XP2 PROGRAMMING CARD INSTRUCTIONS

Thank you for purchasing the Overlander XP2 Programming Card. This programming card is used to make programming compatible Overlander XP2 ESCs easier and faster. Simply plug the ESC throttle connector and a separate 4-cell receiver battery (not included) into the programming card and you're ready to go. If you're out in the field and don't have a separate receiver battery, the programming card can be powered directly through the ESC using the ESC's motor battery.

Please read through these instructions to familiarise yourself with how to use your new programming card. It's important to understand the various programming options to get the most out of the ESC.

Important: If using a separate receiver battery to power the programming card, you MUST use a 4-cell receiver battery. The programming card will not work using a 5-cell receiver battery.
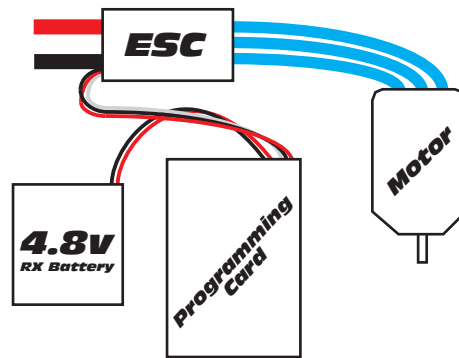
CONNECTIONS 》》》》》》

Follow the steps in this section to connect the ESC and separate receiver battery (if used) to the programming card.

1) Plug the universal ESC throttle connector into the BEC port in the programming card, making sure to observe correct polarity (black-negative, red-positive and white-signal)

2) If using a separate receiver battery to power the programming card, plug the receiver battery connector into the BATT port in the programming card, making sure to observe correct polarity (black-negative and red-positive). If youre not using a separate receiver battery, plug the motor battery into the ESC.

3) The programming card will turn ON automatically and the current ESC programming values will be displayed in red. The currently selected Brake programming value will flash.

PROGRAMMING THE ESC 》》》》》》

Values for eight different programs can be selected through the programming card to customise the ESC to suit your specific setup.

Using the Programming Card:
1) Press the ⬍ and ◀▶ buttons to highlight the desired programming value. That programming value will flash.
2) Press the OK button to store the selected programming value to the ESC. That programming value will continue to flash.
3) Repeat steps 1 and 2 to select and store any other desired programming values.

TIP: If desired, all programming values can be reset to the default values. To do this, press the Load Default button, then press the OK button.

4) When youre finished changing programming values, unplug the receiver battery and/or the throttle connector from the programming card, then plug the throttle connector into the throttle channel slot in the receiver.

Program Descriptions (Default Values Shown in Bold)

• Brake – ON / OFF – Turns the brake function ON or OFF. When turned ON, the motor will come to a stop and hold in that position as soon as the throttle is pulled all the way down. This function is typically used with aircraft that feature a folding propeller, such as a powered glider, to prevent the propeller from being damaged during landing.

• Battery Type – NiCD/NiMH/LiPo – Selects the desired battery type. Make sure this programming value matches the type of motor battery used.

• Cutoff Type – Reduce/Cutoff – Determines how the ESC responds when the ESC senses the low voltage cutoff value has been reached during flight. When Reduced is selected, motor power will be reduced to a pre-programmed value, regardless of throttle control stick position. When Cutoff is selected, motor power will be shut off completely, regardless of throttle control stick position.

• Cutoff Voltage – Low/Medium/High – Determines the low voltage protection threshold. Choose a value that wont damage your battery from over-discharging. When LiPo Battery Type is selected, the low voltage cutoff threshold is 2.8V per cell (Low), 3.0V per cell (Medium) and 3.2V per cell (High). The number of cells is automatically detected during startup. When NiCD/NiMH Battery Type is selected, the Low, Medium and High cutoff voltages are 0%, 60% and 65% of the initial voltage of the battery pack, respectively.

PROGRAMMING THE ESC, CONTINUED... 》》》》》》

• Timing Mode – Low/Medium/High – Adjusts the timing of the motor to change the motors performance. In most cases the manufacturer of the motor will provide a motor timing recommendation to use. In general, Low works good for all types of motors, but Medium or High can be used to improve motor performance. If your motor does not function correctly with a higher motor timing setting, reduce the Timing Mode value.

• Start Mode – Very Soft/Soft/Accelerate – Determines how quickly and forcefully the motor starts up as the throttle control stick is advanced. Soft and Accelerate are generally used for aircraft and Very Soft is suited for use with helicopters.

• Governer Mode – Heli Off/Heli ON – Determines if the throttle governer is ON or OFF. When Heli OFF is selected, the motor will throttle up proportionally with the throttle control stick. This setting is best suited for aircraft. When Heli ON is selected, there will be an 8 second delay from the point the throttle control stick is moved to full throttle and the motor actually reaches full power. This setting is best suited for helicopters to prevent stress on the drive system.

• Motor Direction – Normal/Reverse – Determines the direction the motor turns. In most cases, the direction the motor turns can be changed by swapping any two of the three motor wires. If the motor wires cannot be accessed, the motor direction can be changed electronically.

• Load Default – Restores all default programming values

TROUBLESHOOTING GUIDE 》》》》》》

Programming Card does not power up:
Using a 5-cell receiver battery to power programming card. A 4-cell receiver battery MUST be used unless powering the programming card with the ESC's motor battery.
Receiver battery plugged into the wrong port or plugged in with reverse polarity. Plug the receiver battery connector into the BATT port, making sure the polarity is correct.
ESC throttle connector is not plugged into the BEC port or is plugged in with reverse polarity. Plug the ESC throttle connector into the BEC port, making sure the polarity is correct.

Programming Value Changes Not reflected in ESC Operation:
Press the OK button after highlighting the programming value.
Using an ESC that's not compatible with this programming card.

Cannot scroll up or left to highlight programming values:
This is normal. Pressing the ⬍ and ◀▶ buttons scrolls only down and right. Continue pressing the ⬍ and ◀▶ buttons to cycle through the programming values and return to the top.

WARRANTY AND AFTER-SALES 》》》》》》

Overlander guarantees this product to be free from defects in both material and operation for the period of 12 months from the date of purchase. During this period we will repair or replace without charge any product deemed defective due to those causes. You will be required to provide proof of purchase (Invoice or Receipt). This warrenty does not cover damage due to wear, overloading, short circuiting, modification, use of incorrect accessories or connectors or incompetant handling.

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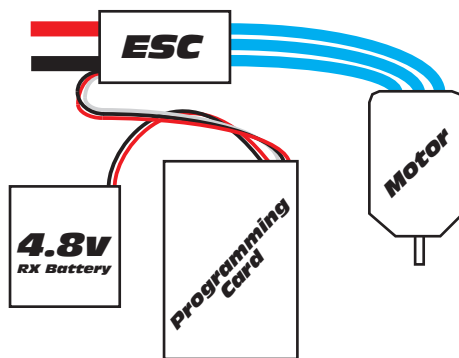
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