

FLIER



Flier ESC Program box

User's Manual

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FLIER Program Box Instruction

This new Prog-Box was designed for Flier Brushless ESC. Here are four kinds of Brushless ESC: Airplane ESC、Helicopter ESC、Boat ESC、Car ESC. This new Prog-Box can setting more function values for the four kinds of ESC. You can easily operate it via four buttons under the LCD (on the front of the Box).

Parts introduction:



1. There is a LCD screen on the middle of the Prog-Box, it can display the operation information or setting values.
2. There are four buttons on the lower right corner. “←”、 “→”、 “Back” and “Forward”. The “Back” and “Forward” buttons can select the function which you need. The “←”、 “→” buttons can setting the values of the function(which you selected).
3. A 4PIN Plug on the left of the box.

They are “GND”、 “5V”、 “Rxd、 and “Txd” signal. The 4pin wires on the ESC should be connected with the 4pin plug. Then the ESC will two-way communicate with the Prog-box.

How to program the ESC

You can program your ESC according to the following step:

1. Plug the 4pin connector of ESC into the 4PIN of Prog-Box. Make sure the direction is correct.
2. Connect the ESC to the motor correctly.
3. connect the battery, and you will hear a “♪♪” cheep, it prompt that the connecting is ok and you can go on.
4. “Great! Read ESC Data OK” will be displayed on the LCD screen (on the front of the Box). After one second, it will enter the first function-MODE TYPE setting interface automatically. Then your ESC type will be displayed on the LCD screen. And no action if press “←” and “→” buttons now, because the ESC type can’t be changed.
5. Press “Forward” button to enter the second function item-CONTROLLER TYPE. The ESC type which you purchased will be displayed on the LCD screen. And no action too because the ESC type can’t be changed too.
6. You can press” Forward” button enter desired function item, then press “←” and “→” button enter desired value. You also can press “Back” button, then back to the last function item.

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7. All setting is done. You can press “Back” and “Forward” buttons together, the LCD screen will display “Sending Data to ESC”. It prompt the Prog-box is sending setting values to the ESC.

When the display returns back, the sending is over.

8. Turn off the power of the ESC, and turn on it again. You can check whether the function values were written in the ESC or not.

9. After setting is over, turn off the ESC, disconnect the Prog-Box. Setting is done.

Notes: If you need load factory default values. You need connect the 4pins wires of the prog-box with the ESC after the ESC turn on. The Prog-box will automatically restore the factory default values if no read ESC. You press “Forward” and “Back” buttons together. The factory default values will be sent to the ESC.

How to adjust function values

1. Appendix table is the setting values list.
2. The left column (with Red words) on the list is the Main menu. It's the item name, can be displayed on top line of the LCD screen. This can be programmed. Press “Forward” button, it will enter the next item. Press “Back” button, it will be back to the last item.
3. For the four kinds of ESC. Helicopter, Airplane, Boat, Car ESC. “*” means the ESC have those functions. You can set those function values as your requirements. Press “Back” and “Forward” buttons, the Prog-Box can skip to those functions which the ESC doesn't have.
4. The other parts on the list are the values of each function. After you selecting the main function, then press “→” button and setting the value of this function on the right. Press “←” button can setting the value of this function on the left. This value can be displayed on the bottom line of the LCD screen. If there are some other values for this function. The “←” (or “→”) on the LCD will prompt that. When pressing “←” (or “→”) buttons, there are no “←” (or “→”) showed on the LCD. It's means the current value is the Max or Min. No any changes if you press “←” (or “→”) buttons again.
5. Because of the format cause, some item values aren't listed out one by one. And only are put the remainder in the last cell.

The introduction for the Function Values

1. MODE TYPE: Airplane、 Helicopter、 Boat、 Car can be selected.
2. CONTROLLER TYPE are classified according to the different type.
3. BRAKE: drag brake, only Airplane ESC have this function.
4. HELI MODE: only Helicopter ESC have this function.

5. MOTOR POLE NO: only Helicopter ESC have this function.
6. REVERSER: Boat, Car ESC have this function.
7. START POWER: Only Car ESC have this function.
8. TIMING: Can setting it from 0° to 30°. All kinds of ESC have this function
9. FREQUENCY: 8KHz、16 KHz、32 KHz can be selected. All kinds of ESC have this function.
10. ACCELERATION: Soft、Medium、Hard can be selected. All kinds of ESC have this function.
11. ACCUMULATOR TYPE: Li-MH/Li-Po, Ne-Cd/Ne-MH, LiFe battery can be used. All kinds of ESC have this function.
12. NiCd/NiMH CUTOFF: Enables setting the voltage per cell for the point at which the controller's cut off circuitry. All ESC will have the function if choose NiCd/NiMH battery.
13. NUMBER OF CELLS: All ESC will have the function if choose NiCd/NiMH battery.
14. LiIo/Pol CUTOFF: Enables setting the voltage per cell for the point at which the controller's cut off circuitry. All ESC will have the function if choose Li-MH/Li-Po battery.
15. CUT OFF TYPE: Slow down、Hard can be selected. Only Helicopter ESC don't have this function.
16. INI POINT: Airplane、Helicopter have this function.
17. END POINT: Airplane、Helicopter have this function.
18. THROTTLE CURVER: LOG、LINEAR、EXP can be selected. All ESC have this function.
19. ROTATION: Only Helicopter、Airplane ESC have this function.
20. ABS BRAKING: Only Car ESC have this function.
21. POWER LIMITED FOR: Car、Boat ESC have this function.
22. POWER LIMITED REV: Car、Boat ESC have this function.
23. DELAY: Car、Boat ESC have this function.
24. FORWARD POINT: Car、Boat ESC have this function.
25. TIMING MONITER: All kinds of ESC have this function.

Specification:

1. Size: 85×50×22mm
2. Weight: 74g

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Main Menu	Heli	Airplane	Boat	Car	SubMenu (settable values)							
MODE TYPE	*	*	*	*	Airplane	Helicopter	Boat	Car				
CONTROLLER TYPE	*				2-6S	2-8S	3-16S	4-24S				
CONTROLLER TYPE		*			2-6S	2-8S	3-16S	4-24S				
CONTROLLER TYPE			*		2-6S	2-8S	3-16S	4-24S				
CONTROLLER TYPE				*	2-6S	2-8S	3-16S	4-24S				
BRAKE	*				Off	Extra Soft	Soft	Medium	Hard	Extra Hard		
HELICOPTER MODE		*			Constant RPM	Normal						
MOTOR POLE NO.		*			2-4	6-10	12-14					
REVERSER			*	*	ON	OFF						
START POWER				*	Auto	5%	10%	15%	20%	25%	30%	35%,40%.....100%
TIMING	*	*	*	*	0°	1°	2°	3°	4°	5°	6°	7°,8°..... 30°
FREQUENCY	*	*	*	*	8KHz	16KHz	32KHz					
ACCELERATION	*	*	*	*	Soft	Medium	Hard					
ACCUMULATOR	*	*	*	*	Ni	Li						
NiCd/NiMH CUTOFF	*	*	*	*	X0.05	0.4V	0.5V	0.6V	0.7V	0.8V	0.9V	0.10V
NUMBER OF CELLS	*	*	*	*	Auto	2	3	4	5	6	7	8
LiIo/PoI CUTOFF	*	*	*	*	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7、 2.8、 2.9、 3.0、 3.1、 3.2
CUT OFF TYPE	*		*	*	Slow Down	Hard						
INI POINT	*	*			Auto	FIXED1.0mS	FIXED1.1mS	FIXED1.2mS	FIXED1.3mS	FIXED1.4mS	FIXED1.5mS	
END POINT	*	*			Auto	FIXED1.7mS	FIXED1.8mS	FIXED1.9mS	FIXED2.0mS			
THROTTLE CURVER	*	*	*	*	LOG	LINEAR	EXP					
ROTATION	*	*			Left	Right						
ABS				*	ON	OFF						
POWER LIMITED			*	*	OFF	75%	50%	25%				
POWER LIMITED			*	*	OFF	75%	50%	25%				
DELAY			*	*	0.25 S	0.5 S	0.75 S	1 S	1.5 S	2 S	3 S	5 S
FORWARD POINT			*	*	AUTO	FIXED1.7mS	FIXED1.8mS	FIXED1.9mS	FIXED2.0mS			
REV./BRAKE POINT			*	*	AUTO	FIXED1.0mS	FIXED1.1mS	FIXED1.2mS	FIXED1.3mS			
TIMING MONITER	*	*	*	*	ON	OFF						