# T-600 7.2 - 9.6V Ferrite Motor Instruction Sheet

**Parts List**
T-600 Motor (MOTOR001)
Capacitor (CAPACIT1)

**If any parts are missing, broken or defective, or if you have any questions about the T-600 motor, please call us at (217) 398-8970 and we'll be glad to help.**

The T-600 7.2 - 9.6V Ferrite Motor System is a low cost, high performance motor designed primarily for electric powered R/C airplanes having a weight of approximately 48 oz. and a wing loading of approximately 15 oz/sq.ft. The motor is also excellent for cars and boats. Although the following instructions refer to an airplane installation, the following information, warnings and precautions also apply when using the T-600 in a car or boat.

### *PROPELLER SELECTION*

The T-600 was especially designed for powering electric airplanes. It is well suited for this application because it turns a relatively large (8 x 4) propeller at an RPM that provides sufficient thrust for airplanes. You may wish to experiment with various other propeller sizes in nylon and wood, but the 8x4 propeller is the best place to start.

### *POWER SOURCE*

The T-600 motor was designed to use a 7.2 volt to 9.6 volt, 1700 mAh to 3000 mAh battery pack. Using a higher voltage battery pack will shorten the life of the motor and should not be used. For weight savings and better vertical performance, smaller 800 mAh battery packs work well, but reduce your flight time.

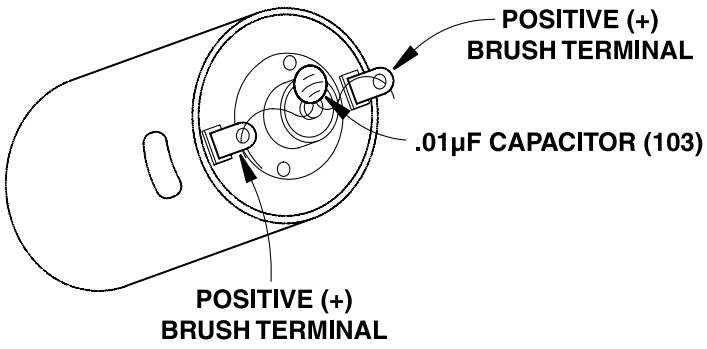
### *WIRING*

**Note:** A typical wiring setup for this type of motor includes the following Items, wired in series: a toggle switch, micro switch, 20 to 25 amp safety fuse, battery connector and wire. For better motor control, use an electronic speed control such as the Great Planes ElectriFly™ C-30 Mini High Power ESC (GPMM2030) instead of the wire harness.

Standard "Tamiya" style connectors supplied with most battery packs are normally adequate for most installations. However, if you want maximum performance, you may want to consider installing high-performance Duratrax® Powerpole™ Connectors (DTXC2300) and 13 gauge wire.

### *INSTALLING THE MOTOR CAPACITORS*

Motors generate radio noise which can interfere with your receiver and cause problems. Your motor includes one .01µF (103) non-polarized, ceramic capacitor. This capacitor must be used at all times to help reduce the radio noise generated by the motor. Solder one of the leads of the capacitor to the positive brush terminal and the other lead to the negative brush terminal. **Do not** allow the capacitor leads to touch the motor case, as this will cause a short circuit.




Solder your switch harness or ESC wires to the brush terminals on the end bell of the motor. The red or (+) wire from the switch harness or ESC must be soldered to the positive brush terminal designated by the nearby red dot. Solder the black or (-) wire from the switch harness or ESC to the other brush terminal.
**Note:** If you do not have soldering experience, we strongly recommend that you have an experienced person help you with the above procedure.

### *OPERATION*

Before installing the propeller, test the operation of the motor/battery/switch setup. If you have installed an ESC, follow the manufacturers instructions included with your ESC.

1. Make sure the toggle switch is in the "off" position.

2. Before switching on your radio system, make sure no one in the area is on your radio frequency. Switch on your transmitter, then your receiver. Pull the throttle stick back to the off position and check that the micro switch is in the "off" position.

3. Insert the charged motor battery into the airplane, and plug the battery into the switch harness.

4. Without the propeller installed, switch the toggle switch to the “on” position. The motor should **not** run at this time.

5. Advance the throttle stick forward to the “on” or full throttle position. This should cause the motor to start.

6. Continue running the motor until the motor slows down considerably. This may take 10 to 20 minutes depending on the capacity of the battery. This will allow the motor and motor brushes to “break-in” extending the overall life of the motor.

7. **Do not** allow the motor to run until the battery pack is fully discharged and the motor stops. This could damage the battery. After the motor slows down, move the throttle stick to the “off” position and switch the toggle switch off.

8. Switch off the receiver, then the transmitter.

9. Remove the battery pack from the airplane and allow the battery pack to cool before recharging.

10. Install a prop adapter hub on the motor shaft.

11. Install a propeller on the prop adapter hub. Re-check after each flight.

13. Recharge the motor battery pack. Your motor is ready to fly.

**Caution:** Allow the motor to cool for at least 10 minutes between flights. Successive flights without a cool down period may cause the motor to become excessively hot.

## *MAINTENANCE*

The bronze bushings in the ends of the motor are self lubricating, but you may extend their life by applying a **very small amount** of light machine oil to the points where the center shaft touches the bushings, after each hour or two of running time. **Note:** A “drop” of oil is far too much, so you should apply the oil with a toothpick. **Never oil the inside of the motor**.

The T-600 motor brushes (which transfer electricity to the commutator inside the motor) are maintenance-free and will last a long time under normal use. Under normal operating conditions the motor brushes wear slightly every time the motor is run. If over time you notice that the motor is running slower and not producing the power that it used to, the brushes may need cleaning or are worn out and the motor needs replacing. To clean the brushes, remove the motor from the airplane. A spray motor cleaner such as Duratrax® Power Shot ™ (DTXC2458) will remove any buildup on the brushes. After cleaning the brushes, run the motor without the prop for 10 to 15 minutes using a motor battery pack to reseat the brushes on the commutator.

## *PRECAUTIONS*

- Keep all body parts and loose clothing away from the propeller while the motor battery is connected to the switch harness.

- Connect the motor battery to the micro switch only when ready to fly. Never leave the battery connected between flights.

- When the motor battery is connected, never place your body within the arc of the propeller. The motor may accidently start without warning. Even though the plane is powered by an electric motor, the rotating propeller can cause serious injury.

- After each flight, allow the motor to cool for at least 10 minutes.

- Never operate the motor without a safety fuse. If the propeller should touch something and not be able to rotate, the motor will draw a very high current from the motor battery. This high current could easily result in a fire, causing property damage and personal injury.

## *PROPELLER SAFETY INSTRUCTIONS*

- Before installing the propeller, remove any molding flash along the edges of the propeller by scraping with a sharp knife.

- Carefully balance your propellers before flying. An unbalanced prop is the single most significant cause of vibration.

- Keep spectators at least 20 feet away from and out of the path of the rotating propeller.

- Wear safety glasses and hand protection when operating model motors. Do not permit any objects to touch the moving propeller. Remain clear of the propeller arc.

- Inspect the propeller after each flight. Discard any propeller that has nicks, scratches, or any other visible defect. Do not repair, alter, or modify the propeller.

For questions about your ElectriFly T-600 Ferrite Motor, contact:

Product Support
3002 N. Apollo Drive, Ste 1
Champaign, IL 61822
(217) 398-8970, Ext. 5

e-mail: productsupport@greatplanes.com

Internet Address: www.electrifly.com

Printed in USA