

# Parts of a Combat Robot

**Armor/Body:** This protects a robot from damage. It can be aluminum, steel, titanium, polycarbonate, or special alloys and metals. (\$0-\$2000)

**Batteries:** The heart of a robot. These supply the power to all the systems. They are usually 24 or 36 volt NiCad, NiMH, SLA or Lilon cells. (\$40-\$500)

**Transmitter:** This is what you use to remotely operate your robot, they come in many styles, and are also used for R/C planes and cars. (\$60-\$500 - not shown)

**Radio Receiver:** Takes the signal from the transmitter, and turns it into a pulse width modulated (PWM) signal that the speed controller can use. (\$20-\$100)

**Speed Controllers:** A complex electrical device that bridges the receiver, batteries, and motors. It converts the PWM signal from the receiver and feeds the motor the corresponding power from the battery packs. (\$50-\$700)

**DC Motors:** These make the robots and their weapons (e.g, spinners) move. They can be salvaged from junkyards or bought from specialty shops. (\$0-\$1000)

**Gearbox:** These enclosed gears increase the motors torque (force) and make the robot easier to manage and significantly more powerful. (\$20-\$300)

**GearMotors:** Motors and gearboxes that come as a single part. (\$0-\$700)

# <http://ComBots.net>

**Sprockets, Pulleys and Bearings:** Used for both spinning weapons and drive-trains. Bearings hold axles in place to spin weapons or gears. Sprockets are toothed discs with chains like you'd find on a bicycle. (\$0-\$50)

**Chain/Belt:** Chains and belts can be used for both spinning weapons and to connect wheels to gearboxes or other wheels. (\$0-\$100)

**Wheels:** These take the power from the gears to make your robot go and come in hundreds of materials and diameters and can be found anywhere. (\$0-\$100)

**Spinning Bar:** A typical high-energy weapon. These are mounted horizontally as shown or vertically. They can also be discs, or entire shells. (\$0-\$300)

**Flipping Arm:** One of the many kinds of weapons you could have. Flippers get under the robot and throw them into the air. (\$0-\$100)

**Pneumatic Ram:** The output from a pneumatic system. These can be used for a flipper, a hammer, a ram, or other similar weapons. (\$50-\$150)

**Air Tank/Pneumatic Regulator:** Air tanks are used in Pneumatic systems, usually canisters from paint-ball CO2 weapons or fire extinguishers. (\$0-200) Regulators ensure the tanks proper pressure. (\$75)

