

2009 FTC Competition Kit

Improved and ready for action!



The 2009 FTC Competition Kit is a custom configuration of robotics hardware, software, and electronics that provides everything teams need to compete. The kit comes complete with:

- Large selection of metal TETRIX parts
- LEGO MINDSTORMS controller, sensors, motors, and building elements
- Powerful DC and servo motors and controllers
- Joystick controllers
- TETRIX battery pack, connectors, and charger
- Storage, tools, and accessories
- 2009 FTC Challenge Kit features the sensor for this year's game and three software options with team licenses with up to five installs each. LabVIEW and RobotC are fully updated for this year's competition, improving ease of use and functionality. Included in the kit are:

NXT-G: graphical programming for basic prototyping and testing

LabVIEW: graphical programming software with full competition capabilities

RobotC: text-based programming with full competition capabilities



The successful 2008 season brought with it a great opportunity to conduct a parts-use poll of teams, study built robots at competitions, and talk with teams from all over the country. This excellent feedback helped identify a few key kit changes that enabled us to provide an extremely robust kit complete with everything needed in competition while keeping the price affordable.

The removal of a few seldom-used parts meant we were able to maintain the overall size and completeness of the kit and invest in the creation of new parts, many of which were suggested by teams and some of which are included in the kit. Now available are:

- 3" Omni Wheel (two included in kit)
- Sprockets and chain
- Improved motor leads (four included in kit)
- Reduced gear prices
- Gear and motor packs
- Tube Plugs (ten Included in kit)
- Sturdy sorting tray (one included in kit)

Returning teams need only purchase the cost-effective 2009 FTC Challenge Kit, enabling the reuse of the kit they purchased last year.

All teams can purchase parts packs at a 20% discount.

Kit Options

2009 FTC Competition Kit
\$999

2009 FTC Competition Kit
Without MINDSTORMS
\$799

2009 FTC Challenge Kit
For Returning Teams
\$149

TETRIX Parts and More
20% discount



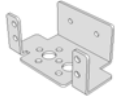






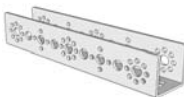
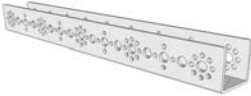



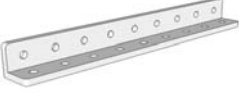
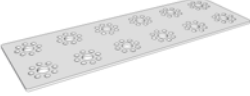

education


NORTH AMERICA

2009 FTC Competition Kit










Brackets & Structural Elements







2009
FTC Qty










Single Servo Mounting Bracket		2
Servo Joint Bracket w/ Pivot Bearing		2
Dual Servo Bracket		1
Flat Interconnect Bracket		12
L Connector Bracket		16
Structural Channel - 32mm x 32mm x 32mm		8
Structural Channel - 32mm x 32mm x 96mm		4
Structural Channel - 32mm x 32mm x 160mm		4
Structural Channel - 32mm x 32mm x 288mm		6
Structural Channel - 32mm x 32mm x 416mm		2
Flat Bar 288mm x 16mm		4
Angle Bar 288mm x 16mm		2
Angle Bar 144mm x 16mm		2
Perforated Plate 64mm x 192mm		2
Structural Tubing .625" diameter x 80mm		4

Structural Tubing .625" diameter x 145mm		4
Structural Tubing .625" diameter x 220mm		4
Tube Clamp		10
Tube Plug		12

Servos & Motors		2009 FTC Qty
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HS-475HB Standard Servo w/ Carbonite Gears w/ horn		2
Servo Y Adapter		1
18" Servo Wire Extension		2
152 RPM 12V DC Gearbox Drive Motor with 6mm D Shaft		4
DC Motor Connection Wire		4
37mm Clamping Motor Mount w/ Fasteners		4
Gear-to-Wheel Hub Spacer w/ Fasteners		2
Bronze Flanged-Sleeve Bearing 3/16" Shaft Dia., 5/16" OD, 1/2" Length		24
Sintered Steel Set Screw Shaft Collar 3/16" Bore, 7/16" OD, 1/4" Length		12

Fasteners	2009 FTC Qty
Znc-Pltd Stl Machine Screw Nut W/Tooth	 300
Alloy Steel Socket Head Cap Screw 6-32 Thread, 1/2" Length	 200
Alloy Steel Socket Head Cap Screw 6-32 Thread, 5/16" Length	 100
Alloy Steel Button Head Cap Screw 6-32 Thread, 3/8" Length	 50
Nylon Unthreaded Round Spacer 3/8" OD, 1/8" Length	 24
Nylon Unthreaded Round Spacer 3/8" OD, 3/8" Length	 12
Aluminum Female Threaded Hex Standoff 1/4" Hex, 1" Length	 12
Aluminum Female Threaded Hex Standoff 1/4" Hex, 2" Length	 12

Wheels, Gears, Drive Train	2009 FTC Qty
3" Diameter Wheel Hub/Tire	 4
4" Diameter Wheel Hub/Tire	 4
3" Omni Wheel	 2
Set Screw Axel Hub	 12
6mm Bore Set Screw Motor D Shaft Mount Hub	 2
120 Tooth, 32 Pitch Hub Gear	 2
80 Tooth, 32 Pitch Hub Gear	 4
40 Tooth, 32 Pitch Hub Gear	 6
3/16" x 100mm SS Precision D Shafting	 12

Sensors, Controllers, & Batteries

2009
FTC Qty

LEGO MINDSTORMS Set including Intelligent Brick, sensors, motors, Technic building elements, and more



1

HiTechnic IR Seeker



1

12v NiMh 3000 mah Rechargeable Battery



1

Battery Charger



1

On/Off Battery Harness



1

DC gearhead motor shaft encoders



2

FTC Bluetooth Dongle



1

Logitech Gaming Controller



2

HiTechnic DC Motor Controller



1

HiTechnic Servo Controller





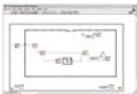

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LEGO Hard Point Connector




12

Software		2009 FTC Qty
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Pro/ENGINEER Mathcad Software & Instructions		1
NXT-G v. 1.1		1
2009 LabVIEW Education Edition for FTC		1
2009 RobotC 2.0 for FTC		1
FTC Team License		1

Storage & Tools		2009 FTC Qty
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Plastic Storage Bin with Snap-On Lid and Parts Summary		2
Hex Key Pack (6/64", 3/32", 1/16", 5/64")		1
11" Zip Ties		12