the performance of the system. Please take precautions to ensure that all solder joints are clean and properly connected and covered (heat shrink). This includes the batteries themselves, as well as all connections between the motor, controller and batteries.

General installation: The motor has three wires, which can be connected to the three controller wires in any sequence. The motor and controller must be properly connected and should be installed on the vehicle before we begin the initial programming procedure. It is also recommended that you run a receiver pack or UBEC anytime you are running more than 10 cells or less than 8cells (pretty much always use a receiver pack or UBEC for the best performance).
If you intend to run 2 packs in series (most Maxx or buggy conversions will run this configuration), wire the battery leads as follows: Connect the red(positive) battery lead from the speed control to the positive side of your male connector (Dean's connectors highly recommended). Then, connect the black (negative) battery lead from the controller to the negative side of ANOTHER male connector. Finally, connect the two male connectors to each other (should be positive on one to negative on the other). You should have a triangle-like configuration on your speed control. Now, when you plug in both battery packs, they will automatically be wired in series. Now, on to the setup.

Now that we have the controller wired and the motor and controller installed, we may begin the initial programming sequence.

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First, turn on your transmitter.

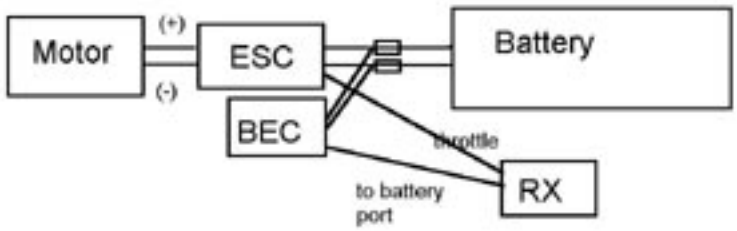
Next, remove the red programming bridge (little red jumper near the battery leads). While you are there, you should also remove the black BEC jumper if you are using a receiver pack or UBEC as recommended. This black tab is near the red jumper, but tucked under the heatshrink. Remove this to disable the BEC and utilize the receiver pack/UBEC.

Now plug in the receiver pack/UBEC and the main batteries and wait. After 5 seconds, you will here a beep from the motor. When you here this beep, move the throttle to full power and wait. After another 5 seconds, you will here another beep. When you here this, move your throttle control to full reverse and wait. After 5 seconds, you will here a double beep, indicating that set up is complete. Now replace the red programming jumper and turn off/unplug your main batteries and receiver pack.
Congratulations, you have just programmed your controller for Forwad/Brakes/Reverse operation and it will operate similar to a regular reversible speed controller. The controller can be set up as a forward only controller, as well. This is done by returning the throttle position to neutral (instead of full reverse)before the final set of beeps (double beeps). Now, if the motor goes backwards when you want it to go forward, we can quickly fix that as well.

Here goes:
Turn on your radio, plug in the main batteries and receiver battery(or UBEC). While the system is on, remove the red jumper. When you here a beep, put the red jumper back on the controller. That is it! You just reversed the motor direction!

Now go out and beat up on some nitro vehicles and enjoy your system!

Here is the diagram to wire in a BEC.



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