

# Hardware Inspection Checklist

Team Number: \_\_\_\_\_

Overall Status (circle): **PASS / FAIL**

Team	Inspector	General Robot Rules	
		Team has presented Bill of Material listing all Non-TETRIX (or MATRIX) parts used on their Robot	I7
		Robot fits within the Sizing Box (18" x 18" x 18") without exerting force on box sides or top	RG4
		Robot does NOT contain any components that could damage the playing field or other robots	RG3a&b
		Robot does NOT contain any hazardous materials	RG3c
		Robot poses NO obvious unnecessary risk of entanglement	RG3d
		Robot does NOT contain any sharp edges or corners	RG3e
		Main Power Switch is readily accessible and visible to competition personnel and installed properly	RG5 & R3d
		All batteries are securely attached to the robot	RG6
		NXT battery can be easily removed with minimal disassembly of the robot	RG7a
		USB ports (NXT and Samantha) are easily accessible	RG7b
		NXT Controller and Samantha Module buttons are readily accessible	RG7b
		NXT Controller liquid crystal display and Samantha LEDs are readily visible	RG7c
		Electrical components are mounted such that they are protected from Robot-to-Robot contact	RG7d
		Robot Flag Holder is present and adequately holds the flag during normal robot operation	RG8
		Team Number is visible from at least 2 sides (180 deg. apart), 3" tall, 1/2" stroke on a contrasting background. The numbers are robust enough to withstand the rigors of match play.	RG9
		Stored energy is provided by approved sources	RG10
		Game elements launched by the robot don't exceed height and range constraints	RG11
		<b>Robot Parts and Materials Rules</b>	
		All preformed components on the Robot are from the TETRIX, LEGO, and MATRIX robotic systems	R1 & R2c
		Robot does NOT contain COTS assemblies other than those specifically allowed in the rules	R2a
		Robot does NOT contain prefabricated and/or preformed COTS plastics or metal	R2b
		Robot does NOT contain additional mechanical parts other than the items listed in R2d	R2d
		Robot has exactly one (1) NXT controller and additional microprocessors comply with R3a	R3a
		Robot has one (1) official NXT rechargeable battery pack (AC or DC) or six (6) AA batteries (not both)	R3b
		Robot has exactly one (1) official TETRIX or MATRIX main battery pack	R3c
		Only HiTechnic or MATRIX motor and servo controllers are used (any quantity is permitted)	R3e
		Maximum of eight (8) TETRIX or MATRIX motors and twelve (12) servos, all controlled by HiTechnic or MATRIX controllers	R3f
		Each NXT motor port (A, B or C) controls no more than: (i) one NXT Interactive Servo Motor, or (ii) one XL Power Function Motor, or (iii) two E Power Function Motors, or (iv) two M Power Function Motors, or (v) one E plus one M Power Function Motors	R3g
		Robot has exactly one (1) Samantha module and one (1) USB cable	R3h
		All sensors attached directly to the NXT, HiTechnic Sensor Multiplexor, or HiTechnic Touch Sensor Multiplexor are LEGO or HiTechnic products	R3i
		HiTechnic 9-volt Battery Box (if used) is only used as part of the NXT Sensor Multiplexor	R3j
		HiTechnic SuperPro Prototype Board and NXT Prototype Board comply with the specified constraints	R3k
		Only LEGO approved NXT extension and conversion cables are used	R3l&m
		Electrical connectors are Anderson PowerPole, crimp, or quick connect styles	R3n
		Power, motor control, servo and encoder wires are the correct size	R3o
		Only visible light LEDs are used and powered by either the main battery or no more than one battery of any type not to exceed 9 volts	R3p
		Robot contains only specifically allowed electrical components and the electrical components have NOT been modified from their original state except as permitted by the rules	R3s
		LEGO Pneumatic Elements have NOT been modified to change their pressure limits	R4
		Decorative components used on the robot are constructed with allowed parts or they are non-functional. Decorations are in the spirit of Gracious Professionalism	R7

General Comments or Reason(s) for Failure (if any):


I hereby state that all of the above is true, and to the best of my knowledge all rules and regulations of the *FIRST* Tech Challenge have been abided by.

\_\_\_\_\_  
Hardware Inspector

\_\_\_\_\_  
Team Student Representative