

Thanks for purchasing the Radient LCD Program Controller G2. This should be used in conjunction with Radient Air ESCs. Please read this manual carefully before using the Controller. This pocket-size LCD Controller has multiple functions allowing you to easily and conveniently set ESC parameters, check batteries, measure PWM outputs and log data.

Features

1. Parameter setting for Radient Air ESCs.
2. LiPo battery voltmeter, measuring total voltage and individual cell voltage.
3. For Radient ESCs with data logging, the Controller can display real-time data including:
Voltage
Current
Input throttle
Output throttle
RPM
Battery power
MOS temperature
Motor temperature.
4. For Radient ESCs with data logging, the Controller can read:
Maximum RPM
Minimum voltage
Maximum current
External temperature
Maximum temperature
5. PWM throttle signal detection. Identification and display of the input throttle pulse width and frequency.
6. ESC tester. The Controller replicates your transmitter to allow adjustment of the ESC's speed output.

Specification

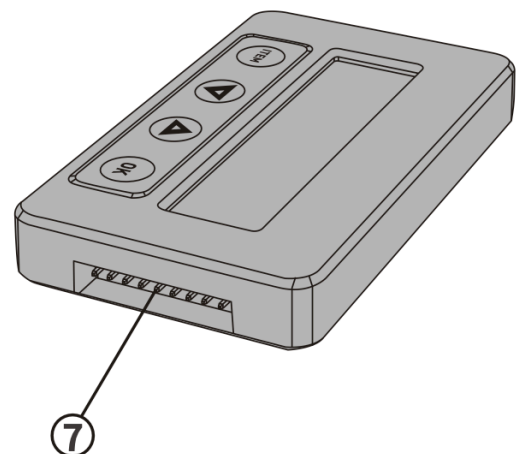
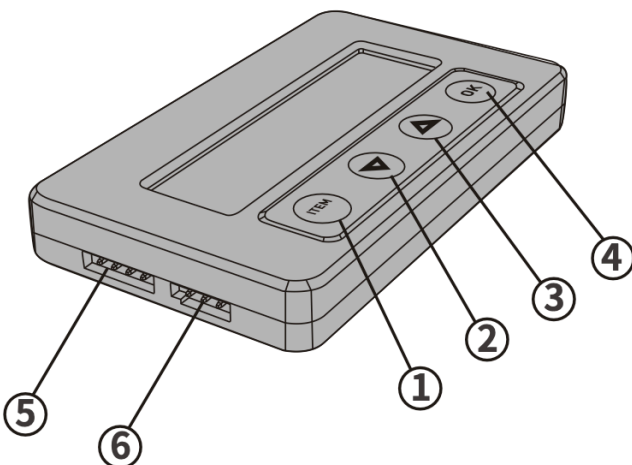
Size: 84x49x11.5mm Weight: 40g Power supply: DC 5.0-12.6V

Compatibility

Suitable for all Radient Air ESCs.

Get to know your LCD Program Controller

1. ITEM button. Select the programmable items.
2. Decrease button. Menu control and adjustment of selected values.
3. Increase button. Menu control and adjustment of selected values.
4. OK button. Saves current parameters into the ESC.
5. ESC programming connection port.
6. Program Controller power supply input port. When the programming port of ESC has no voltage output, such as an OPTO ESC, a separate battery or UBEC is needed to supply power for the Program Controller.
7. Battery check port. Connect the LiXX balance plug to this port.



Using the Program Controller to set ESC parameters

1. Disconnect the battery from the ESC.
2. Connect the ESC to the LCD Program Controller.
 - a.) If the ESC's programming connector and throttle connector are one in the same, unplug the throttle connector from the receiver and plug it into the ESC port (5) of the Program Controller.
 - b.) If the ESC has an independent programming connector, plug this lead into the ESC port (5) of the LCD Program Controller.
3. Connect the battery to the ESC.
4. For OPTO ESCs it will be necessary to supply 4.8-6.0V to the power supply port (6).
5. If the connection is correct the LCD Program Controller will show the 'LCD PG-G2-V1.060' initial screen.
6. Press the ITEM or OK button. The screen will briefly display 'ESC CONNECTING' followed by the first programmable item. This shows that the LCD Program Controller has successfully connected with the ESC.
7. Press the ITEM button then scroll up or down using the arrow keys. Press the OK button to save data.

Other functions

1. Resetting the ESC

When the connection between the ESC and LCD Program Controller is successfully established, press the ITEM button several times until 'Restore Default' is displayed. Press the OK button. All programmable items in the current profile will be reset to factory default options.

2. Reading logged data

For ESCs with data logging functionality the following data can be displayed after the 'Restore Default' menu. Maximum RPM – Minimum voltage – Maximum current – External temperature – Maximum temperature. (ESCs without the data logging function will not display this data).

3. Checking running data in real-time

For ESCs with real-time data functionality, when the connection between the ESC and LCD Program Controller is successfully established the following data can be displayed: RPM – Battery power – MOS temperature – Motor temperature.

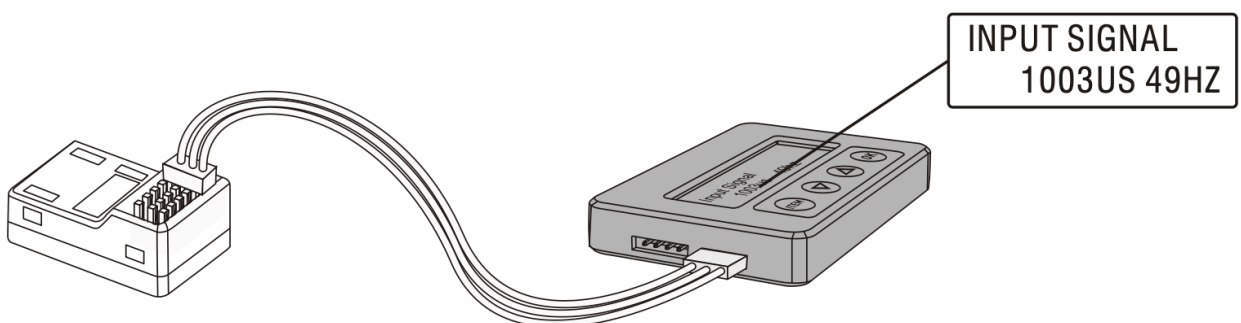
Error warnings

If the ESC has errors, the LCD Program Controller will display the following warnings

SC Protection	Short circuit protection.	Break Protection	Motor wire failure protection.
Loss Protection	Throttle loss protection.	Zero Protection	Throttle is not at 0% on power up.
LVC Protection	Low voltage protection.	Temp Protection	Temperature protection.
Start Protection	Start / locked rotor protection.	PPM_THR ERROR	The PPM throttle is not in range.
OC Protection	Over current protection.	UART_THR ERROR	The UART throttle is not in range.
UART_THR LOSS	UART throttle loss.	CAN_THR LOSS	CAN throttle loss.
BAT_VOT ERROR	Battery voltage is not suitable.		

PWM throttle signal detection

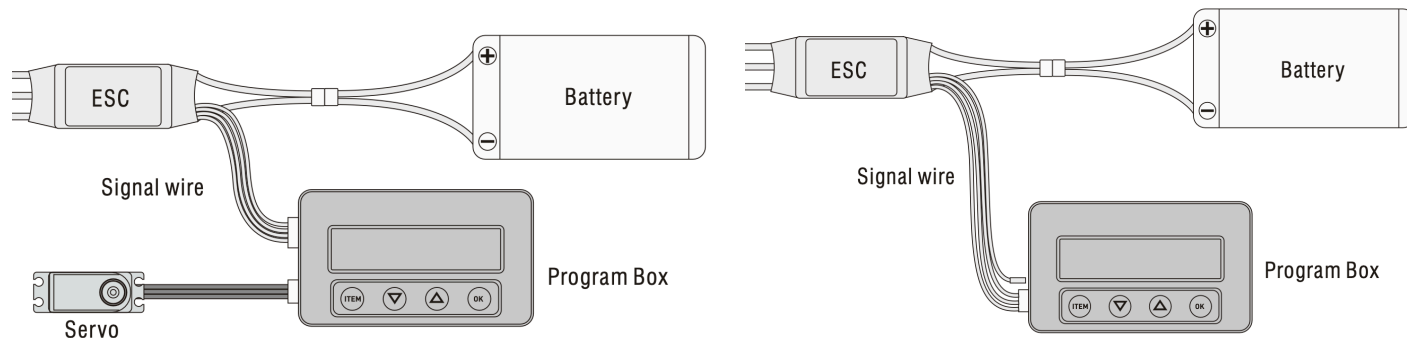
Connect the receiver and LCD Program Controller into the power supply port (6). Press and hold the Increase / Decrease buttons at the same time for 3 seconds, then select 'Input Signal' This function can identify and display the input throttle pulse width and frequency.



ESC / Tester

This function simulates your transmitter in being able to adjust the ESC's speed output.

1. Press and hold the Increase / Decrease buttons at the same time for 3 seconds, then select 'Output Signal'.
2. Press the Increase / Decrease button. The throttle will be increased or decreased in units of 1us. Long press the Increase / Decrease buttons for about 3 seconds to quickly increase or decrease the throttle.
3. Press the ITEM button and the throttle will decrease in units of 100us. Press the OK button for the throttle to increase in units of 100us.



LiPo battery voltmeter

The LCD Program Controller will measure individual cell voltage as well as the voltage of the whole battery pack. Supported batteries: 2-8s LiPo / Li-Lon / LiHV / Li-Fe with a precision of $\pm 0.1V$.

1. Plug the battery balance charge connector into the 'Battery check port' of the LCD Program Controller.
WARNING! Please make sure that the negative pole points to the '-' symbol on the Program Controller case.

CE / UKCA CONFORMITY

J Perkins (Distribution) confirms that this product is in compliance with the relevant harmonised European directives relating to its safe operation.

WEEE

This appliance is labelled in accordance with European Directive 2012/19/EU & UKCA Directive concerning Waste Electrical and Electronic Equipment (WEEE). The WEEE Directive came into force to reduce the disposal of domestic waste and promote recycling. Any electrical item that carries the crossed out wheellie bin logo must not be disposed of in domestic waste but should be taken to a designated collection facility. J Perkins (Distribution) are a member of an approved compliance scheme to encourage consumers to recycle unwanted items. Your local authority will be able to provide details of your nearest approved waste disposal site.

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