



## EXCEED PROGRAMMER FOR EXCEED BRUSHLESS CONTROLLERS



### ***OPERATING INSTRUCTIONS***

**Please keep for future reference**

Thank you for purchasing this Exceed programmer. We are sure you will be pleased with its performance and features. In order to ensure that you obtain the maximum benefit from its operation, please read the instructions carefully.

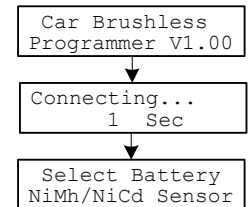


## GENERAL OPERATION

### CONNECTIONS

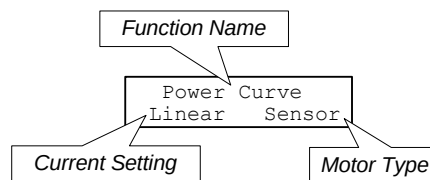
Remove the controller throttle wire from the receiver and connect it to the programmer, or if using the Ultra controller then connect the dedicated programmer wire to the programmer.

When the controller is turned on, the programmer will display the initial screen then try to connect to the controller. Once the connection is established, the current settings will be downloaded from the controller and displayed on the screen.



### PROGRAMMER SCREEN

The programmer screen shows the selected function name, current setting and motor type.



### BASIC OPERATION

The settings can be scrolled through using the up and down buttons and edited using the '+' and '-' buttons on the programmer.

*N.B. New settings are not downloaded to the controller until the 'Download' function has been selected. This function can be accessed quickly by pressing the '+' and '-' buttons at the same time.*

To change the 'Motor Type' between sensored, sensorless and brushed, press both outer buttons (up and down) at the same time.

### PROGRAMMER MEMORY

The programmer can be used to store settings from your controller which can be saved or recalled using the Backup and Restore functions.

This memory can also be accessed and edited at any stage by connecting a battery directly to the programmer. To do this, connect a battery and press any button. The unit will then give a connection error which can be accepted by pressing any button. The programmer will now show the values stored in the internal memory, which can be edited in the normal way. To save these settings, use the backup function. When the programmer is connected to the controller again, these settings can be recalled using the restore function.

## PROGRAMMING SUMMARY

The table below shows the programming functions that can be accessed using the programmer.

|    | <b>Function</b>              | <b>Setting Options</b>                                           | <b>Default Value</b> |
|----|------------------------------|------------------------------------------------------------------|----------------------|
| 1  | Battery Type                 | LiPo / LiFe / NiMH-NiCd                                          | NiMH                 |
| 2  | Cut Off Voltage              | Auto / 3.0V ~ 14.0V                                              | Auto                 |
| 3  | Power Curve                  | Soft / Linear / Hard                                             | Linear               |
| 4  | Advance Timing               | 0° ~ 25° (Sensorless) / 0° ~ 10° (Sensored)                      | 25° / 10             |
| 5  | Acceleration                 | Lowest / Low / Normal / High / Highest                           | Highest              |
| 6  | Start Power                  | Lowest / Low / Normal / High / Highest                           | Lowest               |
| 7  | Start Current Limit Function | Off ~ 100% (not Sport or Race)                                   | Off                  |
| 8  | Current Limit Function       | Off ~ 100% (not Sport or Race)                                   | Off                  |
| 9  | Reverse Function             | One Way / Two Way                                                | One Way              |
| 10 | Reverse Delay                | 0.2s / 0.5s / 0.8s / 1.3s / 1.8s / 2.5s                          | 2.5s                 |
| 11 | Neutral Width                | Narrow / Normal / Wide                                           | Normal               |
| 12 | Motor Direction              | Normal / Reverse                                                 | Normal               |
| 13 | Speed Mixing Brake           | 0% ~ 100%                                                        | 0%                   |
| 14 | A.B.S Brake                  | Off / Weakest / Weak / Normal / Strong / Strongest               | Off                  |
| 15 | Auto Brake Amount            | 0% ~ 100%                                                        | 0%                   |
| 16 | Min Brake Amount             | 0% ~ 100%                                                        | 30%                  |
| 17 | Max Brake Amount             | 0% ~ 100%                                                        | 100%                 |
| 18 | Current Voltage              | 0.0V                                                             | Read only            |
| 19 | Current Temp                 | 0° ~ 135°                                                        | Read only            |
| 20 | Max Temperature              | 0° ~ 135°                                                        | Read only            |
| 21 | Max Current                  | 0A ~ 999A                                                        | Read only            |
| 22 | Motor Pole Num               | 2 ~ 20 pole                                                      | 2                    |
| 23 | Gear Ratio                   | 2.0:1 ~ 15.0:1                                                   | 2.0:1                |
| 24 | Tire Diameter                | 40mm ~ 200mm                                                     | 63                   |
| 25 | Maximum Speed                | 0.0 km/h                                                         | Read only            |
| 26 | Average Speed                | 0.0 km/h                                                         | Read only            |
| 27 | Error History                | T, S, V, R (High Temp, Sensor, Low Voltage, Signal)              | Read only            |
| 28 | Download                     | All the settings in the memory are downloaded to the controller. |                      |
| 29 | Restore Memory               | All the Parameters in the EEPROM are recalled to the memory.     |                      |
| 30 | Backup Memory                | All the settings in the memory are saved to the EEPROM.          |                      |
| 31 | Factory Setting              | Resets the controller to the Factory settings.                   |                      |

# PROGRAMMING FUNCTIONS

## 1 BATTERY TYPE

Select Battery  
NiMh/NiCd Sensor

Use the '+' or '-' buttons to select the type of battery being used.

N.B. It is very important that the correct battery type is selected, as different battery types require the controller to cut-off at different voltages. If a Lithium battery is allowed to discharge below its minimum voltage, then permanent damage can be caused to the battery.

## 2 CUT -OFF VOLTAGE

Cut Off Voltage  
Auto Sensor

The Cut-Off Voltage varies according to the battery type that you have set. In "AUTO" mode the cut-off for Li-Po is 3.0V per cell and for NiCd/NiMH is 5.5V (variable cut-off type). However, you can set the range manually using the '+' and '-' buttons from 3.0V~14.0V dependant on your controller.

## 3 POWER CURVE

Power Curve  
Linear Sensor

The power curve can be adjusted between soft, linear and hard.

## 4 ADVANCED TIMING

Advance Timing  
10 Sensor

Advance timing or Motor Timing alters the advance of the rotational field which has a similar effect to "advancing the ignition point". The timing can be adjusted from 0°~10° for sensored motors and 0°~25° for sensorless. For sensored motors, this only applies to forward.

## 5 ACCELERATION

Acceleration  
Highest Sensor

This is the time taken for the motor to reach the desired speed after it starts turning. The options are Lowest / Low / Normal / High / Highest.

## 6 START POWER

Start Power  
Lowest Sensor

This is the minimum amount of power delivered to a motor to make it start turning, choosing between Lowest / Low / Normal / High / Highest.

## 7 START CURRENT LIMIT

Start Curr Limit  
Off Sensor

This is designed to limit the power that is delivered to a motor, dependant on the track conditions, to stop the wheels spinning. This function is only active if the motor has been stationary for 10 seconds or more.

## 8 CURRENT LIMIT

Current Limit  
Off Sensor

This is designed to limit the power that is delivered to a motor, dependant on the track conditions, to stop the wheels spinning. This function is active when the motor has been operated within the last 10 seconds.

## 9 REVERSE FUNCTION

|                   |
|-------------------|
| Reverse Function  |
| One Way    Sensor |

This function is used for switching between “One Way” (forward only) and “Two Way” (forward and reverse). The default value is “One Way”.

## 10 REVERSE DELAY

|                 |
|-----------------|
| Reverse Delay   |
| 2.5 s    Sensor |

This is the time delay between forward and reverse functions. The options are 0.2, 0.5, 0.8, 1.3, 1.8 & 2.5 seconds.

## 11 NEUTRAL WIDTH

|                  |
|------------------|
| Neutral Width    |
| Normal    Sensor |

This functions allows you to adjust the width of the neutral position on your throttle stick.

## 12 MOTOR DIRECTION

|                  |
|------------------|
| Motor Direction  |
| Normal    Sensor |

This is used to reverse the direction of rotation of the motor without needing to change round the motor wires.

## 13 SPEED MIXING BRAKE

|                  |
|------------------|
| Speed Mixing Brk |
| 0 %    Sensor    |

This function allows you to change the amount of brake in relation to the speed of a sensed brushless motor.

## 14 A.B.S BRAKE

|               |
|---------------|
| A.B.S Brake   |
| Off    Sensor |

This is the amount of ABS brake to be applied when the throttle stick is at maximum brake.

## 15 AUTO BRAKE AMOUNT

|                 |
|-----------------|
| Auto Brk Amount |
| 0 %    Sensor   |

This function is the amount of brake when the throttle stick is in the neutral position.

## 16 MINIMUM BRAKE AMOUNT

|                   |
|-------------------|
| Min Brk    Amount |
| 30 %    Sensor    |

This function is the minimum amount of brake that is applied when the brake is applied.

## 17 MAXIMUM BRAKE AMOUNT

|                   |
|-------------------|
| Max Brk    Amount |
| 100 %    Sensor   |

This function is the maximum amount of brake that is applied when full brake is applied.

## 18 CURRENT VOLTAGE

|                 |
|-----------------|
| Current Voltage |
| 7.7 V    Sensor |

This shows the current battery voltage.

## 19 CURRENT TEMPERATURE

|                |
|----------------|
| Current Temp   |
| 39 °    Sensor |

This shows the current temperature of the controller.

## 20 MAXIMUM TEMPERATURE

|                 |
|-----------------|
| Max Temperature |
| 0 °    Sensor   |

This shows the maximum temperature of the controller in the previous race.

## 21 MAXIMUM CURRENT

|             |
|-------------|
| Max Current |
| 0 A Sensor  |

This is the maximum current delivered to the motor in the previous race.

## 22 MOTOR POLE NUMBER

|                |
|----------------|
| Motor Pole Num |
| 2 Pole Sensor  |

This allows you to enter the number of poles in your motor (between 2~20 poles) and is used to calculate the speed of your model. n.b. All Exceed sensed motors have 2 poles.

## 23 GEAR RATIO

|                |
|----------------|
| Gear Ratio     |
| 2.0 : 1 Sensor |

This allows you to enter the gear ratio you are using in your gearbox (from 2.0:1 to 15.0:1) and is used to calculate the speed of your model.

## 24 TYRE DIAMETER

|               |
|---------------|
| Tyre Diameter |
| 63 mm Sensor  |

This allows you to enter the tyre diameter for the drive wheels and is used to calculate the speed of your model.

## 25 MAXIMUM SPEED

|                |
|----------------|
| Maximum Speed  |
| 0.0Km/h Sensor |

This shows the maximum speed of your model in the previous race. (Brushless motors only)

## 26 AVERAGE SPEED

|                |
|----------------|
| Average Speed  |
| 0.0Km/h Sensor |

This shows the average speed of your model in the previous race. (Brushless motors only)

## 27 ERROR HISTORY

|                 |
|-----------------|
| Error History   |
| No Error Sensor |

This shows any errors from the previous race, such as high temperature, sensor, low voltage or signal.

## 28 DOWNLOAD TO CONTROLLER

|                |
|----------------|
| Down Load      |
| Really? Sensor |

Pressing the '+' button with this function selected sends all the settings from the programmer to the controller. This function can be accessed at any time by pressing the '+' and '-' buttons at the same time.

## 29. RESTORE MEMORY

|                |
|----------------|
| Restore Memory |
| Really? Sensor |

This function is used to recall the settings that are stored in the programmer memory and is activated by pressing the '+' button. These settings will not be downloaded to the controller.

## 30. BACKUP MEMORY

|                |
|----------------|
| Backup Memory  |
| Really? Sensor |

This function is used to save the current settings to the programmer memory and is activated by pressing the '+' button.

## 31. FACTORY SETTINGS

|                 |
|-----------------|
| Factory Setting |
| Really? Sensor  |

This function is used to reset the controller settings back the factory default and is activated by pressing the '+' button.



**PROGRAMMER  
FOR EXCEED BRUSHLESS CONTROLLERS**

**FS-XCPROG**



Made in China

**[www.LogicRC.com](http://www.LogicRC.com)**

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