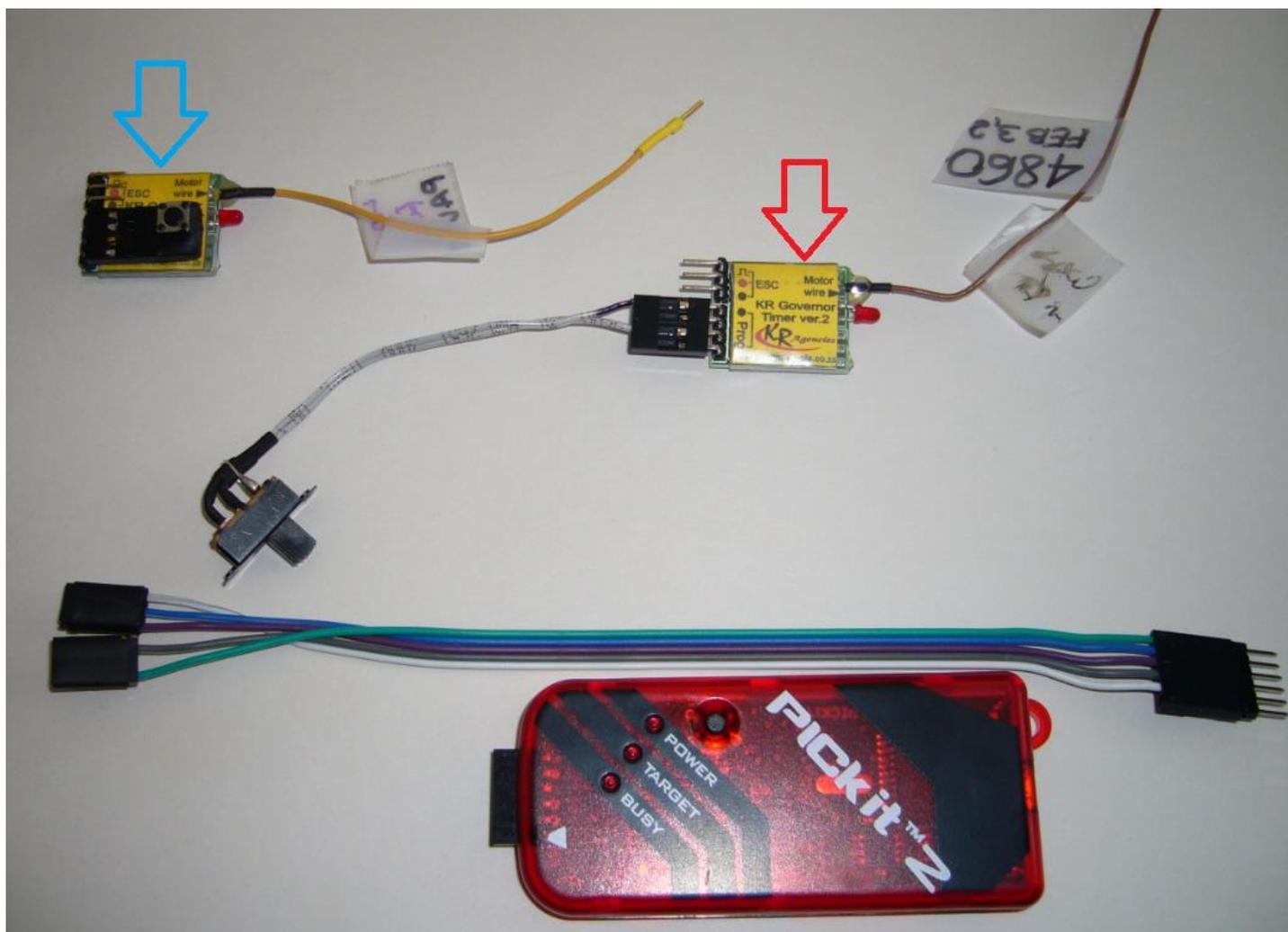


## KR Governors programming and troubleshooting



There are two types of KR governors: compact (blue arrow) and standard with the slide switch (red arrow).

Compact governor weights 5 grams with the push button, standard – 7 grams with the switch. The functionality of both is the same. The user can set RPM, gain, start-up delay and flight time.

I purchased both from RSM Distribution (<https://www.rsmdistribution.com>: contact person: Eric Rule) in Summer 2016. RSM Distribution confirmed that the governors were programmed for low RPM (less than 7,500) and tested before shipment to Toronto.

I tested them in my indoor C/L planes with EMAX2822 motors, 2S 800 mAh batteries and two different ESCs.

The standard governor worked but the compact governor behaved strangely. The motor was running with only one, low speed (3,900 RPM), it was impossible to set the desired RPM and the system was shutting down after ten seconds.

I have contacted Eric Rule for suggestions but he could not solve the problem. Then, I contacted Keith Reneclé (RSA) who designed the governors. After many e-mails the problem remained unsolved and I decided to replace the push button governor with the standard one that worked flawlessly.

In the meantime Paul Emmerson, who flies indoors with me each Saturday morning, bought the compact governor from RSM Distribution and reported similar problems, forcing him to use another governor in his indoor Bee.

It was only recently that I discovered the root cause of these problems. The \*.HEX file used by RSM Distribution in Summer 2016 was most likely corrupted, messing up the compact governor functionality. The true reason for this corruption is and will probably stay unknown. I cannot exclude the possibility that \*.HEX files, traveling from RSA to Eric Rule in California, were somehow affected by one or more internet security software functions and/or virus protection.

It is also possible that the \*HEX file used by RSM Distribution in Summer 2016 had some hidden programming bug in it or/and that Eric Rule made an error while programming my compact governor or/and he did not test it thoroughly before shipping to me. Lastly, it is also possible that this particular compact governor programmed with this particular \*.HEX file worked fine with the ESC used by Eric and did not work with one of my ESCs.

I write more about a tricky matter of the ESC selection below.

The photo above shows my Pickit2 programmer that has been used to debug and successfully program Paul's compact governor for low RPM (less than 7,500) from scratch, with Keith Reneclé providing the updated \*.HEX files directly to me.

The programming is straightforward but requires a special, custom made cable (see the photo above) that connects the governor to be programmed with Pickit2. Pickit2 programmer requires the driver that comes within the software available free on the internet.

I can program and re-program now both types of KR governors that are indispensable for electric C/L flight – indoors and outdoors.

There are many ESC that work flawlessly with KR governors but some, for example Electrify SS-12 Amps, do not.

I will write separately about my quest to find the ESC that fulfills the following conditions:

1. Is available immediately in the GTA or/and on the web
2. Is priced reasonably
3. "Cooperates" with KR governors and vice versa
4. Has minimal weight
5. Provides the programmable propeller break functions: soft, medium and hard breaking
6. Provides certain other programmable functions like reset to factory setting, low voltage protection etc.
7. Can be programmed using the programming card  
(the traditional option is to use the R/C transmitter and receiver)
8. Is manufactured in 12 Amps. – 60 Amps. range
9. Will be still available in the next, say, 6-12 months
10. Has the manual that is written in passable English

To be continued.....