

GT200 Suggestion Newest-Setting 2016-11-21

■ First step

- Flash D-F3 FC to newest version (Current Betaflight 3.0.1) -->

<https://chrome.google.com/webstore/detail/betaflight-configurator/kdaghagfopacdngbohiknlhcocjccjao>

-Update BLHeli-S ESC to latest version (Current blheli_s 16.45) ,

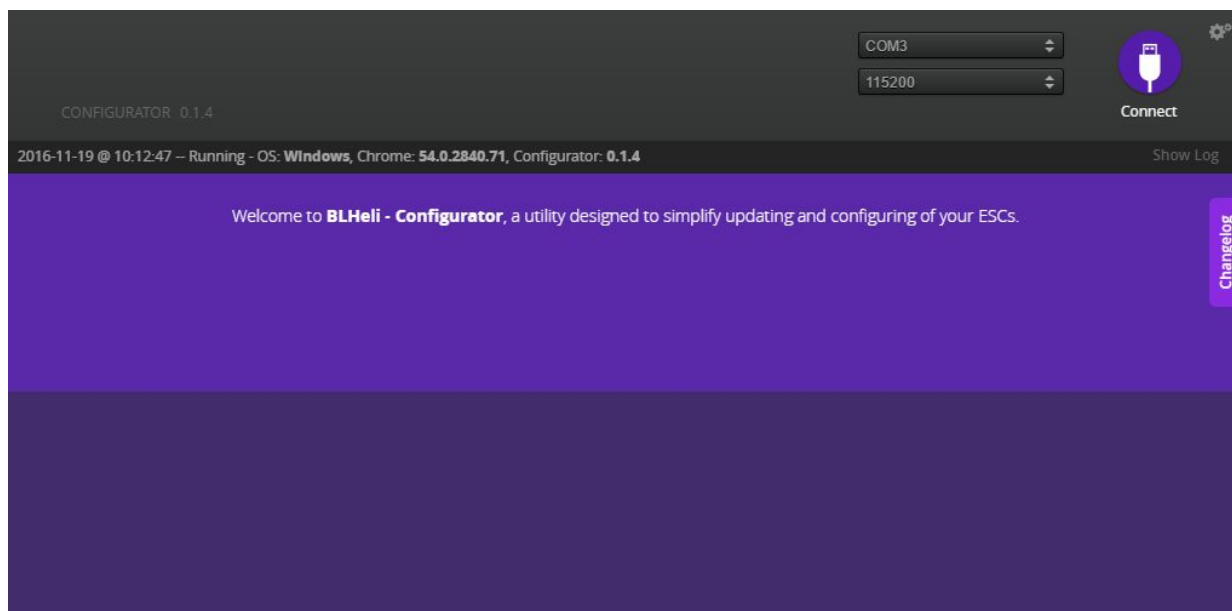
Use Blheli Config in Chrome Tools -->

(<https://chrome.google.com/webstore/detail/blheli-configurator/mejfggmbnocnfbibbi bmoogocnjbcjnk>)

ESC version X202 = A_H_70

ESC version X302 = A_H_30

Open BLheli/configurator:



Select flash all:

Select Target

A_H_30 ESC

16.45 Version

Flash

Select File Manually

Cancel

Recommended settings:

Common Parameters	
<input checked="" type="checkbox"/>	Programming by TX
0.125	Startup Power
Disabled	Temperature Protection
<input checked="" type="checkbox"/>	Low RPM Power Protection
<input checked="" type="checkbox"/>	Brake on Stop
Low	Demag Compensation
MediumHigh	Motor Timing
40	Beep Strength
80	Beacon Strength
10 minutes	Beacon Delay

*If motor stop or stutter upon quick throttle increase and timing settings won't do the job you can try to set demag compensation at HIGH.

ESC 1: A_H_30, 16.45	
Reversed	Motor Direction
1040 μ s	PPM Min Throttle
1980 μ s	PPM Max Throttle
FLASH FIRMWARE	

ESC 2: A_H_30, 16.45	
Normal	Motor Direction
1040 μ s	PPM Min Throttle
1980 μ s	PPM Max Throttle
FLASH FIRMWARE	

ESC 3: A_H_30, 16.45	
Normal	Motor Direction
1040 μ s	PPM Min Throttle
1980 μ s	PPM Max Throttle
FLASH FIRMWARE	

ESC 4: A_H_30, 16.45	
Reversed	Motor Direction
1040 μ s	PPM Min Throttle
1980 μ s	PPM Max Throttle
FLASH FIRMWARE	

■ ■ Second step
Betaflight Setting

Open Betaflight en set the following settings:

ESC/Motor Features

MULTISHOT ESC/Motor protocol

Motor PWM speed Separated from PID speed

MOTOR_STOP Don't spin the motors when armed

Disarm motors regardless of throttle value (When arming via AUX channel)

1500 Center value for RC channels

1040 Minimum Throttle

1980 Maximum Throttle

1000 Minimum Command

System configuration

Note: Make sure your FC is capable to operate on these speeds! Check CPU and cyclotime stability. Changing this may require PID re-tuning. TIP: Disable Accelerometer and other sensors to gain more performance.

4KHz Gyro update frequency

4KHz PID loop frequency

Accelerometer

Barometer (if supported)

Magnetometer (if supported)

Warning when off no self-leveling and only acro-mode!

When you set Gyro update frequency and Pid loop frequency It's always important that CPU load will never be above 40% other potential risks CPU overload and crashes.

Port utilization: D: 7% U: 2% Packet error: 0 I2C error: 0 Cycle Time: 254 **CPU Load: 18%**

In Betaflight Config

RC rate 1.0 and rate 0.77 for roll and pitch for yaw 1.0 and rate 0.70 is default

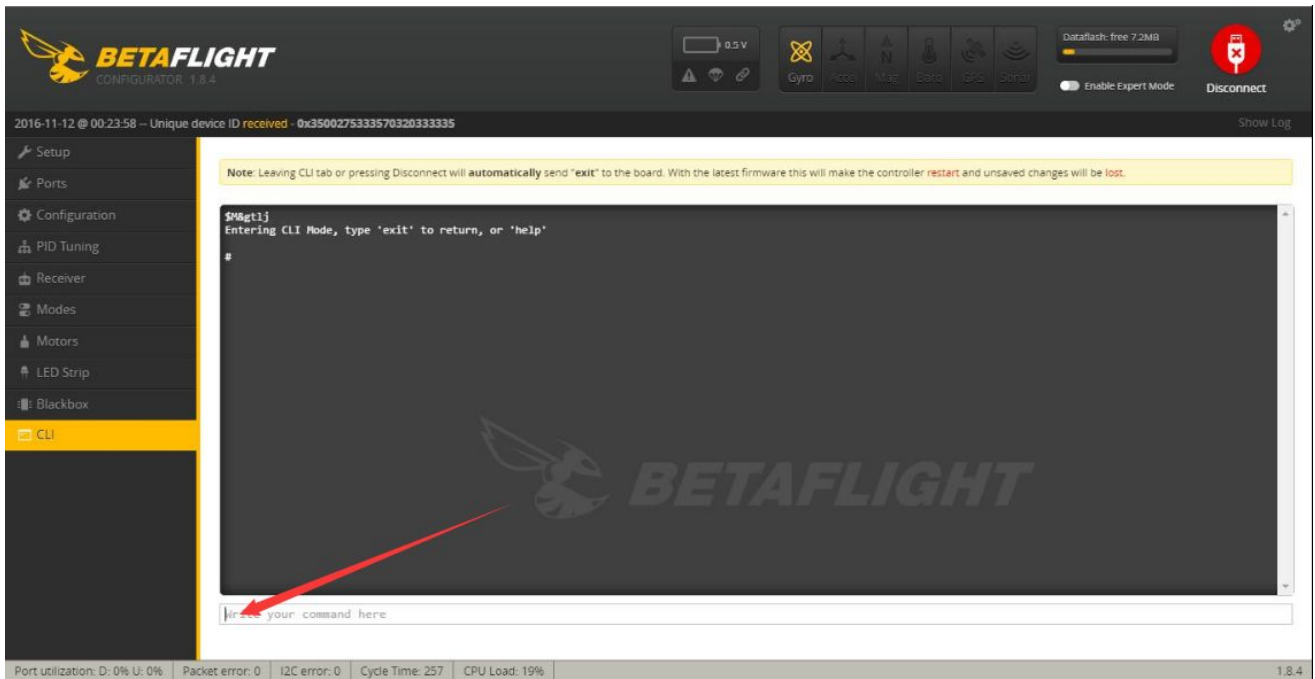
PID Settings Filter Settings

	Proportional	Integral	Derivative	RC Rate	Super Rate	Max Vel (deg/s)	RC Expo
Basic/Acro							
ROLL	43	40	20	1.00	0.77	870	0.00
PITCH	58	50	22	0.77	0.77	870	
YAW	70	45		1.00	0.70	667	
PID Controller Settings							
2	D Setpoint Weight						
0.3	D Setpoint transition						
<input type="checkbox"/>	Vbat PID Compensation						
Rates Preview							

CLI setting :

Copy paste the following in CLI:

```
set gyro_lowpass_type = FIR
set dterm_lowpass_type = FIR
set dterm_lowpass = 100
Set gyro_lowpass = 150
set gyro_notch1_hz = 0
set gyro_notch2_hz = 0
save
```



For more information: <https://github.com/betaflight/betaflight/wiki>

Complete