

FPVtune - PID Tuning Report

Order: FPV-20260118-U5XGDM

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Date: 2026-01-18

Flying Style: Freestyle | Frame Size: 5"

Analysis Summary

The log header shows an older PID controller (pidController:2, LuxFloat-era) on

Issues Identified

- Legacy PID controller (2) – no modern feedforward / setpoint tuning, which
- High D-term averaging (dterm_average_count:12) – very slow D-term, delays c
- No explicit gyro/D-term lowpass configuration in the header – likely relyin
- Pitch PID much higher than roll (58/50/35 vs 40/40/23) – can easily overhea
- No dynamic notch info – suggests older filtering strategy.

PID Values

Roll: P=48 I=60 D=32 F=90

Pitch: P=52 I=65 D=36 F=95

Yaw: P=50 I=60 D=0 F=60

Filter Settings

Gyro Lowpass: 120 Hz | Gyro Lowpass2: 250 Hz

D-term Lowpass: 80 Hz | D-term Lowpass2: 160 Hz

Dynamic Notch: 90-350 Hz (Q=250)

CLI Commands

Copy and paste into Betaflight Configurator CLI:

```
# FPVtune Generated Settings
```

```
set pid_controller = 3
```

```
# Roll
```

```
set p_roll = 48
```

```
set i_roll = 60
```

```
set d_roll = 32
```

```
set f_roll = 90
```

```
# Pitch
```

```
set p_pitch = 52
```

```
set i_pitch = 65
```

```
set d_pitch = 36
```

```
set f_pitch = 95
```

```
# Yaw
```

```
set p_yaw = 50
```

```
set i_yaw = 60
```

```
set d_yaw = 0
```

```
set f_yaw = 60
```

```
# Filters
```

```
set gyro_lpf1_static_hz = 120
```

```
set gyro_lpf2_static_hz = 250
```

```
set dterm_lpf1_static_hz = 80
```

```
set dterm_lpf2_static_hz = 160
```

```
set dyn_notch_count = 2
```

```
set dyn_notch_q = 250
```

```
set dyn_notch_min_hz = 90
```

```
set dyn_notch_max_hz = 350
```

```
save
```