Thank you for choosing Dash Products. Understand your needs in racing. Dash is proud to bring you the newest innovation in Competition Speed controller. Utilizing state of the art 32 bit (Micro- Controllers) MCUs right from the beginning, Dash AI is able to explore new technology and development in both software and hardware design. Dash AI allows Customization for Multiple programmable parameters (Using the ESC’s Program Card which can be Purchased separately). Please read this manual thoroughly to familiarize yourself with the installation, setup and operation. By operating this product, you accept the Dash Warranty Terms.

**Installation & Connectors**

- **Wire Gage & Connectors:**
  - Connect the ESC to the battery wires to a charged battery, then connect supplied 4pin wire (200mm) to the ESC setting port (4pin port) and Program Card. Turn on the receiver and the Program Card will activate automatically. Note that the screen will show “Loading…” during initialization – indicating that the ESC is copying the current setup in the ESC to the Program Card. Once loading is completed, the screen will show “DASH AI” and “Program”. You can now begin programming your ESC.

  - To begin, connect the battery wires to a charged battery, then connect supplied 4pin wire (200mm) to the ESC setting port (4pin port) and Program Card. Turn on the receiver and the Program Card will activate automatically. Note that the screen will show “Loading…” during initialization – indicating that the ESC is copying the current setup in the ESC to the Program Card. Once loading is completed, the screen will show “DASH AI” and “Program”. You can now begin programming your ESC.

  - Press “Enter” to access Program Mode or Data Reading.

  - The ESC has an available Blindy Mode. Open Stock Brushless and Offset profiles are pre-loaded within the firmware.

**Operating Tips**

- **Multiple Protection System:**
  - Yes

- **BEC:**
  - 6V / 7A / 3.0A

- **Motor Limit:**
  - Over 4.5 Turns

- **Peak Current:**
  - 760A

- **Motor Type:**
  - Sensored 540 sized brushless motors

- **B.E.C.:**
  - 6V

- **Multi Protection System:**
  - Yes

- **Fan Mode:**
  - Auto

- **Voltage Input:**
  - (4.8 – 9.9V DC)

- **ESC:**
  - Maximum / 100%

- **Throttle Reverse Reverse (Futaba, KO, Sanwa)

- **Throttle Exponential Start with 0%

- **Throttle Travel Maximum / 100%

**Blinking Mode**

- **1. Region:**
  - Level 1-15

- **2. Pulse Width Modulation (PWM):**
  - 2000-32000Hz, 4000kHz

- **3. Drag Brake:**
  - OFF

- **4. Compass Sensor:**
  - 0% - 20%

- **5. Braking Level:**
  - 0% - 100%

- **6. Motor Brake:**
  - OFF

- **7. ESC Motor/Link:**
  - A + B + C

- **8. Fan Mode:**
  - 80%

**Operating Instructions**

1. **Set-Up:**
   - Connect your receiver and transmitter first if your radio requires you to do so.

2. **Initial set-up of the throttle end-points of the ESC:**
   - Set the throttle reverse setting in the transmitter.

3. **Setting Initial Setup options of the Program Card:**
   - Use “SELECT” button to find [BLINKY MODE], [MODIFY MODE], [OPEN MODE] or [OFF ROAD MODE].

**TIPS!**

- Experiment to find out what suits your driving style.

- The 2K setup will give you good punch at the low end.

- Level 1 has the least punch and Level 15 has the highest punch.

- The “off” position during a crash. Power will not be applied in this situation.

- Power will not be applied in this situation.

- CAUTION: Since the ESC relies on the feed back of the ESC wires to display this protection, it only works if the motor does not turn at all. If the motor has any rotation, the ESC will consider the motor to be operational and the motor will not be cut off.

- **Fail Signal Protection:**
  - In case the radio signal to the ESC is interrupted for over 1 second during a run, the ESC will cut off until the signal resumes.

**Quick Setup:**

- **1. Torque Feel Level 1-15:**
  - 15

- **2. Pulse Width Modulation (PWM):**
  - 2000-32000Hz, 4000kHz

- **3. Drag Brake:**
  - OFF

- **4. Compass Sensor:**
  - 0% - 20%

- **5. Braking Level:**
  - 0% - 100%

- **6. Motor Brake:**
  - OFF

- **7. ESC Motor/Link:**
  - A + B + C

- **8. Fan Mode:**
  - 80%

- **9. Voltage Input:**
  - (4.8 – 9.9V DC)

- **10. Motor Direction (CW/CCW):**
  - CW

**Detailed Explanation of Each ESC Menu Items**

1. **Torque Feel –** Allows you to change the punch of the ESC (Level 1 to Level 15).

2. **Pulse Width Modulation (PWM):**
   - This function can be found in the “Advance setup” except Blindy Mode – Allows you to change the forward drive frequency of the ESC (2K to 32K Step by 500Hz).

3. **The 2K setup will give you good punch at the low end.

4. **The 32K setup will result in strong mid to top end.

Experiment to find out what suits your driving style best. (Lower PWM will lower ESC temperatures while higher PWM settings may increase ESC temperatures. Higher PWM will cause ESC running times to decrease.)
### Modified Mode

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<th>Quick Setup</th>
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<th>Off Road Mode</th>
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</thead>
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<tr>
<td>1. 1. Throttle Value Level: 1-5 100% 95%</td>
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<tr>
<td>4. Turbo OFF 100% 1000</td>
<td>4. Turbo OFF 100% 1000</td>
<td>4. Turbo OFF 100% 1000</td>
<td>4. Turbo OFF 100% 1000</td>
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<tr>
<td>5. Turbo Down Rate Normal Normal</td>
<td>5. Turbo Down Rate Normal Normal</td>
<td>5. Turbo Down Rate Normal Normal</td>
<td>5. Turbo Down Rate Normal Normal</td>
</tr>
<tr>
<td>6. DragBrake 0% 1% 5%</td>
<td>6. DragBrake 0% 1% 5%</td>
<td>6. DragBrake 0% 1% 5%</td>
<td>6. DragBrake 0% 1% 5%</td>
</tr>
<tr>
<td>7. TurboPunch 0% 100% 95%</td>
<td>7. TurboPunch 0% 100% 95%</td>
<td>7. TurboPunch 0% 100% 95%</td>
<td>7. TurboPunch 0% 100% 95%</td>
</tr>
<tr>
<td>8. TurboFuel 0% 100% 68%</td>
<td>8. TurboFuel 0% 100% 68%</td>
<td>8. TurboFuel 0% 100% 68%</td>
<td>8. TurboFuel 0% 100% 68%</td>
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<tr>
<td>9. TurboStart 40%-100% 90%</td>
<td>9. TurboStart 40%-100% 90%</td>
<td>9. TurboStart 40%-100% 90%</td>
<td>9. TurboStart 40%-100% 90%</td>
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<tr>
<td>10. TurboDelay 0.01s 0.02 0.02</td>
<td>10. TurboDelay 0.01s 0.02 0.02</td>
<td>10. TurboDelay 0.01s 0.02 0.02</td>
<td>10. TurboDelay 0.01s 0.02 0.02</td>
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<tr>
<td>11. InitialBrake 0-60% 20%</td>
<td>11. InitialBrake 0-60% 20%</td>
<td>11. InitialBrake 0-60% 20%</td>
<td>11. InitialBrake 0-60% 20%</td>
</tr>
<tr>
<td>12. MaxBrakeForce 0-100% 60%</td>
<td>12. MaxBrakeForce 0-100% 60%</td>
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<td>12. MaxBrakeForce 0-100% 60%</td>
</tr>
</tbody>
</table>

### Advance Setup

<table>
<thead>
<tr>
<th>Initial Setup</th>
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<th>Open Stock Mode</th>
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<tbody>
<tr>
<td>4. EscOverHeat 95° 120°</td>
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</tr>
</tbody>
</table>

### Quick Setup

- Allows you to adjust early or later to add timing in (found in “Advance Setup” menu). Except for Blinky (found in “Quick Setup”).
- Also known as trail braking—allows you to set the Turbo/Punch value, the smaller the track is, the Higher the number value.
- Turbo is applied at 90% (Preset in Modified mode). 100% of your ESC has a Modulation (PWM).
- Turbo timing has the least torque and the highest RPM.
- Turbo start—Turbo is applied at 90% (Preset in Modified mode). 100% of your ESC has a Modulation (PWM).
- Turbo delay—Delay how long to start your turbo timing when you touch the turbo turbo point.
- Turbo Down Rate—This is an opposite side Turbo timing for braking. preset -15, if you set the value to -30, this will smooth the throttle response as you slow from top speed, if you value set to -1, this will have more drag brake effect when you release throttle from top speed.
- Advance Setup:
  1. Torque Fine Tune—Allows you fine tune your runnig mode setting more detail. If you set (+1) your punch will up to 7.1 when the punch setup on 7. If you set (-1) your punch will down to 6.9 when you setup is 7.
  2. Boost start—Allows you to adjust early to later add timing in bottom power, this will make it easy to get a smooth power band in bottom power.
  3. Boost Range—Allows you to adjust a smooth power band in middle power.
  4. Turbo delay—Delay how long to start your turbo timing when you touch the turbo turbo point.
  5. Turbo Start—Turbo is applied at 90% (Preset in Modified mode) 95% (Preset in Open stock/Off road mode). This function is to adjust when does the turbo function apply correspond to the throttle trigger.
  6. Turbo Punch—Fine tune adjustment for the increase rate of Turbo, The higher the number value, the more aggressive the turbo ramp up in speed. The Lower the number value, the smoother the turbo ramp up in speed. This function can be critical depend on the type of track and traction. The larger the track is, the smaller the number value, the smaller the track is, the higher the number value.

### Limited Warranties / Repair Procedures

Dash guarantees this product to be free from defects in materials or workmanship for 60 days from the original date of purchase verified by sales receipt. With your original receipt showing the item and the date and place of purchase is required with your warranty service application. An ESC that is found to have been mishandled, abused or used incorrectly, including use in an application other than the one for which the ESC is intended, will not be covered under the warranty.

Since Dash has no control over the use of the ESC application with the other electronic devices such as motors and batteries. Dash cannot accept any liability for any damages resulting from the usage of this product. Therefore, using this product is at your own risk, and the user accepts all resulting liability from installing and using of the product.

For all technical questions, please visit www.Dash-RC.com & E mail your question and using of the product.