



TOURNAMENT RULES AND PROCEDURES

REVISION 2008.0

Significant changes from 2007.0 and 2006.0 in blue text

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PART 1: TOURNAMENT RULES

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1.0 INTRODUCTION

1.1 BOTS IQ

BotsIQ is an educational program that promotes math, science, engineering expertise, competitive sportsmanship and creativity among teams of students. These skills are promoted through the design and creation of competitive robots.

1.1.1 TEAMS

BotsIQ contests are structured as a Team activity. On a Team, multiple students collaborate under the guidance of one or more adult supervisors, advisors and mentors.

1.1.2 COMPETITION CLASSES

There are three competition classes: The Large Class robots, the Mini Class robots and the TableTop bots.

1.1.3 DIVISIONS

Teams compete in two divisions: Middle/High School and College/University. Student teams compete within their division, and not against the other division.

1.2 ROBOT SAFETY

The safety of all concerned must be foremost at all times during the design, construction, testing, shipping, preparation, maintenance, staging, activation, competition, deactivation and any other activity involving a BotsIQ robot. Common sense and safety awareness is stressed in all areas of construction and operation.

Building and operating competition robots can be dangerous. A Team must not build or operate a BotsIQ robot unless it is qualified to do so, and has the supervision of a qualified adult. Each BotsIQ Team is solely responsible for its robot whether or not it complies with the rules of BotsIQ Inc. or has been inspected for safety or otherwise by BotsIQ Inc. Each BotsIQ Team's responsibility includes all matters of safety, condition, design, conformity to law, operation, merchantability and fitness for use and for any particular purpose.

1.3 DEFINING DOCUMENTS AND INFORMATION

Multiple documents and information sources define the requirements for participation in BotsIQ. All Tournament participants have to be familiar with the contents of these documents and sources.

1.3.1 PARTICIPANT AGREEMENT

The BotsIQ Participant Agreement is a legal document that is the primary Tournament entry document, and must be submitted by each BotsIQ Team in order to enter a BotsIQ competition. The BotsIQ Participant Agreement describes a Team's rights and their relationship with BotsIQ Inc. and is used to document the name and type of participation of each Team member.

The Participant Agreement is part of the online registration system and becomes available when registration opens for a BotsIQ event.

1.3.2 TECHNICAL/OPERATIONAL DOCUMENTS

Additional documents are:

- a. This BotsIQ Tournament Rules and Procedures ("TR&P") document defines the rules and procedures for a safe, fair and efficient BotsIQ Tournament.
- b. The BotsIQ Large Class Technical Regulations ("Large Class Tech Regs") define the requirements specific to the design and construction of a Large Class BotsIQ robot.
- c. The BotsIQ Mini Class Technical Regulations ("Mini Class Tech Regs") define the requirements specific to the design and construction of a Mini Class BotsIQ robot.
- d. The BotsIQ TableTop Rules define arena design, robot design and game play rules for the TableTop robots.

There may be other BotsIQ documents that provide additional information.

1.3.3 BOTS IQ INTERNET INFORMATION

The BotsIQ website contains general information on BotsIQ and also makes available copies of BotsIQ documents.

BotsIQ Inc. may send e-mail messages to current and former BotsIQ Teams to provide event and/or competition-specific information on a timely basis.

1.3.4 TEAM RESPONSIBILITY

It is the sole responsibility of every BotsIQ Team to verify that they are referencing the last-updated version of any BotsIQ document available on the BotsIQ website. It is also each Team's responsibility to check their e-mail regularly.

1.4 GENERAL DEFINITIONS

1.4.1 BOTS IQ INC.

BotsIQ Inc. ("BotsIQ") refers, collectively, to the incorporated entity that owns and manages BotsIQ, and all its officers, employees and authorized agents.

1.4.2 BOTS IQ EXECUTIVE OFFICERS

"BotsIQ Executive Officers" have jurisdiction on all BotsIQ matters, as follows:

- a. **BotsIQ President** – Has overriding authority on all BotsIQ matters.
- b. **BotsIQ CEO** – Has overriding authority on all BotsIQ matters, unless specifically overridden by the BotsIQ President.
- c. **BotsIQ COO** – Has overriding authority on all BotsIQ matters, unless specifically overridden by the BotsIQ CEO or President.
- d. **Authorized Proxy** – The BotsIQ President or CEO may authorize certain persons to have specific Executive Officer rights for a specific time period.

1.4.3 BOTS IQ OFFICIALS

"BotsIQ Officials" are authorized employees or agents of BotsIQ Inc., and have overlapping jurisdictions, as follows:

- a. **Check-in Staff** – Robot check-in procedures.
- b. **CrewBots** – Arena and Staging Area operations.
- c. **Radio Coordinator** – Use of radio devices anywhere in the Tournament.
- d. **Judges** – Rules interpretation and winner determination for certain Matches.
- e. **Pit Coordinators** – Pit, Queuing and Staging area operations.
- f. **Production Coordinator** -- All third-party vendor and service operations.
- g. **Referees** – Arena operations during Matches. Certain rule interpretations.

- h. **Transmitter Impound Personnel** – Transmitter Impound operations.
- i. **Safety/Tech Inspectors** – Safety/Tech, Testing, Arena and Pit Area operations.
- j. **Security** – Access to all areas.
- k. **Team Coordinator** – All Team records, fees and documentation.
- l. **Tournament Scoring & Scheduling** – Timing and scoring of all Matches, Match postponements and Forfeits.

1.5 RULES INTERPRETATION

Interpretation of all BotsIQ rules, procedures and regulations are governed as follows:

1.5.1 APPLICABILITY

These Tournament Rules and Procedures supercede all previous published rules and regulations regarding BotsIQ Tournament operations.

1.5.2 OVERLAPPING/CONFLICTING REQUIREMENTS

A reasonable effort is made to ensure that the requirements in all BotsIQ documents are self-consistent. However, in case of an inconsistency:

- a. If any requirements appear to overlap, then the effective requirement will be the combination of all of the overlapping requirements.
- b. If any requirements appear to conflict, then the effective requirement will be the most restrictive of the conflicting requirements.

1.5.3 CHANGE PUBLICATION

Any changes or special interpretations of these Tournament Rules and Procedures will be published on the official BotsIQ website.

1.5.4 EXECUTIVE OFFICER AUTHORITY

BotsIQ Executive Officers have the final authority over the interpretation, implementation and extension of the rules, procedures and regulations in this and all other BotsIQ documents.

At the discretion of BotsIQ Executive Officers, additional regulations and requirements may be applied to any and all BotsIQ robots at any time.

1.6 CONTACTING BOTS IQ

For questions, comments, requests and clarifications regarding the rules, regulations and procedures in this or other BotsIQ documents, contact BotsIQ Inc. at the following:

BotsIQ Inc.

7865 SW 21 Terrace
Miami, FL 33155

Phone: 305.264.1488

Fax: 305.267.2208

Questions: info@BotsIQ.org

Website: <http://www.BotsIQ.org/>

2.0 GENERAL TOURNAMENT RULES

2.1 BOTS IQ TOURNAMENT

In a BotsIQ Tournament, different robots compete in three different classes, as described below.

2.1.1 LARGE CLASS

The Large Class BotsIQ robots are allowed a maximum weight of 120 lb. These robots compete one-on-one, with the intent to disable their opponent.

Large Class robots compete in a 32 foot square enclosed arena, raised 2 feet off the ground. The Arena may employ certain hazards and obstacles that can damage and/or disable a robot. Competitors are allowed and encouraged to use the hazards and obstacles to their advantage.

2.1.2 MINI CLASS

The Mini Class BotsIQ robots have a maximum 15 lb. weight, and also compete one-on-one, with the intent to disable their opponent. The Tech Regs for a "Mini" class BotsIQ robot are generally a subset of the Tech Regs for the Large Class BotsIQ robots, with additional restrictions on design features.

Mini Class BotsIQ robots may compete in the main Arena, or in a smaller 12' x 12' "Mini-Arena". The Mini-Arena does not contain any hazards.

2.1.3 TABLETOP BOTS

The TableTop bots are maximum 12 lb. weight robots that perform special tasks on an open "table-top" arena. The design requirements for a TableTop bot can be very different than those for BotsIQ combat robots.

TableTop bots compete on an open (usually horizontal) surface that contains various obstacles.

2.1.4 TOURNAMENT COMPOSITION

At a BotsIQ Tournament, Large Class, Mini Class and TableTop matches may be held simultaneously.

Tournaments may be structured as either single or double elimination matches, depending upon several factors. BotsIQ will notify teams of the type of matches prior to the Tournament.

2.2 BOTS IQ TEAMS

2.2.1 TEAM DEFINITION

A BotsIQ "**Team**" is defined primarily by its Team name and its affiliated school or youth organization. A Team is composed of student competitors and one or more Adult Supervisors, Technical Advisors and Chaperons, as defined below.

There are two separate divisions of Teams, one for Middle/High School students and the other for College/University students. Middle/High School division Teams compete only with each other and not with the College/University teams.

2.2.2 QYO TEAMS

A Qualified Youth Organization ("QYO") is a Middle school, High school, vocational school or a legally established youth organization. The QYO is the entity that enters Middle/High school student Teams into a BotsIQ competition.

There is no stated limit to the number of Teams that may be entered by a QYO. However, any Team can only be affiliated with a single QYO.

The QYO Teams can enter BotsIQ robots in the Mini Class and the Large Class, as well as the TableTop class. A QYO Team competes only with other QYO Teams.

2.2.3 PSEI TEAMS

College and University Teams are collectively known as Post-Secondary Educational Institution ("PSEI") Teams. PSEI Teams compete against one another, and not against QYO Teams.

There is no stated limit to the number of Teams that may be entered by a PSEI. However, any Team can only be affiliated with a single PSEI. A PSEI Team competes only with other PSEI Teams.

[PSEI Teams are not currently eligible to compete in the TableTop bots competition.](#)

2.2.4 QYO TEAM COMPOSITION

A QYO Team is composed of the following:

- a. At least **three** students, who are between the ages of **11 years** and **18 years** old, inclusive, who are members of the same QYO.
- b. At least **one**, but not more than **two** Adult Supervisors who are at least **21 years** old. Each Adult Supervisor is responsible for the Team and must be affiliated with the Team's QYO.
- c. Optionally, two additional non-student Technical Advisors at least **18 years** old, who need not be affiliated with the Team's QYO.

Other adult Mentors may advise and assist the Team, but they cannot be Team members.

2.2.5 PSEI TEAM COMPOSITION

A PSEI Team is composed of the following:

- a. At least **three** college or other post-secondary school students. These student members must all attend the same PSEI.
- b. At least **one**, but not more than **two** Adult Supervisors who are at least **21 years** old and are instructors at the same PSEI as the student Team members.
- c. Optionally, **two** additional Technical Advisors at least **18 years** old, who need not be affiliated with the PSEI.

Other adult Mentors may advise and assist the Team, but they cannot be Team members.

2.2.6 TEAM MEMBER RESTRICTIONS

Teams are generally not allowed to share members.

- a. No student may be a member of more than **one** Team.
- b. No Adult Supervisor may be a member of more than **one** Team.
- c. A Technical Advisor may be a member of up to **two** different Teams.

2.2.7 ENTRIES PER TEAM

A QYO Team may enter a robot in each of the Large, Mini and TableTop classes. That is, a QYO Team can enter up to three robots, as long as they are in different classes.

[A PSEI Team may enter a robot in each of the Large or Mini classes. That is, a PSEI Team can enter two robots, as long as they are in different classes.](#)

2.2.8 TEAM IDENTIFICATION CARDS

Each Team member will be issued a personalized Team Identification Card ("ID Card"). Team members are required to wear their ID Cards at all times during a Tournament. ID Cards are non-transferable and non-exchangeable between Teams or Team members.

2.2.9 BOTS IQ INC. RIGHTS

BotsIQ Inc. reserves the right to reject any Team, or any entry from any Team for any reason.

2.3 TEAM MEMBERS

2.3.1 COMPETITOR DEFINITION

A "**Competitor**" is a student member of a QYO or PSEI who has actively contributed to the design, construction, testing, support or promotion of the Team's robot.

A Competitor can be a member of **one** Team only.

Competitors are the only ones allowed to operate a robot in competition.

2.3.2 COMPETITORS ATTENDING TOURNAMENT

At least **two** competitors per Large/Mini robot from each Team must attend the Tournament. That is, if a Team is entering both a Mini Class and a Large Class robot, at least four competitors must attend.

There is no restriction on the number of attending Competitors and TableTop bots.

2.3.3 ADULT SUPERVISORS

An "**Adult Supervisor**" is a person who supervises and takes responsibility for the actions of the Team's Competitors. An Adult Supervisor must have read and fully understood all relevant BotsIQ documents and communiqués.

A Team is required have a single Primary Adult Supervisor. Prior to the Tournament, this person is the main contact individual for e-mail or other notices regarding the Tournament. During the Tournament, this person is the primary contact for all Team affairs.

A Team may have a single Secondary Adult Supervisor. This person is an alternate contact individual when the Primary Adult Supervisor cannot be contacted, or is otherwise unavailable.

An Adult Supervisor can be a member of **one** Team only.

2.3.4 TECHNICAL ADVISOR

A "**Technical Advisor**" ("Tech Advisor") is a person who provides technical advice to the BotsIQ Team. The Tech Advisor must not be attending a Middle or High School.

The Primary or Secondary Adult Supervisor may also serve as a Tech Advisor, provided that they are a Tech Advisor only to their one Team.

A Tech Advisor can be a member of **two** different Teams.

2.3.5 CHAPERON

A "**Chaperon**" is a person of age **21 years** or older who accompanies a Team's Competitors to a Tournament, but is neither an Adult Supervisor nor a Tech Advisor.

The Chaperon is affiliated with the QYO or PSEI, rather than a specific Team.

2.3.6 MENTORS

A "**Mentor**" is any person affiliated with a Team who provides advice and assistance to Team members, but is not a member of any Team.

2.3.7 MAXIMUM MEMBERS PER TEAM

There is no fixed limit to the maximum number of members per Team, provided that all Team members are Competitors, Adult Supervisors, Tech Advisors or Chaperons.

If the total number of Team members will exceed **twenty**, the Team entry will require the advance approval of BotsIQ Inc.

2.3.8 TEAM MEMBER PARTICIPATION

A primary goal of BotsIQ is to encourage hands-on participation of the student Team members, with a minimum of adult intervention. Thus:

- a. Each of the Team's Competitors must have actively participated in the design, assembly, testing, promotion and/or support of the Team's robot.
- b. The Adult Supervisors, Tech Advisors and Mentors are expected serve in supervisory and advisory capacities only, and should not physically participate in the assembly, testing, promotion and/or support of the robot.
- c. Where necessary or prudent for reasons of safety or experience, Adult Supervisors, Tech Advisors, Mentors, or other entities (e.g., machine shops) may fabricate basic components for the Team's robot. However, Competitors should participate in parts fabrication whenever possible.

2.3.9 TEAM MEMBER RESPONSIBILITIES

All Teams at a BotsIQ Tournament have certain duties and responsibilities.

- a. Team members must follow the verbal and/or written instructions of BotsIQ Executive Officers and BotsIQ Officials at all times.
- b. Teams have to know the BotsIQ Regulations, Rules and Procedures as defined in this and other official BotsIQ documents.
- c. The appropriate Team members are responsible for showing up on time for all meetings, inspections, ceremonies or other events that require their participation.
- d. Teams are responsible for informing the appropriate BotsIQ Officials of any problems with radios, the robot, or any other factor that could affect their robot's Match participation.
- e. Teams are responsible for knowing when their Match will take place, and for having someone available at their Pit Table at least **60 minutes** in advance of the scheduled Match time.

Note: There will be multiple ways for Teams to learn approximately when their Matches are scheduled. However, some Matches cannot be scheduled until another Match's outcome has been determined.

2.4 TEAM ELIGIBILITY

To compete in a BotsIQ Tournament, Teams must complete, submit and, as necessary, sign any and all entry and related documents as requested by BotsIQ Inc.

2.4.1 ENTRY DOCUMENTS

Entry documents are released at specific times prior to BotsIQ Tournaments. Consult the BotsIQ website for further information.

2.4.2 ENTRY FEES

Prior to competition registration, BotsIQ Inc will post entry fees both online and in all entry documentation. All Teams are required to fully pay the appropriate entry fees when submitting their BotsIQ Participant Agreement. Any additional fees that may result from changes in their BotsIQ status may be paid when checking-in at the event.

2.4.3 IDENTIFICATION PHOTOS

Along with the Participant Agreement, a Team must provide recent photos of each Team member. The preferred method is to send digital .JPG photos by e-mail. However, passport-sized photo prints may be sent by regular mail. The photos are used on the Team ID Cards.

2.4.4 LARGE-SIZE ROBOTS

If the robot has a size greater than **4 x 5 feet**, it may require special consideration when assigning the Pit Area location. If the length and width of the robot exceeds these limits, please notify BotsIQ Inc. when submitting the Participant Agreement.

2.4.5 PROOF OF VIABILITY

If a robot has not previously competed in an official BotsIQ Match, BotsIQ Inc. may require that the Team prove, in advance of the Tournament, that the robot in fact exists and is capable of competing.

2.5 ROBOT ELIGIBILITY

2.5.1 BOTS IQ SPECIFIC

In order to be entered in a BotsIQ Tournament, a BotsIQ robot must have been specifically constructed for the purpose of entering BotsIQ, and must not have previously competed in any nationally televised robotic tournament.

Constructing a robot using parts from other robots is allowed, provided that the resulting robot is substantively different than any robot from which parts have been used.

2.5.2 ROBOT COMPLETENESS

A Large, Mini or TableTop class robot, including its radio control system, must not contain any parts from any other robot that is still eligible to compete in Tournament elimination Matches.

Thus, a robot may be repaired utilizing parts from another robot if that other bot has been eliminated from BotsIQ Match competition.

2.5.3 TRANSFER OF OWNERSHIP

A BotsIQ robot may be transferred from one BotsIQ Team to another, provided that BotsIQ Inc. is notified of the change at least **4 weeks** prior to Tournament entry.

2.5.4 ROBOT NAME CHANGE

A BotsIQ robot's name may be changed, provided that the change is clearly noted on the appropriate entry form.

2.5.5 BOTS IQ INC. RIGHTS

Due to possible arrangements with marketing and sponsorship organizations, BotsIQ Inc. reserves certain rights:

- a. BotsIQ Inc. can require removal of any sponsor's logos, signage or other materials that it determines to be offensive or in conflict with BotsIQ, its sponsors or its affiliates' sponsors.
- b. BotsIQ Inc. has the future right to modify or define any sponsorship display specifications and regulations.

2.6 ROBOT RETIREMENT

Under certain conditions, a BotsIQ robot may be "Retired" and prohibited from further BotsIQ competition.

2.6.1 RETIREMENT CONDITIONS

A BotsIQ robot will be Retired if either of the following occurs:

- a. The same robot receives **two** First-Place BotBout wins in BotsIQ Tournaments.
- b. The same robot receives **one** First-Place and **two** Second-Place BotBout wins in BotsIQ Tournaments.

Wins in Grudge Matches or Robot Rumbles will not count toward Retirement.

2.6.2 CHANGED ROBOT DETERMINATION

If the robot is changed sufficiently between Tournaments, it is not considered to be the "same" robot and therefore is not subject to the requirements of "2.6.1 RETIREMENT CONDITIONS".

In all matters of decision whether a robot has changed sufficiently, BotsIQ Inc. will render a judgment and reserves the final right of determination.

The general criteria for judging whether or not a robot has changed are defined below.

2.6.3 CHANGE CRITERIA

The primary features that define a BotsIQ robot are its mobility (drive) system and its weapons. Thus, a robot may qualify as being changed if one or more of the following are done:

- a. The drive system is converted from wheeled to non-wheeled, or from non-wheeled to wheeled. For example, all drive wheels are replaced with legs.
- b. Rubber drive wheels are completely replaced by metal tank treads, or vice versa. This change should require either a new chassis or significant chassis modification.
- c. A primary weapon is added to a robot that previously used no active weapon. For example, a "pusher" bot has a rotating drum weapon added.
- d. The primary weapon type system is changed. For example, a lifter mechanism is replaced by a hammer.
- e. The power system for the primary weapon is changed. For example, a gas-powered spinning disk is replaced with an electric spinning disk.

If a robot has two or more active weapons of sufficient power, then each of those weapons may be considered to be a "primary weapon", and all will have to be changed.

2.6.4 INSUFFICIENT CHANGES

Certain changes are not individually sufficient to qualify a BotsIQ robot as "changed". These are:

- a. Robot name change.
- b. Exterior appearance changes.
- c. Changing the number, size or location of the drive wheels.
- d. Changing the motors, gearboxes, chains, etc. in the drive system.
- e. Changing, adding or removing a secondary weapon.
- f. Changing, adding or removing a self-righting system.
- g. Changing the chassis design or materials.
- h. Changing, adding or removing armor.
- i. Conversion to or from a MultiBot.
- j. Changing the number of segments on a MultiBot.

While each the above changes is not sufficient individually, an aggregate of those changes, if sufficiently numerous and significant, may qualify a BotsIQ robot as being changed.

2.7 RESTRICTED/PROHIBITED ACTIVITIES

All Team members are expected to act in a safe and reasonable manner at a BotsIQ Tournament. Certain activities are restricted or not permitted, and violation can result in the Disqualification of the robot and/or the Expulsion of one or more Team members.

2.7.1 CAMERAS AND RECORDING DEVICES

Still cameras, video cameras, audio recorders and recording devices of any kind are allowed to be used in the Pit Area.

However, unless otherwise specifically authorized by BotsIQ Inc., BotsIQ Team members cannot directly or indirectly, videotape, photograph or otherwise record any of the actual Tournament Matches.

2.7.2 NO UNRULY BEHAVIOR

Fighting, belligerence, or other unruly behavior, including abusive physical contact with any BotsIQ Official, will not be tolerated and will result in the immediate and unconditional Expulsion of the offending person or people from the Tournament.

2.7.3 No SCOOTERS, BICYCLES, SKATEBOARDS, SKATES

Scoters, bicycles, skateboards and skates cannot be used or even brought into the Pit Area. Their use is also prohibited in the Testing, Fueling, Welding/Grinding, Queuing or Staging Areas.

2.7.4 RUNNING AND PLAYING

Running in the Pit Area, except in an emergency, is not allowed. Running while carrying a charged pneumatic tank, or any sharp or otherwise dangerous part, may result in the revoking of the Team ID Card of the offender.

Engaging in horseplay or tossing items in the Pit Area is also not allowed.

2.7.5 SMOKING RESTRICTED

Smoking is prohibited in the Pit Area and Fueling Area. Depending on the venue, smoking may be prohibited in any indoor area.

2.7.6 No ALCOHOL AND DRUGS

The consumption/use of Alcohol or illegal drugs is strictly prohibited anywhere at a BotsIQ Tournament.

2.7.7 No PETS

No biological pets of any kind are allowed anywhere at a BotsIQ Tournament.

2.8 SECURITY CAMERAS

Teams are hereby notified that security cameras may be recording activities anywhere at the tournament venue at any time before, during or after the event.

3.0 PIT AND TESTING AREA RULES

3.1 THE PIT AREAS

3.1.1 PIT AREA DEFINITION

The "**Pit Area**" refers primarily to the tables at which Robots and associated auxiliary equipment are prepared, maintained and stored during a Tournament.

However, for purposes of restricted access, the Pit Area also encompasses all areas where robot testing, preparation, maintenance and/or staging are performed.

3.1.2 PIT CREW DEFINITION

The "**Pit Crew**" members are, by definition, those Team members who are currently attending to the Team's robot in the Pit Area and other associated areas. The Pit Crew includes student Team members as well as Adult Supervisors and Tech Advisors.

3.1.3 PIT TABLE

The "**Pit Table**" refers to the specific table in the Pit Area that is assigned to a Team's robot. It also may refer to the floor area under and the aisle adjacent to the table.

3.1.4 PIT TABLE USAGE

If a Team is entering multiple robots, BotsIQ will attempt to locate all of the Teams Pit Tables adjacent to one another.

A Team must notify BotsIQ in advance if they wish to be located near certain other Teams. Pit Table assignment is based on multiple factors and no guarantee can be made about specific locations.

No Team may use an empty adjacent Pit Table until Check-In has been closed for all bots at the Tournament. If such an empty table becomes available, the Teams on either side of the empty table may each use half of the table, unless one Team agrees to allow the other Team full use.

3.1.5 PIT ACCESS

For a Team member to gain access to the Pit Area, he or she is required to show their Team ID Card. Family and friends of Team members are not allowed in the Pit Area, unless the friend or family member has a Team ID Card.

3.1.6 TEAM MEMBER AVAILABILITY

A Team that is still eligible to compete at a Tournament either must have a person available at their designated Pit Table, or must leave a note clearly visible on the top of their Pit Table indicating where key Team members may be found.

3.2 PIT SAFETY REQUIREMENTS

It is expected that BotsIQ Pit Crew members will practice safety and exhibit common sense at all times. However, certain specific safety requirements must be adhered to in the Pit Area:

3.2.1 EYE/FACE PROTECTION

All persons standing near or working on a robot in the Pit Area must wear shatterproof safety glasses or a facemask.

Corrective-lens eyeglasses are not considered to be a substitute for safety glasses unless the eyeglasses have shatterproof lenses and some degree of side-entry protection.

It is strongly recommended that all persons in the Pit Area wear safety glasses at all times, even if they are not standing near or working on a robot.

3.2.2 ADULT SUPERVISION

When any QYO Team member is working on a robot in the Pit Area, at least one of the Team's Adult Supervisors or Tech Advisors has to be observing the working student(s).

3.2.3 RUNAWAY PREVENTION

All robot motion system wheels/tracks/legs/etc. must be suspended in the air, with a clearance of at least **one-quarter inch**, such that the robot is incapable of translational motion even if its motion system is Activated and moving.

3.2.4 PROTECTIVE COVERS/RESTRAINTS

All sharp objects and edges must have the Safety Covers installed, all pinch hazards must be blocked, and any Safety Restraints must be installed.

The only exception is when a Pit Crew member is working on a specific bot part that requires removal of a cover, block or restraint.

3.2.5 NO WELDING/GRINDING/SANDING

No welding or power grinding/sanding of any kind can be done in the Pit Area. This includes grinding and sanding of plastic and fiber composite materials (e.g. Lexan, fiberglass, Kevlar, etc.).

Drilling holes at a Pit Table is allowed, provided that any shavings stay in the Pit Table area, and are cleaned up immediately after the drilling operation is complete.

3.2.6 NO ROBOT ACTIVATION

Under no circumstances can a robot be activated in the Pit Area.

Any switch which controls the primary-power electrical system must not be turned on in the Pit Area. The primary-power system may only be activated in the competition Arena or in a Testing Area

If the robot employs pneumatic or hydraulic systems, the actuation system must not be pressurized in the Pit Area. That is: all Shut-Off valves must be closed and all Pressure-Relief valves must be opened.

3.2.7 NO RADIO ACTIVATION

Under no circumstances can a remote control transmitter be activated in the Pit Area. This includes all types of radios, including IFI and Spektrum.

3.2.8 NO FLAMMABLE FUELS

No liquid refueling containers may be stored in the Pit Area. There must be no refueling of a robot in the Pit Area.

3.2.9 ROBOT PRESSURE TANKS

Pressurized primary pneumatic storage tanks for use in a robot are allowed in the Pit Area, provided that each tank:

- a. Is completely undamaged, as defined in "5.7.5 PNEUMATIC SYSTEMS".
- b. Is not pressurized higher than the limit specified in the BotsIQ Technical Regulations.
- c. Has an attached pressure relief valve or a burst disk.
- d. Is either properly installed in a robot or is placed in a container that prevents it from moving.

All pneumatic tanks in the Pit Area, whether discharged or not, must either be installed in a robot or placed in a container. There must be no pressure storage tanks lying about loose at any time.

3.2.10 CHARGING SUPPLY TANKS

Supply tanks used for pneumatic tank charging are specifically prohibited in the Pit Area.

Improper use, handling or storage of pneumatic tanks can result in Disqualification of the entire Team and its robot.

3.3 WELDING/GRINDING AREA

All welding and grinding must be done in the Welding/Grinding Area specifically set aside for those purposes. When working in the Welding/Grinding Area, the following procedures must be followed:

- a. All persons in the Welding/Grinding Area must wear safety glasses or face masks.
- b. If any student Team member is working in the Welding/Grinding Area, at least one of the Team's Adult Supervisors or Tech Advisors must be observing the working student(s).
- c. When grinding metal, the part and the grinding tool must be positioned such that no sparks are thrown toward another person, or outside the Welding/Grinding Area.
- d. When arc welding or torch-cutting, darkened welder's goggles or a darkened face shield must be used by the welder and by anyone observing.
- e. Any part being welded or cut must be sufficiently shielded such that persons outside the Welding/Grinding Area cannot directly view the welding or cutting.

3.4 ROBOT TESTING

Robots may only be tested in specific areas and only when supervised by BotsIQ personnel.

3.4.1 TESTING AREAS

Specific areas for robot testing purposes will be provided at the Tournament site. Each Testing Area will be supervised by a BotsIQ Official. This Official will control entry and exit from that Testing Area and determine what the type of testing may be safely performed.

In addition, a designated BotsIQ Safety/Tech Inspector may in some circumstances choose to allow a robot to be tested in a safe area away from the standard Testing Areas. During such testing, the robot and supporting personnel must be under the direct observation and supervision of the Inspector at all times.

Unauthorized or unsupervised testing of a robot at the Tournament site can result in the immediate Disqualification of the robot and its Team.

3.4.2 RADIO USE FOR TESTING

When using a Testing Area, Teams must comply with all radio-use and Transmitter Impound procedures as defined in "4.0 RADIO OPERATION RULES".

3.4.3 ROBOT TRANSPORT

When transporting any robot to or from the Testing Area:

- a. The robot must be moved on a rolling dolly or cart. Driving or hand carrying is prohibited.
- b. All Safety Covers and Restraints must be installed on the robot.
- c. The robot must be completely Deactivated.

Absolutely no riding or carrying of passengers on robots is permitted at any time. Violators may have their robot(s) and Team Disqualified.

3.4.4 TESTING SAFETY

When testing a robot, Team members participating in the test must:

- a. Wear approved safety glasses or a facemask.
- b. Stand in a protected area.
- c. Make sure any bystanders are protected also.
- d. Comply with any and all requests of BotsIQ Officials.

3.5 FUELING AREA

All liquid fueling must take place in a Fueling Area specifically set aside for that purpose. There must be no smoking, sparks or fires of any kind in Fueling Area.

3.6 PRESSURE REFILL STATION

BotsIQ will provide official Nitrogen pneumatic refilling equipment for robots using stored-pressure pneumatics. All robot pneumatic storage pressure tanks should be equipped with, or have an attachment for, the filling adapter specified in the BotsIQ [Large Class Technical Regulations](#).

3.7 TRASH, DEBRIS AND HAZARDOUS WASTE

For the safety of all, Team members should at all times minimize the amount of trash and debris at their Pit Table location(s). In addition, when a Team vacates a Pit Table, they have to remove all debris and other items on the table, on the floor beneath and beside the table, and on any walls adjacent to the table.

BotsIQ will provide specific containers for the disposal of hazardous materials. These must be used at all times when disposing of fuels, oil, hydraulic fluid and damaged batteries.

Disposal in other areas in violation of local ordinances and/or state and federal codes can result in the Disqualification of a Team and its robot.

4.0 RADIO OPERATION RULES

4.1 UNAUTHORIZED USE

With regard to any radio use, Teams must at all times follow the instructions of the Radio Coordinator, or any other BotsIQ Official.

All radio control equipment must at all times comply with all the requirements and restrictions of the appropriate BotsIQ [Technical Regulations](#) document, including frequency used, and control type.

The unauthorized or improper use of a radio control transmitter is grounds for Disqualification of a robot or Expulsion of Team members.

4.2 ALLOWED RADIO SYSTEMS

As specified in the BotsIQ [Large Class Technical Regulations](#), all Large Class robots have to use either the Spektrum or the IFI Robotics remote-control systems.

Mini Class robots and TableTop bots are encouraged to use Spektrum or IFI equipment, but are also allowed to use the old-style single-frequency FM R/C equipment.

4.2.1 IFI TEAM CODES

To prevent interference between IFI transmitters, each Team using IFI equipment will be assigned a unique Team code at Tournament Check-In. This code must be entered on the Team's IFI transmitter and receiver, and left unchanged during the Tournament, unless otherwise requested by a BotsIQ Official.

4.3 TRANSMITTER IMPOUND

Transmitter Impound is used to prevent radio interference from the operation of certain types of radio control equipment.

4.3.1 IMPOUND RADIO TYPES

Mini Class and TableTop robots may use single-frequency FM "hobby" R/C radios. However, the transmitters of such radios are subject to Transmitter Impound procedures for the duration of the Tournament.

Robots using IFI or Spektrum equipment are generally not subject to the Impound procedures. However, BotsIQ reserves the right to enforce Impound procedures for any and all radios, regardless of type.

4.3.2 IMPOUND AT CHECK-IN

Any transmitter subject to Impound procedures must be turned in to Transmitter Impound immediately after the participating Team checks in to the Tournament.

When the transmitter is first brought to Impound, the Team will be issued one Transmitter Impound Card (TIC) for each transmitter impounded. The TIC has to be exchanged for the transmitter each time the transmitter is checked out. The TIC is exchanged again when the transmitter is checked back in.

Also, each transmitter or module will be tagged with an identification card containing the robot and Team information. When the transmitter/module is checked out, it is the Team's responsibility to make sure that the identification tag stays with the transmitter at all times.

4.3.3 FREQUENCY CLIPS

To prevent interference between radios, a unique antenna clip is provided for each of the frequency channels used by single-frequency R/C equipment.

Before any such R/C transmitter is turned on, the operators must be certain that the appropriate frequency clip is attached to the transmitter antenna. This clip must remain attached at all times while the transmitter is turned on.

Unless otherwise authorized by a BotsIQ Official, use of a single-frequency FM R/C transmitter without a frequency clip can result in Disqualification.

4.3.4 IMPOUND SECURITY

To protect the valuable radio equipment of BotsIQ Teams:

- a. Only authorized personnel are allowed in the Transmitter Impound area. All transactions between Team members and the Transmitter Impound should be accomplished at the specific locations designated for that specific Tournament.
- b. BotsIQ Officials may, if necessary, allow selected Team members into the Transmitter Impound area for the specific purpose of locating and retrieving a Team's transmitter.
- c. Any unauthorized entry into the Transmitter Impound area by any Team member is grounds for Disqualification of the Team and their bots.

4.3.5 MISREPRESENTATION

Deliberate misrepresentation of any radio equipment to Transmitter Impound will not be tolerated and will result in the immediate and unconditional Expulsion of the offending person's entire Team from the Tournament.

4.4 IMPOUND PROCEDURES

During a tournament, the following Impound procedures will be used:

4.4.1 TESTING

If a transmitter is needed for testing, a Team member brings the transmitter's TIC to Transmitter Impound to exchange for the transmitter. Each transmitter will have a frequency clip in addition to the identification tag. Both items must remain attached to the transmitter at all times while it is checked out of Impound.

Transmitters must be returned to Transmitter Impound immediately upon completion of testing.

4.4.2 SAFETY/TECH INSPECTION

During the Functional Test part of the Safety/Tech Inspection, the Safety/Tech Inspector and/or other BotsIQ personnel will, if necessary, coordinate the transfer of transmitters and frequency clips for the robot to be inspected.

4.4.3 PRE-MATCH

Competitors queued for an upcoming Match will be asked by Impound personnel for their TICs for the transmitters they will need during their Match. The Impound Personnel will then retrieve the required transmitter and give them to the waiting Competitor.

However, if the same frequency is being used for a more imminent Match, the Competitor must wait until the frequency becomes available. In some cases, this may not be until just before the Match. The Impound personnel will handle transfer of transmitters and frequency clips.

4.4.4 POST-MATCH

After the Match is complete, Impound personnel will take the Team's transmitters and return the TICs. It is the Team's responsibility to make sure they get their TICs back after a Match.

4.4.5 CHECKOUT PRIORITY

If two or more Teams want to use radios on the same frequency, priority for checkout from Transmitter Impound is assigned as follows:

- a. First priority is for a Team entering a Match competition.
- b. Second priority is for a Safety/Tech Inspection.
- c. Third priority is for other robot testing by a Team.

If two or more Teams want to use their transmitters at the same time, transmitters will be checked-out in the order they are requested. However, Impound may place a limit on the length of time a Team may use their transmitter.

4.4.6 PROCEDURE CHANGES

Changes, exceptions or further restrictions may be made to the Transmitter Impound procedures at the discretion of BotsIQ Officials, as needed for safety or other practical reasons. These changes may be announced at any time prior to or during the Tournament.

4.5 TETHERED TESTING

BotsIQ Officials may allow Radio Control equipment to be used for testing using an electrical tether or factory-provided direct connect cable between the transmitter and receiver. This will only be allowed provided that:

- a. There is a positive method of locking out any transmitter radio broadcast while using the tether.
- b. Operation with the tether does not require putting any body part in the path of any robot weapon system.
- c. The robot is tested in a designated Testing Area following all the requirements specified in "3.4 ROBOT TESTING".

5.0 ROBOT SAFETY RULES

5.1 THE SAFETY/TECH INSPECTION

To be eligible to compete in a BotsIQ Tournament Match, each robot and any auxiliary systems must pass a Safety and Technical Inspection ("Safety/Tech Inspection").

5.1.1 INSPECTION PROCEDURE

Refer to the description of the Safety/Tech Inspection in the Procedures part of this document. A description of robot preparation for Safety/Tech Inspection is given in Part 3.

5.1.2 SAFETY COVERS AND RESTRAINTS

All Safety Covers and Restraints must be installed on the robot for the Safety/Tech Inspection. The Covers and Restraints may be temporarily removed at the direction of a Safety/Tech Inspector, when necessary for weigh-in or weapons inspection.

5.1.3 SAFETY ADMINISTRATOR

The Safety Administrator (SA) is the BotsIQ Official responsible for the scheduling of robots for Safety/Tech Inspection and the recording of Inspection results. The SA is also the contact point for any questions or disagreements about the inspection scheduling and procedures.

5.1.4 SECURE INSPECTION

If a Team wishes to protect certain features of their robot from scrutiny by competitors, they may request that Safety/Tech personnel inspect their bot in a private or secure location. Safety/Tech personnel will attempt to accommodate such requests, but can make no guarantees.

5.1.5 DISAGREEMENT WITH INSPECTOR

If an Entrant disagrees with an Inspector about whether their robot complies with certain rules and regulations, they can notify the SA to request a review of that Inspector's decision.

Similarly, if an Entrant is asked to perform a test that they believe is unnecessary and could damage their robot, they may refuse to do the test and notify the SA to request a review.

Any review will be done by the Chief Safety Inspector, or a designated proxy, and his or her decision will be final.

5.2 INSPECTION TIME SCHEDULE

Initial Safety/Tech Inspection will take place during specified time periods at the beginning of the Tournament.

5.2.1 ADVANCE NOTIFICATION

All Teams will be notified of the Safety/Tech Inspection time schedules prior to the Tournament. It is the responsibility of each Team to be aware of these times and to plan accordingly.

5.2.2 INSPECTION TIME PERIODS

The initial Safety/Tech inspection must be done within the specified time periods. The time periods may be extended or shortened at the discretion of BotsIQ Officials.

Initial inspection outside the specified time periods requires specific advance written authorization from a BotsIQ Executive Officer.

5.3 COMPLIANCE WITH RULES AND REGULATIONS

During any Safety/Tech Inspection, the robot must demonstrate that it complies with the requirements of the appropriate BotsIQ Tech Regs.

Specific checks that will be performed include:

- a. All Safety Covers and Restraints meet the protection requirements of the Tech Regs.
- b. The robot complies with the weight limits, using the requirements defined in "5.5 ROBOT WEIGHING".
- c. Radio remote-control and telemetry systems comply with all requirements for allowed frequency, control-type and non-interference.
- d. The robot complies with the specified Activation and Deactivation time limits and fail-safe requirements.
- e. BotsIQ electrical systems comply with the battery-type, voltage limitations and insulation requirements of the Tech Regs.
- f. Any fuel-powered engines comply with the engine type, fuel type and fuel quantity requirements of the Tech Regs.
- g. Any pneumatics and hydraulics comply with the pressure limitations, volume limitations, component rating, tank protection and pressure-measuring requirements of the Tech Regs.
- h. Weapons systems operation is predictable and fail-safe.
- i. Any required robot auxiliary equipment (e.g. external control) and procedures for their use are safe and compliant.

Other checks may be performed at the discretion of the Safety/Tech Inspectors.

5.4 INSPECTION PROCEDURE

The inspection procedure has two primary parts: Internal Inspection and Functional Testing. The required weight check is not specifically part of either inspection, and can be performed at any time.

5.4.1 INTERNAL INSPECTION

Internal Inspection involves the inspection of all of the components of the robot to confirm that the components and their mounting comply with the requirements of the Tech Regs.

The Internal Inspection is usually performed at the Pit Table for the robot. By mutual agreement between the Team and the Inspector, the Internal Inspection may be performed at an alternate location.

5.4.2 FUNCTIONAL TESTING

Functional Testing of a robot is not done until the robot has completely passed the Internal Inspection. Functional Testing involves a demonstration that the robot can be safely controlled and meets all of the Activation, fail-safe, Deactivation and other operational requirements specified in the Tech Regs.

5.4.3 INSPECTION AND TESTING COMPLETION

If the robot fails any part of the Internal Inspection, it must again be inspected and pass completely before it can be eligible for the Functional Testing. Similarly, if the robot fails any part of the Functional Test, it must again be tested and pass before it will be allowed to compete in any Matches.

At the discretion of the Inspector, the robot may be required to re-pass all parts of the Internal Inspection or the Functional Test, even if some parts were passed on the initial inspection or testing.

5.4.4 FULL DISCLOSURE

During any Safety/Tech Inspection, the Team must fully and accurately disclose all features and characteristics of the robot that could affect safety or compliance with BotsIQ rules and regulations.

Deliberate misrepresentation or obfuscation of any robot feature or characteristic may result in Disqualification of the Team and its robot(s).

5.5 ROBOT WEIGHING

The weight limits, as specified in the BotsIQ Tech Regs, will be strictly enforced. Robot weighing will be performed as follows:

5.5.1 BOTS IQ OFFICIAL SCALE

One scale at the Tournament will be designated the BotsIQ "Official Scale". This scale can be used by any robot for initial weigh-in and will be used for any subsequent weight challenges.

BotsIQ Inc. will make reasonable efforts to insure the accuracy, sensitivity and consistency of the Official Scale so that all robots are treated equally.

The reading on the Official Scale is the weight that will be used to determine whether the robot complies with the weight requirements.

5.5.2 DITHERING

If the reading on a digital scale is "dithering" (changing between two values) the weight value used will be the highest of the weights displayed. The scale will be considered to be dithering if it does not maintain a consistent value for at least **5 seconds**.

5.5.3 OTHER SCALES

BotsIQ may make other scales available for use. If such scales are available, an Entrant may use them to weigh parts or to do comparative weighing. However, the initial robot weighing and any subsequent re-weighing for compliance checking will use the Official Scale.

5.5.4 MULTIBOT SEGMENT WEIGHTS

The weight of a MultiBot will be determined by weighing all of the segments together at one time.

Also, each segment of a MultiBot will be weighed separately. A sticker will be applied to each segment indicating that segment's weight.

Any time a change is made that may affect the weight of a segment, then that segment has to be re-weighed and the sticker changed if necessary.

5.6 ADDITIONAL INSPECTIONS AND TESTING

The initial Safety/Tech inspection and testing is intended to determine if the robot, as initially entered, appears to comply with the appropriate BotsIQ Technical Regulations. Passing the initial Safety/Tech Inspection does not in any way exclude the robot from being inspected or tested at any later time during the duration of the Tournament.

5.6.1 RIGHT TO REQUEST

If any BotsIQ Official or Team member has reason to believe that a robot does not comply with the requirements of any official BotsIQ document, that person can request that the robot be re-weighed and/or re-inspected at any time except while the robot is in the Arena competing in a Match.

5.6.2 REQUEST PROCEDURE

A Team member or a BotsIQ Official must verbally notify any Safety/Tech Inspector of their request to have a robot re-weighed and/or re-inspected. However, any Safety/Tech Inspector may independently initiate a re-weigh/re-inspect at their discretion.

In all cases, a Safety/Tech Inspector will notify a BotsIQ Executive Officer and any other appropriate BotsIQ Official of the results of the re-weigh/re-inspect.

5.6.3 BEST EFFORT

If a Team's robot has been selected for re-weighing and/or re-inspection, they must make their best effort to move and/or prepare their robot for the procedure. Failure to do so may result in the Disqualification of the Team and its robot(s).

5.6.4 NON-COMPLIANT

If, as the result of the re-weighing and/or inspection, a robot is found to not comply with any applicable BotsIQ Rules and Regulations, the remedy will depend on what is determined by BotsIQ Officials, as follows:

- a. If the non-compliance was accidental, and would not have affected the outcome of any Match in which it participated, the robot will have to be modified to make it comply.
- b. If the non-compliance was accidental, but could have affected the outcome of any Match in which it participated, the robot can be Disqualified.
- c. If the non-compliance was deliberate, the robot will be Disqualified and barred from competing in the next BotsIQ Tournament.
- d. If the non-compliance was deliberate, and the non-compliance endangered personnel at the Tournament, the Team will be Expelled as defined in "8.1.5 TEAM EXPULSION".

5.6.5 HARASSMENT

If one competing Team makes more than **two** requests for re-weigh/inspect against the same robot, for the same alleged rules infraction, and if the accused robot was found to be in compliance both previous times, then the accusing Team is deemed to be engaging in Harassment.

Any Team determined to be Harassing another will be warned or Disqualified as provided for in "8.3 REPEATED WARNINGS".

There are no restrictions on the number of re-weigh/inspect requests that may be made by any BotsIQ Official or Safety/Tech Inspector.

5.7 DAMAGED-ROBOT SAFETY REQUIREMENTS

If a robot has been damaged, either by combat or by any other means, it must comply with the requirements specified below, as is applicable.

5.7.1 ACTIVATION/DEACTIVATION ACCESS

If a robot is damaged such that it cannot meet the Activation or Deactivation time requirements of the Tech Regs, it must not be Activated. Before any Activation, the robot must be repaired such that both the Activation and Deactivation time requirements can be met.

5.7.2 SAFETY COVERS AND RESTRAINTS

If damage to the robot precludes the use of an existing Safety Cover or Restraint, a new cover or restraint may be fabricated, provided that it complies with all the requirements of the Tech Regs.

5.7.3 ELECTRICAL SYSTEMS

If any primary-power Master Switch or its mounting, is damaged in such a way that it can no longer function safely and reliably, the switch system must either be replaced, or it must be repaired in such a manner that its full functionality and safety are restored before any Activation.

5.7.4 FUEL-POWERED ENGINES

Damaged Fuel-Powered Engine systems cannot be operational on a BotsIQ robot, as follows:

- a. If a fuel line has any cuts or abrasions, other than superficial damage, then it must be replaced.
- b. If any fuel or oil tank or its mounting system is damaged, it must be either replaced or repaired such that the original functionality and structural integrity of the fuel or oil tank and/or its mounting system is fully restored.
- c. If any ICE fail-safe cut-off system is damaged, it must be either replaced or repaired such that the full fail-safe functionality is restored.

Damaged Fuel-Powered Engine components are allowed aboard an Activated robot provided that no fuel is carried on board.

5.7.5 PNEUMATIC SYSTEMS

Damaged pressurized pneumatic systems cannot be operational on a BotsIQ robot, as follows:

- a. If any pneumatic pressure tank sustains damage that in any way compromises its structural integrity, it must be immediately depressurized as soon as the damage is discovered. This tank can never again be used to store pressurized gas aboard a BotsIQ robot.
- b. If any pneumatic component other than a pressure tank is damaged in any way that compromises its structural integrity, then that component must be replaced before the pneumatic system is pressurized.
- c. If the mounting of any pneumatic component is compromised such that it will not meet the requirements of the Tech Regs, the mounting must be either replaced or repaired such that full structural integrity is restored.

Damaged pneumatic components may be carried aboard an Activated robot provided that the damaged components are completely depressurized at all times.

5.7.6 HYDRAULIC SYSTEMS

Damaged pressurized hydraulic systems cannot be operational on a BotsIQ robot, as follows:

- a. If any low-pressure hydraulic storage reservoir or its mounting system is damaged, it must be either replaced or repaired such that the original functionality and structural integrity of the reservoir and/or its mounting system is fully restored.
- b. If any hydraulic component, other than the storage reservoir, is damaged in any way that compromises its structural integrity, then that component must be replaced before the hydraulic system is pressurized.
- c. If the mounting of any hydraulic component is compromised such that it will not meet the requirements of the Tech Regs, the mounting must be either replaced or repaired such that full structural integrity is restored.

Damaged hydraulic components may be carried aboard an Activated robot provided that the damaged components are completely depressurized and contain only residual hydraulic fluid.

5.7.7 TEAM RESPONSIBILITY

It is the responsibility of the Team members to constantly check if their robot has sustained any damage that requires repair or replacement as described herein. Checking for damage is particularly important immediately following a Match.

Any Activation of a damaged robot that fails to comply with the requirements of the Tech Regs, or of this section **5.7**, can result in the Disqualification of the Team and its robot.

5.8 BOTS IQ OFFICIALS AND SAFETY

If at any time during the Tournament, any BotsIQ Official determines that a robot poses a threat to safe competition, BotsIQ reserves the right to require that specific modifications be made to the robot. If such modifications are not possible, then the robot may be Disqualified.

6.0 MATCH DEFINITIONS

6.1 APPLICABILITY

The definitions and terminology defined in this chapter are specifically for Matches with Large Class and Mini Class robots.

For TableTop bot Match definitions, also refer to the specific BotsIQ TableTop Rules document.

6.2 COMPETITION TERMINOLOGY

The following are terms used in BotsIQ competition.

6.2.1 TOURNAMENT DEFINITIONS

The basic terms used at a BotsIQ Tournament:

- a. **Arena** – The protected area in which the robot competition takes place. There may be different Arenas for the Large and Mini classes. The TableTops compete in their own separate area.
- b. **BotBout** – The standard Match format used for Tournament eliminations, where two robots battle in one-on-one combat. May also be referred to as a "Bout".
- c. **Bye** – A robot does not have to compete in a Match and is automatically advanced to the next Round. Byes occur in an Elimination Tournament when it is not possible to schedule a competitor in the current Round.
- d. **Eliminations** – The standard Tournament format composed of successive Rounds of competition. Two formats are Single Eliminations and Double Eliminations.
- e. **Grudge Match** – A Match format where two robots battle one-on-one, but the combat is not part of the standard Tournament Eliminations.
- f. **Hazards** – Powered weapons located in the Arena that are controlled by persons outside the Arena. Also referred to as "Arena Hazards".
- g. **Match** – Any competition between robots in an Arena. The three Match formats are: the "BotBout", the "Robot Rumble" and the "Grudge Match".
- h. **Mini-Arena** – The armored venue where the Mini Class Matches take place.
- i. **MultiSeg** – Refers to any single segment of a MultiBot.
- j. **Robot** – A single competing Large Class, Mini Class or TableTop robot. It can also refer to the collection of MultiBot segments that compete as one (see "MultiSeg").
- k. **Robot Rumble** – A Match format where more than two robots battle each other in an Arena at the same time. May also be referred to as a "Rumble".
- l. **Rounds** – One set of Matches, where all remaining competitors are paired off and compete (or receive Byes), in order to advance in the Eliminations.

6.2.2 MATCH-SPECIFIC DEFINITIONS

The terms below describe situations that can occur during Match competition

- a. **Disqualification** – A robot is no longer permitted to compete in the current BotsIQ Tournament.
- b. **Fault** – Occurs when a robot starts moving along the Arena floor, starts a weapon moving or initiates certain other actions before the official start of the Match.
- c. **Forfeit** – A robot loses a Match, either because it was not ready to compete at the scheduled time, or because of some specific Team or robot action during a Match.
- d. **Incapacitated** – In a Referee's opinion, a robot it is not Responsive for a specified period of time. See also "7.4.6 INCAPACITATION".

- e. **KnockOut** – Occurs when the attack or deliberate actions of one robot causes its opponent to become Incapacitated.
- f. **Lifting** – Occurs when one robot controls an opponent's translational motion by lifting the drive mechanism of the opponent off of the Arena floor. Also referred to as a "Mobile Pin".
- g. **No Contact** – Occurs when neither robot makes contact with each other, or with any Arena Hazards for a specified period of time.
- h. **Pinning** – Occurs when one robot, through sheer force, holds an opponent robot stationary in order to Incapacitate it. Also referred to as a "Stationary Pin".
- i. **Postponement** – Occurs when a specific BotBout is delayed from the originally scheduled time.
- j. **Radio Interference** – Refers to the situation where at least one robot becomes non-Responsive or non-controllable due to the effect of the other robot's radio-control signal.
- k. **Responsive** – Means that, as determined by a Referee, the robot can display some kind of controlled movement along the Arena floor. A moving robot whose translational movement cannot be controlled by its Operators is considered to be non-Responsive.
- l. **Restart** – Occurs after a Fault or a Timeout has been declared and the robots are ready to continue.
- m. **Stuck** – A robot is entrapped on a part of the Arena or on another robot, such that it is not Responsive or cannot otherwise move independently.
- n. **Tap-Out** – Occurs in a BotBout or Grudge Match when a robot's Operators decide that they no longer want to continue the Match, and concede the win to the opponent robot.
- o. **Technical KnockOut** – Occurs when a robot wins due to Incapacitation of its opponent even though, in the Judges' opinion, no action of the winning robot caused the opponent's Incapacitation.
- p. **Timeout** – A temporary halting of a Match. Timeouts are usually called to separate or free stuck robots, but can be called for other reasons. However, a Timeout can be called for any reason during a Match at the discretion of a Referee, a Judge, a CrewBot, or a BotsIQ Executive Officer.

6.2.3 JUDGING CRITERIA DEFINITIONS

The following describe the criteria that can be used by Judges to determine a Match winner.

- a. **Aggression** -- The frequency, severity, boldness and effectiveness of attacks deliberately initiated by the robot against any opponent. If a robot appears to have accidentally attacked an opponent, that act will not be considered Aggression.
- b. **Control** – The ability of the robot's Operators to move the robot in a specific and deliberate manner. Control means a robot is able to attack an opponent at its weakest point, use its weapons in the most effective way, and avoid being struck by the opponent or its weapons.
- c. **Damage** – Through deliberate action, a robot either directly, or indirectly using the Arena Hazards, reduces the functionality, effectiveness or defensibility of an opponent. Damage is not considered relevant if a robot inadvertently harms itself. Also, if a pressure vessel or a rapidly spinning device on a robot fragments, any damage to the opposing robot will not be considered "deliberate".
- d. **Strategy** – The robot exhibits a combat plan that exploits the robot's strengths against the weaknesses of its opponent. Strategy is also defined as a robot exhibiting a deliberate defense plan that guards its weaknesses against the strengths of the opponent. Strategy can also involve using the Arena hazards to gain a relative advantage.

6.3 THE PLATFORM CREW

The "**Platform Crew**" is defined as those Team members who are present on the Arena driver's platform during a Match.

6.3.1 CREW COMPOSITION

The Platform Crew is comprised of Operators, Strategists and a Hazard Controller. These terms are defined below.

A Platform Crew can have a maximum of **five** people for BotBout Matches, or **three** people for Robot Rumbles. One of the Platform Crew members may be either the Adult Supervisor or a Tech Advisor for the Team.

6.3.2 OPERATORS

"**Operators**" refers to the Competitor(s) who remotely control the robot during a Match. Up to **three** people may control a Large Class robot during a Match. Up to **two** people may control a Mini Class robot during a Match.

The plural form ("Operators") may be used to refer to a single person who is the only one controlling the robot. When the singular form is used ("Operator"), it always refers to one person.

All Operators must be Competitors from the robot's Team; Adult Supervisors and Tech Advisors cannot operate a BotsIQ robot in competition.

6.3.3 HAZARD CONTROLLER

The "**Hazard Controller**" is **one** Competitor who may have access to control a portion of any Arena Hazards. The Hazard Controller cannot also be a robot Operator.

The Hazard Controller may only be present during BotBout elimination Matches.

6.3.4 STRATEGISTS

Team "**Strategists**" are those people who do not directly control the robot, but advise the Operator(s) and the Hazard Controller during the Match. Strategists may be adult or student members of the Team.

6.3.5 PLATFORM AND PIT CREWS

The members of the Platform Crew can also be members of the Pit Crew who transport the robot before and after the Match. However, it is recommended that the Platform Crew members not be involved in transporting the robot.

6.4 BOTBOUT MATCHES

6.4.1 BOTBOUT FORMAT

BotBouts are started with the two robots in colored squares on opposite sides of the Arena. Before the start, the robots must be motionless within their respective squares. After the official start, the robots fight in an attempt to Damage or Incapacitate their opponent.

6.4.2 BOTBOUT TIME LIMITS

Unless a BotBout terminates early, the Match will end after a maximum of **three minutes** of actual fighting. The time limit does not include any time elapsed as a result of Timeouts.

Certain BotBouts may have a shorter time limit if such is decided by BotsIQ Officials, and the affected Teams are notified in advance.

6.4.3 STUCK ROBOTS

If both robots become Stuck, the Referees may declare a Timeout to free the robots.

6.4.4 EARLY TERMINATION

A BotBout can be terminated early by Tap-Out, Forfeit, Disqualification, Incapacitation or No Contact.

6.4.5 TIME BETWEEN BOTBOUTS

No robot will be required to compete in more than one BotBout within any **20 minute** period. Teams who are not prepared to compete after this period may be required to Forfeit.

Time spent in a post-Match interview or for post-Match re-inspection or re-weighing will not be counted toward the time limit.

Note: As the Tournament moves to the final competitions, the time between Matches will become shorter.

6.4.6 MATCH POSTPONEMENT

If a Team will not be able to compete in a BotBout as scheduled, they may request that the Match be postponed. Postponement may be granted by BotsIQ Officials, subject to all of the following:

- a. A Team can request at most **two** Postponements during the Tournament.
- b. The opponent Team agrees to the Postponement.
- c. BotsIQ Officials agree to the Postponement.
- d. BotsIQ Officials determine that the Match can be re-scheduled.

BotsIQ reserves the right to postpone any Match for any reason. Any such Postponement will not count as a Team-requested Postponement.

6.5 GRUDGE MATCHES

Grudge Matches allow two robots to fight in a demonstration Match that is not part of the Tournament elimination.

The format for a Grudge Match is the same as for a regular BotBout Match, except that neither competitor will be allowed to Tap-Out.

The requirements for a Grudge Match are:

- a. Both robots have been eliminated from the Tournament Matches.
- b. Both Teams agree to the Match.
- c. BotsIQ Officials approve of the Match.
- d. Time is available for scheduling the Match.

6.6 ROBOT RUMBLES

6.6.1 SELECTION OF COMPETITORS

Only robots that have been eliminated from regular Tournament Matches can compete in a Rumble.

Based on various factors, BotsIQ Officials will decide which robots, and the number of robots that can compete in any given Rumble.

6.6.2 RUMBLE FORMAT

Robot Rumbles are started with multiple robots arranged around the edge of the Arena. Before the start, all robots must be motionless in their positions. After the official start, the robots fight in an attempt to incapacitate their opponents.

If any robots become Stuck during a Rumble, no Timeout will be declared and no attempt will be made to free them.

6.6.3 RUMBLE DURATION

The normal length of time for a Rumble is **three** minutes. However, this time period may be changed at the discretion of BotsIQ Officials.

A Rumble will be terminated early for safety reasons only. There will be no Timeouts or Tap-Outs during a Rumble.

6.6.4 TIME BETWEEN RUMBLES AND BOTBOUTS

Due to scheduling limitations, there is no guarantee of a minimum time between Rumbles and BotBouts.

6.6.5 EXECUTIVE OFFICER AUTHORITY

BotsIQ Executive Officers have the authority to modify, cancel or terminate any Rumble at any time for purposes of Tournament safety, or for any other reason.

6.7 JUDGES

BotsIQ Judges provide informed subjective decisions on the outcome of certain BotsIQ Matches.

6.7.1 NUMBER OF JUDGES

There will be either **three**, **five** or **seven** Judges for a Tournament. The number of Judges will be determined by BotsIQ Officials and need not be announced in advance of the Tournament.

6.7.2 JUDGES' DUTIES

Specific duties of Judges are defined in the chapter: "7.0 MATCH PROCEDURES". Their general duties are:

- a. Deciding the outcome of Matches when neither robot is Incapacitated.
- b. Watching for technical or safety violations.
- c. Deciding if a robot is to be Disqualified.

6.7.3 DISCUSSION AMONG JUDGES

Judges may discuss among themselves technical or other information about the identity, starting square color, or features of one or more of the competing robots.

However, Judges must not discuss their individual Match result decisions with one another until after their decisions have been publicly displayed.

6.7.4 CONSULTING OTHERS

To resolve ambiguous situations, Judges may individually or collectively discuss rules interpretation issues with BotsIQ Officials.

If necessary, the Judges may also consult with one or more Operators or Team members. However, during any such discussion with one Team, at least one member of the opposing Team must be present as an observer.

6.8 REFEREES

Referees supervise the Platform Crews during Matches.

6.8.1 REFEREE ASSIGNMENT

There are **two** Referees for each Match, assigned as follows:

- a. For BotBouts, each Referee is assigned to a single robot and its Platform Crew.
- b. For a Robot Rumble, each Referee is assigned to multiple Platform Crews and robots.

6.8.2 REFEREES' DUTIES

Specific duties and actions of Referees are specified in the chapter: "7.0 MATCH PROCEDURES". The general duties of Referees are:

- a. Starting Matches.
- b. Stopping Matches early.
- c. Declaring Timeouts.
- d. Watching for safety violations.

6.8.3 REFEREE AUTHORITY

If at any time before or during a Match, a Referee observes disruptive or other inappropriate behavior by any member of the Team's Platform Crew, the Referee has the authority to call a Timeout, as necessary, to instruct any member of the Crew to leave the Arena platform immediately.

6.9 CREWBOTS

CrewBots coordinate the movement and safety of robots near and inside the Arena.

6.9.1 PRIOR TO MATCH

Prior to the Match, CrewBots escort the robots and Pit Crew members into place within the Arena. They then supervise and coordinate the Activation of the robots and the exit of the Crew members.

When the CrewBots are satisfied that everything is ready, they secure the Arena doors.

6.9.2 TIMEOUT

If a Timeout is declared, CrewBots may enter the Arena to escort a Pit Crew member to their robot, to assist in the Pit Crew member in separating a Stuck robot from the Arena or from another robot.

CrewBots may also enter the Arena for other reasons related to the safety or functioning of a Match.

6.9.3 AFTER THE MATCH

At the end of the Match, the CrewBots open the Arena doors when they deem it safe.

CrewBots then supervise the Deactivation and damage-checking of the robots. After Deactivation, the CrewBots coordinate the exit of the robots and Pit Crew members out of the Arena.

Time permitting, CrewBots will pick up any large pieces of debris from the floor of the Arena.

6.9.4 CREWBOT AUTHORITY

If at any time during a Tournament, a CrewBot observes disruptive or other inappropriate behavior by any Team member in the Arena area, the CrewBot has the authority to instruct that Team member to leave the Arena area.

7.0 MATCH PROCEDURES

7.1 APPLICATION OF PROCEDURES

Match procedures in this chapter apply to BotBouts, Grudge Matches and Rumbles for Large Class and Mini Class robots. There may be some differences during the Rumbles due to the larger number of robots and Operators.

For TableTop bot Match procedures, refer to the specific BotsIQ TableTop Rules document.

7.2 PRIOR TO MATCH START

7.2.1 ARENA PIT CREW

During Match competition:

- a. A maximum of **three** Pit Crew members may be used to transport the robot into and out of the Arena.
- b. During Activation and Deactivation of the robot, only **one** Pit Crew member may be present in the Arena.
- c. One or more of the Pit Crew members may also work on the Platform Crew, although this is not recommended.

7.2.2 FAILURE TO START IC ENGINE

If a Team is unable to start their robot's Internal Combustion Engine within **30 seconds**, the Team has the following options:

- a. Request a Postponement.
- b. Compete without the engine running.
- c. Forfeit the Match.

7.2.3 INITIAL ROBOT STATE

Prior to the start of a battle, all robots must be in position and not moving. Specifically:

- a. For a BotBout or Grudge Match, robots must be completely inside their respective starting squares.
- b. For a Rumble, robots must be at their assigned starting positions.
- c. All robots must be motionless.
- d. Any robot rotary weapons must be motionless.
- e. Any Flywheel devices, whether internal or external, must be motionless.
- f. Any Internal Combustion Engine (ICE) must be running at Idle Speed.
- g. Spring-powered devices are allowed to have been set by remote control.
- h. Autonomous functions may have been remotely enabled.

7.3 START OF BATTLE

7.3.1 COUNTDOWN TO START

The Match countdown sequence will not begin until each Platform Crew indicates to their assigned Referee that they are ready to start. The Referees will, at their discretion, activate the countdown sequence on the starting light tree.

In some circumstances, the Referees may verbally start the match.

7.3.2 MATCH START

The Match officially starts at the moment the starting light tree Green lights first turn on, or the Referees verbally declare the start.

Any robot ICE must be running at Idle Speed and there must be no movement of any robot or of any robot part until the Match officially starts.

7.3.3 FAULT

If a Referee or Judge notices premature robot movement or any other violation of starting procedure, he or she may declare a Fault, and require a Restart. Operators must cease robot movement and follow the instructions of the Referees for a Restart.

If a robot Faults more than **two times** in a BotBout Match, it will Forfeit the Match.

If a robot Faults during a Rumble, the Match will not be restarted, but the faulting robot will not be eligible to be the Rumble winner.

7.3.4 RESTART AFTER A FAULT

A Restart begins with the robots back in their starting positions and complying with all the requirements of "7.2.3 INITIAL ROBOT STATE". The Referees may choose to verbally Restart a Match.

7.4 DURING A MATCH

7.4.1 REFEREE DECISIONS

During a Match, each Referee must observe their Platform Crew and robot to check and respond to one or more of the following:

- a. Tap-Out
- b. Pinning or Lifting
- c. Single robot Stuck
- d. Both robots Stuck
- e. Incapacitation
- f. No Contact
- g. Radio Interference

Each is described in more detail below.

7.4.2 TAP-OUT

During a BotBout, if a robot becomes disabled, and any of its Platform Crew wants to prematurely end the Match in order to avoid further damage:

- a. A Platform Crew member must say clearly to his or her Referee: "Tap-Out" or "Stop the Match".
- b. The Referee confirms the request by asking the Platform Crew if they are Tapping Out. All of the Crew members must respond with "YES", or the request will not be considered confirmed.
- c. Once Tap-Out is confirmed, the robot has lost the Match. The Platform Crew cannot revoke their decision and are required to stop controlling their robot.
- d. The Tap-Out robot's Referee notifies the opposing Referee of the confirmed Tap-Out request.
- e. The Tap-Out robot's Referee will begin a 10-count to the termination of the Match.
- f. The opposing robot's Platform Crew will be advised of the Tap-Out and be asked (but not instructed) to refrain from attacking during the count out, as their robot has now been awarded a win by KnockOut.

Note: Tap-Out is not allowed during a Grudge Match or Rumble.

7.4.3 PINNING OR LIFTING

Robots may not win by pinning or lifting their opponents. Referees will allow pinning or lifting for a maximum of **20 seconds** per pin/lift then the Referee will instruct the attacker to release. If, after the request by the Referee, the attacker is able to release, but does not, their robot may be Disqualified as specified in "7.7.1 COMPLYING WITH OFFICIALS".

A weapon that is designed to partly or completely cover (smother) an opponent robot is allowed. However, covering a robot may be considered Pinning, depending upon which robot is in control.

7.4.4 SINGLE ROBOT STUCK

If a single robot or MultiSeg becomes Stuck, the action taken will depend upon the type of Match:

- a. During a BotBout or Grudge Match, if a robot or MultiSeg becomes Stuck to any part of the Arena, the Operators must be able to remotely free the robot or MultiSeg in **20 seconds** or less. Otherwise, the robot or MultiSeg will be declared Incapacitated.
- b. During a Rumble, no Timeout will be declared if any robots and/or MultiSegs become Stuck.

Note: There is no prohibition against a robot attempting to free a Stuck opponent.

7.4.5 BOTH ROBOTS STUCK

If two robots become simultaneously Stuck during a BotBout or Grudge Match, the action taken will depend upon the situation, as follows:

- a. If the robots, or a robot and a MultiSeg are stuck together, or are both stuck on the Arena, the Referees will declare a Timeout for the CrewBots to separate the robots.
- b. If two robots are stuck together, and one robot is also stuck on a part of the Arena, the Referees will declare a Timeout and the robots will be separated. However, no deliberate attempt will be made to free the robot stuck on the Arena.
- c. If two or more segments of the same MultiBot become stuck together, or become simultaneously stuck on the Arena, no Timeout will be declared.

During a Rumble, no Timeout will be declared if any robots and/or MultiSegs become stuck together.

7.4.6 INCAPACITATION

During a BotBout or Grudge Match, a robot or MultiSeg must at any time be able to demonstrate that it is Responsive. This is confirmed as follows:

- a. At any time, a Referee may request that the Operators show that their robot or MultiSeg is Responsive.
- b. The Referee will allow a maximum of **20 seconds** (the final 10 seconds of which will be verbally counted down) for the Operators to demonstrate that the robot or MultiSeg is Responsive.
- c. If the robot or MultiSeg cannot demonstrate that it is Responsive within the required time, it will be declared Incapacitated.

If **50.0% or more**, by weight, of a MultiBot's segments become Incapacitated, then the robot (entire MultiBot cluster) is considered to be Incapacitated.

7.4.7 NO CONTACT

If neither robot makes physical contact with the other, or with any of the Arena Hazards, for a period of **60 seconds**, then the Referees can stop the Match for "No Contact".

7.4.8 RADIO INTERFERENCE

If Radio Interference occurs during a Match, a reasonable attempt will be made to eliminate the interference by having one or both Competitors change their radio channels and/or signal coding.

However, if it is not possible to eliminate the Radio Interference, then preference will be given to robots according to the following:

- a. If one robot is using Spektrum or IFI equipment, and the other is not, the robot not using the Spektrum or IFI equipment will be required to forfeit the Match.
- b. If both robots are using single-frequency FM R/C radios, and it can be determined which robot's transmitter is causing the interference, then the non-interfering robot will be declared the winner.

If a Radio Interference issue cannot be otherwise resolved, BotsIQ Executive Officers reserve the right to declare that one robot is the Match winner.

7.5 BOTBOUT OR GRUDGE MATCH WINNER

At the conclusion of each BotBout or Grudge Match, the winner will be decided as follows:

7.5.1 RULES VIOLATION

If the Judges unanimously agree that one Competitor's robot was violating any BotsIQ Rule or Regulation, then the opposing robot will be declared the winner by Forfeit.

7.5.2 INCAPACITATION

If one robot becomes Incapacitated, then the opposing robot will be declared the winner.

If both robots become Incapacitated, the robot that became Incapacitated last will be declared the winner. If necessary, the determination of which robot was last-Incapacitated will be decided by a majority vote among the Judges.

If a majority of the Judges agree that the Incapacitation was due at least in part to some action of the opposing robot, then the opposing robot will be declared the winner by a KnockOut.

7.5.3 SIMULTANEOUS INCAPACITATION

If the Judges cannot determine the order in which the robots became Incapacitated, then the robots will be declared to be Simultaneously Incapacitated, and the following procedure will be used:

- a. If one robot caused a Fault in the Match, and the Referees were not able to stop the Match before the robots became non-Responsive, then the non-Faulting robot will be declared the winner.
- b. If more than **60 seconds** of the Match has elapsed prior to the time the robots became non-Responsive, the Judges will decide the winner using the criteria defined in "7.5.4 BOTH ROBOTS RESPONSIVE".
- c. If one of the Incapacitated robots can display some kind of remote-controlled activity, and the other cannot, then the partially operable robot will be declared the winner.
- d. If none of the previous criteria can be used, BotsIQ Executive Officers have the right to declare the winning robot, or to declare that neither robot won, and thus neither will advance to the next Round.

A robot win due to Simultaneous Incapacitation will be considered a Technical KnockOut.

7.5.4 BOTH ROBOTS RESPONSIVE

If both robots are Responsive at the end of the Match and the Match did not end prematurely due to the No Contact rule, the winner will be determined and indicated by the Judges, as follows:

- a. Each Judge will evaluate the Aggression, Control, Damage and Strategy of each robot during the Match.
- b. As allowed in "6.7.3 DISCUSSION AMONG JUDGES" and "6.7.4 CONSULTING OTHERS", Judges may consult with each other, BotsIQ Officials, or Team members.
- c. Each Judge then indicates which robot they believe is the winner by holding up either a Red or a Blue card, denoting the starting square color of the winning robot.
- d. The robot with the majority vote of the Judges will be declared the winner.

A robot win due to Judge's Decision will be considered a Technical KnockOut.

7.5.5 NO CONTACT DECISION

If the Referees have stopped the Match due to No Contact (ref. "7.4.7 NO CONTACT"), then the Judges decide the Match outcome as follows:

- a. If a Judge believes that one robot deserves the win, they indicate so by holding up the appropriate colored card.
- b. If a Judge believes that neither robot deserves the win, they indicate so by holding up an empty hand.
- c. If one robot receives a majority of the Judges' win votes, then that robot will be declared the winner.
- d. If neither robot receives a majority of the Judges' votes, then both robots lose, and neither will advance to the next round.

If neither robot advances, the competitor for the next Round will receive a Bye.

7.6 RUMBLE WINNER

At the conclusion of a Rumble, the winner will be decided as follows:

7.6.1 FAULTING ROBOT

If the Referees or Judges determine that a robot Faulted at the start of the Rumble, then it cannot be declared the winner.

7.6.2 NO ROBOTS RESPONSIVE

If no robot is Responsive at the conclusion of the Rumble, the last robot to become non-Responsive will be declared the winner.

If it cannot be determined which robot became non-Responsive last, the Judges will declare a winner selected from the last-Responsive robots, using the method described below in "7.6.4 MULTIPLE RESPONSIVE ROBOTS".

7.6.3 SINGLE ROBOT RESPONSIVE

If only one robot is Responsive at the conclusion of the Rumble, it will be declared the winner.

7.6.4 MULTIPLE RESPONSIVE ROBOTS

If at the end of the Rumble, more than one robot is Responsive, or it cannot be determined which robot was last-Responsive, the winner will be selected from the Responsive or the last-Responsive robots as follows:

- a. Each Judge, based on their subjective evaluations of Aggression, Control, Damage and Strategy, will vote for the robot they think won the Rumble.
- b. If one robot receives more votes than any of the others, it will be declared the Rumble Winner.
- c. If there is a Judge's tie between two or more robots, a BotsIQ Executive Officer will break the tie by adding his or her vote.

7.7 DISQUALIFICATION AND FORFEIT

7.7.1 COMPLYING WITH OFFICIALS

During a Match, any Team member who deliberately fails to comply with any Referee's or CrewBot's instruction will automatically have their Team and robot Disqualified.

7.7.2 DISQUALIFICATION

If a Judge, Referee or CrewBot observes a safety or technical violation, he or she may declare a Timeout to discuss the matter with all of the BotsIQ Judges. If the Judges reach a unanimous decision, they can collectively Disqualify a robot.

7.7.3 PLATFORM CREW BEHAVIOR

If a Referee observes disruptive or other inappropriate behavior by a member of a Team's Platform Crew, the Referee can call a Timeout to instruct the Crew member to leave the Arena platform. If the affected Crew member is an Operator, the robot will be declared to have lost by Forfeit.

7.7.4 ATTACKING ARENA HAZARDS

Robots must not deliberately attack any Arena Hazard. If any Judge, Referee or CrewBot believes that a robot is deliberately attacking a Hazard, they should call a Timeout to discuss the situation with the Judges. If it is determined that the robot was deliberately attacking a Hazard, the robot will be declared to have lost by Forfeit.

7.8 EXECUTIVE OFFICER DECISIONS

BotsIQ Executive Officers may at any time, including during a Match, Disqualify any robot that they believe has committed a safety or technical violation.

8.0 RULES ENFORCEMENT

8.1 RULES COMPLIANCE

In all matters of compliance with these Tournament Rules and Procedures, and any applicable civil or criminal laws, BotsIQ Inc. and its Executive Officers reserve the right to Disqualify a robot or to warn, fine or expel any Team or individual Team member.

8.1.1 TEAM RESPONSIBILITY

The action of any single Team member is considered to be the responsibility of the whole Team. If any individual Team member is found to be violating one or more requirements of this document, the Team as a whole may be warned, Disqualified or Expelled.

8.1.2 DISQUALIFICATION

Disqualification applies to a single robot. If a robot is Disqualified, the robot can no longer compete at the Tournament. The Team must vacate its Pit Table. If the Team has entered no other robot, Team members must also turn in all their Team ID cards.

Note: BotsIQ Inc. will endeavor to modify the Tournament elimination placement to compensate for any win nullification, but cannot make any guarantees.

8.1.3 TEAM MEMBER EXPULSION

If any Team member is expelled, he or she must leave the Tournament premises for the duration of the Tournament. In addition, any expelled Team member will not be eligible to compete in any BotsIQ Tournament for a period of **one year** from the date of Expulsion.

8.1.4 ADULT SUPERVISOR EXPULSION

If an expelled Team member is an Adult Supervisor, the entire Team and its robot(s) may be Disqualified.

8.1.5 TEAM EXPULSION

If an entire Team is Expelled, they must turn in their Team ID Cards and leave the Tournament premises for the duration of the Tournament. In addition, the Team's robot will be barred from any future BotsIQ competition, and all Team members will not be eligible to compete in any BotsIQ Tournament for a period of **one year** from the date of Expulsion.

8.2 SERIOUS OFFENSES

Certain offenses are so serious that BotsIQ Inc. reserves full Expulsion rights.

8.2.1 CRIMINAL ACTIVITY

If a person at a BotsIQ Tournament is found to be in apparent violation of any Federal, State or local criminal laws, that person will be Expelled and turned over to local authorities.

8.2.2 SABOTAGE

"Sabotage" is defined as the deliberate tampering with a robot without the specific authorization of that robot's Team. If any Team member is determined to have engaged in Sabotage, that person will be Expelled.

8.2.3 COUNTERFEITING

If any Team member is determined to have counterfeited a Team ID Card or any other BotsIQ entry passes or tickets, that person will be Expelled.

8.3 REPEATED WARNINGS

Occasionally, a Team may do something that fails to adhere to the requirements of these Rules and Procedures. When that happens, the Team will receive a warning from a BotsIQ Official. However, if a Team is repeatedly warned for the same violation:

- a. On the first warning, the Team has the violation explained to them, and is told that it must not occur again.
- b. On the second warning for the same offense, the Team will be told that they must not commit the same offense again, or they will be Disqualified.
- c. On the third warning for the same offense, the Team and its robot(s) may be Disqualified.

9.0 PROTESTS AND APPEALS

9.1 PROTESTS

A BotsIQ Team has the right to Protest the decision of a BotsIQ Official, Judge, Referee or CrewBot on certain Match-related events.

9.1.1 ALLOWED ISSUES

Allowed Protest issues include, but are not limited to:

- a. Failure to comply with Match procedures.
- b. Match Forfeit due to Platform Crew or robot action during a Match.
- c. Match Forfeit as the result of non-availability.
- d. Disqualification due to an inadvertent rules violation.

9.1.2 INADMISSIBLE PROTESTS

For certain specific items, a Protest cannot be lodged. These are:

- a. [Judges' decision on the outcome of a Match.](#)
- b. Disqualification due to a deliberate safety violation.
- c. Disqualification for failure to obey a Referee's instructions.

9.1.3 PROTEST PROCEDURE

Protest requirements and procedures are as follows:

- a. Any Protest must be lodged within **15 minutes** of the time the protested event occurred.
- b. The protesting party will have a maximum of **5 minutes** to present their case to a BotsIQ Executive Officer.
- c. Any contesting party will have a maximum of **5 minutes** to present any opposing case to the same BotsIQ Executive Officer.
- d. After all parties have presented their cases, the BotsIQ Executive Officer will make a final decision within **60 minutes** after the conclusion of the case presentations.

The BotsIQ Executive Officer decision will be final and not subject to further Protest or Appeal.

9.1.4 PROTEST LIMITATIONS

If a BotsIQ Executive Officer determines that a Team is lodging frivolous Protests to the detriment of the functioning of the Tournament, that Team may be excluded from making further Protests.

9.2 APPEALS

For certain serious matters involving the decision of a BotsIQ Executive Officer, a BotsIQ Team may file an Appeal.

9.2.1 RIGHT TO APPEAL

A Team may file an Appeal for the following:

- a. Disqualification due to repeated warnings.
- b. Disqualification due to a safety violation.
- c. Disqualification due to a technical violation during a re-weigh/re-inspect.

9.2.2 INADMISSIBLE APPEALS

For certain matters, an Appeal cannot be made. These include, but are not limited to:

- a. Expulsion due to criminal behavior.
- b. Expulsion due to deliberate endangerment of any person at the Tournament.
- c. A decision on a Protest, as defined in "9.1 PROTESTS".

9.2.3 APPEAL PROCEDURE

The Appeal requirements and procedures are as follows:

- a. Any Appeal must be made in writing within **two hours** of the time the appealed event occurred.
- b. The Appeal must be presented to a BotsIQ Official or directly to a BotsIQ Executive Officer.
- c. The written Appeal should state the case of the appealing party in concise and direct terms.
- d. After receiving the Appeal, the BotsIQ Executive Officer may consult other parties in the matter, and will render a final decision within **24 hours** after the time the Appeal was received.

9.2.4 FINAL DECISION

On all Appeals, the decision of the BotsIQ Executive Officer will be final and not subject to further Appeal.

PART 2: TOURNAMENT PROCEDURES

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A. Tournament Entry

A.1 Registering for the Tournament

To compete in a BotsIQ Tournament, each QYO and PSEI has to complete, sign and submit any and all entry and release forms as requested by BotsIQ Inc. The procedure uses an online Tournament Registration System as follows:

- **Register Online** – Fill out the online registration on the BotsIQ website and electronically submit the information including a JPEG photo of each Team Member.
- **Participant's Agreement** – If the registration information was submitted correctly, the online Tournament Registration System will generate the appropriate Participant's Agreement Form. Read this Agreement, and if you agree with all of the terms and conditions, print out a hardcopy and have all the Team members sign it.
- **Tax Forms** – The registration system may also make available any appropriate IRS tax forms for downloading and printing.
- **Entry Fees** – The entry fees will be posted on the BotsIQ website and will also be shown in the online registration. All fees must be paid with the registration.
- **Special Requests** – If you want a Pit Table next to another Team or would like some other special accommodation, send in a written request. BotsIQ will try to accommodate reasonable requests but makes no guarantees.

Mail (no fax or e-mail) to BotsIQ (see "1.6 CONTACTING BOTS IQ") an original of the signed Participant's Agreement, the completed Tax Form(s), the entry fee(s) and any written requests. You will be able to check your registration status online.

A.2 Pre-Event Notification

Exact details of Tournament procedures (seeding, byes, etc.) will be announced prior to the event, either by posting on the BotsIQ website, and/or by direct e-mail to the Teams.

If a Team has entered a BotsIQ Tournament and has been accepted, the Team must check its e-mail and the BotsIQ website often.

A.3 Proof of Robot Viability

If a Team's robot has not previously competed in a previous BotsIQ Tournament, BotsIQ Inc. may require that the Team prove, in advance of the Tournament, that the robot in fact exists and is capable of competing.

This proof may be in the form of a video tape, a QuickTime file, photographs or other methods of demonstrating the existence and viability of the robot.

B. Check-In and Set-Up Procedures

B.1 Arrival and Parking

For all Team members:

- Please try to arrive punctually, as this will help speed the check-in process. Check-in will be done on a first-come, first-served basis.
- Park in designated areas only. Be aware that a Team may have to move their vehicle(s) at the direction of a Bots!Q Official, a Security officer or the Fire Marshal.
- Please do not unload the robot until after the Team has registered at the Check-In table.

B.2 Check-In

Signs will indicate the location of the Check-In table.

- Go to the Check-In location and be ready to provide information about the Team and robot.
- During check-in, the Bots!Q person will confirm that the Team's entry information is in good order. The robot's name, Team member names, entry fee payments and other information will be verified.
- When all the information has been confirmed, the attendant will present the Team's Pit Package.

B.3 Pit Package

The Pit Package contains some or all of the following items:

- **Team Number** -- This is the number assigned to the Team. If the Team is using an IFI remote control, this is the number that must be used as the Team Code on the IFI remote control.
- **Pit Table Number** -- This is the number of the Team's assigned Pit Table. Once this number has been assigned, it cannot be changed.
- **Pit Map** -- A map to help the Team locate its Pit Table and other important areas.
- **Team ID Cards** -- All members of a Team must wear their Team ID Cards at all times while at the Tournament. If a Team ID Card is lost, Bots!Q cannot replace it.
- **Voting Sheet** -- This form allows the Team to cast their vote for their favorite robots. Submit the voting sheet to the Information Booth no later than the time specified on the sheet. Only one sheet can be submitted per robot Team.
- **Parking Passes** -- Depending upon the event location, the Team may need parking passes for its vehicle(s) for use during the Tournament. Vehicles without passes may be turned away or towed.
- **Internal Inspection Checklist** -- Two green pages. The first page of this form explains what to do to prepare for the Internal Inspection. The second two-sided sheet is the checklist that will be used by the Inspector when he or she performs the Internal Inspection on your bot.

B.4 Transmitter Impound

As a safety measure, non-Spektrum and non-IFI radio transmitters may be placed in Transmitter Impound during the Tournament. This is necessary to control frequency interference and minimize the associated safety risks.

You risk Disqualification or Expulsion for unauthorized use of your radio transmitter.

Transmitter Impound works as follows:

- **Impound at Check-In** -- Transmitters are impounded at check-in. The transmitters are tagged and moved to the Transmitter Impound area.
- **Transmitter Impound Card** – When you turn your transmitter in, you will be given a Transmitter Impound Card (TIC). The TIC has to be exchanged for the transmitter each time it is checked in or out of Transmitter Impound.
- **Testing** – If you need a transmitter to test your robot, you must bring the TIC to Transmitter Impound. If the desired frequency is available, they will exchange your TIC for your transmitter. If the frequency is already in use, they will advise you of the current user so you can coordinate availability.

Transmitters must be returned to Transmitter Impound immediately upon completion of testing.

- **Safety Inspection** – When you are waiting for Functional Testing, you give your TIC to a person at the Impound area, who will retrieve the transmitter for the Inspection. When a transmitter is no longer needed for Inspection, return the transmitter and get back your TIC.
- **Pre-Match** – When you are in line for an upcoming Match, you again exchange your TIC for the transmitter you will need during your Match. The Impound personnel will then retrieve the required transmitter and give it to you as soon as the frequency is available. Be aware that sometimes you may not get your transmitter until just before the Match.
- **Post-Match** -- After the Match is complete, re-exchange your transmitter for your TIC. Make sure you get your transmitter's TIC back after a Match.
- **Exceptions** -- Exceptions to the standard Transmitter Impound procedure will be made at the discretion of BotsIQ Officials as needed (for example, to allow changing crystals).

Conflicting radio frequencies are potentially one of the most dangerous aspects of our sport. You must follow the instructions of Transmitter Impound Personnel at all times.

B.5 Transmitter Batteries

- If your R/C equipment allows it, BotsIQ recommends removing your transmitter batteries and charging them in a stand-alone charger at your Pit Table.

B.6 Moving Bots To Pit Area

- After completing check-in, locate the Team's assigned Pit Tables (consult the pit map for assistance), unload the robots and move them into the Pit Area.

At all times, and especially when transporting the robot, all sharp edges and motion hazards must be protected with Safety Covers and Restraints as defined in the BotsIQ Tech Regs. The covers/restraints must remain attached except when the robot is inside the Combat Arena or Testing Area, or during specific servicing of the covered/blocked component.

B.7 Information Booth

An Information Booth (or window) will be set up for the following:

- For you to inform Officials if the robot is unable to compete on schedule due to problems.
- For you report security, safety and procedural violations.
- To ask scheduling and/or procedural questions.
- As the place to turn in Voting Sheets and other forms.
- Lost and Found.

C. The Pit Area

C.1 Pit Layout

- The Pit Area is set up with rows of worktables. Dimensions of the tables are approximately 2.5' x 6', though they may be shorter or longer.
- Pit tables come equipped with 110v AC power outlets, and the Pit Area has overhead lighting. Each Team may need to supply their own power strips and any additional work lights that they require.
- Teams are responsible for bringing all tools necessary to maintain and repair their robot. However, if the Team brings any large industrial tools, they may not be able to use them in the Pit Area and will need to store them in their vehicle(s) when not in use.
- Teams should coordinate and cooperate with their pit neighbors regarding the use of pit space, lights and power outlets.

C.2 Pit Area Rules

Keep in mind the following Pit Area rules, as defined in "3.0 PIT AND TESTING AREA RULES":

- Safety glasses must be worn by all people standing near or working on a robot.
- All robots must be supported off their wheels or legs, for runaway protection.
- All Safety Covers and Restraints must be installed.
- An Adult Supervisor must be present when any work is done on the robot
- No flammable liquids.
- Pressure tanks must be installed in a robot or else stored in a container.
- Pneumatic/hydraulic systems must be unpressurized.
- No welding or grinding.
- No fueling of robots.
- No robot Activation or testing.

Also:

- No smoking, drinking, drugs or unruly behavior.
- No scooters, bicycles, skateboards or skates.

C.3 Pit Hours and Security

- BotsIQ will endeavor to keep the Pit Area open as long as possible. However, the Pit Area may close at night. The Pit Area hours of operation will be announced by BotsIQ prior to the Tournament.
- There will be 24-hour access security during the entire event. Also, there may be security cameras monitoring the Pit Area. However, Teams are responsible for the safekeeping of their own equipment.
- BotsIQ will not be responsible for any Team items lost or stolen from the Pit Area, the parking lot or anywhere else in the Tournament venue.

C.4 Fire Extinguishers

- Fire extinguishers are located throughout the Pit Area. Every person acting as a Pit Crew member should locate and make note of the positions of the two extinguishers closest to the Team's Pit Table.
- If you do not know how to operate and use a fire extinguisher, ask a CrewBot or other BotsIQ Official to explain the procedure.

C.5 Hazardous Waste Disposal

Specific containers will be provided for the disposal of hazardous materials. You must use these at all times when disposing of fuels, oil, hydraulic fluid and damaged batteries.

Disposal in other areas in violation of local ordinances and/or state and federal codes can result in the Disqualification of your Team and its robot(s).

C.6 Team Seating Area

For viewing Matches, there may be special Team Seating Areas for viewing the Arenas. Team members may have to show their Team ID Card to gain access.

If public seating is available, Team members may sit in the Public Seating Area. However, if the Public Seating Area becomes crowded, Teams must sit in the Team Seating Area.

C.7 Unnecessary Pit Personnel

To minimize pit crowding, BotsIQ asks each Team's cooperation in limiting their Pit Crew to as few members as needed at any given time. If someone on the Team has nothing to do, they should move outside the Pit Area.

C.8 Cameras and Video

Multiple production companies, media and press may videotape the proceedings, including the Pit Area. They may wish to interview people on camera. Please be courteous and accommodating.

You may take photographs or make video recordings in the Pit Area. However, unless BotsIQ has specifically indicated otherwise, you cannot record Matches, either directly or indirectly (e.g., off monitors or wall projections).

D. Safety/Tech Inspection

D.1 Preparing for Safety/Tech Inspection

After the Team has settled into its pit space, the Pit Crew should next prepare the robot for Safety/Tech Inspection.

The specific rules regarding Safety/Tech Inspection are described in "5.1 THE SAFETY/TECH INSPECTION". Note that:

- Inspection hours will be specified prior to each event.
- Read and follow the instructions on the inspection checklists you are given.

A Team's robot will not be inspected if all sharp points and edges are not covered as defined in the BotsIQ Technical Regulations.

D.2 Safety/Tech Inspection Procedure

The Safety/Tech Inspection is typically performed in two stages: The Internal Inspection and the Functional Test. A general description is given below. A more detailed Safety/Tech Inspection description is given in Part 3 of this document.

D.3 Internal Inspection

The Pit Crew removes the robot's outside covers to expose all of the internal systems. For this stage of the inspection:

- Where necessary, safety covers and restraints must be installed.
- The robot drive and weapons systems must be completely Deactivated.
- Any pneumatic system on board the robot must be completely depressurized.
- Any fuel tanks should be completely empty.

When the robot is ready for Internal Inspection, the Team notifies the Safety Administrator. When an Inspector is available, he or she comes to the robot's Pit Table. The Inspector checks that all internal components are safe and comply with the requirements of the BotsIQ Tech Regs.

D.4 Functional Testing

If the robot passes the initial Internal Inspection, the Team prepares the robot to put it in the exact condition that it will be when it competes. Preparation includes:

- Installing all components, covers and armor.
- Pressurizing any pneumatic tanks.
- Adding Fuel, oil and/or hydraulic fluid, as necessary.

When the robot is ready for Functional Testing, the Team notifies the Safety Administrator.

Functional Testing usually takes place in a special Test Box, but it may be tested in another designated area at the discretion of the Inspector.

D.5 Team and Robot Photos

At any time when your robot is completely assembled, take it and the rest of your Team to the photography area to have your Team and robot photos taken.

Note that you must have your Team and robot photos taken. This is not optional.

D.6 Weighing

When the robot has been configured for battle, it is weighed using the requirements defined in "5.5 ROBOT WEIGHING". The covers and Restraints may be temporarily removed at the direction of a Safety/Tech Inspector, when necessary for weighing.

The robot can be weighed at any time during the Inspection, but it is usually weighed just prior to the Functional Testing.

Safety/Tech Inspection always has priority on using the scales. However, the BotsIQ scales may be used for checking your robot's weight anytime that they are not being used for a Safety/Tech Inspection.

D.7 If The robot Fails Inspection

If the robot fails any phase of the inspection, the Team must fix the problem(s) and request re-inspection during scheduled inspection times.

- If there are a few minor problems, the Team will typically be given a form that specifies the inspection phase and what needs correcting.
- If there are several problems, or if any problem fix will require significant modifications, the Team will have to fix the problems, then return for a new complete Inspection and Test.

D.8 Inspection Notes

During Safety/Tech inspection, be aware of the following:

- The Safety/Tech inspection is intended to determine if the robot, as initially entered, appears to comply with the Tech Regs. It does not protect the robot from later being inspected and Disqualified for a rules infraction.
- If there are any features or modifications on the robot that any Team member suspects may not be allowed, they should point them out to a Safety/Tech Inspector.
- Avoid wasting time by making sure that the robot will comply with the Safety/Tech Inspection procedures before having it inspected. If the robot fails one part of the Inspection, your Team will be put on the list behind all the others who are waiting for that Inspection stage.

Just because some feature of your (or some other) Team's robot was allowed at a previous Tournament does not mean it will be allowed this time. If a robot does not comply with the requirements of the latest revision of the BotsIQ Tech Regs, it will not be allowed to pass Safety/Tech Inspection.

E. Robot Preparation and Testing

E.1 Welding/Grinding Area

No welding or grinding can take place in the Pit Area. BotsIQ will set aside a special area for welding and grinding. If you are using this area:

- Always wear approved safety glasses or a full face-shield. This is not optional.
- When grinding, position yourself such that no sparks are thrown in the direction of other people, or outside the Welding/Grinding Area.
- All arc welding and torch cutting must be shielded from others. People unfamiliar with welding and torch cutting may not be aware of the dangers of watching.

E.2 Robot Fueling Area

All liquid fueling must take place outside of the Pit Area in a Fueling Area specified by BotsIQ.

- Exercise caution to prevent spilling fuel on the ground.
- There must be no smoking or other ignition sources in the Fueling Area.

E.3 Pressurization Refill Area

All pressurization of pneumatic system pressure bottles must take place in a specified Refill Area. BotsIQ will provide standardized equipment and supervisory personnel for pressurization.

In all cases, the following rules must be followed:

- Use safety glasses or a full-face shield.
- Pressurize the system slowly.
- Do not hold the robot in an unstable position while re-pressurizing.

E.4 Robot Testing

Specific areas will be provided to test your robot. When using such a Test Area, always abide by the following:

- You must at all times be accompanied by an authorized BotsIQ Official, and comply with all of his or her instructions.
- Transport the robot to or from the Testing Area on a rolling dolly or cart. Do not drive or hand-carry the robot.
- When transporting the robot, all Safety Covers and Restraints must be installed.
- Do not activate the robot until it is in the Testing Area.
- Completely Deactivate the robot before removing it from the Testing Area.
- Comply with all radio-use procedures.
- When testing, stand in a protected area and make sure any bystanders are protected also.
- Comply with any requests of BotsIQ Officials.

Absolutely no riding or carrying of passengers on robots is permitted. Violators may have their Team and robot(s) Disqualified.

F. General Match Procedures

F.1 Overview

This section describes the general Match procedures used at BotsIQ Tournaments.

Various factors may require changes to the procedures described below. Consult the BotsIQ website for specific Tournament information.

Also, at the Tournament there will be one or more mandatory-attendance meetings to describe any procedural changes, and to reiterate the important existing procedures.

F.2 Instruction of Officials

Unexpected events may require last-minute changes in the procedures. Therefore, Team members must always follow the instructions of BotsIQ Officials at all times.

F.3 Know the Team's Schedule

When competing at a BotsIQ Tournament, key Team members must be constantly aware of their robot's fight schedule. Use the following guidelines:

- Individual Match schedules will be posted at the beginning of each Tournament session. BotsIQ will post fight schedules on both paper and computer displays.
- Keep in mind that the schedules are approximate and the order of the Matches may change. Always have someone at your Pit Table at least **60 minutes** before your next posted Match time.
- During the Tournament, the Pit Coordinators will need to know where key Team members are in order to alert your Team to an upcoming Match and escort the robot to the Queuing Area. Every Team should have at least one Pit Crew member present at its Pit Table at all times. If no one is at the Pit Table, there must a clearly visible note on the Pit Table indicating where key Pit Crew members can be found.
- The basic rule is: If a Team's robot is scheduled to fight and a BotsIQ Official cannot find key Team members, the Team Forfeits the Match. Please keep the robot's fight times in mind and remain visible to BotsIQ staff.

F.4 Time Between BotBouts

Always be aware of the following:

- In BotBouts, robots are guaranteed only 20 minutes between bouts (post-bout interview time and time spent for re-inspect is excluded). Therefore, any routine maintenance on the robot should take no longer than 20 minutes (especially battery charging and/or replacement).
- If the robot is not prepared to compete when its next bout is up, it may be required to Forfeit. However, in some cases a Team may be able to reschedule the bout. See "6.4.6 MATCH POSTPONEMENT" for more information on this.
- There is no guarantee of a minimum time between BotBouts and Rumbles.
- As the Tournament moves into the final eliminations, the time between Matches will generally become shorter.

F.5 Unable To Compete

If the robot is non-functional and the Team knows it will be unable to compete in a Match, notify a Pit Coordinator, or a BotsIQ Official at the Information Booth. This will help the scheduling and spare your opponent unnecessary effort.

F.6 Team Platform Crew

The Platform Crew is those Team members who are present on the Arena platform during a Match. A Platform Crew can have a maximum of 5 people, including 1 Adult, and consists of the following:

- Operators who control the robot during the Match. Up to 3 Operators for a Large Class robot, and up to 2 Operators for a Mini Class robot.
- One or more Team Strategists, who advise the Operators, but do not control the robot.
- An optional Hazard Controller, who can control certain Arena hazards.

The Platform Crew may be different people than the Pit Crew that handles the robot.

F.7 Pre-Match Queuing Area

As the Match time approaches, Pit Coordinators will escort Pit Crew members and the robot from the Pit Area to the Arena Queuing Area. Be aware of the following:

- Moving the robot from the Pit Area to the pre-Match queue must be done on a separate cart or dolly, with the robot fully Deactivated.
- All Safety Covers and Restraints must be installed on the robot while moving it from the Pit Area to the Queuing Area.
- There may be mandatory or random weighing of robots either as they exit the Pit Area, or prior to the staging for battles.
- There may be mandatory or random checks of pneumatic system pressures of robots in the Queuing Area. If the robot uses pneumatics, and if access to pressure-test points requires special tools, then the Pit Crew should have those tools with them in the Queuing Area.

F.8 Pre-Match Staging Area

Just prior to the Match, the robot will be moved from the Queuing Area to the Staging Area just outside the Arena. There, the Pit Crew and Platform Crew will wait until it is time for the actual Match. Note that:

- The robot must remain fully Deactivated.
- A BotsIQ Official will assign each Team's robot a starting location, either the red or blue square. Listen carefully and note the positions.
- Notify the CrewBots if the robot has a special feature or characteristic that could be hazardous to the CrewBots in the Arena.
- Keep the transmitter off and do not remove any Safety Covers or Restraints.

F.9 Entry to the Arena

When moving the robot into the Arena, always follow the direction of the CrewBots. If you are involved in transporting and Activating the robot, proceed as follows:

1. Move the robot up the ramp and into the Arena. Watch your footing inside the Arena. Do not step on any of the Arena weapons or hazards.
2. Place the robot in either the Red or the Blue square as instructed by the CrewBots.
3. Remove any Safety Covers and Restraints and stand next to the robot for the duration of the announcer's introduction (as described next).
4. At the conclusion of the announcer's introduction, make sure that all non-essential personnel are outside the Arena.
5. Activate the robot, as you should have practiced many times before.
6. If you cannot Activate your robot, or if there is some other problem, you may be able to Postpone your Match (if allowed), or else compete with a non-functioning robot part (e.g., an ICE or weapon).

7. Once the robot is Activated, exit the Arena. If you are part of the Platform Crew proceed to your respective driving platform outside the Arena. Otherwise exit the immediate Arena area.

F.10 Platform Crew Preparations

While the robot is being setup in the Arena, the Platform Crew should be taking its place on the platform just outside the Arena. If you are a member of the Platform Crew, proceed as follows:

1. Go to the platform on the side of the Arena where your robot is being started.
2. Turn on your transmitter when requested by a Referee or other BotsIQ Official.
3. Do not test any part of the robot until the CrewBots have locked the Arena doors, and have given the all-clear signal.
4. After you have confirmed mobility, the robot should be completely motionless with any Internal Combustion Engines running at Idle Speed.
5. Your Referee will ask if you are ready. When you are, respond "Yes" or "Ready".
6. When both Platform Crews have affirmed their readiness, the Referees will start the countdown.
7. The countdown light tree sequence starts, with the lights turning on from top to bottom. The robot must remain motionless, with any engines at Idle Speed, until the Green lights turn on, or the Referees signal the beginning of the Match.
8. The Match begins when the Green lights near the bottom of the countdown tree turn on, or on the Referees' verbal signal.

F.11 The Match

Rules for Matches are defined in "6.0 MATCH DEFINITIONS". However, from the perspective of a Platform Crew member, here are some possibilities:

- **Fault** – If either robot started moving before the green lights turned on, this is a Fault, and at the discretion of the Judges or Referees, the Match may be halted and restarted.
- **Restart** – A Restart begins with the robots back in their starting positions and motionless. Usually, the Referees will verbally restart a Match.
- **Pinning/Lifting** – If your robot is pinning or lifting the opponent robot, the Referee will ask your Operators to release it after 20 seconds. They must comply or your Team can Forfeit the Match.
- **Tap-Out** -- If the robot becomes disabled, and you want to end the Match to avoid further damage, tell the Referee "Stop the Match" or "Tap-Out". The Referee will ask the entire Platform Crew to confirm. If you all say "YES", your robot loses and your Team's Operators must release their controls.
- **Opponent Tap-Out** – If a Referee reports that your opponent has confirmed a Tap-Out, show good sportsmanship and refrain from any further attack.
- **Incapacitation** – Your robot must show that it is Responsive at least every 20 seconds, or it may be declared Incapacitated.
- **No Contact** – If your robot does not make physical contact with the other robot or an Arena Hazard at least every 60 seconds, Referees can stop the Match, and you could lose.
- **Robot Stuck** – If your Team's robot is stuck on the Arena, your Operators have 20 seconds to get it unstuck, unless the Match ends sooner.
- **Opponent's Robot Stuck** – If the opponent robot is stuck on the Arena, you are not prohibited from using your robot to free it, if you want to keep fighting.
- **Both Robots Stuck** -- Matches will be paused to free robots if they become stuck together, or are simultaneously stuck on the Arena.
- **Disqualification** – If any BotsIQ Official, Referee or Judge observes the Platform Crew or the robot violating a BotsIQ rule, your Team and robot(s) may be Disqualified.

- **Disruptive Behavior** – If the Referee observes that you are exhibiting disruptive behavior, he or she may instruct you to leave the platform. You must comply immediately or your Team and robot(s) may be Disqualified.

F.12 Match Conclusion

At the conclusion of the Match, the Platform Crew should stay on the driving platform and turn off their transmitter.

The Pit Crew must wait until the CrewBots have determined that the Arena is safe for reentry. When the CrewBots indicate that it is safe, the Pit Crew may:

1. Enter the Arena and immediately perform the Deactivation sequence to safe the robot.
2. Install all Safety Covers and Restraints.
3. Check for any damage that may render the robot unsafe. If they find such damage, they must notify a CrewBot immediately.
4. Remove the robot through the exit door, as directed by the CrewBots.
5. If possible, you should remain near the Arena for the winner announcement and post-match interview.
6. Return your transmitter(s) to Transmitter Impound if necessary.

F.13 Winner Announcement

When the robot has been safely removed from the Arena:

1. The Platform Crew proceeds to the middle of the Arena for the official announcement of the winner. The Red Crew stands on the Red side of the Referee and the Blue Crew on Blue side.

Exercise caution, as robots for the next Match may be being moved into the Arena.

2. When the winner is announced, the Referee will raise the hand of the winner.
3. If your Team won, be sure to collect a win pog.

F.14 Return Robot to the Pit Area

Before taking the robot back to the Pit Area:

1. Pit Crew members should check that any sharp edges or corners caused by battle damage are temporarily covered using tape, cloth or other makeshift means. Materials will be available near the Arena exit.
2. If a BotsIQ Official suspects that your robot may be unsafe as a result of combat damage or incomplete Deactivation, they may ask to immediately inspect the robot before you move it back to the Pit Area.
3. Place the robot on its carrier before moving it back to the Team's Pit Table. Do not hand-carry it.

All Safety Covers and Restraints must be installed on the robot while moving it from the Arena area to the Pit Area.

PART 3: SAFETY/TECH INSPECTION

The Safety/Tech Inspection is done in two steps: The Internal Inspection and the Functional Testing. In addition, the robot's official weight is also checked.

Internal Inspection

Internal Inspection Preparation

To get ready for Internal Inspection, do the following:

1) Set up your Pit Table area

- Put your robot on the table or the floor, but be sure to place it such that the wheels, legs or other motion-producing components are suspended in the air by at least 1/4 inch.
- Unpack and arrange your tools. You may need them for Inspection.

2) Pre-Weigh your Robot

- Before disassembling your robot for Inspection, if you think it might be overweight, weigh it on the official BotsIQ scale. You can use the scale anytime it is not being used by a Safety/Tech Inspector.

3) Open up your Robot for Internal Inspection

- Remove external panels to expose the interior.
- Expose the batteries.
- Expose all electrical system wiring.
- Expose any pneumatic tanks to allow checking their type and rating.
- Expose any pneumatic system components (regulators, valves, etc.).
- Keep all Safety Covers and Restraints on, if possible.

4) Depressurize any pneumatic system tanks

- If the robot has a pneumatic system, completely depressurize all your tanks, including any spares.
- Place any spare tanks in a container that keeps them from moving around.

5) Empty fuel/oil tanks

- Empty all fuel and external oil tanks. It's OK to have oil in the sump of an ICE.
- Any hydraulic fluid reservoir need not be emptied.

6) Notify Safety/Tech that your robot is ready

- Bring the Internal Inspection checklist sheet with you to the Safety/Tech Area and notify the Safety Administrator that your bot is ready for the Internal Inspection.
- Do not bring your robot to the Safety/Tech Area. An Inspector will come to your Pit Table.
- Have someone at your Pit Table at all times when waiting for inspection.
- Know the location of your Team's Adult Supervisor. He or she must be present during the inspection.
- You can check with the Safety Administrator occasionally to find out your approximate inspection position.

Functional Test

Functional Test Preparation

To get ready for the Functional Testing, do the following:

1) Charge all batteries

- Check/charge the primary power batteries.
- Check/charge any secondary power batteries.

2) Pressurize any pneumatic system tanks

- If the robot has a pneumatic system, go to the Refill Area and get pressure tank(s) filled the same as they will be prior to combat.
- Install the filled tank(s) in the robot.
- Keep all spare tanks (filled or not) in a container that prevents tank movement.

3) Add any required fluids

- Add fuel to fill any fuel tanks.
- Add oil to any engine sump or oil tank.
- Add hydraulic fluid to any reservoir.

4) Re-Assemble the robot

- Install all internal components.
- Install all external covers and armor.
- Attach all Safety Covers and Restraints.

5) Weigh the robot

- If you think your bot might be overweight, check-weigh it on the official BotsIQ scale. You can use the scale anytime it is not being used by BotsIQ personnel.
- If your bot is overweight, correct the problem.
- If you have made significant changes to reduce the weight, notify the Safety Administrator.

6) Notify Safety/Tech that your robot is ready

- Bring the Functional Test checklist with you to the Safety/Tech Area and notify the Safety Administrator that your bot is ready for the Functional Testing.
- Have someone at your Pit Table at all times while waiting for the Functional Testing.
- Know the location of your Team's Adult Supervisor.
- Do not bring your robot to the Safety/Tech Area (except to weigh it). A Safety/Tech representative will notify you at your Pit Table when your bot will be tested.
- When you are notified, bring your robot and your Adult Supervisor to the Safety/Tech Area.