

Term	Definition
ALLIANCE	a set of up to four (4) <i>FIRST</i> Robotics Competition Teams who play <i>FIRST STRONGHOLD</i> together
ALLIANCE CAPTAIN	a designated student representative from an ALLIANCE in a Playoff MATCH
ARENA	all elements of the game infrastructure that are required to play <i>FIRST STRONGHOLD</i> SM : the FIELD, the CASTLES, the scoring elements, and all equipment needed for FIELD control, ROBOT control, and scorekeeping
ARENA FAULT	an error in ARENA operation that includes, but aren't limited to those listed in Section 5 (5.5.5 MATCH Replays)
AUTO	the first fifteen (15) seconds of a MATCH in which ROBOTS operate without any DRIVE TEAM control or input
AUTO LINE	a line of green gaffers tape used by Teams to demarcate the field for the AUTO period as per Section 2 (2.1 Zones & Markings)
BACKUP TEAM	a Team used to replace an inoperable ROBOT on an ALLIANCE during Playoff MATCHES per Section 5 (5.5.6 TIMEOUT and BACKUP TEAM Rules)
BATTER	a series of ramps and dividers that compose the base of the TOWER as per Section 2 (2.2.3.1 CASTLE WALL)
BERM	a steel barrier that defines the border of the SECRET PASSAGE as per Section 2 (2.2.2.2 SECRET PASSAGE)
BOULDER	a 10 in. diameter, gray, Gopher SoftiBall™ coated foam ball used by ALLIANCES to score points in <i>FIRST STRONGHOLD</i>
BRATTICE	the hole in the plastic portion of the HUMAN PLAYER STATION used by an ALLIANCE to introduce BOULDERS to the FIELD as per Section 2 (2.2.3.1 CASTLE WALL)
BREACHED	the state of an OUTER WORKS once four (4) out of its five (5) DEFENSES have been DAMAGED
BUMPER	a protective assembly designed to attach to the exterior of the ROBOT and constructed as specified in Section 4 (4.7 BUMPER Rules)
BUMPER ZONE	the volume contained between two virtual horizontal planes, 4 in. above the floor and 12 in. above the floor
BYPASSED	a state in which a ROBOT has been commanded by the Driver Station to deactivate all outputs
CAPTURED	the state of a TOWER if, at the end of the MATCH, it is WEAKENED, and it is surrounded such that each of the three (3) opponent ROBOTS has SCALED or CHALLENGED a unique face of the TOWER
CASTLE	an area located at each end of the FIELD and bounded by and including the edges of the carpet, the CASTLE WALL, and white gaffers tape
CASTLE WALL	the barrier between ROBOTS and DRIVE TEAMS (with the exception of a SPY in the SPY Box) that consists of three (3) PLAYER STATIONS, a HUMAN PLAYER STATION, and a TOWER
CHALLENGE	an act performed by a ROBOT, such that at the conclusion of the MATCH, the ROBOT is fully supported by the TOWER, but hasn't met the criteria for SCALING the TOWER

Term	Definition
COACH	a student or adult Mentor identified as the person wearing the designated “COACH” pin or button during a MATCH
COMPONENT	any part in its most basic configuration, which cannot be disassembled without damaging or destroying the part or altering its fundamental function
CORRAL	the collection area for scored BOULDERS located at the rear base of the TOWER as described in Section 2 (2.2.3.1 CASTLE WALL)
COTS	a “Commercial, Off-The-Shelf” COMPONENT or MECHANISM, in its unaltered, unmodified state. A COTS item must be a standard (i.e. not custom order) part commonly available from the VENDOR, available from a non-Team source, and available to all Teams for purchase. Items that are no longer commercially available but are functionally equivalent to the original condition as delivered from the VENDOR are considered COTS and may be used
COURTYARD	an infinitely tall volume bordered by, but excluding, the CASTLE WALL, the GUARDRAIL, the SECRET PASSAGE and the OUTER WORKS
CROSS	an act performed by a ROBOT, such that it starts free of contact with an opponent DEFENSE and completely in the NEUTRAL ZONE, traverses the DEFENSE such that its BUMPERS go fully between the adjacent SHIELDS/GUARDRAIL, and ends up fully contained by the opponent’s COURTYARD
CUSTOM CIRCUIT	any electrical component of the robot other than motors , pneumatic solenoids, roboRIO, PDP, PCM, VRM, RSL, 120A breaker, motor controllers, relay modules, wireless bridge, or batteries
DAMAGED	the state of a DEFENSE when that DEFENSE’S STRENGTH is zero (0)
DEFENSE	one (1) of five (5) obstacles in the OUTER WORKS and clips in to a PLATFORM
DISABLED	a state in which a ROBOT has been commanded by the Driver Station to deactivate all outputs
DISQUALIFIED	the status of a Team, as determined by the Head REFEREE, in which their Team receives zero (0) Match points in a qualification MATCH or causes their ALLIANCE to receive zero (0) Match points in a Playoff MATCH
DRIVE TEAM	one (1) COACH, two (2) DRIVERS, and one (1) HUMAN PLAYER from the same <i>FIRST</i> Robotics Competition Team who are responsible for ROBOT operation during a particular MATCH
DRIVER	a pre-college student DRIVE TEAM member responsible for operating and controlling the ROBOT during a MATCH
EMBRASURE	a hole at the bottom of the HUMAN PLAYER STATION wall diamond plate which can be used by an ALLIANCE to introduce BOULDERS to the FIELD
FABRICATED ITEMS	any COMPONENT or MECHANISM that has been altered, built, cast, constructed, concocted, created, cut, heat treated, machined, manufactured, modified, painted, produced, surface coated, or conjured partially or completely into the final form in which it will be used on the ROBOT
FIELD	a 26 ft. 7 in. by 54 ft. 1 in. carpeted area, bound by and including the inward-facing surfaces of the GUARDRAILS and two (2) CASTLES
FIELD STEWARDS	REFEREES, FTAs, or other staff working around the FIELD
FMS	FIELD Management System as described in the FMS Whitepaper

Term	Definition
FOUL	a penalty assessed by a REFEREE which credits the opponent with 5 points
FRAME PERIMETER	the polygon defined by the outer-most set of exterior vertices on the ROBOT (without the BUMPERS attached) that are within the BUMPER ZONE. To determine the FRAME PERIMETER, wrap a piece of string around the ROBOT at the level of the BUMPER ZONE - the string describes this polygon
FTA	<i>FIRST</i> Technical Advisor
GOAL	an opening in the TOWER in which BOULDERS may be scored
GUARDRAIL	a system that consists of transparent polycarbonate shields supported on the top and bottom by aluminum extrusion
Herald	the Emcee of the event
HUMAN PLAYER	a pre-college student DRIVE TEAM member primarily responsible for managing and introducing game pieces onto the FIELD throughout the MATCH
HUMAN PLAYER STATION	an area on the side of each CASTLE through which HUMAN PLAYERS feed BOULDERS on to the FIELD
Kit of Parts (KOP)	the collection of items listed on any Kickoff Kit Checklists, distributed via <i>FIRST</i> Choice, or obtained via a Product Donation Voucher (PDV), etc.
LINEUP	the list of three (3) Teams and their selected PLAYER STATIONS submitted by an ALLIANCE CAPTAIN to play in a <i>FIRST</i> Championship Division Playoff MATCH or a MATCH on the Einstein FIELDS
MATCH	a two (2) minute and thirty (30) second period of time in which ALLIANCES play <i>FIRST STRONGHOLD</i>
MECHANISM	a COTS or custom assembly of COMPONENTS that provide specific functionality on the ROBOT. A MECHANISM can be disassembled (and then reassembled) into individual COMPONENTS without damage to the parts
MIDLINE	a line of 2 in. white gaffers tape that bisects the length of the FIELD
MPX	MyRIO eXpansion Port, the expansion port on the roboRIO
NEUTRAL ZONE	an infinitely tall volume formed by, but not including, the BERMS, the GUARDRAILS and OUTER WORKS
OPERATOR CONSOLE	the set of COMPONENTS and MECHANISMS used by the DRIVERS and/or HUMAN PLAYER to relay commands to the ROBOT
OUTER WORKS	an infinitely tall volume bordered by the GUARDRAIL, the SECRET PASSAGE, and 2 in. white gaffers tape (The OUTER WORKS includes the white gaffers tape, but does not include the GUARDRAIL or SECRET PASSAGE). It consists of a series of five (5) DEFENSES, five (5) PLATFORMS, and five (5) Shields arranged in a line across the FIELD and is designed to impeded the passage of ROBOTS and BOULDERS in to the COURTYARDS
PASSIVE CONDUCTORS	any device or circuit whose capability is limited to the conduction and/or static regulation of the electrical energy applied to it (e.g. wire, splices, connectors, printed wiring board, etc.)
PCM	Pneumatic Control Module
PDP	Power Distribution Panel
PLATFORM	a 4 ft. 2 in. wide, 2 ft. deep and 3 in. tall base for a DEFENSE and associated ramps

Term	Definition
PLAYER STATION	one (1) of three (3) assigned positions behind a CASTLE WALL from where a DRIVE TEAM operates their ROBOT
RS	Ranking Score, the total number of Ranking Points earned by a Team throughout their Qualification MATCHES
RP	Ranking Point + a unit credited to a Team based on their ALLIANCES' performance in Qualification Matches
REACH	an act performed by a ROBOT, such that at the end of the AUTO period, any part of a ROBOT'S BUMPERS are within the opponent's OUTER WORKS
RED CARD	a penalty assessed for egregious ROBOT or <i>FIRST</i> Robotics Competition Team member behavior which results in a Team being DISQUALIFIED
REFEREE	an official who is certified by <i>FIRST</i> to enforce the rules of <i>FIRST STRONGHOLD</i>
ROBOT	an electromechanical assembly built by an <i>FIRST</i> Robotics Competition Team to perform specific tasks when competing in <i>FIRST STRONGHOLD</i> . It includes all of the basic systems required to be an active participant in the game: power, communications, control, and movement. The implementation must obviously follow a design approach intended to play <i>FIRST STRONGHOLD</i> (e.g. a box of unassembled parts placed on the FIELD or a ROBOT designed to play a different game would not satisfy this definition)
RUNG	a bar mounted on a TOWER face that is 1 ft. 9 in. wide and constructed of 1-1/2" Steel DOM Tubing
SCALE	an act performed by a ROBOT, such that at the conclusion of the MATCH, it is in contact with a unique RUNG, and has all of its BUMPERS fully above the height of the low GOALS.
SECRET PASSAGE	a rectangular area in front of each HUMAN PLAYER STATION. As introduced in Section 2 (2.1 Zones & Markings) , each ALLIANCE has a SECRET PASSAGE; an infinitely tall, 4 ft. 5-1/2 in. wide, 23 ft. 11-1/2 in. deep volume defined by BERMS, the GUARDRAIL and the CASTLE WALL
SHIELD	a 3/8" thick polycarbonate sheet, 4 ft. deep and 2 ft. tall separating each DEFENSE, and the OUTER WORKS from the SECRET PASSAGE BERM
SPY BOX	a 6 ft. wide by 2 ft. deep, infinitely tall volume, bounded by and including 2 in. white gaffers tape, located adjacent to the to the edge of the opposing CASTLE and the edge of the carpet.
STANDARD	a Team's flag to be flown over their PLAYER STATION on the FIELD during MATCHES
STARTING CONFIGURATION	the physical configuration and orientation of the ROBOT when the MATCH is started. This is the state of the ROBOT immediately before being Enabled by the Field Management System, before the ROBOT takes any actions, deploys any mechanisms, or moves away from the starting location. This configuration is static, and does not change during a single MATCH (although it may change from MATCH to MATCH). In the STARTING CONFIGURATION, no part of the ROBOT may extend outside the vertical projection of the FRAME PERIMETER, with the exception of minor protrusions such as bolt heads, fastener ends, rivets, etc.
STARTING LINE	a 2 in. white gaffers tape line that is the width of the CASTLE and is 2 ft. 6 in. from the CASTLE WALL
STRENGTH	a measure of DEFENSE or TOWER health

Term	Definition
SURROGATE	a Team randomly assigned by the FIELD Management System to play an extra Qualification MATCH
TECH FOUL	a penalty assessed by a REFEREE which credits the opponent with 5 points and one (1) TOWER STRENGTH
TELEOP	the final two (2) minutes and fifteen (15) seconds of a MATCH in which ROBOTS may be directly controlled by DRIVERS and/or HUMAN PLAYERS
TIMEOUT	a period of up to six (6) minutes between MATCHES used to pause Playoff MATCH progression
TOWER	the part of the CASTLE constructed between PLAYER STATIONS two (2) and three (3) with three (3) faces, three (3) RUNGS, five (5) GOALS, a BATTER, and a CORRAL
VENDOR	a legitimate business source for COTS items that satisfies criteria listed in Section 4 (4.1 Overview)
VRM	Voltage Regulator Module
WEAKENED	the state of a TOWER if its STRENGTH is at or below zero (0)
WITHHOLDING ALLOWANCE	a static set of FABRICATED ITEMS that shall not exceed 30 lbs., brought to an event (or Robot Access Period) in addition to the bagged items, to be used to repair and/or upgrade their ROBOT
YELLOW CARD	a warning issued by the Head REFEREE for egregious ROBOT or Team member behavior

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