

PowerBox Evolution

Changing the output voltage 5.9 V / 7.4 V

PowerBox Systems® GmbH

zertifiziert nach DIN EN ISO 9001:2008

World Leaders in RC
Power Supply Systems

You can set your **PowerBox Evolution** to either of two different output voltages. The default stabilised voltage is 5.9 Volts. If you wish to raise the voltage to 7.4 Volts, please check carefully that all the components in your model are designed and approved for the higher voltage.

At the time of writing (June 2011) we still recommend that you leave the voltage at 5.9 Volts, even when using 7.4 Volt servos, as the trade-off for the higher servo power and slightly faster transit speeds is a significant reduction in effective servo life - regardless of the manufacturer.

In 7.4 Volt mode the dissipated power is lower, and this means that the power of your **PowerBox Evolution** is about 30% higher.

By default both voltage regulators are set to 5.9 V. If you wish to use high-voltage servos (HV servos, designed for up to 8.4 V), the **PowerBox Evolution** allows you to operate the servos on a regulated voltage of 7.4 V instead of 5.9 V. The advantage of a regulated 7.4 V voltage compared with an 'open' 8.4 V battery is that the regulated voltage causes all servos to work constantly at the same speed and generate the same torque. This is an important advantage which is particularly appreciated by all our competition pilots, as it makes all manoeuvres more predictable and easier to fly.

A further advantage of a regulated 7.4 V servo voltage is a longer effective life for your servos, as it eliminates the voltage peaks which occur when the batteries are freshly charged.

Setting the servo voltage:

The procedure for switching the unit to 7.4 Volts is quick and simple, and only needs to be carried out once. The setting is stored permanently, but can also be changed again at any time. The change must be carried out for **each of the two voltage regulators**, as the **PowerBox Evolution** features two regulators which work independently of each other.

To change the output voltage, connect both batteries and switch the **PowerBox Evolution** on.

Now disconnect **both** batteries from the **PowerBox Evolution**.

Press the **SET** button and **hold it pressed in**. With the **SET** button pressed in, re-connect Battery 1 and Battery 2.

The selected setting is indicated by the LED monitor on the **PowerBox Evolution**: all the LEDs on the appropriate side light up:

1 x flash means that the regulator is now operating at 5.9 V

3 x flashes means that the regulator is now operating at 7.4 V

The output voltage is switched by a toggle process. Example: the set voltage is 5.9 V; if you connect the batteries with the Set button pressed in, the output voltage changes to 7.4 V, and the LEDs flash three times. If you wish to revert to 5.9 V, you must disconnect the batteries and repeat the procedure.

Caution: it is essential that both regulators are set to the same voltage. If you set only one regulator to 7.4 V, the voltage at the output is 7.4 V.