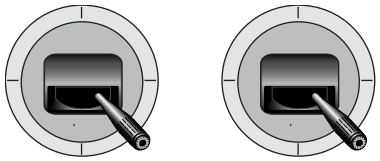
Blade® 200 SR X Gain Adjustment

The 200 SR X default settings are appropriate for most users. We recommend flying with the default gain parameters first, especially for newer pilots. More advanced pilots may want to adjust the gain parameters. Pilots flying at higher altitudes (above 4000 feet or 1200 meters msl) will likely want to increase the motor power to improve performance.

Entering Gain Adjustment Mode

1. Lower the throttle stick to the lowest position. If your transmitter utilizes mechanical trims (like the included RTF transmitter), set the throttle trim to the highest position. Set all other trims to the center position.
2. Power ON the transmitter.
3. Install the flight battery on the helicopter frame. Secure the flight battery with the hook and loop strap.
4. Connect the battery connector to the ESC.
5. Place the helicopter on a flat surface and leave it still until the motor beeps twice and the blue ESC LED glows solid, indicating initialization is complete.
6. Move and hold the left stick to the bottom right corner and the right stick to the bottom right corner. See illustration.
7. Press and hold the bind/panic switch until the swash servos move.
8. Release the sticks and bind/panic switch.
9. The model is now in Gain Adjustment Mode.



Gain Adjustment

The gain adjustment parameters are scaled to appropriate and safe adjustments per function, so you cannot accidentally make your model unflyable. Plus, any changes made are easily reversible by resetting to the default settings. For example, 0% cyclic gain does not turn the gyros off; it simply decreases the gain. 100% is the default gain for each parameter.

The selected gain parameter is indicated by the lean of the swashplate on the roll axis:
Gain Parameter 1 = 100% Left
Gain Parameter 2 = 50% Left
Gain Parameter 3 = 50% Right
Gain Parameter 4 = 100% Right

Use the aileron stick to select the gain parameter you would like to adjust. Move the stick to the right to select the next gain parameter. Move the stick to the left to select the previous gain parameter.

Once the gain parameter is selected, the gain value is indicated by the lean of the swashplate on the pitch axis:
0% Gain = Full Aft
50% Gain = 50% Aft
100% Gain = Level Swash on the Pitch Axis
150% Gain = 50% Forward
200% Gain = 100% Forward

Use the elevator stick to adjust the gain value. Move the stick up to increase the gain value. Move the stick down to decrease the gain value.

If you would like to reset the current gain value to the default value of 100%, hold the rudder stick full left or right for 1 second. The swash will level on the pitch axis indicating 100%.

Gain Parameter 1 = Cyclic Gain Adjustment
Default = 100%

Higher gain results in greater stability and faster response to stick inputs. Setting the gain too high may result in random twitches in flight, depending on the level of vibration on the model.

Lower gain results in a decrease in stability and a slightly slower response to stick inputs. Setting the gain too low may result in a less stable model, especially in wind.

If you are located at a higher altitude or in a warmer climate, higher gain may be beneficial. The opposite is true for lower altitude or colder climates.

Gain Parameter 2 = Tail Rotor Gain Adjustment
Default = 100%

Higher gain results in more tail holding power. If your model has a high level of vibration, you may see some mild twitching in the tail rotor at higher gain settings.

Lower gain results in the tail drifting slightly and a less responsive feeling.

If you are located at a higher altitude or in a warmer climate, higher gain may be beneficial. The opposite is true for lower altitude or colder climates.

Gain Parameter 3 = Filtering Adjustment
Default = 100%

This adjustment is most useful for pilots flying in high-altitude locations. Higher gain results in decreased vibration filtering. Use higher gain if the model feels disconnected and unstable.

Lower gain results in increased vibration filtering. Use lower gain if you experience random twitches.

If you experience issues with random twitches or poor performance, adjust the filtering. In most cases, the default value is correct, and having to adjust the filtering indicates that the model has a damaged, bent or imbalanced part. Inspect the model and make any repairs necessary.

Gain Parameter 4 = Motor Power Adjustment
Default = 100%

Higher values result in a faster climb rate but may result in the tail drifting during fast accelerations. After adjusting the motor power, tail rotor gain adjustment may be necessary.

Exiting Gain Adjustment Mode

1. To save the adjustments, lower the throttle stick to the lowest position and release the sticks.
2. Press and hold the bind/panic switch until the swash servos move.
3. Release the bind/panic switch to save the gain adjustments.
4. The model is ready to fly.

Telemetry-Enabled Transmitters

If you are using a Spektrum™ telemetry-enabled transmitter the gain adjustments can be viewed on the Flight Log Screen. Refer to your transmitter instructions to locate this screen. The gain parameter currently selected will flash on the transmitter screen.

Flight Log Screen

F: 888 (Indicates Gain Adjustment Mode)
H: Gain Parameter # currently selected (1, 2, 3 or 4)
A: Gain Parameter 1 Value
B: Gain Parameter 2 Value
L: Gain Parameter 3 Value
R: Gain Parameter 4 Value

Inflight Vibration Analysis for Telemetry-Enabled Transmitters

Enabled=Fore/aft servo moves several times.
Disabled=Fore/aft servo moves once then returns to center.

Once enabled, the Flight Log Screen on your telemetry-enabled transmitter will show:
F: Current Vibration Level (1–9999)
A: Maximum Vibration Level (1–9999)
B: Current Roll Attitude Estimate
L: Current Pitch Attitude Estimate
R: Current Yaw Attitude Estimate (resets to 0 when the stick is at the stop position)

Use this function to compare vibration levels on your model before and after making changes, such as balancing main rotor blades, replacing a bent main shaft, etc. The vibration level numbers are not calibrated to a vibrational acceleration level, but are meant for comparison purposes. For example, if the vibration level decreases after balancing the main rotor blades, you will have at least some data indicating the rebalancing was successful.

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