Brake Function Setting

BRAKE FUNCTION: The factory default brake setting is "off". Skip to the "ESC OPERATION" section below if you want to keep this setting.

To turn the brake "on":

1. Move the throttle stick to full throttle, turn on the transmitter and connect the battery to the ESC.
2. After 2 seconds the motor will have one beep sound , then the ESC will be in the Programming mode.
3. When you hear 3 continue beep, it's the break function setup. This kind of sound will last circulate 4 times. During these 4 times, you can move the throttle stick to the off position. After that the motor will have 1 beep sounds, means the ESC have saved the setting.
4. Then you can unplug the battery to restart.

To turn the brake off, repeat the above process.Once the brake is set, it does not require resetting after the ESC has been switched off.

PS: Once you miss the voice which is for the brake function, there are some other Engineering Mode which are for factory setting, they are different beep sound, you can just unplug the battery, **ensure don't move the throttle down.** Then restart the program as above.

Working condition:

Brake "on": When you pull off the throttle, the Propeller will stop immediately.

Brake "off": When you pull off the throttle, the Propeller will stop naturally.

ESC Operation

1. Turn the transmitter's power on.
2. Move the throttle stick to the off or brake position (towards you).
3. Connect the battery to the ESC. The motor will beep firstly to match the Battery type, (like 3 beep sounds, means 3 cells LiPo battery, 4 beep sounds, means 4 cells LiPo etc.) After that it will have sound to indicate the brake setting (once for on, twice for off).
4. The ESC is fully ready for starting.

NOTE:

The "Easy-Plug" line of brushless ESC include many built-in safety features. One such feature ***COULD POSSIBLY CAUSE THE BRUSHLESS MOTOR TO STOP ROTATING*** when the transmitter's throttle stick is at an extremely low position and/or if rotation of the brushless motor is impeded or obstructed in some way. This is NORMAL, as the ESC is detecting that a problem possibly exists with the motor and/or speed control. Rotation of the motor is stopped to protect the speed control from possible damage.

⚠ **WARNING!!** If the ESC and motor have already been armed and the motor has been rotating normally, yet after moving the throttle stick to near minimum the motor suddenly ceases to rotate normally even if the throttle stick is advanced above minimum throttle, ***DO NOT PLACE YOUR HANDS NEAR THE PROPELLER!! FAILURE TO OBEY THIS WARNING COULD RESULT IN PERSONAL INJURY!!***

From this point, moving the throttle stick up, even to full throttle, might not cause the motor to rotate BUT THE MOTOR IS STILL ARMED AND ACTIVE DURING THIS TIME!! To regain control

of the motor, move the throttle stick to absolute minimum throttle position and then advance the throttle stick upwards once again. Alternatively, you can disconnect the battery from the ESC, and then reconnect the power source and re-arm the system.

NEVER get near the propeller if the speed control is connected to input power! ALWAYS make sure the throttle stick is at minimum position before attempting to disconnect the battery from the speed control! ElectriFly is not responsible for incidental damage or personal injury as a result of misuse of this product.

VolantexRC Easy-Plug Series Eletric Speed Control

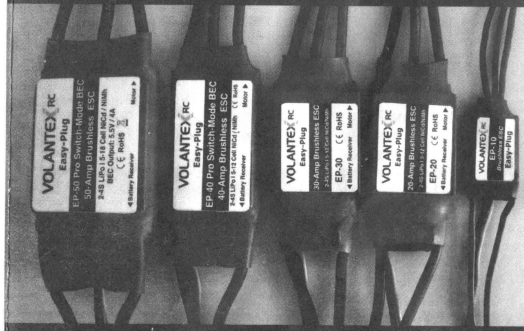
ESC Item.	EP-10	EP-20	EP-30	EP-40	EP-50	EP-60
NiMH Cells	5-9NC	5-12NC	5-12NC	5-12NC	5-18NC	5-18NC
LiPo Cells	2-3S	2-4S	2-4S	2-4S	2-4S	2-4S
Cont. Current (A)	10A	20A	30A	40A	50A	60A
Surge Current (A)	13	23	33	45	55	65
BEC	5V/1A	5V/3A	5V/3A	5V/4A	5.5V/4A	5.5V/4A
Battery Cut Off (V)	65%	65%	65%	65%	65%	65%
Female Motor Connector	2.0 mm	3.5 mm	3.5 mm	3.5 mm	3.5 mm	3.5 mm
Thermal Cutoff:	100°C	100°C	100°C	100°C	100°C	100°C
Brake	yes	yes	yes	yes	yes	yes

VOLANTEX RC

www.volantexrc.com

VOLANTEX RC

Easy-Plug *Brushless ESC*



Auto-Match function

Light weight & High quality

Easy-Plug starting from here ▶

Thank you for purchasing the VolantexRC Easy-Plug Brushless ESC. This is a lightweight, high-quality, efficien t sensorless and Easy programing brushless electronic speed control . This ESC have advanced 'auto-match' features such as match automaticly battery type , low voltage cutoff , timing etc. making this truly a 'Easy-Plug' ESC.

VolantexRC's Easy-Plug ESC are designed for no-frill, quick and easy plug to play for controlling brushless motors. All feature the Safe-Start function, which prevents accidental propeller rotation until the ESC is deliberately "armed". NiCd, NiMH, and LiPo compatibility is also included and will be auto match , plus a high-power battery eliminator circuit (BEC). A thermal protection system will automatically stop motor rotation if ESC temperatures reach extreme levels , and a brake function can be manually switched on or off.

Important Precautions

Read and follow these precautions carefully before use.

- NEVER use more than the specified voltage on the ESC input.
- ALWAYS mount the ESC in a position where air can freely flow across it during operation.
- ALWAYS turn on the transmitter before connecting the battery to the ESC.
- ALWAYS disconnect the battery from the ESC when not in use.
- ALWAYS remove the propeller from the motor when working on the model!
- ALWAYS observe that a propeller might unexpectedly rotate anytime that power is applied to the ESC , which could cause severe injury! Never get near the propeller!!
- Make sure the input battery is fully charged before connecting to the ESC , so the low voltage cutoff feature can function

properly.

- Do not attempt to use Silver Series ESC with brushed motors.
- Do not allow water, moisture or any foreign material onto the ESC PC board.
- Use heat-shrink tubing to insulate any bare wires between the motor battery and ESC , and from the ESC to the motor to prevent a short circuit.
- Allow the ESC to cool before touching and between flights.
- Keep out of reach of children .
- VolantexRC is not responsible for incidental damage or personal injury as a result of misuse of this product.

Battery Eliminator Circuit (BEC)

The built-in Battery Eliminator Circuit allows the ESC's battery to also supply power to the receiver and servos , eliminating the need for a separate receiver battery . Refer to the specification chart at the end of this manual for the BEC current ratings for each Easy-Plug ESC.

It's very **IMPORTANT** to understand that BEC circuits are rated to handle **only a certain amount of current, power, and heat.** If such limits are exceeded the ESC might reset itself, automatically returning throttle control back to minimum ! This could happen if too many servos are used or if using servos which draw high current (high torque or digital servos) , **and is especially important to know when flying extreme 3D maneuvers which require all servos to be activated very rapidly at the same time.** If a BEC reset occurs, only the throttle channel will be affected – control of all other surfaces will not be interrupted.By simply " re-arming " the throttle channel (see **"ESC SETUP"**) while in flight you should be able to re-gain throttle control very quickly.

It might be hard to determine exactly how much current is being demanded through the BEC circuit . As a general guide , refer to the chart below to determine approximately how many servos can be used with the different size Easy-Plug ESCs. Remember, this is only an approximation! More extreme setups (with very high powered digital servos, for example) will be more demanding on the BEC circuit.

EP-10 ESC BEC: 5V/1A	Up to 8 NiCd/NiMH cells, or 7.4V LiPos	9-10 NiCd/NiMH cells, or 11.1V LiPos	12 NiCd/NiMH cells, or 14.8V LiPos
Micro or nano size analog servos	3	3	3
Micro or nano size high torque or digital servos	2	2	2

EP-20 & EP-30 ESC BEC: 5V/3A	Up to 8 NiCd/NiMH cells, or 7.4V LiPos	9-10 NiCd/NiMH cells, or 11.1V LiPos	12 NiCd/NiMH cells, or 14.8V LiPos
Standard size analog servos	6	6	6
Standard size high torque or digital servos	4	4	4
Micro or nano size servos	6	6	6

EP-40 BEC: 5V/4A EP-50& EP-60 ESC BEC: 5.5V / 4A	Up to 8 NiCd/NiMH cells, or 7.4V LiPos	9-10 NiCd/NiMH cells, or 11.1V LiPos	12 NiCd/NiMH cells, or 14.8V LiPos
Standard size analog servos	8	8	8
Standard size high torque or digital servos	6	6	6

Mounting the ESC

Determine the best location for the ESC, inside or outside the fuselage.

IMPORTANT! It's highly recommended to install the ESC so that air can freely flow across it during operation ! This is especially important when using the maximum number of cells on the input , when ambient temperatures are very high, when using a lot of servos in the aircraft , or performing very active 3D maneuvers ! If the airplane's structure doesn't naturally allow for air to flow into the fuselage,create vent holes fore and aft in the fuselage to allow air to pass through and across the ESC for cooling.Do NOT pack the ESC with foam padding as it will not allow the ESC to properly radiate heat and likely cause a thermal shutdown.

PS: When the Temperatures reach 100℃ **the ESC will low down the power to avoid the ESC burned up.**

Important Throttle Input Setting

For proper ESC operation, it's very important to set the transmitter's throttle channel adjustments, as follows:

1. Set the throttle trim and sub-trim to neutral or zero.
2. Move the throttle stick to full throttle, turn on the transmitter.
3. Plug the ESC to the Receiver, then Plug the battery to ESC.
4. After 2 seconds, it will have 2 short beep, than pull down the Throttle Joystick to the down position.
5. Unplug the battery, restart the ESC.
6. Throttle Range is seted successfully.

PS: VolantexRC's Easy-Plug ESC have Pro auto-match function, after Throttle Range setting, it will match and setup the best throttle linear according to different Transmitter . And usually this setting is needed in the first operation for a new Transmitter, after that it will be saved in the program.