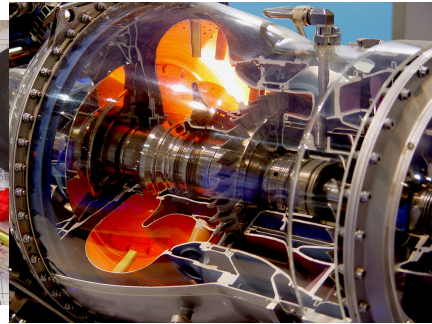
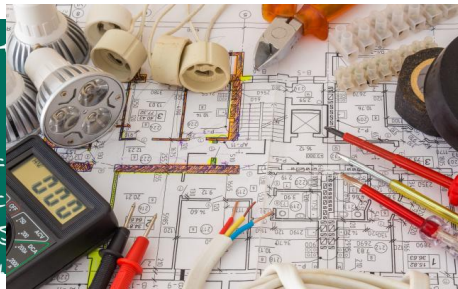
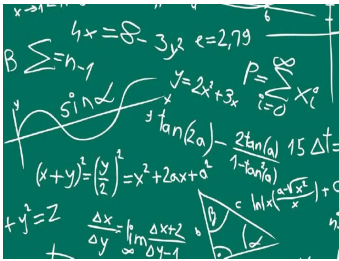




SPEEDSOURCE^{FPV} ULX

The Concept

An ultra-light, full-spec competitive racing drone. Lighter, faster, more durable. Smaller batteries, cheaper parts and longer flight times. Yet fully race grade. What's not to like?

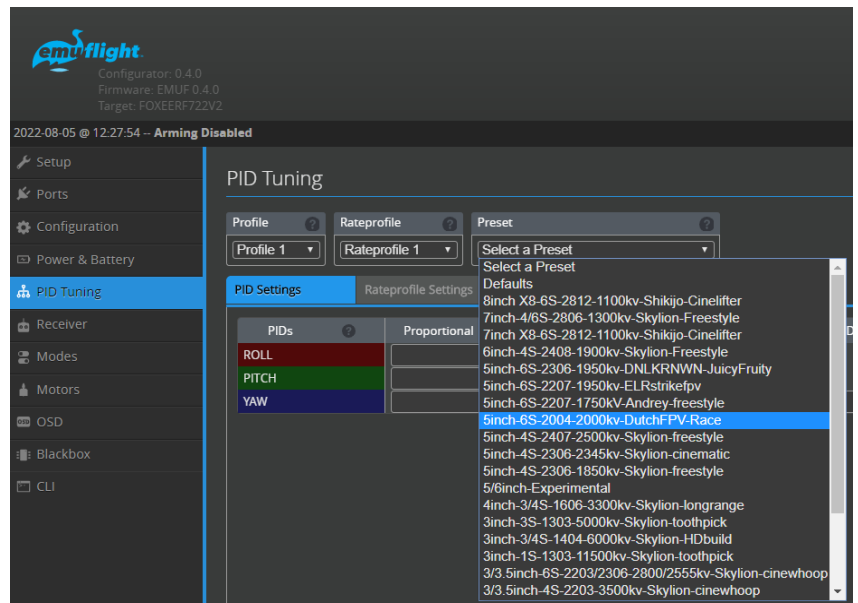


The Frame

SpeedSource SLX. The fastest frame in the game. We made it even lighter and more balanced. T700 Carbon Fiber and a proprietary NylonX printing process make it crazy strong. Barely 47g in the basic configuration.

The Tune

A 'Sim in real life' tune exploiting the full capabilities of Emuflight. Direct feel, precise control, efficient filtering and no lag, jitter, bounce or propwash. Select it as a Preset in the Emuflight PID tab.



The Finishing Touches

The gear listed in the table below has been race tested and rated for a fixed set of metrics. They are a guide for exploiting the many special features of this build. Below that you'll find sample build specs, focused on different individual features. Looking for light? Cheap? Durable? Use this guide to build yours to your specs and preferences. But don't feel limited to just what's here. The ULX will fit most any 20x20 stack of your choice. Likewise for any nano cameras and nano size VTX/RX s. Just aim to be 170-190g dry weight with props. The Gemfan SL5125 and SL5130s, Nazgul R5s or the HQ R35s are all great lightweight prop options.

	Metrics					Build			
	Price	Performance	Weight	Durability	M2/M3	Bargain	Ultralightest	Standard	Durable
Frame									
SpeedSource ULX 4mm T700 Arm	\$!!!	+	=====	M2/M3	√√√	√√√	√√√	√√√
ULX 4mm T700 Arm Brace	\$!!!	+	=====	M2	√√	√	√√√	√√√
Motors									
Emax Eco2 2004/2000kV (T-mount)	\$!!	+	=====	M2	√√√	√	√√	√√√
GEPRC SpeedX 2004/2150kV (5mm shaft)	\$\$!!!	+	=====	M2	√√	√√	√√√	√√
BrotherHobby TC2004 1950kV (T-mount)	\$\$!!	+	=====	M2	√	√√√	√	√
ESC (w/XT30)									
Mamba F40 mini BLS	\$!!	+	=====	M2	√√√	√√√	√	√
Mamba F40 mini Pro32	\$\$!!!	+	=====	M2/M3	√√	√√	√√	√√
HobbyWing Xrotor Mini 40A BL32	\$\$\$!!!	++	=====	M3	√	√	√√	√√
Foxeer Reaper F4 45A BL32	\$\$\$!!!	++	=====	M3	√	√	√√√	√√√
Battery									
Tattu R-Line 6S 550mAh 95C (XT30)	\$!!	+	=====		√√	√√√	√	√
Tattu R-Line 6S 650mAh 95C (XT30)	\$\$!!	++	=====		√√	√√	√√√	√√
GNB 6S 720mAh 100C HV (XT30)	\$\$!!!	++	=====		√√√	√√	√√√	√√
GNB 6S 850mAh 80C (XT30)	\$\$\$!	+++	=====		√	√	√√	√√√

Spec Builds

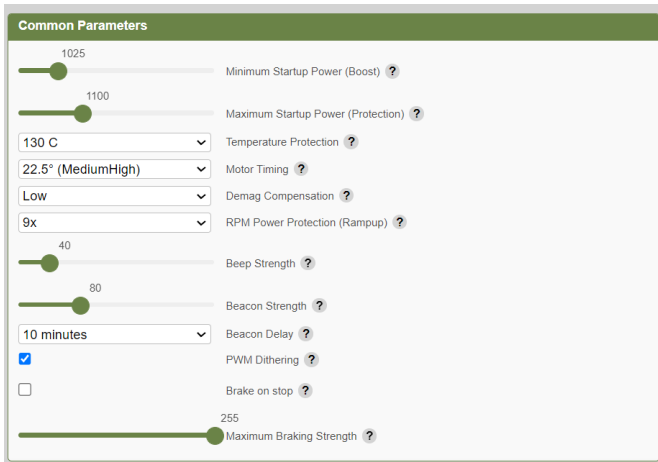
Builds specs targeted to the features you're looking for. Assume them all to be hecka fast!

Bargain	Ultralightest	Standard	Durable
SpeedSource ULX 4mm T700 Arm	SpeedSource ULX 4mm T700 Arm	SpeedSource ULX 4mm T700 Arm	SpeedSource ULX 4mm T700 Arm
		ULX 4mm T700 Arm Brace	ULX 4mm T700 Arm Brace
Emax Eco2 2004/2000kV (T-mount)	GEPRC SpeedX 2004/2150kV (5mm shaft)	GEPRC SpeedX 2004/2150kV (5mm shaft)	Emax Eco2 2004/2000kV (T-mount)
Mamba F40 mini BLS	Mamba F40 mini Pro32	Foxeer Reaper F4 45A BL32	Foxeer Reaper F4 45A BL32
Tattu R-Line 6S 550mAh 95C (XT30)	Tattu R-Line 6S 550mAh 95C (XT30)	Tattu R-Line 6S 650mAh 95C (XT30)	GNB 6S 720mAh 100C HV (XT30)
Gemfan SL5130	Gemfan SL5125	Gemfan SL5130	Nazgul R5

ESC Settings

Ultralights can be very fast and very zippy. So you don't need or want overly aggressive ESC settings which can make the drone too twitchy. Both Bluejay and BLHeli32 firmware performed exceptionally in race testing using the settings below. They are a good, safe starting point.

Bluejay



Common Parameters

Minimum Startup Power (Boost) ? 1025

Maximum Startup Power (Protection) ? 1100

Temperature Protection ? 130 C

Motor Timing ? 22.5° (MediumHigh)

Demag Compensation ? Low

RPM Power Protection (Rampup) ? 9x

Beep Strength ? 40

Beacon Strength ? 80

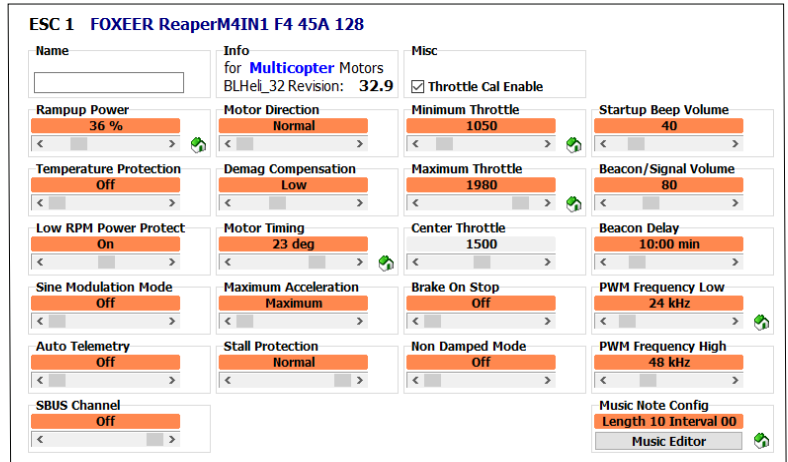
Beacon Delay ? 10 minutes

PWM Dithering ? ☒

Brake on stop ? ☐

Maximum Braking Strength ? 255

BLHeli 32



ESC 1 FOXEER ReaperM4IN1 F4 45A 128

Name

Info for Multicopter Motors BLHeli_32 Revision: 32.9

Misc ☒ Throttle Cal Enable

Rampup Power 36 %

Motor Direction Normal

Minimum Throttle 1050

Startup Beep Volume 40

Temperature Protection Off

Demag Compensation Low

Maximum Throttle 1980

Beacon/Signal Volume 80

Low RPM Power Protect On

Motor Timing 23 deg

Center Throttle 1500

Beacon Delay 10:00 min

Sine Modulation Mode Off

Maximum Acceleration Maximum

Brake On Stop Off

PWM Frequency Low 24 kHz

Auto Telemetry Off

Stall Protection Normal

Non Damped Mode Off

PWM Frequency High 48 kHz

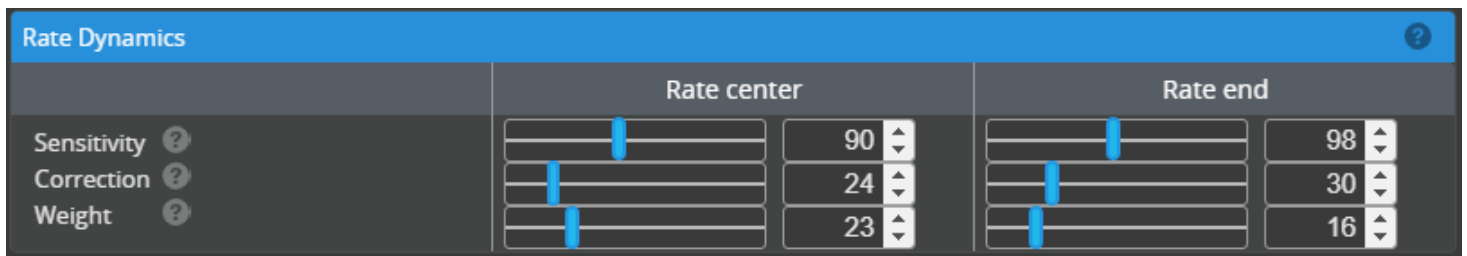
SBUS Channel Off

Music Note Config Length 10 Interval 00

Music Editor

Rate Dynamics

If you use the Emuflight tune, its worth exploring the Rate Dynamics. They allow you to tune the feel of your sticks without disrupting your tune. The stock settings are basically just standard Betaflight and may feel great to you. But should you want more of a sim feel, the settings below will make the feel soft yet precise and even. Not quite perfect for your taste? Just raise or lower the 'Sensitivity' sliders a bit at a time until you find your sweet spot.



Rate Dynamics

	Rate center	Rate end
Sensitivity ?	<input type="text"/> 90	<input type="text"/> 98
Correction ?	<input type="text"/> 24	<input type="text"/> 30
Weight ?	<input type="text"/> 23	<input type="text"/> 16

"For those of you just looking to get into FPV racing, or those of you who had to take a break from the rising costs and hassle of gear, this project is for you. To get you in the game, or back in the game. And keep it fun and inexpensive while you push to your absolute limits. Big thanks to (oOo) for all the inspiration and support. We put a lot of time into this project and got a lot of fun out and now we're excited to share it with you. Happy Flying! "

