

# **Analog vs Digital Servos**



For existing and new radio control enthusiasts, one debate and conversation has been what is the difference between analog and digital servos. And which type is best for your particular application?

## ANALOG SERVOS (+ & -)

Analog Stat Advantages	Analog Stat Disadvantages
1. Less Expensive	1. Slow Response
2. Lower Power Consumption	2. Large 8us Deadband Zone
3. Low Frequency Audible Noise	3. Weak Holding Torque
	4. Low Resolution - 256-512 steps

#### **Typical Applications:**

- Air > Sport & Scale Aircraft
- Surface > Sport Level 1/10 Cars & Trucks

### DIGITAL SERVOS (+ & -)

Digital Stat Advantages	Digital Stat Disadvantages
<ol> <li>Fast, Precise Response</li> <li>Excellent Holding Power - 3-5 times the stall torque</li> <li>1us Deadband Zone - 8 times Better Centering</li> <li>Excellent Resolution for Smooth Controls - 2048-4096 steps</li> </ol>	<ol> <li>More Expensive</li> <li>Higher Power Consumption</li> <li>High Frequency Audible Noise</li> </ol>

#### Typical Applications:

- Air > 3D & Pattern Aircraft of all Sizes, Jets and Larger Scale Models
- Surface > High Performance Cars & Trucks of all Sizes

### **MATCHUP CONSIDERATIONS:**

Before placing your bets on either servo type, bear in mind, you should always match the level of the servo with the level of your model. Depending upon the speed and power that you need, an analog servo may be sufficient in producing the result you want, at a more affordable price. On the other hand, high performance models should always use high performance, digital servos. Another important factor is TORQUE. There is no such thing as too much torque! The higher the torque, the easier it is on the servo which keeps the heat down and improves reliability.