

ESC-PROG

Pocket ESC Program Box – Fast Field Setup for Brushless ESCs

User Manual



rev: 260917
Made in Taiwan

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INTRODUCTION

The **ESC-PROG** pocket-sized ESC program box lets you configure a Formosa Drone brushless ESC quickly and easily using a simple button-and-LED interface with no PC required. In addition to parameter setup, it also supports ESC firmware updates for fast field maintenance. Use the navigation keys to select a programmable item and option, then press OK to transmit and store the new setting in the ESC.

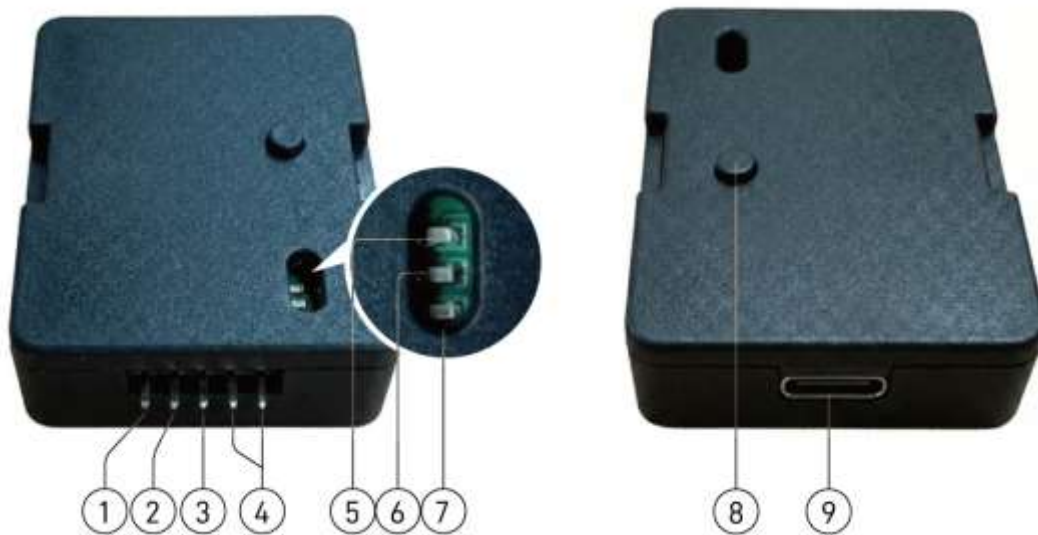
PACKAGE CONTENTS

- 1x ESC-PROG

FEATURES

- Compact & lightweight
- Firmware update support: Update Formosa Drone ESC series firmware directly via ESC-PROG
- Friendly UI: one button to set & three LEDs display the user defined mode.
- Normal-voltage : 4.5-17V Input or USB-C 5V
- Compatibility note: Suitable only for ESCs from the same manufacturer.

PANEL DESCRIPTIONS



1. ESC Throttle

2. Power Input: 4.5V - 17V**

3. GND

4. Jumper Configuration:

With jumper installed: Normal operation

Without jumper: Enabled for ESC-PROG firmware update

5. Mode 1 LED*

6. Mode 2 LED*

7. Mode 3 LED*

* Note: **Mode 0** indicates all LEDs are off

8. Push Button: Cycles through Modes 0/1/2/3 and configures parameters for Modes 1/2/3 on the ESC

9. USB-C:** Connects to host PC

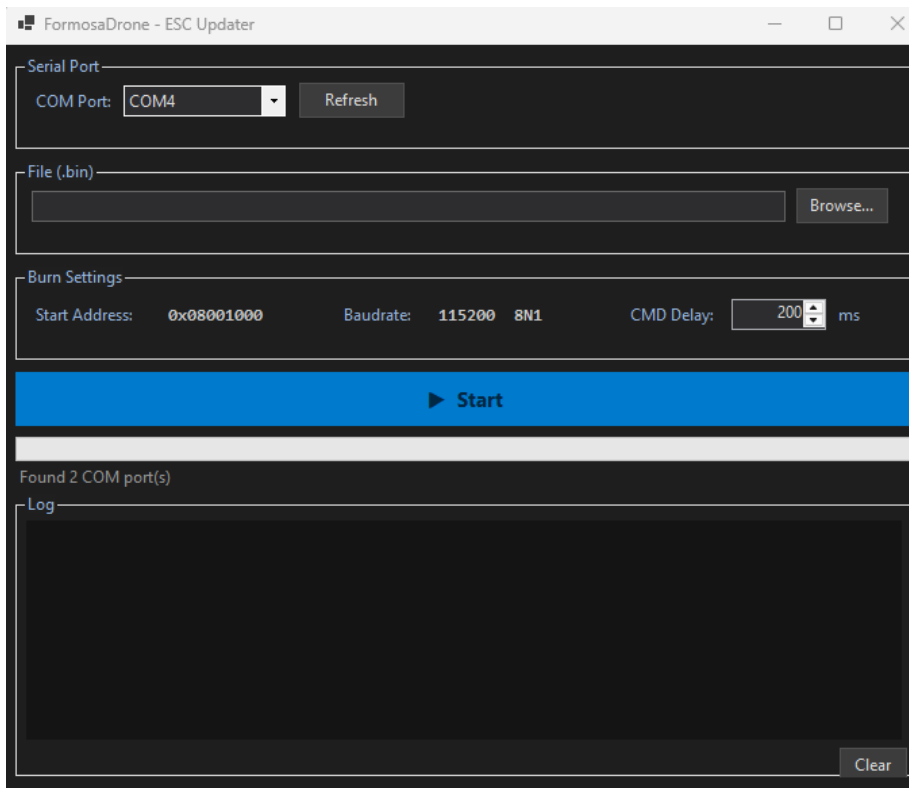
**** Power Supply Options:** Powered via USB-C host connection or via the Power Pin input (4.5-17V)

OPERATION

1. ESC Firmware Update

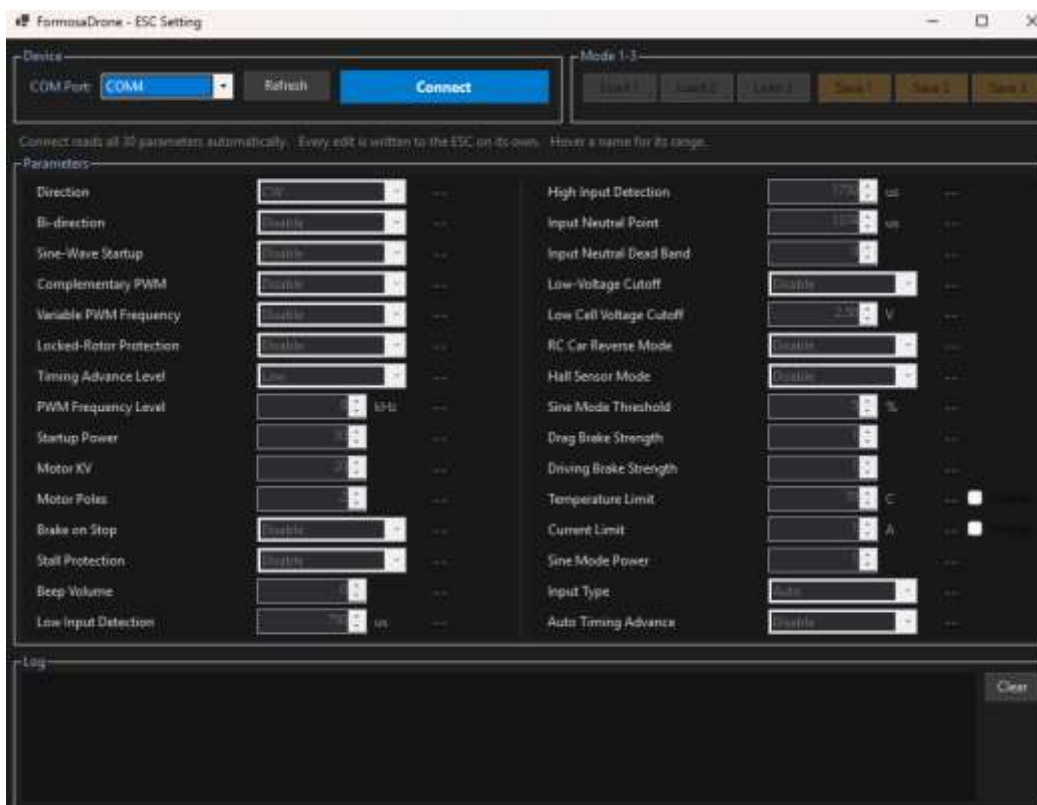
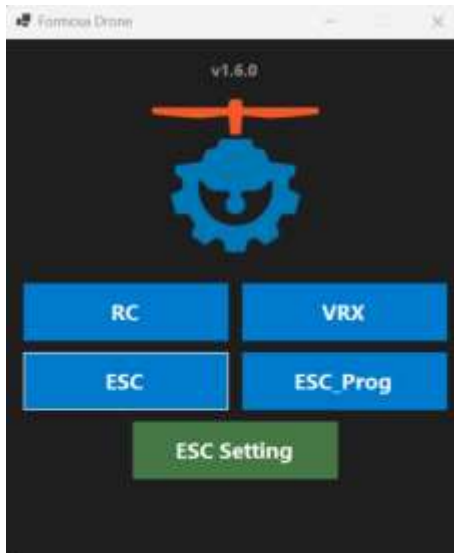
Open the software and click "ESC". Select the correct COM port, load the .bin file, and press "Start". Then, power on the ESC.

(Note: Red LEDs 1, 2, and 3 will flash alternately during the update. Once finished, they will flash simultaneously three times.)



2. ESC Parameter Setting

Power on both the ESC and ESC-PROG. Open the software and click "ESC Setting". Press the push button to switch to Mode 0. Once the ESC-PROG connects to the host PC, Red LEDs 1, 2, and 3 will light up.



3. Configuring and Saving ESC Settings

In the "ESC Setting" menu, you can edit user parameters and save them to Mode 1, 2, or 3. To apply these settings afterwards, connect only the ESC and ESC-PROG. Switch to Mode 1, 2, or 3, then press and hold the button for 5 seconds.

- Success: Red LEDs 1, 2, and 3 will flash three times to indicate the operation was successful.
- Failure: If the system automatically returns to Mode 0, the operation has failed.

FormosaDrone - ESC Setting

Device

COM Port:

COM4

Refresh

Connect

Mode 1-3

Load 1

Load 2

Load 3

Save 1

Save 2

Save 3

Connect reads all 30 parameters automatically. Every edit is written to the ESC on its own. Hover a name for its range.

Parameters

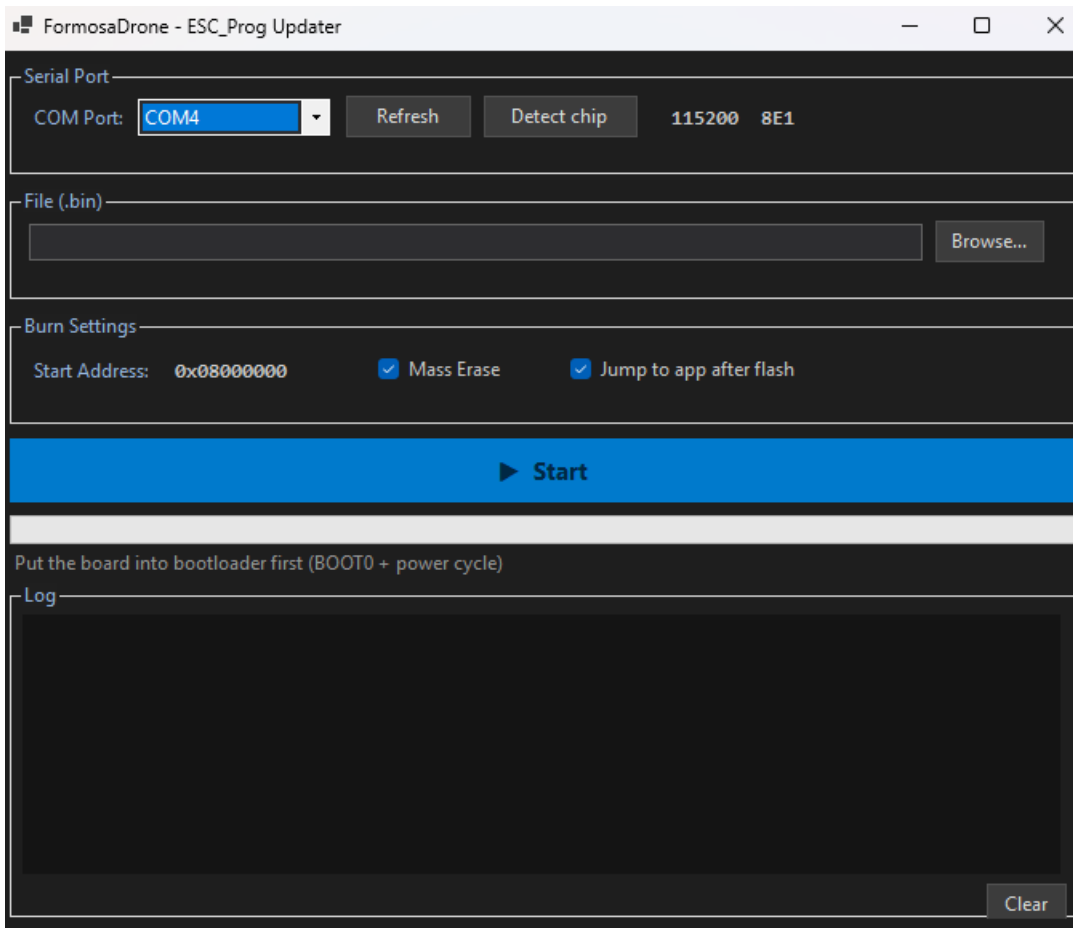
Direction	CW	--	High Input Detection	1750	us	--
Bi-direction	Disable	--	Input Neutral Point	1374	us	--
Sine-Wave Startup	Disable	--	Input Neutral Dead Band	0		--
Complementary PWM	Disable	--	Low-Voltage Cutoff	Disable		--
Variable PWM Frequency	Disable	--	Low Cell Voltage Cutoff	2.50	V	--
Locked-Rotor Protection	Disable	--	RC Car Reverse Mode	Disable		--
Timing Advance Level	Low	--	Hall Sensor Mode	Disable		--
PWM Frequency Level	8	kHz	Sine Mode Threshold	5	%	--
Startup Power	50		Drag Brake Strength	1		--
Motor KV	20		Driving Brake Strength	1		--
Motor Poles	2		Temperature Limit	70	C	-- ☐ Disable
Brake on Stop	Disable	--	Current Limit	1	A	-- ☐ Disable
Stall Protection	Disable	--	Sine Mode Power	1		--
Beep Volume	0		Input Type	Auto		--
Low Input Detection	750	us	Auto Timing Advance	Disable		--

Log

Clear

4. ESC-PROG Firmware Update

Remove the jumper and connect the USB-C cable to the host PC. Open the software, click "ESC_PROG", select the COM port, and load the .bin file. Press "Start". When the update is complete, disconnect the USB-C cable and reinstall the jumper.



WARRANTY

The SELLER warrants the **ESC-PROG Pocket ESC Program Box – Fast Field Setup for Brushless ESCs** to be free from defects in the material and workmanship for 1 year from the date of purchase from the SELLER or an authorized dealer. Should this product fail to be in good working order within 1 year warranty period, The SELLER, at its option, repair or replace the unit, provided that the unit has not been subjected to accident, disaster, abuse or any unauthorized modifications including static discharge and power surges.

Unit that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for 90 days from the day of reshipment to the BUYER. If the unit is delivered by mail, customers agree to insure the unit or assume the risk of loss or damage in transit. Under no circumstances will a unit be accepted without a return authorization number.

The warranty is in lieu of all other warranties expressed or implied, including without limitations, any other implied warranty or fitness or merchantability for any particular purpose, all of which are expressly disclaimed.

Proof of sale may be required in order to claim warranty. Customers outside Taiwan are responsible for shipping charges to and from the SELLER. Cables are limited to a 30 day warranty and cable must be free from any markings, scratches, and neatly coiled.

The content of this manual has been carefully checked and is believed to be accurate. However, The SELLER assumes no responsibility for any inaccuracies that may be contained in this manual. The SELLER will NOT be liable for direct, indirect, incidental, special, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. **Also, the technical information contained herein regarding the ESC-PROG features and specifications is subject to change without further notice.**