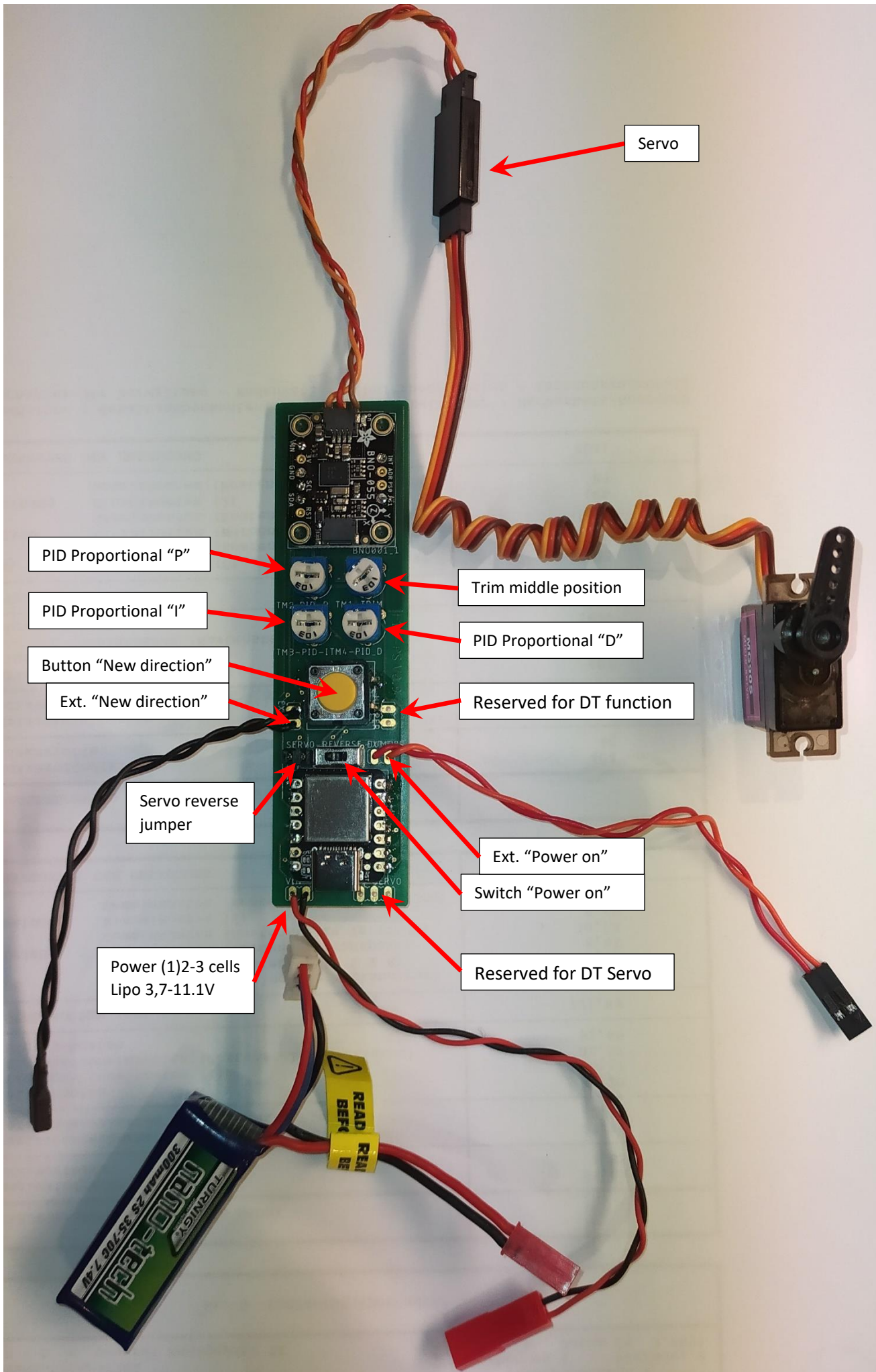


# F1E-Steering - Overview connectors F1E-PS device (© Paul Seren 2022)



Servo

PID Proportional "P"

PID Proportional "I"

Button "New direction"

Ext. "New direction"

Servo reverse jumper

Power (1)2-3 cells Lipo 3,7-11.1V

Trim middle position

PID Proportional "D"

Reserved for DT function

Ext. "Power on"

Switch "Power on"

Reserved for DT Servo

# F1E-Steering - Overview connectors F1E-PS device (© Paul Seren 2022)

## Servo

Connection to the servo

## Trim middle position

By pressing the Button “New direction” / Ext. “New direction” and adjust the Trim potentiometer at the same time you can adjust the middle position of the servo/(rudder)

## PID Proportional “P”

By adjusting the PID Proportional “P” you can adjust the angle amplitude of the ruder for the deviation from the desired direction to the individual characteristics of your model

## PID Proportional “I”

By adjusting the PID Proportional “I” you can adjust the ..... ruder for the deviation from the desired direction to the individual characteristics of your model

## PID Proportional “D”

By adjusting the PID Proportional “D” you can adjust the ..... ruder for the deviation from the desired direction to the individual characteristics of your model.

## Reserved for DT function

Usable for further development of the device for the communication with a timer or RDT. Not enabled in version V 0.9

## Reserved for DT Servo

Usable for further development of the device for the communication with a timer or RDT. Not enabled in version V 0.9

## Switch “Power on” / Ext. “Power on”

+ Power Switch onboard or via external wiring

## Button “New direction” / Ext. “New direction”

Most important button: Pressing the button (or using a button with the external wiring) will define the new direction and set the Servo to the defined/trimmed middle position. Each pressing of the button will use the current heading as the new direction.

## Servo reverse jumper

The default is set for a head-steering as a conventional steering with a physical magnet in front of the F1E-model. If you want to use the steering with a vertical tail at the tailplane, you can change the servo / deviation correction direction with a jumper bridge (2,54 mm)

## Power (1)2-3 cells / Lipo 3,7-11.1V

An on board internal constant voltage sensor provide a Vin Voltage from 3.7 – 11.1 V. Two cells Lipo (“2S / 7.4 V”) is recommended.

# F1E-Steering - Overview connectors F1E-PS device (© Paul Seren 2022)

## How to use the device

- Connect the power (Lipo 2S/7.4 V recommended)
- Power Switch on
  - Two **green** LED from the microcontroller and sensor will appear



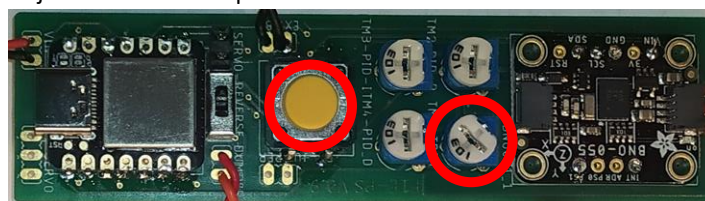
- A **yellow** LED will start blinking



- The F1E-rudder-Servo will go to a position of maximum
- This yellow blinking and the Servo amplitude indicate that a calibration is necessary
- **Calibration:**
  - 1. Take the device in your hand and “write” an imaginary “8”. This will calibrate the magnetic sensor!
  - 2. Lay the device/the model nearly flat on the floor. Do not touch/move for a moment. This will calibrate the earth gravity. (The order of both calibration could be changed)
  - When the calibration is finished
    - The yellow LED will glow permanenty
    - The F1E-rudder-Servo will move to the adjusted middle position
    - The device is now ready for the next flight
- **Flying**
  - After successful calibration:
    - Press the yellow “New direction” Button:
      - The Servo will move the rudder to middle /neutral position
      - Start you model
      - Have fun and success!



- **Trimming**
  - After successful calibration:
    - Press and hold the yellow “New direction” Button:
      - The Servo will move the rudder to middle /neutral position
      - Adjust with the Trim potentiometer the Servo



## F1E-Steering - Overview connectors F1E-PS device (© Paul Seren 2022)

- **Trimming the amplitude of the rudder**
  - After successful calibration:
  - Adjust with the PID – P potentiometer the amplitude

