



ZTW Multi Functional LCD Program Card G2 User Manual

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Multifunction LCD Program Box G2 User Manual

Thanks or purchasing the LCD program box G2, please read this manual carefully before using it. The ZTW Multifunction LCD G2 program box G2 is the equipment that integrates multiple functions, it is small to carry and convenient to set parameters for ESC (Electronic Speed Controller).

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FEATURE

1. Works as an individual device to set the parameters for the ESC.
2. Working as a Lipo battery voltmeter to measure the voltage of the whole battery pack and each cell
3. For the ZTW ESC with data returning feature, it can display real-time data including: voltage, current, input throttle, output throttle, RPM, battery power, MOS temperature and motor temperature.
4. For the ZTW ESC with data logging feature, it can read the data including: maximum RPM, minimum voltage, maximum current, external temperature, and maximum temperature,

5. PWH throttle signal detection: Identify and display the input throttle pulse width and frequency.
6. ESC/Servo Tester: It works like remote control to adjust the speed for ESC/servo by pressing the program button.
7. The LCD program box can be upgraded by the mobile App via the ZTW bluetooth module,

SPECIFICATION

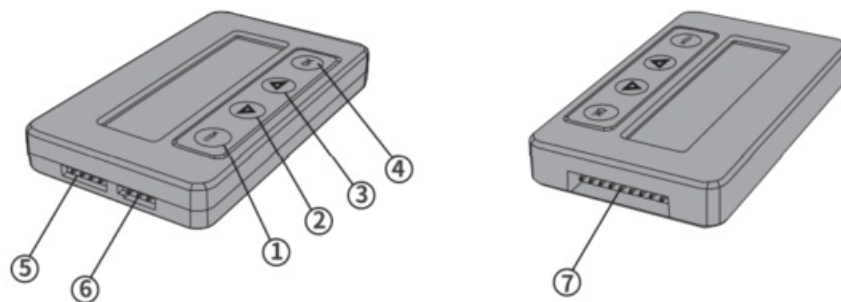
- Size: 84*49*115mm
- Weight: 40g
- Power supply: DC5~12.6V

SUITABLE FOR THE FOLLOWING ESC

1. Beatles G2, Mantis G2, Skyhawk
2. Shark G2, Seal G2, Dolphin

DESCRIPTION OF EACH BUTTON AND PORT

1. ITEM: Change the programmable items circularly.
2. ▽: Change the programmable items circularly in positive direction.
3. △: Change the programmable items circularly in negative direction.
4. OK: Save and send the current parameters into the ESC.
5. ESC: Use programming line to connect this port with programming port of ESC.
6. Batt: Programming box power supply input port.
7. Battery Check: Connect this port with the balance charging connectors of the battery.



INSTRUCTIONS

A. Working as an individual device to set the parameters for the ESC

1. Disconnect the battery from the ESC.
2. Select the corresponding connection method, and connect the ESC with LCD program box.
 1. If the programming line of ESC shares a same line with throttle line, then unplug throttle line from receiver and plug into "ESC" port of LCD program box correspondingly. (See Diagram 1)
 2. If the ESC has independent programming port, then using programming line to connect programming port of ESC with "ESC" port of LCD program box. (See Diagram 2)
3. Connect the ESC to battery.

ZTW
PB-G2-V1.00



4. If the connection is correct, LCD program box shows initial screen,  press "ITEM" or "OK" button on the LCD program box, the screen shows , then it shows the 1st programmable item after a few seconds, which means LCD program box connects with ESC successfully. Press the "ITEM" "▽" and "△" button to select the options, press "OK" button to save data.

Diagram 1

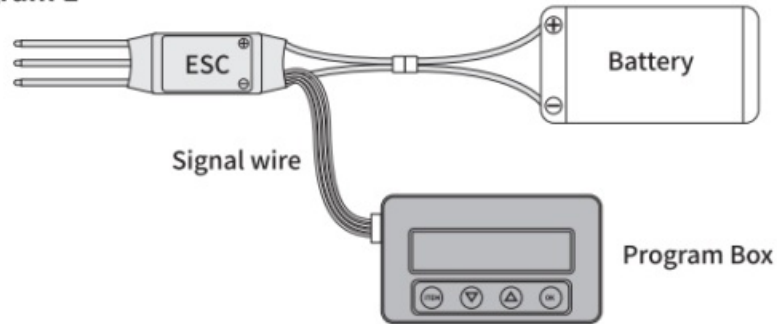
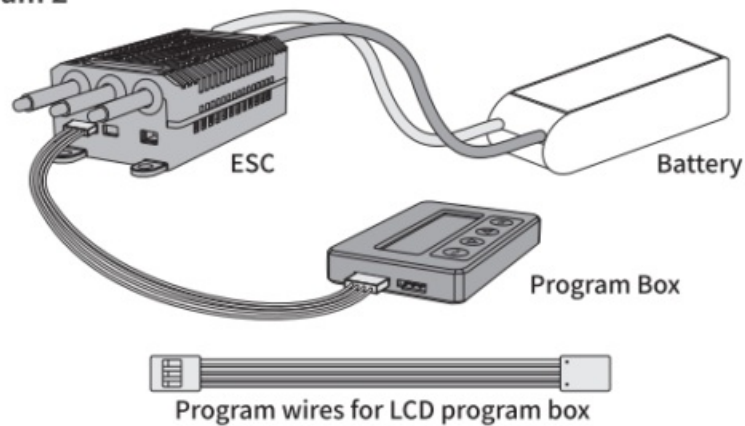


Diagram 2



Note:

1. Reset the ESC by the LCD program box

When the connection between ESC and LCD program box is successfully established, press "ITEM" button for several times until the "Restore Default" is displayed, press "OK" button, then all programmable items in the current profile are reset to factory default options.

2. Read the data logging of ESC by LCD program box

For the ESCs with data logging function, the following data can be displayed after the menu of "Restore Defaults maximum RPW, minimum voltage, maximum current, external temperature, and maximum temperature. ESCs without data logging function will not display these data)

3. Check the ESC running data in real time by LCD program box

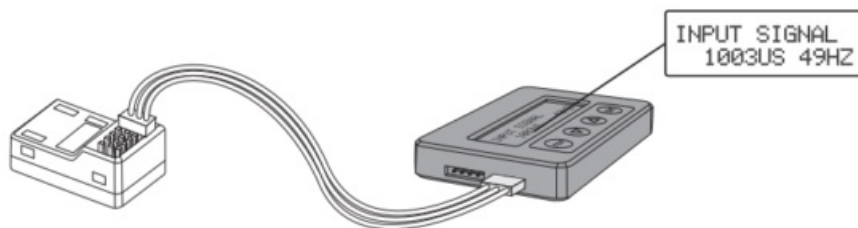
For the ESCs with data returning function, when the connection between ESC and LCD program box is successfully established:

1. The LCD program box can display the following data in real time: voltage, current, input throttle, output throttle, RPM, battery power, MOS temperature and motor temperature.
2. If the ESC has errors, the LCD program box will display the current error circularly. The errors are as below:

SC protection	Shortcircuit protection
Break Protection	Motor wire brake protection
Loss Protection	Throttle loss protection
Zero Protection	“Throttle inten zero position when powered up.
LYC Protection	Low voltage protection
Temp Protection	Temperature protection
Start Protection	Start locked rotor protection
OC Protection	Over correct protection
PPH_THR ERROR	The PPM throttle s not n the range
UART_THR ERROR	The UART throttle is noting the range:
UART_THRLOSS	UART throttle loss:
CANTHRLOSS	Can throttle loss
BAT_VOT ERROR	The battery voltage is not in the range

B. PWM throttle signal detection

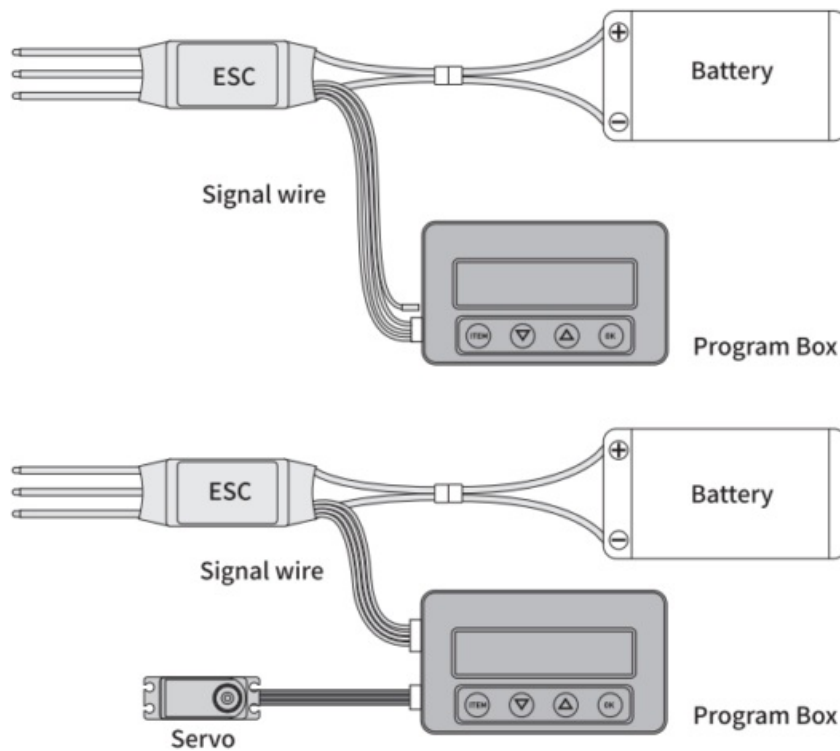
When the PWM signal device such as the receiver is in normal working state, connect the receiver and LCD program box, Press and hold the buttons Δ ∇ for 3 seconds at the same time, Then select “Input Signal”, it can identify and display the input throttle pulse width and frequency.



C.ESC/Servo Tester

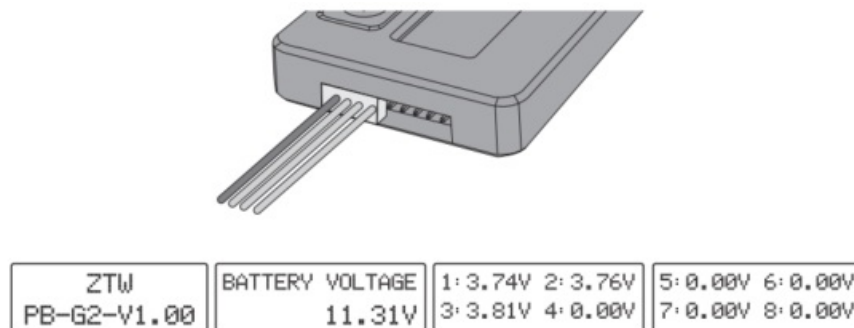
It works like remote control to adjust the speed for ESC/servo by press the program box button.

1. Press and hold the buttons Δ ∇ for 3seconds at the same time, then select “Output Signal
2. Press the button respectively Δ ∇ the throttle will be increased or decreased in unis of “1us”, long press the Δ or ∇ button for about 3 seconds to quickly increase or decrease the thottle.
3. Press the “ITEM button, the throttle will decrease in units of “100us” press the OK- button, the throttle wil Increase n units of “100us”.



D. Working as a Lipo battery voltmeter to measure the voltage of the whole battery pack and each cell

1. Battery: 2-85Li-Polymer/Li-Lon/LiHVILi-Fe
2. precision: $\pm 0.1\text{V}$
3. Usages lug the battery balance charge connector into the "BATTERY CHECK" port of the LCD program box separately, (Please make sure that the negative pole points to the "TM" symbol on the program box).



E. Update the firmware of LCD program box

The LCD program box should be updated because the functions of ESC are improved continuously, the method is as follows:

1. Provide power for LCD program box by ESC, battery or external power supply device, the power supply range is 5-12.6V.
2. Connect the ZTW Bluetooth module to the "ESC" port of the LCD program box.
3. Download ZTW APP and install it on your phone, after install it successfully, open your phone's bluetooth, find "ZTW-BLE-XXXxX", then click "Connect".
4. After the connection is successful, select "Firmware", then select "Firmware Update".
5. Select the latest firmware and click "OK" to upgrade.
6. Wait for a few seconds until the interface displays "Upgrade Successful"

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Documents / Resources

	<p>ZTW Multi Functional LCD Program Card G2 [pdf] User Manual Multi Functional LCD Program Card G2, Functional LCD Program Card G2, LCD Program Card G2, Program Card G2, Card G2, G2</p>
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References

- [User Manual](#)

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