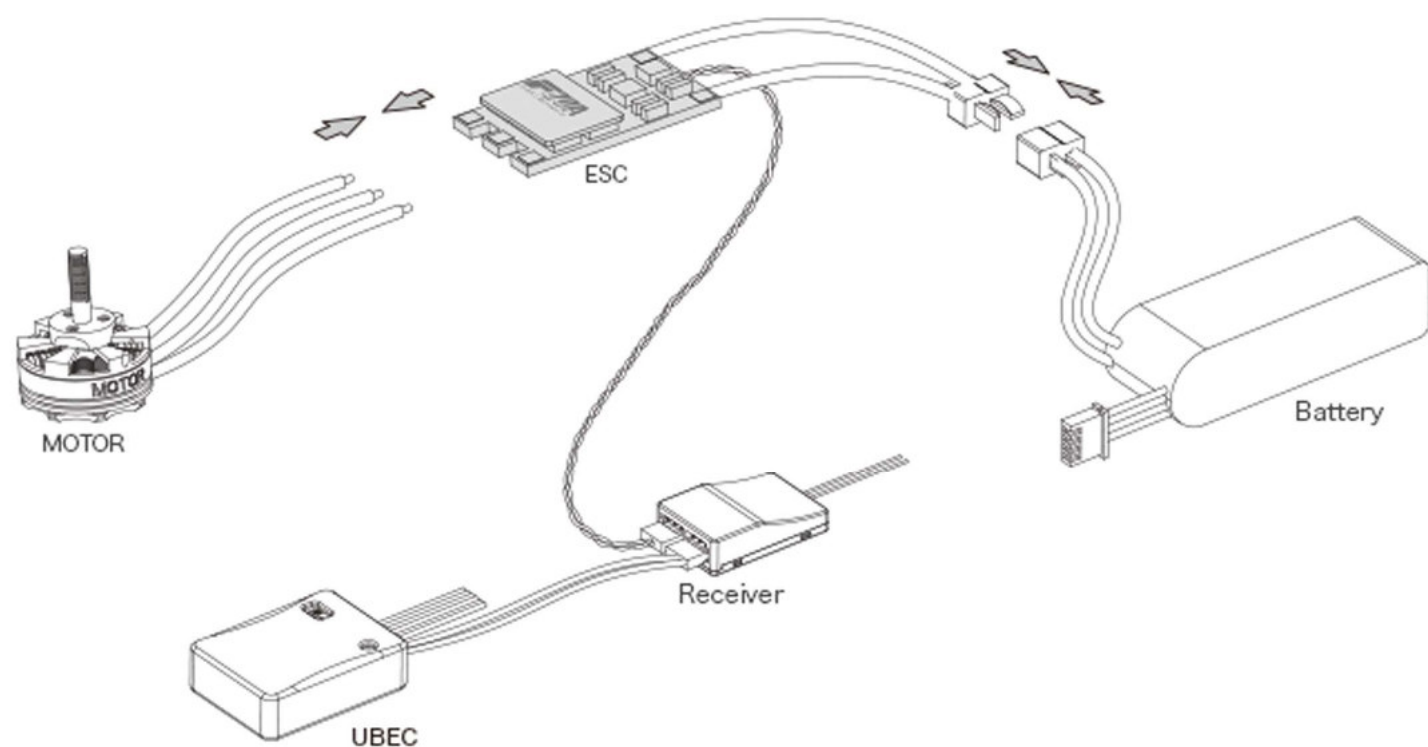
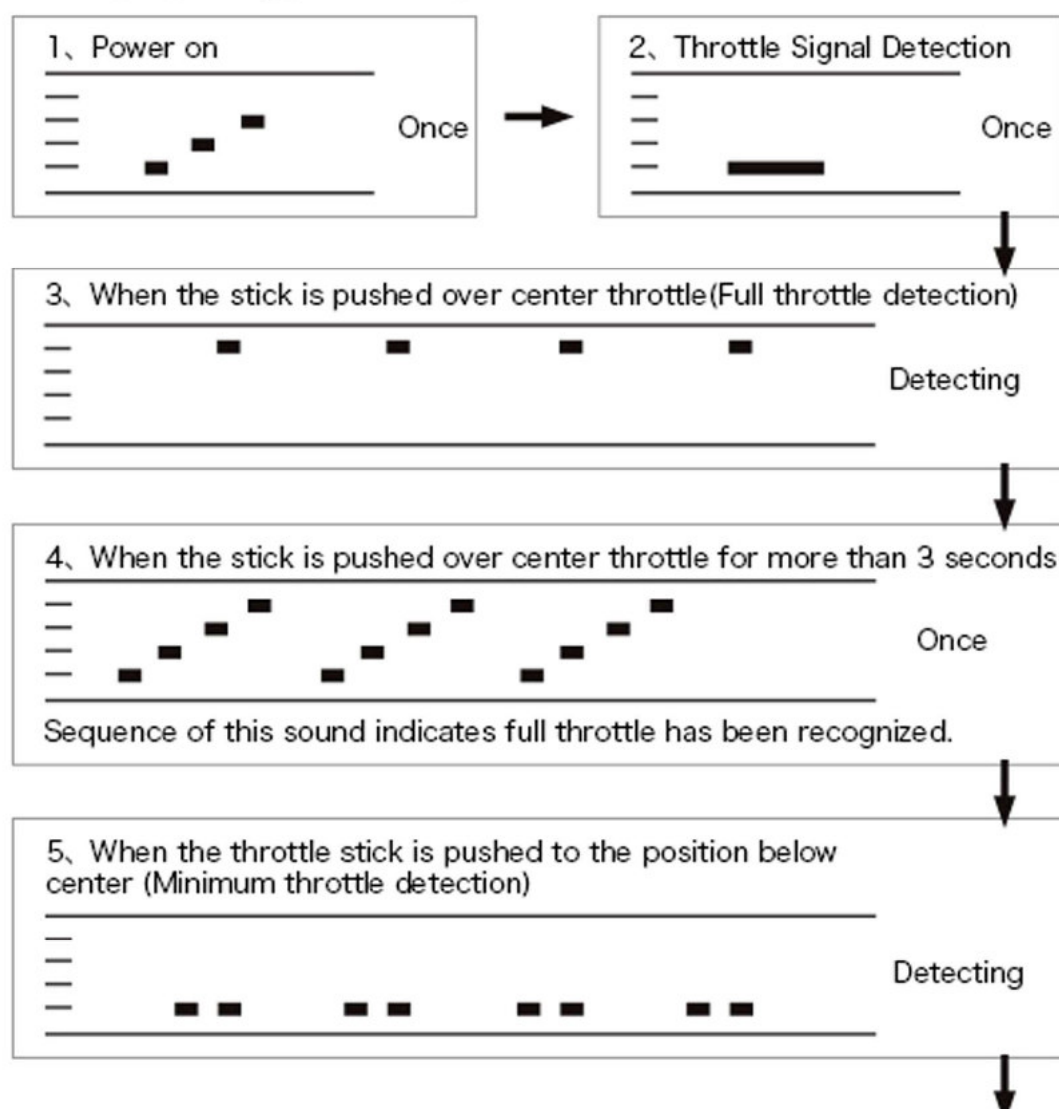


USER GUIDE ►

1. Wiring Diagram



2. Throttle Range Calibration



6. When the throttle stick is pushed to the position below middle one



Sequence of this sound indicates that minimum throttle has been recognized.

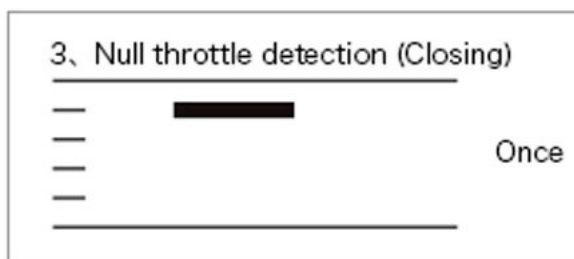
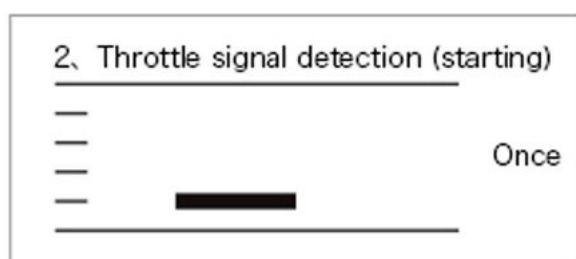
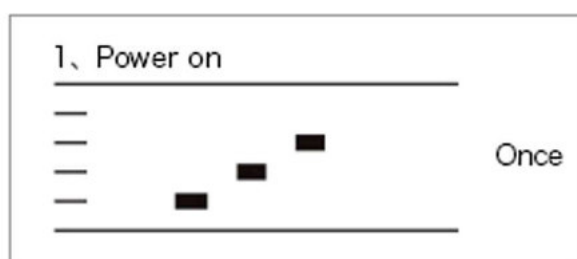
7. Throttle calibration completed



Sequence of this sound indicates the finish of throttle calibration.

⚠ Attention! For safety sake, please remove the propellers during throttle calibration.

3. Normal Startup Process



Motors are ready to get started.

PROGRAMMABLE PARAMETERS ►

	Function	1	2	3	4	5
1	Startup Power	0.031	0.047	0.063	0.094	0.125
2	Temperature Protection	Off	80	90	100	110
3	Low RPM Power Protection	Off	On			
4	Motor Direction	Normal	Reversed	Bidirectional	Bidirectional Rev	High
5	Demag Compensation	Off	Low	High		
6	Motor Timing	Low	Medium Low	Medium	Medium High	High
7	PPM Min Throttle	1100-1692	1148			
8	PPM Max Throttle	1288-2020	1832			
9	PPM Center Throttle	1152-1828	1488			
10	Brake On Stop	Off	On			

11	Beep Strength	Off	2-255	40		
12	Beacon Strength	1-255	80			
13	Beacon Delay	1-10minutes	Infinite	10minutes		

6	7	8	9	10	11	12	13
0.188	0.25	0.38	0.50	0.75	1.00	1.20	1.50
120	130	140					

SETTINGS IN GREY ARE DEFAULT

Adjustable Parameters

1. Startup Power

Startup power refers to the max. power allowed at startup stage, which can be any relative value from 0.031 to 1.5 Real power depends on input throttle, but the min. value cannot be lower than 1/4 of the max. power. In addition, startup power, which restricts the power of rotating direction change, shows its influence on bidirectional setting. In low RPM running, max power which can be adjusted via startup power parameters setting, is limited for BEMF voltage detection. In low RPM running (since from 16.1 version), low startup power means low max power.

2. Temperature Protection

There are off and on modes for this setting.

3. Low RPM Power Protection

It is recommended that this setting be invalid when motors of low kv powered with low voltage. However, invalidity will increase the risk of step out and get motors and ESCs burnt.

4. Motor Drection

Motor direction can be normal, reversed, bidirectional and bidirectional reversed. In bidirectional mode, center throttle stands for null throttle. Throttle position above center one, motors rotate normally, otherwise, motors will rotate in a reversed direction. Bidirectional mode will invalid RC parameter setting.

5. Demag. Compensation

Demag. compensation is meant to avoid motor stalling from long time wire demagnetization. High timing helps with that, however, it brings efficiency down. It begins to detect on demag. Compensation occurrence. When motor timing is unavailable, motor rotating direction will be changing according to motor timing estimate. Motor power will be cut off before a next direction change. Demag. compensation degree will be calculated. The severer demag. compensation is, the more power will be cut. When demag. compensation is on "OFF" mode, power won't be cut off. Technically, higher demag. compensation parameter means better protection. Nevertheless, if demag. compensation parameter is set too high, max power drop slightly.

6. Motor Timing

There are low, medium low, medium, medium high and high timing settings, and they are 0° , 7.5° , 15° , 22.5° and 30° Generally, medium timing suits most of the requirements. In case of motor vibration, please try changing motor timing. It takes longer for high induction motors to demagnetize for direction change which leads to motor stalling or vibration on quick throttle increase. This phenomenon occurs especially at low RPM. High timing allows longer time for demagnetization, and thus helps to improve the above mentioned issue.

7. Min. Throttle, Max. Throttle & Center Throttle

These settings decide throttle pos, and usually for input signal of 1000-2000us. Other input signals should be interpreted proportionally. Center throttle is for bidirection only.

8. Brake On Stop

There are off and on modes for this setting. Validity of this setting ESCs will generate automatic braking at null throttle. This setting shows no influence at NZ throttle.

9. Beep Strength

Beep strength can be adjusted in compliance with normal operation.

10. Beacon Strength

ESCs will emit beacon beeps, once null throttle signal lasts for some time. Please note that high beacon strength brings heat to ESCs and motors.

11. Beacon Delay

This setting determines the delay in time before beacon beeps.

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