

GLOSSARY OF TERMS

ALLIANCE: a set of three FRC teams that work together during a match to play against an opposing alliance. Alliances are identified during the match by their assigned color, either red or blue.

ALLIANCE CAPTAIN: the team representative for each alliance lead.

ALLIANCE SELECTION: the process during elimination rounds where the top eight teams pick two other robots to work with

ALLIANCE STATIONS: the areas located at either end of the arena, behind the alliance walls; they extend back eight feet from the alliance wall, and across the 18-foot wide center section of the wall; include three identical player's stations each.

ALLIANCE WALL: a 6-1/2 feet high, 27 feet wide, wall that defines the ends of the field.

ANALYST: a human player that assists the coaches with strategy. There is one analyst per alliance.

ARENA: all elements of the game infrastructure that are required to play the game: the field, the alliance stations, the game pieces, and all supporting communications, arena control, and scorekeeping equipment.

AUTONOMOUS PERIOD: driver control of the robot is not permitted at this time. During this period, the robots may react only to sensor inputs and commands pre-programmed into the onboard control system. All robot safety rules are still applicable during the autonomous period.

BACKUP TEAM: one of the eight highest seeded teams remaining after alliance selection that is available to play, should a robot need replacing during the elimination matches.

BUILD SEASON: the six-week period between the Kick-off and the shipment deadline.

BUMPER: an assembly designed to attach to the exterior of the robot and constructed as specified in Game Play Manual.

CHAIRMAN'S AWARD: FIRST's most prestigious award, it honors the team that best represents a model for other teams to emulate and best embodies the purpose and goals of FIRST. The Chairman's Award helps keep the central focus of the FIRST Robotics Competition on the goal of inspiring greater levels of respect and honor for science and technology.

COACH: a student or adult mentor identified as the person wearing the designated "Coach" pin or button during a match. There is one coach per team.

COOPERTITION™: displaying unqualified kindness and respect in the face of fierce competition. Coopertition™ is founded on the concept and a philosophy that teams can and should help and cooperate with each other even as they compete. Coopertition™ involves learning from teammates. It is teaching teammates. It is learning from mentors. And it is managing and being managed. Coopertition™ means competing always, but assisting and enabling others when you can.

COOPERTITION™ AWARD: the Coopertition™ Award celebrates the team that best demonstrates the ability to help their opponents compete. The Coopertition™ Award will be granted to the team that earns the most Coopertition™ Bonus points during the competition.

CREATIVITY AWARD sponsored by XEROX: the Creativity Award celebrates creative design, in process, execution, or via a creative or unique strategy of play. It is focused on a feature or features of the machine or development process.

DEAN'S LIST FINALIST AWARD: this award celebrates outstanding student leaders whose passion for and effectiveness at attaining, FIRST ideals is exemplary. The Kamen family hopes this honor not only recognizes these student leaders' tremendous recent accomplishments, but also inspires them to continue their great work for FIRST as alumni. FIRST Dean's List Finalists will compete at the championship for the FIRST Dean's List.

DRIVER: a pre-college student team member responsible for operating and controlling the robot. There are two drivers per team.

END GAME: the final 10 seconds of a match.

ENGINEERING EXCELLENCE AWARD sponsored by DELPHI: the Engineering Excellence Award celebrates an elegant and advantageous machine feature or features. This award recognizes any aspect of engineering elegance that reinforces the principles of FIRST.

ENGINEERING INSPIRATION AWARD: the Engineering Inspiration Award celebrates outstanding success in advancing respect and appreciation for engineering and engineers, both within their school, as well as their community.

ENTREPRENEURSHIP AWARD sponsored by KLEINER PERKINS CAUFIELD & BYERS: the Entrepreneurship Award celebrates the entrepreneurial spirit and recognizes a team which has developed a comprehensive business plan in order to define, manage, and achieve team objectives. This team displays entrepreneurial enthusiasm and the vital business skills to ensure a self-sustaining program.

EXCELLENCE IN DESIGN AWARD sponsored by AUTODESK: Details coming soon.

FIELD: the 27-foot by 54-foot carpeted playing area, bounded by two alliance walls and a guardrail system.

FIRST: For Inspiration and Recognition of Science & Technology, whose mission is to inspire young people to be science and technology leaders, by engaging them in exciting mentor-based programs that build science, engineering and technology skills, that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership.

FLL: FIRST Lego League, which introduces younger students (grades 4-8) to real-world engineering challenges by building LEGO-based robots to complete tasks on a thematic playing surface. FLL teams, guided by their imaginations and adult coaches, discover exciting career possibilities and, through the process, learn to make positive contributions to society.

FRC: FIRST Robotics Competition. "The varsity Sport for the Mind," FRC combines the excitement of sport with the rigors of science and technology. Under strict rules, limited resources, and time limits, teams of 25 students (grades 9-12) or more are challenged to raise funds, design a team "brand," hone teamwork skills, and build and program robots to perform prescribed tasks against a field of competitors. It's as close to "real-world engineering" as a student can get. Volunteer professional mentors lend their time and talents to guide each team.

FTC: FIRST Tech Challenge. FTC is designed for those who want to compete head to head, using a sports model. Teams of up to 10 students (grades 9-12) are responsible for designing, building, and programming their robots to compete in an alliance format against other teams. The robot kit is reusable from year-to-year and is programmed using a variety of languages. Teams, including coaches, mentors and volunteers, are required to develop strategy

and build robots based on sound engineering principles. Awards are given for the competition as well as for community outreach, design, and other real-world accomplishments.

FOOD CALENDAR: the sign-up list for parents to bring a team meal during build season.

GRACIOUS PROFESSIONALISM™: part of the ethos of FIRST. It's a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community.

GRACIOUS PROFESSIONALISM™ AWARD sponsored by JOHNSON & JOHNSON: the Gracious Professionalism award celebrates outstanding sportsmanship and continuous gracious professionalism in the heat of competition, both on and off the playing field.

HIGHEST ROOKIE SEED AWARD: the Highest Rookie Seed Award celebrates the highest-seeded rookie team at the conclusion of the qualifying rounds.

HUMAN PLAYER: a pre-college student team member that fills one of the alliance roles of feeder or analyst. There is one human player per team.

IMAGERY AWARD in honor of JACK KAMEN: the Imagery Award is in honor of Jack Kamen, Dean's father for Jack's inspirational dedication to art and illustration, his gifted creativity and devotion to FIRST. The Imagery Award celebrates attractiveness in engineering and outstanding visual aesthetic integration from the machine to the team appearance.

INDUSTRIAL DESIGN AWARD sponsored by GENERAL MOTORS: the Industrial Design Award celebrates form and function in an efficiently designed machine that effectively addresses the game challenge.

INDUSTRIAL SAFETY AWARD sponsored by UNDERWRITERS LABORATORIES: the Industrial Safety Award celebrates the team that progresses beyond safety fundamentals by using innovative ways to eliminate or protect against hazards.

INNOVATION IN CONTROL AWARD sponsored by ROCKWELL AUTOMATION: this award celebrates an innovative control system or application of control components – electrical, mechanical or software - to provide unique machine functions.

JUDGES' AWARD: during the course of the competition the judging panel may decide a team's unique efforts, performance, or dynamics merit recognition. To recognize these unique teams, FIRST offers a "blank" judges' award. The judging panel will select a team to be honored as well as the name of the award.

Junior FLL: Focused on building an interest in science and engineering in children ages 6-9, Junior FIRST® LEGO® League is a hands-on program designed to capture young children's inherent curiosity and direct it toward discovering the possibilities of improving the world around them. Just like FIRST® LEGO® League, this program features a real-world challenge, to be solved by research, critical thinking and imagination. Guided by adult coaches and the Jr.FLL Core Values, students work with LEGO elements and moving parts to build ideas and concepts and present them for review.

KAMEN, DEAN: Founder of FIRST and an inventor, entrepreneur, and tireless advocate for science and technology. His passion and determination to help young people discover the excitement and rewards of science and technology are the cornerstones of FIRST (For Inspiration and Recognition of Science and Technology).

KIT OF PARTS (KOP): the collection of items listed in the Kit of Parts Checklist provided by FIRST.

KPM: the Fighting Pi team mascot, who gets passed to the most-deserving student from year-to-year.

MATCH: a single iteration of play in which alliances attempt to complete the objectives of the game during a competition.

MATCH, ELIMINATION: a play-off style, best two out of three, round in which the eight alliances play each other to find the winner. The first and eighth, second and seventh, third and sixth, fourth and fifth play each other initially.

MATCH, QUALIFYING: each team plays twelve matches in order to rank the teams

MATCH SCORE: the total number of points earned by an alliance during a match less any penalties.

OPERATOR CONSOLE: the collection of the hardware used to run the Driver Station software and any associated equipment, control interfaces, display systems, structure, decorations, etc. used by the drivers to operate the robot.

PENALTY: a decrement in the alliance score assigned when a deserving violation of the game rules has been identified by a referee.

PLAYER STATION: positions behind the alliance wall where each team sets up their operator console.

QUALITY AWARD sponsored by MOTOROLA: the Quality Award celebrates machine robustness in concept and fabrication.

RED CARD: an indication of disqualification of a team.

ROBOT: the composite electromechanical assembly designed and built by a FRC team to perform specific tasks when competing in the competition. The robot must include all the basic systems required to be an active participant in the game – power, communications, control, mobility, and actuation. The robot implementation must obviously follow a design approach intended to play the current FRC game (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).

ROOKIE ALL-STAR AWARD: the Rookie All-Star Award celebrates the rookie team exemplifying a young but strong partnership effort, as well as implementing the mission of FIRST to inspire students to learn more about science and technology.

ROOKIE INSPIRATION AWARD: this award celebrates a rookie team outstanding success in advancing respect and appreciation for engineering and engineers, both within their school, as well as in their community.

SURROGATE: a team randomly selected by the Field Management System (FMS) to play an extra qualification match. A surrogate receives no qualification, ranking, or Cooperation™ points for the extra match.

SWAG: Alphabetism for stuff we all get, such as buttons. Teams pass these out at competitions.

TEAM: four representatives from an FRC team that interact with their robot and alliance partners to play the current FRC game. Positions on the team are coach, driver and human player.

TEAM SPIRIT AWARD sponsored by CHRYSLER: the Team Spirit Award celebrates extraordinary enthusiasm and spirit through exceptional partnership and teamwork furthering the objectives of FIRST.

TELEOPERATED PERIOD: at the beginning of the teleoperated period the operator console controls are activated and drivers may remotely control their robots. The drivers continue to teleoperate their robots for the remainder of the match. The teleoperated period ends when the arena timer displays zero seconds. This also indicates the end of the match.

TIMEOUT: a period of up to six minutes, which teams can use to pause elimination match progression. Each alliance is granted one, and only one, timeout.

WEBSITE AWARD: the Website Award recognizes excellence in student-designed, built, and managed FIRST team websites.

WOODIE FLOWERS FINALIST AWARD: The Woodie Flowers Finalist Award celebrates effective communication in the art and science of engineering and design. Dr. William Murphy founded this prestigious award in 1996 to recognize mentors who lead, inspire, and empower using excellent communication skills. The Woodie Flowers Award is presented to an outstanding engineer or teacher participating in the robotics competition who best demonstrates excellence in teaching science, math, and creative design.

YELLOW CARD: a warning of egregious robot or FRC team member behavior.