

Tech - Aero Designs LLC

"Throttle-Tech"™

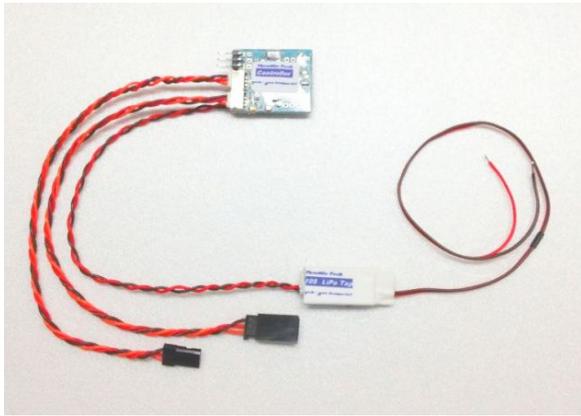


Figure 1 - Tech-Aero Throttle-Tech system

"Throttle-Tech" Features

- ✓ Connects between the throttle channel and ESC of electric powered models. Monitors the ESC's battery to make the throttle behave the same at the end of the flight as at its beginning.
- ✓ Provides consistent, smooth throttle response for the useful capacity of the motor's LiPo battery.
- ✓ The FlexLink™ PC based configuration utility simplifies setting parameters to suit different model setups, and also provides the capability to update to future feature enhancements. *
- ✓ Dual LED indicators eliminate guesswork before starting a flight:
 - ESC/motor LiPo battery Go/No-Go under-voltage alarm
 - Receiver supply Go/No-Go under-voltage alarm
 - Active throttle signal indicator
- ✓ Modular design allows switching between LiPo cell counts from 2S to 10S with an interchangeable LiPo battery tap interface for easy and affordable re-use of the controller board.
- ✓ Compatible with most ESC's commonly used. A growing list of tested ESC's is maintained on the Tech-Aero website.
- ✓ LiPo Tap can connect to battery balance tap connectors or directly to the ESC power leads.
- ✓ Controller board measures 1.2" x 1.0"; LiPo Tap board measures 1.0" x 0.5"
- ✓ Complete system weight : 0.5 oz with all connectors installed.

The Throttle-Tech system combines a LiPo battery voltage tap board and a microcontroller board. Together they apply a compensation factor to the throttle commands from the receiver to the ESC, based on continuous analysis of voltage readings taken at the battery supply to the ESC. It is effectively a battery de-rating system that meters throttle response as the ESC supply battery discharges during flight. The Throttle-Tech system provides a consistent and smooth throttle response throughout the flight, for the full range of throttle movement.

Throttle-Tech is not an autopilot function. It does not sense motor RPM, aircraft speed, attitude or altitude. Its sophisticated algorithm makes small, precise changes to the throttle signal based on the changing supply voltage to the ESC over time. Higher throttle settings are compensated more than lower throttle settings are, resulting in a smoothly integrated response anywhere along the travel range of the throttle. The result is reduced pilot workload by compensating for the usual effect of diminishing power output of the motor as the ESC supply battery discharges during flight.

* Configuration utility requires USB to serial port adapter cable, sold separately