Thanks for purchasing our Electronic Speed Controller (ESC). High power system for RC model can be very dangerous, so we strongly suggest you read this manual carefully. In that we have no control over the correct use, installation, application, or maintenance of the products, no liability shall be assumed nor accepted for any damages, losses or costs resulting from the use of the product. Any claims arising from the operating, failure or malfunctioning etc. will be denied. We assume no liability for personal injury, property damage or consequential damages resulting from our product or our workmanship. As far as is legally permitted, the obligation to compensation is limited to the invoice amount of the affected product.

**Features**

- Extreme low output resistance, super current endurance.
- Multiple protection features: Low voltage cut-off protection / over-heat protection / throttle signal loss protection.
- 3 start modes: Normal / Soft / Super-Soft, compatible with fixed-wing aircraft and helicopter.
- Throttle range can be configured to be compatible with all transmitters.
- Smooth, linear and precise throttle response.
- Separate voltage regulator IC for microprocessor (except FLYFUN-6A and FLYFUN-10A) with good anti-jamming capability.
- Maximum speed: 210000 RPM (2 poles motor), 70000 RPM (6 poles motor), 35000 RPM (12 poles motor).
- The pocket-sized Program Card can be purchased separately for easily programming the ESC at flying field.
- With a program card, user can activate the music playing function of the ESC, and totally there are 15 rhythms can be selected.

**Specifications**

### FanTect Series

<table>
<thead>
<tr>
<th>Class</th>
<th>Model</th>
<th>Cont. Current</th>
<th>Burst Current (&gt;100+)</th>
<th>BEC Mode (Note)</th>
<th>BEC Output</th>
<th>Battery</th>
<th>Cell</th>
<th>Programmable</th>
<th>Size</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>6A</td>
<td>FLYFUN-6A</td>
<td>6A</td>
<td>Linear</td>
<td>5V/0.8A</td>
<td>2</td>
<td>5-6</td>
<td>5.2g</td>
<td>Available</td>
<td>32<em>12</em>4.5</td>
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<td>Linear</td>
<td>5V/1A</td>
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<td>5-12</td>
<td>38*18</td>
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<td>Linear</td>
<td>5V/2A</td>
<td>2</td>
<td>5-12</td>
<td>10g</td>
<td>Available</td>
<td>38*18</td>
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<td>5-12</td>
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<td>52<em>25</em>6</td>
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<td>Linear</td>
<td>5V/2A</td>
<td>2</td>
<td>5-12</td>
<td>24g</td>
<td>52<em>25</em>9</td>
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<td>FLYFUN-30A</td>
<td>30A</td>
<td>Linear</td>
<td>5V/2A</td>
<td>2</td>
<td>5-12</td>
<td>26g</td>
<td>52<em>25</em>9</td>
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</tr>
<tr>
<td>40A</td>
<td>FLYFUN-40A-OPTO</td>
<td>40A</td>
<td>Switch</td>
<td>5V/2A</td>
<td>2</td>
<td>5-18</td>
<td>39g</td>
<td>60<em>24</em>15</td>
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<tr>
<td>60A</td>
<td>FLYFUN-60A-OPTO</td>
<td>60A</td>
<td>Switch</td>
<td>5V/2A</td>
<td>2</td>
<td>5-18</td>
<td>63g</td>
<td>83<em>31</em>16</td>
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<tr>
<td>80A</td>
<td>FLYFUN-80A-OPTO</td>
<td>80A</td>
<td>Switch</td>
<td>5V/2A</td>
<td>2</td>
<td>5-18</td>
<td>72g</td>
<td>83<em>31</em>16</td>
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<tr>
<td>100A</td>
<td>FLYFUN-100A-OPTO</td>
<td>100A</td>
<td>Switch</td>
<td>5V/2A</td>
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<td>5-18</td>
<td>76g</td>
<td>83<em>31</em>16</td>
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</tbody>
</table>

**BEC Output Capability**

<table>
<thead>
<tr>
<th>Linear Mode BEC (5V/2A)</th>
<th>Switch Mode BEC (5V/3A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 Lipo</td>
<td>38 Lipo</td>
</tr>
<tr>
<td>48 Lipo</td>
<td>58 Lipo</td>
</tr>
<tr>
<td>55-68 Lipo</td>
<td>55-68 Lipo</td>
</tr>
</tbody>
</table>

**Wiring Diagram**

**Programmable Items**

1. Brake Setting, Enabled / Disabled, default is Disabled
2. Battery Type, Li-po, Li-ion or Li-p | Ni-MH or NiCd, default is Li-po
3. Low Voltage Protection Mode(Cut-Off Mode), Soft Cut-Off (Gradually reduce the output power) or Cut-Off (Immediately stop the output power). Default is Soft Cut-Off.
4. Low Voltage Protection Threshold(Cut-Off Mode), Low / Medium / High, default is Medium.

1) For lithium batteries, the cutoff voltage for each cell is: 2.85V / 3.15V / 3.3V. For example: For a 3 cells lithium pack, when "Medium" cutoff threshold is set, the cutoff voltage of this battery pack will be 9.45V. When "Low" cutoff threshold is set, the cutoff voltage will be: 2.85V*3=8.55V.

2) For nickel batteries, low / medium / high cutoff voltages are 0%/50%/65% of the startup voltage (it means the initial voltage of a charged battery pack), and 0% for the lowest voltage cut-off function. For example: For a 10 cells NiMH battery, fully charged voltage is 14.4V, when "Medium" cutoff threshold is chosen, the cutoff voltage will be: 14.4V*0.65=9.36V.

5. Startup Mode, Normal / Soft / Super-Soft, default is Normal.

**Troubleshooting**

<table>
<thead>
<tr>
<th>Troubleshooting</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>After power on, motor does not work, no sound is emitted</td>
<td>Check the power connector. Replace the connectors.</td>
</tr>
<tr>
<td>After power on, motor does not work, such an alert tone emits</td>
<td>Check the battery pack.</td>
</tr>
<tr>
<td>After power on, motor does not work, such an alert tone emits</td>
<td>Check the receiver and transmitter.</td>
</tr>
<tr>
<td>After power on, motor does not work, such an alert tone emits</td>
<td>Check the cable of throttle channel.</td>
</tr>
</tbody>
</table>

**Program Example**

1. Enter Program Mode

Switch on transmitter, move throttle stick to top position, connect battery pack to ESC, wait for 2 seconds, "beep-beep-beep" should be heard. Then wait for 2 seconds, special tone."JIJIJIJI" emits, which means program mode is entered.

2. Select Programmable Items

Now you'll hear tones in a loop. When a long "beep-beep-beep-beep-beep-beep-beep-beep-beep" tone emits, move throttle stick to bottom to enter the "Start Mode".

3. Set Item Value (Programmable Options)

- "Beep" - wait for 3 seconds; "Beep-beep" - wait for another 3 seconds; then you'll hear "beep-beep-beep-beep". Move throttle stick to the top position, then a special tone JIJIJIJIJI emits, that means you have set the "Start Mode" item value to the "Super-Soft".

4. Exit Program Mode

After the special tone JIJIJIJIJI, move throttle stick to bottom within 2 seconds.

**Note:**

- After changing the timing setting, please test your RC model on ground before taking off!

**Note:**

- Setting the "Start Mode to "Super-Soft", i.e. option #3 of the programmable item #5!
After power on, motor does not work, such as an alert tone emits:

- beep, beep, beep (Every “beep” has a time interval of about 0.25 second)
- After power on, motor does not work, a special tone “³EHH” emits after 2 beep (beep-beep-)
- Direction of the throttle channel is reversed, so the ESC has entered the program mode
- Direction of the throttle channel is not reversed, the ESC has entered the program mode
- The connection between ESC and the motor need to be changed.
- Set the direction of throttle channel correctly
- Swap any two wire connections between ESC and motor

If the throttle stick is not in the bottom (lowest) position
- Move the throttle stick to bottom position, and make sure it is Zero throttle at this position.
- a long alert tone emits: beep-, beep-, beep-(Every beep- has a time interval of about 0.25 second)
- After power on, motor does not work, a special tone “³EHH” emits after 2 beep (beep-beep-)
- Beep-beep-tone emits after 2 beep
- The motor runs in the opposite direction
- The throttle signal is lost
- Check the receiver and transmitter
- Check the cable of throttle channel
- The motor stop running while in working state
- Change the connection between ESC and motor
- Land RC model as soon as possible, and then replace the battery pack

Normal startup procedure

- Move throttle stick to bottom and then switch on transmitter.
- Connect battery pack to ESC, special tone like “³123” means power supply is OK
- Several “beep-” tones emits, which means the quantity of the lithium battery cells
- When the self-test is finished, a long “beep-” tone emits
- ESC has entered Low Voltage Cut-off Protection mode
- Move throttle stick upwards to go flying

Throttle setting range

- Switch on transmitter, move throttle stick to top
- Connect battery pack to ESC, and wait for about 2 seconds
- “Beep-Beep-” tone emits, which means throttle range highest point has been correctly confirmed
- Move throttle stick to the bottom, several “beep-” tones presents the quantity of battery cells
- A long “beep-” tone emits, means throttle range lowest point has been correctly confirmed

Program the ESC with your transmitter (4 Steps)

1. Enter program mode
2. Select programmable item
3. Set item value (Programmable option)
4. Exit program mode

1. Enter program mode
   1) Switch on transmitter, move throttle stick to top, connect the battery pack to ESC
   2) Wait for 2 seconds, the motor should emit special tone like “³EHH” emits, which means program mode is entered
   3) Wait for another 5 seconds, special tone like “³EHH” emits, means program mode is entered

2. Select programmable item
   After entering program mode, you will hear 8 tones in a loop with the following sequence. If you move the throttle stick to bottom within 3 seconds after one kind of tones, this item will be selected:
   1. “beep” (1 short beep)
   2. “beep-beep-” battery type (2 short beeps)
   3. “beep-beep-beep-” cutoff mode (3 short beeps)
   5. “beep-----” startup mode (1 long beep)
   6. “beep-----” timing (1 long short)
   7. “beep-----beep-beep” set all to default (1 long 2 short)
   8. “beep-----beep-----” exit (2 long beeps)

   Note: 1 long “beep-----” = 5 short “beep-“

3. Set item value (Programmable option)
   You will hear several tones in loop. Set the value matching to a tone by moving throttle stick to the top position when you hear the tone, then a special tone “³EHH” emits, which means the value is set and saved. (Keeping the throttle stick at the top position, you will go back to step 2 and you can select other items. Moving the stick to the bottom position within 2 seconds will exit the program mode directly)

<table>
<thead>
<tr>
<th>Items</th>
<th>“beep”</th>
<th>“beep-beep-”</th>
<th>“beep-beep-beep-”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tones</td>
<td>1 short tone</td>
<td>2 short tones</td>
<td>3 short tones</td>
</tr>
<tr>
<td>Brake</td>
<td>Off</td>
<td>On</td>
<td></td>
</tr>
<tr>
<td>Battery type</td>
<td>Li-ion / Lipo</td>
<td>NiMH / NiCd</td>
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</tr>
<tr>
<td>Cutoff mode</td>
<td>Soft-Cut</td>
<td>Cut-Off</td>
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<tr>
<td>Cutoff threshold</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
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<tr>
<td>Start mode</td>
<td>Normal</td>
<td>Soft</td>
<td>Super soft</td>
</tr>
<tr>
<td>Timing</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
</tr>
</tbody>
</table>