Congratulations, you have just purchased the RimFire 50mm power system components. All the components are sold separately to allow you to customize your power system to your airplane. The components needed to assemble your RimFire 50mm power system are: RimFire 50mm motors, propeller, propeller adapters and brushless speed controls. This instruction sheet explains how to determine what you will need and how to assemble each component.

**BATTERIES: CHEMISTRY**

The RimFire Motor/Silver Series ESC combination can use NiMH or LiPo batteries. Typically, NiMH batteries are heavier but much more affordable for the same capacity as LiPo batteries. If you want a very light, high-performance airplane, you might want to use LiPo batteries, but weight is not a concern, then NiMH batteries might be for you.

<table>
<thead>
<tr>
<th>Model</th>
<th>Stock #</th>
<th>Voltage</th>
<th>Capacity</th>
<th>Weight</th>
<th>Battery Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPMP0515</td>
<td>7.4V</td>
<td>2100mAh</td>
<td>11.5V</td>
<td>4.2oz (121g)</td>
<td>LiPo</td>
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<tr>
<td>GPMP0516</td>
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<td>2100mAh</td>
<td>11.5V</td>
<td>4.2oz (121g)</td>
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<td>GPMP0522</td>
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<td>3200mAh</td>
<td>11.5V</td>
<td>6.3oz (179g)</td>
<td>LiPo</td>
</tr>
<tr>
<td>GPMP0523</td>
<td>7.4V</td>
<td>3200mAh</td>
<td>11.5V</td>
<td>6.3oz (179g)</td>
<td>LiPo</td>
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<td>11.5V</td>
<td>8.6oz (245g)</td>
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</tr>
<tr>
<td>GPMP0531</td>
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<td>2000mAh</td>
<td>11.5V</td>
<td>8.6oz (245g)</td>
<td>NiMH</td>
</tr>
<tr>
<td>GPMP0532</td>
<td>7.2V</td>
<td>2000mAh</td>
<td>11.5V</td>
<td>13.7oz (390g)</td>
<td>NiMH</td>
</tr>
<tr>
<td>GPMP0533</td>
<td>7.2V</td>
<td>2000mAh</td>
<td>11.5V</td>
<td>13.7oz (390g)</td>
<td>NiMH</td>
</tr>
<tr>
<td>GPMP0534</td>
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<td>3600mAh</td>
<td>11.5V</td>
<td>17.5oz (497g)</td>
<td>NiMH</td>
</tr>
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<td>GPMP0535</td>
<td>7.4V</td>
<td>3600mAh</td>
<td>11.5V</td>
<td>17.5oz (497g)</td>
<td>NiMH</td>
</tr>
<tr>
<td>GPMP0536</td>
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<td>3600mAh</td>
<td>11.5V</td>
<td>17.5oz (497g)</td>
<td>NiMH</td>
</tr>
<tr>
<td>GPMP0537</td>
<td>7.4V</td>
<td>3600mAh</td>
<td>11.5V</td>
<td>17.5oz (497g)</td>
<td>NiMH</td>
</tr>
<tr>
<td>GPMP0538</td>
<td>7.4V</td>
<td>3600mAh</td>
<td>11.5V</td>
<td>17.5oz (497g)</td>
<td>NiMH</td>
</tr>
<tr>
<td>GPMP0539</td>
<td>7.4V</td>
<td>3600mAh</td>
<td>11.5V</td>
<td>17.5oz (497g)</td>
<td>NiMH</td>
</tr>
<tr>
<td>GPMP0540</td>
<td>7.4V</td>
<td>3600mAh</td>
<td>11.5V</td>
<td>17.5oz (497g)</td>
<td>NiMH</td>
</tr>
<tr>
<td>GPMP0541</td>
<td>7.4V</td>
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<td>11.5V</td>
<td>17.5oz (497g)</td>
<td>NiMH</td>
</tr>
<tr>
<td>GPMP0542</td>
<td>7.4V</td>
<td>3600mAh</td>
<td>11.5V</td>
<td>17.5oz (497g)</td>
<td>NiMH</td>
</tr>
</tbody>
</table>

If a battery is arranged in PARALLEL it might be labeled as (P). Arranging the batteries in parallel will give you more duration (more capacity).

All LiPo batteries have a rated discharge that must not be exceeded or the battery will be damaged. They may say 15C max discharge rate or 20C max discharge rate. This means that the discharge rate (current drawn of the motor) must not be more than 15 or 20 (15C or 20C) times the capacity of the battery. The capacity is expressed in milliamp hours (2100mAh). It can also be expressed in amp hours (2.1Ah).

A LiPo battery with a capacity of 2100mAh with a 20C discharge rate must not be discharged at 42 amps, 2.1Ahx20C = 42 amps. If the power system draws more than 42 amps, the batteries will have to be connected in parallel to increase the capacity. Two 2100mAh batteries in parallel have a capacity of 4200mAh or 2.1Ahx20C = 42 amp discharge rate allowed.

ElectriFly offers a full line of NiMH and LiPo batteries. Airplanes that use the RimFire 50mm motors will typically use batteries with a capacity of 2000 to 3600mAh with the higher capacity batteries delivering more flying time but also being heavier. All of the airplanes have connectors that fit the recommended ESCs.

Due to the constantly changing battery technology, check out the ElectriFly web site at www.electrifly.com for the most up-to-date listing of the batteries that will work with your motor through your radio system. Never run any RimFire motors with a brushed ESC. It will not work and you may damage both the motor and the ESC. Always use a brushless ESC. ElectroFly offers the Silver Series SS-80 Brushless Escs (GPMP1680) that works well with the RimFire 50mm motors.

**BATTERIES: NUMBER OF CELLS**

Cells can be connected in series or in parallel. Usually batteries are labeled as 4S NiMH or 3-cell LiPo. This means the cells are connected in SERIES (4S). Arranging batteries in series gives you more power (higher voltage).

- Each NiMH cell has 1.2V, so an 8-cell NiMH battery has 1.2V x 8 = 9.6V
- Each LiPo battery has 3.7V, so a 3-cell LiPo battery has 3.7V x 3 = 11.1V

If you need a higher voltage than what is available in the LiPo battery line, you will need to connect two battery packs together in series. If you need a battery voltage of 14.8V you can use the Series V-Connector (GPMM3143) to connect two 7.4V batteries together.
Congratulations, you have just purchased the RimFire 50mm power system components. All the components are sold separately to allow you to customize your power system to your airplane. The components needed to assemble your RimFire 50mm power system are: RimFire 50mm motors, propeller, propeller adapters and brushless speed controls. This instruction sheet explains how to determine what you will need and how to assemble each component.

**BATTERIES: CHEMISTRY**

The RimFire Motor/Silver Series ESC combination can use NiMH or LiPo batteries. Typically, NiMH batteries are heavier but much more affordable for the same capacity as LiPo batteries. If you want a very light, high-performance airplane, you might want to use LiPo batteries, but weight is not a concern, then NiMH batteries might be for you.

**BATTERIES: NUMBER OF CELLS**

Cells can be connected in series or in parallel. Usually batteries are labeled as 3-cell NiMH or 3-cell LiPo. This means the cells are connected in SERIES (S). Arranging batteries in series gives you more power (higher voltage). If a battery is arranged in PARALLEL, it might be labeled as (P). Arranging the batteries in parallel will give you more duration (more capacity).

All LiPo batteries have a rated discharge that must not be exceeded or the battery will be damaged. They may say 5C max. discharge rate, which means that the discharge rate (current drawn of the motor) must not be more than 15 or 20 (25C or 50C) times the capacity of the battery. For example, a 20C rate will discharge a 5000mAh battery in 250 minutes (1 hour and 50 minutes). It can also be expressed in amps (2.1A).

A LiPo battery with a capacity of 2100mAh with a 20C discharge rate is not discharged at 42 amps, 2.1Ahx20C = 42 amps. If the power system draws more than 42 amps, the batteries have will have to be connected in parallel to increase the capacity. Two 2100mAh batteries in parallel have a capacity of 4200mAh or 4.2Ahx20C = 84 amp discharge rate.

ElectriFly offers a full line of NiMH and LiPo batteries. Airplanes that use the RimFire 50mm motors will typically use batteries with a capacity of 2000 to 3600mAh with the higher capacity batteries delivering more flying time but also being heavier. All of the batteries have connectors that fit the recommended ESCs.

**MOTORS**

<table>
<thead>
<tr>
<th>Model</th>
<th>Stock #</th>
</tr>
</thead>
<tbody>
<tr>
<td>55-55-500</td>
<td>GPMP04740</td>
</tr>
<tr>
<td>55-65-500</td>
<td>GPMP04745</td>
</tr>
<tr>
<td>55-65-300</td>
<td>GPMP04765</td>
</tr>
<tr>
<td>55-65-450</td>
<td>GPMP04770</td>
</tr>
</tbody>
</table>

The RimFire motors are labeled to provide the most information at a glance. For example: the 55-55-650v is 55mm in diameter, 55mm long and has a 49 (rpm-per-volt) of 650 rpm.

**Electronic Speed Control (ESC)**

An ESC is basically the device that controls your motor through your radio system. Never run any RimFire motors with a brushed ESC. It will not work and you may damage both the motor and the ESC. Always use a brushless ESC. ElectriFly offers the Silver Series SS-60 Brushless ESCs (GPMP0160) that works well with the RimFire 50mm motors.

The SS-60 ESC comes with 4mm female bullet connectors that plug directly into the 4mm male connectors installed on the RimFire 50mm motors, so no soldering is required. Also, this ESC comes with a Deans® LiPo Plug® battery connector that matches the connectors that are found on most batteries that it will use.

**BRUSHLESS LARGE MOTOR MOUNT**

The ElectriFly Brushless Large Motor Mount combines the ease of installation with the adaptability to fit most motor applications. The Large Motor Mount is designed to fit the bolt pattern of the Great Planes® 40-70 and 80-120 Nylon Engine Mount. This easily allows the conversion of a glow powered plane to electric powered.

**PROPELLERS**

There is a wide selection of propellers available for electric use. The RimFire 50mm motors use high performance electric props such as the APC E-series props. The larger the propeller used, the more current your motor will draw. The smaller the propeller, the less current the motor will draw.

Shown are a few of the recommended electric props. Due to the large range of propellers and the constant addition of new sizes, visit our web sites at www.electrifly.com and www.greatplanes.com for the most up-to-date listing of electric type props.

**PROPELLER ADAPTERS**

The RimFire 50mm motor comes with a prop adapter that mounts directly to the motor case. If the RimFire 50mm motor needs to be mounted so that the prop is mounted on the motor shaft, the motor requires an 8mm prop adapter collaret type (GPMQ4971) or set screw type (GPMQ4945).

**BATTERY# Voltage Capacity Weight # of Cells**

<table>
<thead>
<tr>
<th>Stock #</th>
<th>Voltage</th>
<th>Capacity</th>
<th>Weight</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPMP0616</td>
<td>7.4V</td>
<td>2100mAh</td>
<td>4.3oz</td>
<td>LiPo 2</td>
</tr>
<tr>
<td>GPMP0617</td>
<td>11.1V</td>
<td>2100mAh</td>
<td>6.4oz</td>
<td>LiPo 3</td>
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<tr>
<td>GPMP0622</td>
<td>7.4V</td>
<td>3300mAh</td>
<td>6.3oz</td>
<td>LiPo 2</td>
</tr>
<tr>
<td>GPMP0623</td>
<td>11.1V</td>
<td>3300mAh</td>
<td>9.5oz</td>
<td>LiPo 3</td>
</tr>
<tr>
<td>GPMP0590</td>
<td>7.2V</td>
<td>2000mAh</td>
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<td>24GPM 6</td>
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<td>GPMP0591</td>
<td>8.4V</td>
<td>2000mAh</td>
<td>12.2oz</td>
<td>24GPM 7</td>
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<td>GPMP0592</td>
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<td>2000mAh</td>
<td>13.7oz</td>
<td>24GPM 8</td>
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<td>12V</td>
<td>2000mAh</td>
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<td>24GPM 9</td>
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<td>GPMP0581</td>
<td>8.4V</td>
<td>3600mAh</td>
<td>17.5oz</td>
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<td>GPMP0582</td>
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<td>19.9oz</td>
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<td>GPMP0584</td>
<td>14.4V</td>
<td>3600mAh</td>
<td>29.6oz</td>
<td>NiMH 13</td>
</tr>
</tbody>
</table>
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**BATTERIES: CHEMISTRY**

The RimFire Motor/Silver Series ESC combination can use NiMH or LiPo batteries. Typically, NiMH batteries are heavier but much more affordable for the same capacity as LiPo batteries. If you want a very light, high-performance airplane, you might want to use LiPo batteries. If weight is not a concern, you more power (higher voltage).

The ElectriFly Brushless Large Motor Mount combines the ease of installation with the adaptability to fit most motor applications. The Large Motor Mount is designed to fit the bolt pattern of the Great Planes 40-70 and 60-120 Nylon Engine Mount. This easily allows the conversion of a glow powered plane to electric powered.

The RimFire motors are labeled to provide the most information at a glance. For example: the 50-55-650kV is 50mm in diameter, 55mm long and has a 650 kV (rpm-valor) of 650 rpm. The RimFire motors are labeled to provide the most information at a glance. For example: 50-55-650kV is 50mm in diameter, 55mm long and has a kV (rpm-valor) of 650 rpm.

If you need a battery voltage of 14.8V, then NiMH batteries might be for you. LiPo batteries, but if weight is not a concern, you more power (higher voltage). Typically, NiMH batteries are heavier but much more affordable for the same capacity as LiPo batteries. Airplanes that use the RimFire 50mm motor needs to be mounted so that the prop is mounted on the motor shaft, the motor requires an 8mm prop adapter collet type (GPMQ4945) or set screw type (GPMQ4945).

**BATTERIES: NUMBER OF CELLS**

Cells can be connected in series or in parallel. Usually batteries are labeled as 4xNiMH or 3 LiPo batteries. This means the cells are connected in SERIES (S). Arranging batteries in series gives you more power (higher voltage).

- Each NiMH cell has 1.2V so an 8-cell NiMH battery has 1.2V x 8 = 9.6V
- Each LiPo battery has 3.7V, so a 3-cell LiPo battery has 3.7V x 3 = 11.1V

If you need a higher voltage than what is available in the LiPo battery line, you will need to connect two battery packs together in series. If you need a battery voltage of 14.8V you can use the Series Y-Connector (GPMM3143) to connect two 7.4V batteries together.

If a battery is arranged in PARALLEL it might be labeled as (P). Arranging the batteries in parallel will give you more duration (more capacity).

All LiPo batteries have a rated discharge that must not be exceeded or the battery will be damaged. They may say 15C max. discharge rate or 20C max. discharge rate. This means that the discharge rate (current draw of the motor) must not be more than 15 or 20 (15C or 20C) times the capacity of the battery. The capacity is expressed in milliamp hours (2100mAh). It can also be expressed in amp hours (2.1Ah).

A LiPo battery with a capacity of 2100mAh with a 20C discharge rate is not discharged at 42 amps, 2.1Ah x 20C = 42 amp discharge rate. ElectriFly offers a full line of NiMH and LiPo batteries. Airplanes that use the RimFire 50mm motors will typically use batteries with a capacity of 2000 to 3600mAh with the higher capacity batteries delivering more flying time but also being heavier. All of the batteries have connectors that fit the recommended ESCs.

**BATTERY TYPES**

The RimFire 50mm power system includes a brushless ESC, motors, propellers, propeller adapters and a prop adapter collet for the motor. Each component is designed to work well with the RimFire 50mm motors.

**ELECTRONIC SPEED CONTROL (ESC)**

An ESC is basically the device that controls your motor through your radio system. Never run any RimFire motors with a brushed ESC. It will not work and you may damage both the motor and the ESC. Always use a brushed ESC. ElectriFly offers the Silver Series SS-80 Brushless ESCs (GPMQ0160) that works well with the RimFire 50mm motors.

The SS-80 ESC comes with 4mm female bullet connectors that plug directly into the 4mm male connectors installed on the RimFire 50mm motors, so no soldering is required. Also, this ESC comes with a Deans® Ultra Plug® battery connector that matches the connectors that are found on most batteries that it will use.

**BRUSHLESS LARGE MOTOR MOUNT**

The RimFire 50mm motor comes with a prop adapter that mounts directly to the motor case. If the RimFire 50mm motor needs to be mounted so that the prop is mounted on the motor shaft, the motor requires an 8mm prop adapter collet type (GPMQ4945) or set screw type (GPMQ4945).

**PROPELLERS**

There is a wide selection of propellers available for electric use. The RimFire 50mm motors use high performance electric props such as the APC E-series props. The larger the propeller, the more current the motor will draw. The smaller the propeller, the less current the motor will draw.

Shown are a few of the recommended electric props. Due to the large range of propellers and the constant addition of new sizes, visit our web sites at www.electrifly.com and www.greatplanes.com for the most up-to-date listing of electric type props.

**PROPELLER ADAPTERS**

The RimFire motors are labeled to provide the most information at a glance. For example: the 50-55-650kV is 50mm in diameter, 55mm long and has a kV (rpm-valor) of 650 rpm.
Determine what you need to build your power system

Note that you have a component for your power system, and are ready to assemble the rest of your components for your power system. In time, experience will help you to determine what works best for you, but early to determine what you need now is the following.

Procedure

1. If you have the list of the parameters you want to look for, then these all the charts included in the packaging, and:
   a. Find the combination in the motor/prop chart that achieves the closest performance to what you want.
   b. Note the recommended battery voltage.
   c. Determine if you use LiPo or NiMH batteries.
   d. Determine the number of cells based on the required voltage.

2. If you do not have a list of the parameters you want to look for, then these all the charts included in the packaging, and:
   a. Find the combination in the motor/prop chart that achieves the closest performance to what you want.
   b. Note the recommended battery voltage.
   c. Determine if you use LiPo or NiMH batteries.
   d. Determine the number of cells based on the required voltage.

Now that you have a component for your power system, there are several different ways to select the rest of the components of your power system. In time, experience will help you to determine what works best for you, but early to determine what you need now is the following.

Understanding Motors

KV: The KV is a number that gets thrown around quite a bit when talking electrics and it is important to know what it is a lot. If the KV of a motor is 1,000, it will spin at 1,000 rpm per volt. Ideally the motor should be matched with a propeller that causes the motor to draw 0-100% of its maximum current constant current. Once a power system is set up, it can be fine tuned by adjusting the motor and propeller combination.

Hence every motor has a maximum current it can take before the motor will burn up. The recommended maximum current is determined. Too large a propeller with the motor setup at a much lower KV than normal will cause the low to draw in current and overheat. If the propeller is too small, it will require too high current to turn the prop at a high KV.

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Ideally the motor should be matched with a propeller that causes the motor to draw 0-100% of its maximum current constant current. Once a power system is set up, it can be fine tuned by adjusting the motor and propeller combination.
**PROCEDURE #1**

way to determine what you need now is the following. It will help you to determine what works best for you, but an easy way to find out the components of your power system. In time, experience will want to turn and the rpm, then look at the chart included in the ESC section.

2. The number you get is the minimum wattage you will need for your plane. This number will vary based on the wind and performance you want from it, answer the questions below.

1. Perform the following calculation to determine the wattage required:

   wattage required = \( \text{kV} \times \text{rpm} \times \text{Amps} \times \text{minutes} \)

   \( \text{rpm} \) = revolutions per minute
   \( \text{kV} \) = kilovolts
   \( \text{Amps} \) = amperes
   \( \text{minutes} \) = minutes

   \( \text{rpm} \) should be estimated at 75% of the maximum rpm of the motor when using a propeller that is similar to the one you are using.

   \( \text{Amps} \) should be estimated at 125% of the maximum amp draw of the motor when using a propeller that is similar to the one you are using.

   \( \text{minutes} \) should be estimated at 10 minutes.

4. Determine the battery capacity needed based on the current draw of your system and your desired flight time.

5. Determine if you want to use LiPo or NiMH batteries.

6. Determine the E\( \text{C} \) you need based on the system current drain shown in the motor chart. See the ESC section.

7. **Note:** If you know the approximate weight of your airplane, including the motor and battery, and the performance you want, you can answer the questions below to determine the correct motor for your plane. You should know the length and width of the motor mount, the diameter of the mounting holes, and the pitch and diameter of the prop you will be using. Here are the steps to follow:

   a. **Note:** The current draw of your system and your desired flight time.

   b. Choose a motor that has a kV of 1000 or lower.

   c. Choose a motor that has a kV of 1000 or lower.

   d. Choose a motor that has a kV of 1000 or lower.

   e. Choose a motor that has a kV of 1000 or lower.

   f. Choose a motor that has a kV of 1000 or lower.

   g. Choose a motor that has a kV of 1000 or lower.

   h. Choose a motor that has a kV of 1000 or lower.

   i. Choose a motor that has a kV of 1000 or lower.

   j. Choose a motor that has a kV of 1000 or lower.

   k. Choose a motor that has a kV of 1000 or lower.

   l. Choose a motor that has a kV of 1000 or lower.

   m. Choose a motor that has a kV of 1000 or lower.

   n. Choose a motor that has a kV of 1000 or lower.

   o. Choose a motor that has a kV of 1000 or lower.

   p. Choose a motor that has a kV of 1000 or lower.

   q. Choose a motor that has a kV of 1000 or lower.

   r. Choose a motor that has a kV of 1000 or lower.

   s. Choose a motor that has a kV of 1000 or lower.

   t. Choose a motor that has a kV of 1000 or lower.

   u. Choose a motor that has a kV of 1000 or lower.

   v. Choose a motor that has a kV of 1000 or lower.

   w. Choose a motor that has a kV of 1000 or lower.

   x. Choose a motor that has a kV of 1000 or lower.

   y. Choose a motor that has a kV of 1000 or lower.

   z. Choose a motor that has a kV of 1000 or lower.

   **Note:** Always choose a motor that has a kV of 1000 or lower. If you expect 3D or extreme performance multiply the current draw shown on the motor/prop chart by 150. If you expect trainer-like performance then multiply the current draw shown on the motor/prop chart by 75.

   **Note:** Because every motor is rated in its best condition. Performance can be increased or decreased. There are meters available from your hobby dealer that measure current and voltage.

**UNDERSTANDING MOTORS**

**kV (volts per rpm):** The number that gets thrown around quite a bit when talking electric is its kV. It is the speed of the motor, which is the rpm that the motor will spin at each volt applied (usually under no load).

This means that basically a motor has a lot of 1000 when connected to a 12 volt battery will try to spin at 12,000rpm (12000 rpm) under no load. However, a 2800 rpm motor will try to spin at 34,800 rpm (34800 rpm) under no load.

When purchasing it is important to know how fast the motor will spin at the voltages you will be using for the battery you plan to use.

**Note:** Some motors work best with different voltages. If you want to spin the same propeller at a higher rpm. This will cause the motor to draw more current and possibly exceed its maximum current constant. Once a power system is set up it can be fine tuned by adjusting the voltage and size of the battery to get the right current and speed.

Ideally the motor should be matched with a propeller that causes the motor to draw less than 100% of its maximum constant current. Once a power system is set up it can be fine tuned by adjusting the voltage and size of the battery to get the right current and speed.

**Note:** Please note that on a motor does not change with voltage, but it is a higher voltage is applied to the motor, it will try to spin the same propeller at a higher rpm. This will cause the motor to draw more current and possibly exceed its maximum constant current. Once a power system is set up it can be fine tuned by adjusting the voltage and size of the battery to get the right current and speed.

**Note:** If you expect 3D or extreme performance multiply the current draw shown on the motor/prop chart by 150. If you expect trainer-like performance then multiply the current draw shown on the motor/prop chart by 75.

Because every motor has a maximum current it can take before it will burn up. This maximum current will be determined. Too large a propeller with a motor setup at a much lower rpm than the max kV, causing the drive to slow in current and speed. If the propeller is too small, it will require little effort (current) to turn the prop at rated speed.

**Note:** Always choose a motor that has a kV of 1000 or lower. If you expect 3D or extreme performance multiply the current draw shown on the motor/prop chart by 150. If you expect trainer-like performance then multiply the current draw shown on the motor/prop chart by 75.

**Note:** Because every motor has a maximum current it can take before it will burn up. This maximum current will be determined. Too large a propeller with a motor setup at a much lower rpm than the max kV, causing the drive to slow in current and speed. If the propeller is too small, it will require little effort (current) to turn the prop at rated speed.

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**PROCEDURE #1**

way to determine what you need now is the following.

1. Determine if you want to use LiPo or NiMH batteries
2. Note the recommended battery voltage.
3. Determine if you want to use LiPo or NiMH batteries
4. Determine the number you get is the minimum wattage you will
5. The number you get in the minimum wattage you will
6. Determine the ESS you need based on the system

In time, experience will

When a propeller is attached to the motor, the motor will try

In addition to these two procedures, you can also visit the

Another possibility to fine tune the power system’s performance

**UNDERSTANDING MOTORS**

-kV. This is a number that gets thrown around quite a bit when taking electric and it’s important to know what it is, so it’s in the section that a motor will spin at

This means that a motor has a lot of 1/1000 when connected to a 12-volt battery will try to spin at

Every motor has a maximum current it can bring

2. Note that a large propeller will move air much faster than a small propeller, causing it to draw a lot of

As long as a propeller within the motor is set at a much lower rpm than the motor intended to generate

ElectriFly carries a complete line of MotoCraft type prop and replaces the Great Planes .40-.70 and .60-1.20 nylon engine mounts.

**ASSEMBLE YOUR POWER SYSTEM**

When the motor and ESC have been assembled, it needs to be installed on the plane. To determine the best motor speed, the distance from the blade tip to the back of the prop adapter first needs to be determined.

**MOUNTING PLATE INSTALLATION**

If attaching the motor to the firewall using the adjustable motor mount, skip to the

Apply a drop of

**LARGE MOTOR MOUNT INSTALLATION**

Note: Apply a drop of Threadlocker (GPMX9460) on all bolts and screws used to install the motor on the plane.

**INSTALL THE BRUSHLESS ESC**

Because most of the power systems using the 60-120 size ESC

RimFire carries a complete line of MotoCraft type prop adapter, replacing the Great Planes .40-.70 and .60-1.20 nylon engine mounts.

**ALUMINUM PROP ADAPTER INCLUDED WITH MOTOR**

These pictures show the distances from the firewall to the front

**COLLECTIVE TYPE PROP ADAPTER INSTALLATION**

Slip the prop shaft over the output shaft of the motor or shaft of the prop adapter. Turn the prop nut clockwise until the propeller is at the desired size. The propeller is at the desired size when the side with the larger diameter is oriented first, then the opposite side is oriented last. When using the prop, prop washer and then the prop nut. Tighten the prop nut firmly, but not too tightly. Slide the prop shaft to squeeze the prop around the sides of the output shaft.

**SET SCREW TYPE PROP ADAPTER INSTALLATION**

This is a number that’s thrown around quite a bit when taking electric and it’s important to know what it is, so it’s in the section that a motor will spin at each volt applied (rpm/volt) under no load. Likewise a 3500kV motor will try to spin at 42000 rpm (3500x12) under no load.

The size of the propeller you select will be determined by a lower voltage is replaced with one with a higher voltage, it is

It can be mounted directly to the firewall using the RimFire aluminum prop adapter (including the motor) which replaces the Great Planes 40-120 nylon engine mount; or an ElectriFly .40-120 Motor Mount (GPMX9140) which replaces the Great Planes .40-.70 and .60-1.20 nylon engine mounts.

**MEASURE THE BACKPLATE INSTALLATION**

Once the battery is connected to the E

**WINDOWS**

In addition to these two procedures, you can also visit the

Several pictures show the distances from the firewall to the front

**IN-RUNNER STYLE BRUSHLESS ESC MOUNTING**

**LARGE MOTOR MOUNT INSTALLATION**

**LARGE MOTOR MOUNT INSTALLATION**

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**LARGE MOTOR MOUNT INSTALLATION**

**E X H A L E**

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