STEP 1. RECEIVER CONNECTIONS

The G2 speed controller is fitted with an industry standard JR receiver lead. The plug on the end of the lead is compatible with all major radio brands recent receivers. However, some of the older receivers must have the wiring order into the plug changed. **This is important because the receiver and or the speed control could be damaged if connected up incorrectly.**

CHANGING WIRING ORDER

If you are using any of the following :
JR, HiTEC, Futaba, new KO & Airtronics Z receivers (Airtronics Z receivers have blue plastic cases & new KO cases have tabs on the input sockets, see fig.a), you do not need to change the wiring order on your receiver lead.
Simply plug the receiver plug into channel 2 on your receiver with the brown wire towards the edge of the receiver.

Fig a. New KO (with tabs)

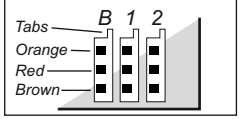
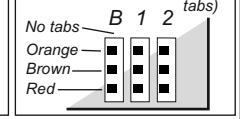


Fig b. Old KO (without tabs)



If your receiver is an older KO or Sanwa/ Airtronics, (Old Sanwa /Airtronics cases are black in colour & old KO cases do not have tabs on the input sockets, see fig.b), you will need to change the wiring order on your receiver lead.
To change the wiring order on your receiver lead you will need to gently lift the plastic retaining tabs on the plug remove the red and brown wires, interchange them and re-insert them into the plug so that the brown wire is now in the middle (see fig.b). Push the wires into the plug gently until the plastic retaining tab clicks. Now plug the receiver plug into channel 2 on your receiver with the red wire towards the edge of the receiver.

USING A RECEIVER BATTERY PACK

If using an external battery pack to power the receiver PLEASE observe the following points.

- ***REMOVE the red wire from the G2 receiver lead before plugging it into your receiver.***
- Use ONLY a 4 Cell(1.5V cells) or 5 Cell(1.2V cells) battery pack and plug it into the battery slot on your receiver.
- Do not leave the G2 switched on even if the receiver battery pack switch is in the off position.

STEP 2. MOTOR PREPARATION

BRUSHLESS MOTORS

Sensorless brushless motors require very little preperation or maintenance. They do not use sensors or require the sensor harness that you would normally use with sensored set ups to connect to the speed control.
This makes the motors very robust and very easy to use and install.
You must be sure that when installing your Brushless sensorless motor you do not allow any of the wires to short out during use.
There is no correct order in which to solder the motor wires from the speed control to the motor but if you find that the motor turns in the wrong direction, all you need to do is simply unplug any two (2) of the motor wires and swap them over!

G2 HYDRA

STEP 3. INSTALLING THE G2

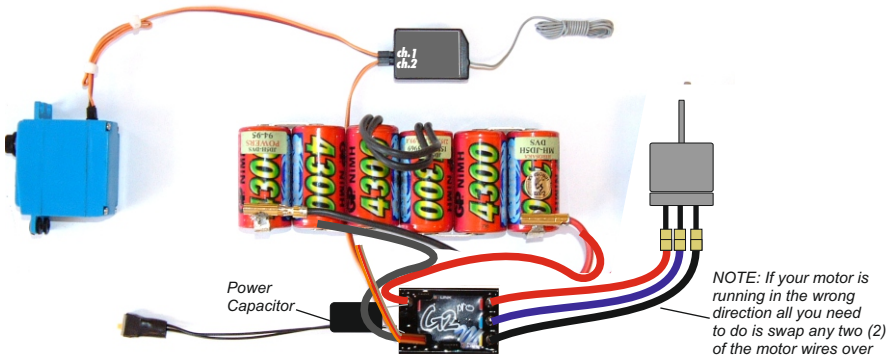
POSITIONING OF THE G2

The G2 speed controller must be mounted as far away as possible from the other electronics in the model, especially the receiver & antenna wire. Do not bundle or tie-wrap any of the receiver wires or antenna wire to the G2's power wires. Mount the G2 in a position where it will receive as much air flow across it as possible, this will help a great deal in keeping the ESC cool and ultimately make the G2 run more efficiently.
With a suitable mounting position decided, we can now attach the wires to the G2.

WIRING IN YOUR SPEED CONTROL

The G2 comes with a set of power wires and a Power capacitor that need fitting before you can use your speed control. See fig.1.2 for diagram
1. Fit the Power capacitor. To fit this, apply solder to the positive lead from the capacitor and position it over the positive battery post (RED) on the G2, then, apply solder to the negative lead from the capacitor and place over the negative battery post (BLACK). Once the capacitor is in position, hold each wire to the post and heat each joint with a soldering iron whilst applying thin solder to the point where the wire meets the post. DO NOT HOLD THE IRON ON THE POST FOR MORE THAN 3 SECONDS, prolonged heat can damage the ESC. The solder should run over the post and wire making a clean joint.
NOTE: Keep wires as short as possible!
2. Fit the battery wires. Solder one end of the first red wire to the positive battery post (RED) on the ESC. Solder the other end to your chosen battery connector. Solder one end of the first black wire to the negative battery post (BLACK) on the ESC. Solder the other end to your chosen battery connector See fig 1.2
3. Fit the motor wires. You should now have left, 1 red, 1 black and 1 blue wire. These are to connect to the 3 motor tabs. As mentioned in the motor preperation section, there is no right or wrong way to do this so solder one wire from the red motor post on the ESC to the first motor tab, one wire from the blue motor post on the ESC to the next and the final wire from the yellow motor post on the ESC to the last free tab on the motor See fig 1.2
If the motor turns the wrong way, swap any 2 motor wires over!

Fig 1.2



STEP 4. PROGRAMMING

SET-UP

1) Once installed you are ready to calibrate the G2 to your transmitter.

1.1) Switch your transmitter on and hold the throttle in the full reverse/brake position.
1.2) Connect the battery to your G2 (ensuring polarity is correct) and switch on using the on/off switch.
NOTE: When you switch on, the red and green LEDs will come on, go out and the controller will beep, the green LED will come on on its own.
1.3) Whilst the green LED is on, push the throttle to the full forwards position, hold there until the green LED goes out and the red LED comes on.
1.4) Whilst the red LED is on, return to neutral.
1.5) Calibration to the transmitter is complete and your G2 speed control is ready to use with last used settings (Factory settings if this is the first time you have switched on.)

YOUR G2 SPEED CONTROL IS NOW READY TO GO!

NOTES:

When the red and green LEDs come on, this denotes that you are in the neutral position.
Both LEDs will go out when you move in either direction, then the green LED will come on at full speed in either direction.

If you are not calibrating the system, after switch on, the controller is ready to use straight away!

If you adjust your transmitter settings you will need to go through the set-up procedure again.

If you want to repeat the set up procedure you must switch the unit off for 10 seconds before trying again.