

## Trouble Shooting Guide for *Power Master* and *Mini P* type RC Speed Controls

Some common problems keep occurring during programming and operation of these speed controls, mostly due to not being able to understand what is happening. Power Master Speed Controls are programmed to operate on normal PWM receiver signals of 1 to 2 millisecond duration (Standard servo signal) Signals outside these times are regarded as spurious and are ignored. With modern RC transmitters having many different ways of displaying the normal settings, it is easy to have the range outside what these speed controls consider to be acceptable limits. This guide should explain what Power Master is telling you and how to overcome these problems.

### Programming Problems

1. *Speed control will not enter programming mode and appears to do nothing after it is plugged into battery ( Led may be on or off but does not flash)*

Test response from throttle movement. If throttle operates upside down then reverse throttle.

2. *Speed control will not enter programming mode and appears to do nothing after it is plugged into battery ( Led flashes about 4 times per second)*

There is a problem with the signal coming from the radio. Check Speed Control servo lead is properly plugged in, Transmitter is turned on and matching crystals are being used in transmitter and receiver.

3. *Speed control will not enter programming mode and motor immediately runs as soon as the speed control is plugged into the battery ( Led may be on or off but does not flash)*

Test response from throttle movement. If throttle appears to operate, then 1 of the following is the problem :-

- i The throttle span does not extend far enough full throttle side. Check radio settings for 100% span and neutral throttle trim. If this is OK then increase span and/or throttle trim till a programming response is achieved.
- ii A smooth plug in is required with the transmitter turned on and at full throttle and only after the speed control has been unplugged from the battery (not the receiver) for at least 10 seconds. If you get a jittery connection then you will need to wait another 10 seconds with the speed control unplugged from the battery.
- iii You are using the switch (s models only) to turn on and off the battery. If you have a switched model, then you can certainly plug in the battery and then use the switch to activate programming mode, but turning the switch off for 10 seconds and then back on does not always work. The speed control should be disconnected from the battery to fully discharge the circuit before attempting another reprogram.

4. *Speed control enters programming mode, but the Led continues to flash in some random pattern not or not what you are expecting. In fact the pattern is 2 flashes, 2 second break, 2flashes, 1 second break, 3 flashes, 1 second break and then 3 flashes. The last 2 sets of three can be all out of time inter-dispersed with other long flashes*

This is caused by the throttle trim being set way too high. Reduce the throttle trim.

5. *The brake does not program properly.*

All programming operations require the all transmitter settings be removed before programming. i.e. transmitter initial brake, ramping etc.. Make sure they are turned off for the throttle channel before programming the speed control. They may be turned back on afterwards.

### **Operation Problems**

1. *Speed control hesitates and jitters at full throttle.*
  - i The battery is nearly flat and the speed control is activating low voltage protection.
  - ii The throttle span is too long, and the speed control is rejecting the signal it is receiving (glitch rejection technology). Reduce throttle span and/or trim and reprogram throttle positions.
2. *While racing, the brake appears to fail. Then, with more racing, the speed control appears to go full throttle and will not stop. (only occurs with some older Power Master type speed controls on **very** low turn motors)*

Return the speed control for a free upgrade and rebuild. (Must be authorised first, and the exact circumstances at failure must be revealed)

Any other problem can be discussed by contacting me by email or phone. Check out the website at <http://home.austarnet.com.au/iarmstrong>

If you have managed to destroy a speed control, it is usually repairable for a fraction of the cost of buying a new control. That includes speed controls from other manufacturers. Quotes given after inspection.