ESC Settings for X-Nova

Xnova motors are not picky about ESC settings. Most default settings are just fine, but there are some things to consider.

PWM Frequency:
Any setting on an ESC designated "outrunner" should not be used. Specifically, Castle Creations has added "outrunner PWM" mode. This setting may cause higher running temps on Xnova motors and SHOULD NOT be used. The default 12khz setting is recommended. Using higher PWM frequencies will result in a cooler motor and warmer ESC. So if your ESC is undersized slightly, use a lower PWM frequency to lower ESC temperatures. If the ESC is oversized relative to the motor, then a higher PWM frequency will decrease motor temperatures slightly.

Timing:
Normal or low timing is ok for the Xnova motor on Castle Creation. You can experiment with your setup to see which mode produces the most efficient operation.

Additionally setup samples for Castle-Creation:
Xnova 40** series: 3 or even lower for timing and 12KHZ.

Xnova 4530-500KV-8D or 450KV-8D : 3 or 5 for timing and 12KHZ.

High Grade IGE or YGE:18 for timing or higer ,PWM Start with 8 (also autotiming works good on YGE with Xnovamotors)

KONTRONIK: MODE 4 AUTOTIMING (remember to reset your ESC when exchanging motors-MODE 1 then MODE 4).

In some cases we discover much lower motor and esc temperature (Jive or KOSMIK) when selecting fixt timing instead of autotiming. So if you are not happy with your temp values use numers like 6* or 8* for fixt-timing.

Heli specific setup:
Governor setup is critical for a constant headspeed. Too low a throttle setpoint will overstress the entire power system. Pulling 100A at 50% duty cycle on the esc produces very high current ripple and high peak currents in the system. This reduces efficiency a great deal. For a 3D heli setup, the gearing, motor kv, and headspeed should be chosen so that at the highest power draw the ESC still has some "headroom" to operate.