CASTLE CREATIONS
402 E. Pendleton Ave.
Wellsville, KS 66092
(785) 883-4519
www.castlecreations.com

THUNDERBIRD-18

Your new Thunderbird ESC represents the best of all worlds:

- ★ Easy to use
- ★ Advanced automatic software features
- ★ Rugged surface mount hardware technology
- ★ Simplified programming steps
- ★ Auto-Lipo and no brake for 3D action right from the package!

You will need to solder a battery connector onto the battery side of your Thunderbird controller. Make sure you solder the controller side connector, so that the positive (red) wire from the controller matches with the positive (red) wire from your battery connector, and the same for the negative (black) wire side. If you should plug in your Thunderbird controller with reversed polarity (positive from battery to negative on the controller) the controller will be damaged, and reverse polarity damage is not covered under warranty. Always double-check your battery polarity and connections before plugging a battery into your controller each and every time. The three wire single lead from the controller with the black connector on the end, plugs into the throttle channel of your receiver (usually ch.3). For full operation, connect the three motor wires from your brushless motor, to the three motor side wires on the Thunderbird controller. For the three motor wires, there is no polarity, but if the motor spins the wrong way when power is applied, then swap any two of the motor side three connections, and it will then spin the other way. OR, use programming function 3 below, to reverse the rotation direction via the controller's software.

Always turn your transmitter on FIRST before applying power to the rest of your radio system and Thunderbird ESC. With the ESC's receiver connector plugged into the throttle channel, and a motor connected, plug in a battery to the Thunderbird ESC (Again - making 100% sure the battery to ESC polarity is correct!). You will hear an initialization tone from the motor, (and a series of beeps telling you how many Lithium Polymer cells in series are in your battery pack) and the servos will be active at this time. When you move your throttle stick down to the bottom (low/off throttle), the Thunderbird will play a double tone through the motor, indicating it is armed and now ready to run the motor. Give a small amount of throttle to determine motor rotation direction, and correct if necessary as explained above.

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Your Thunderbird comes ready to fly safely with Lithium Polymer type batteries with no settings changes needed. After the initialization tones, listen for the two or three beeps telling you how many cells it “sees” in your battery. The cutoff voltage is automatically set at either 6 volts (2 cell pack) or 9 volts (3 cell pack) which is the recommended safe cutoff voltages for all brands of Lithium Polymer battery packs. If you are flying with NiCad or NiHM type packs, you will need to change this setting in the simple programming guide below.

Your Thunderbird also has a programmable brake feature, and it comes from the package with the brake OFF which is preferred for most 3D and parkflyer type airplanes. If you wish to turn the brake ON - follow the simple steps in the programming guide below.

Changing features on your Thunderbird

- To enter programming mode, start with the battery unplugged and the transmitter ON.
- Put the throttle stick in the full throttle (up) position
- Plug a battery pack into your Thunderbird-18
- You should hear the first multi-tone ring upon plug in and battery count in beeps if set for Auto-Lipo
- After 2 seconds you should hear a second multi-tone ring indicating the ESC sees full throttle.
- Bring the throttle stick down to the middle position and you will hear another ring
- Bring the throttle stick back to the top position and you will hear another ring
- Bring the throttle stick to the middle position again and you will hear 4 rings all in a row
- Then the Thunderbird-18 will make a single beep continuing - this is question #1: *What battery type?*
- For Lithium Polymer type batteries (default setting), move the stick up to full throttle and wait for the rapid beeps
- For NiCad and NiMH type batteries, move the stick to low/off throttle and wait for the rapid beeps
- The rapid beeps tell you that the controller has now stored that answer in it’s memory
- You can now move the stick back to the middle position for question #2
- The Thunderbird should now beep twice and repeat to indicate question #2: *Brake ON or OFF?*
- For Brake ON move the stick to full throttle and wait for the rapid beeps

- For Brake OFF (default setting), move the stick to low/off throttle and wait for the rapid beeps
- The rapid beeps tell you that the controller has now stored that answer in it's memory
- You can now move the stick back to the middle position for question #3
- The Thunderbird should now beep three times and repeat to indicate question #3: *Rotation direction?*
- For rotation forward (default setting), move the stick to full throttle and wait for the rapid beeps
- For rotation reversed, move the stick to low/off throttle and wait for the rapid beeps
- The rapid beeps tell you that the controller has now stored that answer in it's memory
- After the last setting is made, the controller will exit programming mode and will arm when the throttle is in the low position.

This product is MADE IN THE USA and warranted for one full year.

For troubleshooting, warranty information, or technical support, please contact us at:

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