

Minibyte 2.5" – Betaflight setup

The PIDs and filters I fly – separately for the 12A and 20A builds – plus the ESC setup in Bluejay. Not a universal recipe: other motors and props want other numbers, but as a starting point it saves you the first hour of tuning.

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Screenshots from the Betaflight Configurator, exactly as I have it set. And as Joshua Bardwell says: you're going to learn something today.

PID – 12A build

✖ Disconnect

Setup

Sensors

Ports

Configuration

Power & Battery

Failsafe

Presets

PID Tuning

Receiver

Modes

Adjustments

GPS

Motors

OSD

Video Transmitter

LED Strip

Tethered Logging

Blackbox

Autotune

Blackbox Viewer

CLI

Profile 1

Profile

PID profile name

PID profile name which can describe what conditions this profile was tuned to: lighter/heavier battery, action camera/no action camera, higher elevation, etc.

Copy profile

Reset this Profile

Show all PIDs

PID Profile Settings

Rate Profile Settings

Filter Settings

PID Tuning Sliders

Mode: OFF

Low

Default

High

Damping: 1.10

Tracking: 1.00

Stick Response: 0.90

Dynamic Damping: 0.15

Drift - Wobble: 0.90

Pitch Damping: 1.25

Pitch Tracking: 1.25

Master Multiplier: 1.40

Proportional

Integral

Derivative

D Max

Feedforward

Basic/Acro					
ROLL	63	112	42	44	125
PITCH	85	152	61	65	170
YAW	63	112	0	0	125

Strength

Transition

Angle: 50

Horizon: 75

Angle Limit: 40

PID Controller Settings

Feedforward

TPA

Dynamic Damping

Throttle and Motor Settings

Miscellaneous Settings

⚙️ 🔍 📄 → Login

+ 13%

0%

00:13

0

249

0.01V (USB)

08

FLWO/FLYWOO4055_AIO(STM32F405) 2025.12.2

2026.6.1 (14a057f)

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Filters – 12A build



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PID Tuning

Profile 1 Profile PID profile name

PID Profile SettingsRate Profile SettingsFilter Settings

More Filtering

Gyro Filter Multiplier1.00

D Term Filter Multiplier1.60

Default Filtering

Less Filtering

CAUTION: Current slider positions may cause flyaways, motor damage or unsafe aircraft behaviour. Please proceed with caution.

Profile independent Filter Settings

Gyro Lowpass Filters

Gyro Lowpass 1

Gyro Lowpass 2

Gyro Notch Filters

Gyro Notch Filter 1

Gyro Notch Filter 2

Gyro RPM Filter

Gyro RPM Filter

HarmonicsMin Frequency [Hz]

1185

Dynamic Notch Filter

Dynamic Notch Filter

Notch CountQ factor (x100)Min Frequency [Hz]Max Frequency [Hz]

1500100600

Profile dependent Filter Settings

D Term Lowpass Filters

D Term Lowpass 1

ModeStatic Cutoff Frequency [Hz]Filter Type

STATIC120BIQUAD

D Term Lowpass 2

D Term Notch Filter

D Term Notch Filter

Yaw Lowpass Filter

Yaw Lowpass Filter

Static Cutoff Frequency [Hz]

100

Log in

13%0%00:3802500.02V (USB)08FLWO/FLYWOOFF4055_AIO(STM32F405) 2025.12.22026.6.1 (14a057f)

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PID Tuning

[Wiki](#)

Disconnect

Profile 1 ▾ Profile ⓘ PID profile name ⓘ

[Copy profile](#)
[Reset this Profile](#)
[Show all PIDs](#)

- Setup
- Sensors
- Ports
- Configuration
- Power & Battery
- Failsafe
- Presets
- PID Tuning**
- Receiver
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- Adjustments
- GPS
- Motors
- OSD
- Video Transmitter
- LED Strip
- Tethered Logging
- Blackbox
- Autotune
- Blackbox Viewer
- CLI

PID Tuning Sliders

Mode: RPY ▾ ⓘ Low Default High ⓘ

Damping: D Gains 1.15 ⓘ

Tracking: P & I Gains 1.00 ⓘ

Stick Response: FF Gains 0.90 ⓘ

Dynamic Damping: D Max 0.15 ⓘ

Drift - Wobble: I Gains 0.90 ⓘ

Pitch Damping: PitchRoll D 1.25 ⓘ

Pitch Tracking: PitchRoll R / I & FF 1.25 ⓘ

Master Multiplier: 1.00 ⓘ

	Proportional ⓘ	Integral ⓘ	Derivative ⓘ	D Max ⓘ	Feedforward ⓘ
Basic/Acro					
ROLL	45 ⓘ	72 ⓘ	34 ⓘ	36 ⓘ	108 ⓘ
PITCH	58 ⓘ	94 ⓘ	48 ⓘ	51 ⓘ	140 ⓘ
YAW	45 ⓘ	72 ⓘ	0 ⓘ	0 ⓘ	108 ⓘ

Strength Transition

Angle 50 ⓘ

Horizon 75 ⓘ

Angle Limit

60 ⓘ

PID Controller Settings

Feedforward

Jitter Reduction ⓘ Smoothness ⓘ Averaging ⓘ Boost ⓘ Max Rate Limit ⓘ Transition ⓘ

10 ⓘ 65 ⓘ 2 Point ▾ 15 ⓘ 90 ⓘ 0.00 ⓘ

TPA

TPA Mode TPA Rate (%) TPA Breakpoint (µs)

D ▾ 65 ⓘ 1350 ⓘ

☒ I Term Relax ⓘ

Axes Type Cutoff ⓘ

RP ▾ Setpoint ▾ 15 ⓘ

☒ Anti Gravity ⓘ

Gain ⓘ

8.0 ⓘ

☐ I Term Rotation ⓘ

Dynamic Damping

Gain ⓘ Advance ⓘ

37 ⓘ 20 ⓘ

Throttle and Motor Settings

5 ⓘ Throttle Boost ⓘ

100 ⓘ Motor Output Limit ⓘ

0 ⓘ Dynamic Idle Value [* 100 RPM] ⓘ

☐ Vbat Sag Compensation % ⓘ

☐ Thrust Linearization % ⓘ

Miscellaneous Settings

Disable ▾ Cell Count - for auto Profile switching ⓘ

20 ⓘ Acro Trainer Angle Limit ⓘ

☐ Integrated Yaw ⓘ

0 ⓘ Absolute Control ⓘ

→ Login

+ 13% + 0% 00:25 Δ 0 248 █

0.02V (USB) Δ ⓘ 🔗 █ 08

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Filters – 20A build

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Blackbox Viewer

CLI

PID Tuning

Profile 1 Profile PID profile name

PID Profile SettingsRate Profile SettingsFilter Settings

More FilteringDefault FilteringLess Filtering

Gyro Filter Multiplier1.20

D Term Filter Multiplier1.50

CAUTION: Current slider positions may cause flyaways, motor damage or unsafe aircraft behaviour. Please proceed with caution.

Profile independent Filter Settings

Gyro Lowpass Filters

Gyro Lowpass 1

Gyro Lowpass 2

Gyro Notch Filters

Gyro Notch Filter 1

Gyro Notch Filter 2

Gyro RPM Filter

Gyro RPM Filter

Harmonics3Min Frequency [Hz]160

Dynamic Notch Filter

Dynamic Notch Filter

Notch Count1Q factor (x100)500Min Frequency [Hz]100Max Frequency [Hz]600

Profile dependent Filter Settings

D Term Lowpass Filters

D Term Lowpass 1

ModeDYNAMICMin Cutoff Frequency [Hz]112Max Cutoff Frequency [Hz]225Dynamic Curve Expo5Filter TypePT1

D Term Lowpass 2

Static Cutoff Frequency [Hz]225Filter TypePT1

D Term Notch Filter

D Term Notch Filter

Yaw Lowpass Filter

Yaw Lowpass Filter

Static Cutoff Frequency [Hz]100

RefreshSave

13%0%01:182480.02V (USB)06FLWO/FLYWOOOF405S_AIO(STM32F405) 2025.12.42026.6.1 (14a057f)

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ESC setup in Bluejay



Čeština

1155.22336

Nastavení

115.200

Výběr portu k otevíření

 Odpojit

2026-08-25 @ 16:38:14 -- Dokončeno čtení ESC

Zobrazit protokol

Varování: Vypněte vysílač! Jinak by nahrávání mohlo selhat, zejména na vysoce integrovaných AIO.

Poznámka: Předtím, než na této kartě cokoliv provedete, ujistěte se, že jste odmontovali vrtule.
Poznámka: Připojte napájení k ESC.

Běžné parametry

1125

Minimální spouštěcí výkon (Boost) ?

1200

Maximální spouštěcí výkon (ochrana) ?

22.5+ (MediumHigh)

Časování motoru ?

Low

Kompenzace demag ?

9x

Ochrana výkonu RPM (Rampup) ?

Nastavení majáku

40

Síla pípnutí ?

80

Síla majáku ?

Infinite

Zpoždění majáku ?

Nastavení bezpečnosti

25+

ESC Jmenovitý výkon ?

140 C

Ochrana proti přehřátí ?

☐

Vynutit EDT odjštění ?

Nastavení brzd

☐

Brzda při zastavení ?

255

Maximální brzdná síla ?

ESC 1: Z.H.30 - Bluejay, 0.21.0, 48kHz

Reversed

Směr otáčení motoru ?

Nahrát Firmware do tohoto ESC

ESC 2: Z.H.30 - Bluejay, 0.21.0, 48kHz

Normal

Směr otáčení motoru ?

Nahrát Firmware do tohoto ESC

ESC 3: Z.H.30 - Bluejay, 0.21.0, 48kHz

Normal

Směr otáčení motoru ?

Nahrát Firmware do tohoto ESC

ESC 4: Z.H.30 - Bluejay, 0.21.0, 48kHz

Reversed

Směr otáčení motoru ?

Nahrát Firmware do tohoto ESC

Uložit protokol ladění

Smazat protokol ladění

Otevřít editor melodií

Obnovit výchozí nastavení

Nahrát všechny ESC

Zápis nastavení

Načíst nastavení

Využití portu: D: 0% U: 0% | Chybné pakety: 0

0.32.1

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