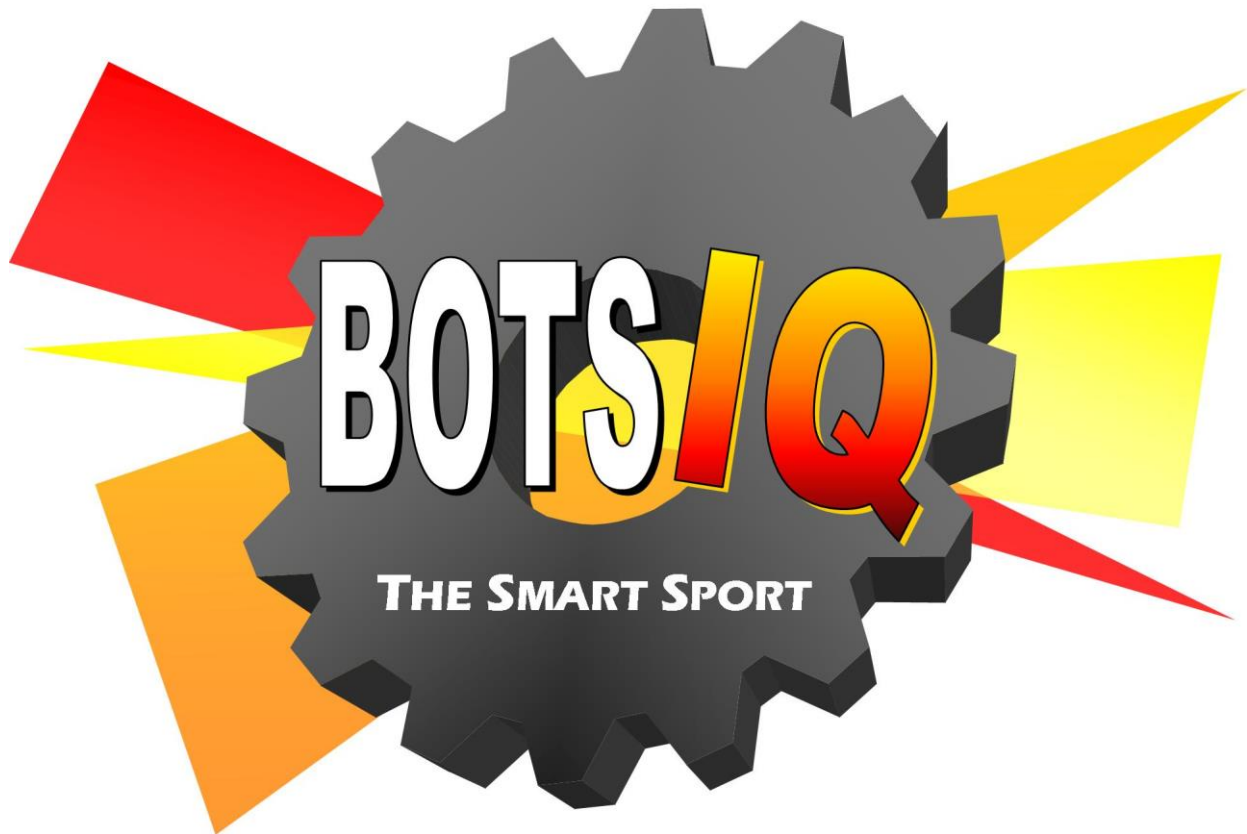


**SOUTHWESTERN PENNSYLVANIA**



# **Competition Rules and Regulations**

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Version 1.1

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# 1.0 Introduction

## 1.1 SWPA BotsIQ

Southwestern Pennsylvania BotsIQ “SWPA BotsIQ” is an educational program that promotes science, technology, engineering and math (STEM), competitive sportsmanship and creativity among teams of high school students. These skills are promoted through the design and creation of competitive, battling Bots. The Bots the students are building are members of the 15 pound weight class, otherwise referred to as the “Mini Class”.

This is a competition. As such there will be winning teams and losing teams. Some teams will achieve much higher overall scores than other teams. A Bot that took months to build may be destroyed in the first match and be unusable.

### 1.1.1 Teams

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

## 1.2 Safety/Warning Notice

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 SWPA BotsIQ Bot. Common sense and safety awareness is stressed in all areas of construction and operation.

## 1.3 Defining Documents and Information

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

### 1.3.1 Quality Youth Organization (QYO) Participant Event Liability and Social Media, Video and Photo Consent Forms

The above documents must be fully completed in order for a Quality Youth Organization (QYO) participant to take part in a SWPA BotsIQ event.

### 1.3.2 Technical/Operational Documents

Additional documents are:

- a. The SWPA BotsIQ Competition Rules and Procedures ("CR&P") document defines the rules and procedures for a safe, fair and efficient SWPA BotsIQ Competition.
- b. The SWPA BotsIQ Mini Class Technical Regulations ("Technical Regulations") define the requirements specific to the design and construction of a SWPA BotsIQ Bot.

There may be other SWPA BotsIQ documents that provide additional information. The latest versions of all documents are on the SWPA BotsIQ website.

### 1.3.3 SWPA BotsIQ Internet Information

The SWPA BotsIQ website contains general information on SWPA BotsIQ and also makes available copies of SWPA BotsIQ documents. SWPA BotsIQ may send e-mail messages to current and former SWPA 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 SWPA BotsIQ Team to verify that they are referencing the last-updated version of any SWPA BotsIQ document available on the SWPA BotsIQ website. It is also each Team's responsibility to check it's e-mail regularly.

## 1.4 General Definitions

- a. **Southwestern Pennsylvania BotsIQ** ("SWPA BotsIQ") refers, collectively, to the entity that manages and owns the program, and all its officers, employees and authorized agents.
- b. **SWPA BotsIQ Executive Officers**
- c. SWPA BotsIQ Executive Officers have jurisdiction on all SWPA BotsIQ matters. The SWPA BotsIQ Executive Officers may authorize certain persons to have specific Executive Officer rights for a specific time period.
- d. **SWPA BotsIQ Competition Officials**  
SWPA BotsIQ Competition Officials are authorized agents and volunteers of SWPA BotsIQ and have overlapping jurisdictions, as follows:
  - i. **Check-in Staff** – Bot check-in procedures.
  - ii. **Documentation Evaluators** – Evaluate and grade each team's documentation.
  - iii. **Interviewers** – Discuss with teams the design and building of their Bots.
  - iv. **Referees** – Arena and Staging Area operations, Arena operations during Matches and certain rule interpretations.
  - v. **Judges** – Rules interpretation and winner determination for certain Matches.
  - vi. **Pit Coordinators / Runners** – Pit, Queuing and Staging area operations.
  - vii. **Safety/Tech Inspectors** – Safety/Tech, Testing, Arena, Working Pit and Pit Area operations.
  - viii. **Security** – Access to all areas.
  - ix. **Competition Scoring & Scheduling** – Timing and scoring of all Matches, Match postponements and Forfeits.

## 1.5 Rules Interpretation

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

### 1.5.1 Applicability

These Competition Rules and Procedures supercede all previous versions of the documents.

### 1.5.2 Overlapping / Conflicting Requirements

A reasonable effort is made to ensure that the requirements in all SWPA 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 Competition Rules and Procedures will be published on the official SWPA BotsIQ website.

#### **1.5.4 Final Authority**

SWPA BotsIQ Executive Officers have the final authority over the interpretation, implementation and extension of the rules, procedures and regulations in this and all other SWPA BotsIQ documents. At the discretion of SWPA BotsIQ Executive Officers, additional regulations and requirements may be applied to any and all SWPA BotsIQ Bots at any time. Authorized SWPA BotsIQ Officials may exclude from competition any Bot that, due to its design, construction or usage, they judge to be a hazard to safe competition, even if that Bot has met all of the requirements in these Technical Regulations.

#### **1.6 Contacting SWPA BotsIQ**

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

Southwestern Pennsylvania BotsIQ

305 E. Carson Street

Pittsburgh, PA 15219

Phone: 412/258-6629

Fax: 412/258-6625

Email: [padnos@ncsquared.com](mailto:padnos@ncsquared.com)

Website: [www.botsiqpa.org](http://www.botsiqpa.org)

## 2.0 General Requirements

### 2.1 SWPA BotsIQ Competition

#### 2.1.1 Mini Class

The Mini Class SWPA BotsIQ Bots have a maximum 15 lb. weight, and compete one-on-one, with the intent to disable their opponent. Mini Class SWPA BotsIQ Bots compete in a 10' by 10' or 12' by 12' arena. The arena does not contain any hazards.

#### 2.1.2 Competition Composition

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

### 2.2 SWPA BotsIQ Teams

#### 2.2.1 Team Definition

A SWPA 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.

#### 2.2.2 QYO Teams

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

A QYO Team is composed of the following:

- a. At least **three** students, who are High School students, inclusive, who are members of the same QYO.
- b. At least **one**, but not more than **two** Supervising Adults who are at least **21 years** old. Each Supervising Adult 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.

A QYO may enter up to two Teams into a SWPA BotsIQ competition. However, any Team can only be affiliated with a single QYO.

#### 2.2.3 Team Member Restrictions

Teams are not allowed to share members.

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

### 2.3 Team Members

#### 2.3.1 Competitor Definition

A "**Competitor**" is a student member of a QYO who has actively contributed to the design, construction, testing, support or promotion of the Team's Bot. A Competitor can be a member of **one** Team only. Competitors are the only ones allowed to operate a Bot in competition.

### **2.3.2 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 SWPA BotsIQ documents and communiqués.

A Team is required to have at least one Primary Adult Supervisor. Prior to the Competition, this person is the main contact individual for e-mail or other notices regarding the Competition. During the Competition, 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.

### **2.3.3 Technical Advisor**

A "**Technical Advisor**" ("Tech Advisor") is a person who provides technical advice to the SWPA BotsIQ Team. The Tech Advisor must not be attending a High School. A Tech Advisor can be a member of **two** different Teams.

### **2.3.4 Chaperon**

A "**Chaperon**" is a person of age **21 years** or older who accompanies a Team's Competitors to a Competition, but is neither an Adult Supervisor nor a Tech Advisor. The Chaperon is affiliated with the QYO rather than a specific Team.

### **2.3.5 Mentor**

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.

### **2.3.6 Team Member Participation**

A primary goal of SWPA 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 Bot.
- b. The Adult Supervisors, Tech Advisors and Mentors are expected to serve in supervisory and advisory capacities only, and should not physically participate in the assembly, testing, promotion and/or support of the Bot.
- 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 Bot. However, Competitors should participate in parts fabrication whenever possible.

### **2.3.7 Team Member Responsibilities**

All Teams at a SWPA BotsIQ Competition have certain duties and responsibilities.

- a. Team members must follow the verbal and/or written instructions of SWPA BotsIQ Executive Officers and SWPA BotsIQ Officials at all times.
- b. Teams have to know the SWPA BotsIQ Regulations, Rules and Procedures as defined in this and other official SWPA 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 SWPA BotsIQ Officials of any problems with radios, the Bot, or any other factor that could affect their Bot'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.
- f. Teams are responsible for having at least one Team member present at the team's Pit Table at all times.

*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 SWPA BotsIQ Competition, Teams must complete, submit and, as necessary, sign any and all entry and related documents as requested by SWPA BotsIQ.

### **2.4.1 Entry Documents**

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

### **2.4.2 Proof of Viability**

If a Bot has not previously competed in an official SWPA BotsIQ Competition, SWPA BotsIQ may require that the Team prove, in advance of the Competition, that the Bot in fact exists and is capable of competing.

## **2.5 Bot Eligibility**

### **2.5.1 Bot Completeness**

Mini-class Bot, including its radio control system, must not contain any parts from any other Bot that is still eligible to compete in Competition elimination Matches. Thus, a Bot may be repaired utilizing parts from another Bot if that other bot has been eliminated from SWPA BotsIQ competition.

### **2.5.2 Bot Name Change**

A Team may change the Bot name, provided that the change is communicated to the SWPA BotsIQ Program Coordinator one month prior to the competition.



### 2.5.3 SWPA BotsIQ Rights

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

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

## 2.6 Bot Retirement

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

### 2.6.1 Retirement Conditions

A SWPA BotsIQ Bot will be Retired if any of the following occurs:

- a. The same Bot receives **two** First-Place wins in SWPA BotsIQ Finals Competition.
- b. The same Bot received **two** Grand Champion wins in the SWPA BotsIQ Finals Competition
- c. The same Bot receives **one** First-Place and **one** Grand Champion wins in SWPA BotsIQ Finals Competition.

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

### 2.6.2 Changed Bot Determination

If the Bot is changed sufficiently between Competitions, it is not considered to be the "same" Bot and therefore is not subject to the requirements of "2.6.1 RETIREMENT CONDITIONS". In all matters of decision whether a Bot has changed sufficiently, SWPA BotsIQ will render a judgment and reserves the final right of determination. The general criteria for judging whether or not a Bot has changed are defined below.

### 2.6.3 Change Criteria

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

- a. 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.
- b. A primary weapon is added to a Bot that previously used no active weapon. For example, a "wedge" bot has a rotating drum weapon added.
- c. The primary weapon type system is changed. For example, a lifter mechanism is replaced by a hammer.
- d. The power system for the primary weapon is changed.

If a Bot 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 Bot as "changed". These are:

- a. Bot 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 Bot as being changed.

### **2.7 Restricted/Prohibited Activities**

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

#### **2.7.1 No Unruly Behavior**

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

#### **2.7.2 Smoking is Prohibited**

Smoking, smokeless tobacco and related products are prohibited on the premises of the Competition.

#### **2.7.3 No Drugs or Alcohol**

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

#### **2.7.4 No Pets**

No biological animals of any kind are allowed anywhere at a SWPA BotsIQ Competition unless the animal is a documented working animal.

#### **2.7.5 Small Children**

Children under the age of 14 must be accompanied by an adult when in the Pit Area and wear safety glasses. All liability is released and consent forms must be signed by accompanying adult before the child is allowed into the Pit Area.

### **2.8 Security Cameras**

Teams are hereby notified that security cameras may be recording activities anywhere at the Competition 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 Bots and associated auxiliary equipment are prepared, maintained and stored during a Competition. However, for purposes of restricted access, the Pit Area also encompasses all areas where Bot testing, preparation, maintenance and/or staging are performed.

#### 3.1.2 Team Member Definition

The "**Team Members**" are, by definition, those Team members who are currently attending to the Team's Bot in the Pit Area and other associated areas. Team members include 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 Bot. 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 Bots, SWPA BotsIQ will attempt to locate all of the Teams Pit Tables adjacent to one another. A Team must notify SWPA 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 Competition. 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 green name tag. Family and friends of Team members are not allowed in the Pit Area, unless the friend or family member has signed all required paperwork, has a SWPA BotsIQ issued name tag and shatterproof safety glasses.

#### 3.1.6 Team Member Availability

A Team that is still eligible to compete at a Competition 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 SWPA 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 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 required that all persons in the Pit Area wear safety glasses at all times, even if they are not standing near or working on a Bot.

If a student in the pit fails to wear his/her safety glasses, either a Pit Monitor or Safety Inspector will punch a hole in the student's name tag and note the infraction at the Safety Inspectors' table. If an individual student has two infractions over the course of the entire competition, he/she will no longer be allowed to enter the pit area and will be escorted out of the pit by the team's teacher/advisor.

Teams will receive one warning if a member is not wearing safety glasses. Thereafter, teams will be deducted the following number of points from their overall score:

2 violations – 5 point deduction

3 violations – 10 point deduction

4 violations – 25 point deduction

5 violations – 50 point deduction

6 violations and over: Team will forfeit next competition or not be allowed to participate in a grudge or rumble match if they have already been eliminated from the tournament.

### **3.2.2 Adult Supervision**

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

The student Team members are responsible for the handling and all work done in the Pit Area. If an adult supervisor or technical advisors works on the Bot in the Pit Area without prior approval from a BotsIQ Official, the Team will be assessed a 10-second non-movement penalty for the beginning of their next Bout. The Team will not be allowed to move their Bot from their home base for the first 10-seconds of the Bout while the other Team Bot is free to engage.

### **3.2.3 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.

### **3.2.4 No Welding/Drilling/Grinding/Sanding**

No welding, drilling 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.). These actions can be done in the Working Pit and under the supervision of an SWPA BotsIQ Competition Official.

### **3.2.5 No Bot Activation**

Under no circumstances can a Bot 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 Bot employs 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.

### **3.2.6 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.

### **3.2.7 No Flammable Fuels**

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

### **3.2.8 Bot Pressure Tanks**

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

- a. Is not pressurized higher than the limit specified in the SWPA BotsIQ Technical Regulations.
- b. Has an attached pressure relief valve or a burst disk.
- c. Is either properly installed in a Bot 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 Bot or placed in a container. There must be no pressure storage tanks lying about loose at any time.

### **3.2.9 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 Bot.**

### 3.3 Working Pit Area

All welding and grinding must be done in the Working Pit Area specifically set aside for those purposes.

When working in the Working Pit Area, the following procedures must be followed:

- a. All persons in the Working Pit Area must wear safety glasses or face masks.
- b. If any student Team member is working in the Working Pit 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 Working Pit 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 Working Pit Area cannot directly view the welding or cutting.

SWPA BotsIQ representatives working within the Working Pit are only allowed to spend a maximum of 30 minutes with each team at a time.

*Note: The Working Pit Area is not to be used for the large scale manufacturing of a Bot before, during or after the competition. This area is only to be used for minor repairs that are not allowed to be done in the Pit Area for safety reasons.*

### 3.4 Bot Testing

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

#### 3.4.1 Testing Areas

Specific areas for Bot testing purposes will be provided at the Competition site. Each Testing Area will be supervised by a SWPA 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 SWPA BotsIQ Safety/Tech Inspector may in some circumstances choose to allow a Bot to be tested in a safe area away from the standard Testing Areas. During such testing, the Bot and supporting personnel must be under the direct observation and supervision of the Inspector at all times.

**Unauthorized or unsupervised testing of a Bot at the Competition site can result in the immediate Disqualification of the Bot and its Team.**

#### 3.4.2 Bot Transport

When transporting any Bot to or from the Testing Area:

- a. All Safety Covers and Restraints must be installed on the Bot.
- b. The Bot must be completely Deactivated.

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

### **3.4.3 Testing Safety**

When testing a Bot, 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 SWPA BotsIQ Officials.

### **3.5 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.

SWPA BotsIQ will provide specific containers for the disposal of hazardous materials. These must be used at all times when disposing of fuels, oil 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 Bot.**

## **4.0 Radio Operation Rules**

All radio control equipment must at all times comply with all the requirements and restrictions of the appropriate SWPA 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 Bot or Expulsion of Team members.**



## **5.0 Bot Safety Rules**

### **5.1 The Safety/Technical Inspection**

To be eligible to compete in a SWPA BotsIQ Competition Match, each Bot 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/Technical Inspection in the Procedures part of this document. A description of Bot preparation for Safety/Technical Inspection is given in "5.4 INSPECTION PROCEDURE" and in Part 3 of this document.

### **5.2 Inspection Time Schedule**

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

#### **5.2.1 Advance Notification**

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

### **5.3 Compliance with Rules and Regulations**

During any Safety/Technical Inspection, the Bot must demonstrate that it complies with the requirements of the appropriate SWPA BotsIQ Technical Regulations.

### **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 Bot to confirm that the components and their mounting comply with the requirements of the Technical Regulations. Safety Plan, Bill of Materials and Component Descriptions must be included.

#### **5.4.2 Functional Testing**

Functional Testing of a Bot is not done until the Bot has completely passed the Internal Inspection. Functional Testing involves a demonstration that the Bot can be safely controlled and meets all of the activation, fail-safe, deactivation and other operational requirements specified in the Technical Regulations.

#### **5.4.3 Inspection and Testing Completion**

If the Bot 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 Bot fails any part of the Functional Test, it must again be tested and pass before it will be allowed to compete in any Matches.

#### **5.4.4 Full Disclosure**

During any Safety/Technical Inspection, the Team must fully and accurately disclose all features and characteristics of the Bot that could affect safety or compliance with SWPA BotsIQ rules and regulations. Deliberate misrepresentation of any Bot feature or characteristic may result in Disqualification of the Team and its Bot(s).

### **5.5 Bot Weighing**

The weight limits, as specified in the SWPA BotsIQ Technical Regulations, will be strictly enforced. Bot weighing will be performed as follows:

#### **5.5.1 SWPA BotsIQ Official Scale**

One scale at the Competition will be designated the SWPA BotsIQ "Official Scale". This scale can be used by any Bot for initial weigh-in and will be used for any subsequent weight challenges. SWPA BotsIQ will make reasonable efforts to insure the accuracy, sensitivity and consistency of the Official Scale so that all Bots are treated equally. The reading on the Official Scale is the weight that will be used to determine whether the Bot 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**

SWPA BotsIQ may make other scales available for use. If such scales are available, an Team Member may use them to weigh parts or to do comparative weighing. However, the initial Bot 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 Bot, as initially entered, appears to comply with the appropriate SWPA BotsIQ Technical Regulations. Passing the initial Safety/Technical Inspection does not in any way exclude the Bot from being inspected or tested at any later time during the duration of the Competition.

#### **5.6.1 Right to Request**

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

### **5.6.2 Request Procedure**

A Team member or a SWPA BotsIQ Official must verbally notify any Safety/Technical Inspector of their request to have a Bot re-weighed and/or re-inspected. However, any Safety/Technical Inspector may independently initiate a re-weigh/re-inspect at their discretion. In all cases, a Safety/Technical Inspector will notify a SWPA BotsIQ Executive Officer and any other appropriate SWPA BotsIQ Official of the results of the re-weigh/re-inspect.

### **5.6.3 Best Effort**

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

### **5.6.4 Non-Compliant**

If, as the result of the re-weighing and/or inspection, a Bot is found to not comply with any applicable SWPA BotsIQ Rules and Regulations, the remedy will depend on what is determined by SWPA 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 Bot 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 Bot can be Disqualified.
- c. If the non-compliance was deliberate, the Bot will be Disqualified and barred from competing in the next SWPA BotsIQ Competition.
- d. If the non-compliance was deliberate, and the non-compliance endangered personnel at the Competition, 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 Bot, for the same alleged rules infraction, and if the accused Bot 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 SWPA BotsIQ Official or Safety/Tech Inspector.

## **5.7 Damaged Bot Safety Requirements**

If a Bot 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 Bot is damaged such that it cannot meet the Activation or Deactivation time requirements of the Technical Regulations, it must not be Activated. Before any Activation, the Bot 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 Bot 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 Technical Regulations.

### **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. Any batteries or cells that show damage shall not be used.

### **5.7.4 Team Responsibility**

It is the responsibility of the Team members to constantly check if their Bot 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 Bot that fails to comply with the requirements of the Technical Regulations, or of this section **5.7**, can result in the Disqualification of the Team and its Bot.

### **5.8 SWPA BotsIQ Officials and Safety**

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

## 6.0 Match Definitions

### 6.1 Applicability

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

### 6.2 Competition Terminology

The following are terms used in SWPA BotsIQ competition.

#### 6.2.1 Competition Definitions

The basic terms used at a SWPA BotsIQ Competition:

- a. **Arena** – The protected area in which the Bot competition takes place.
- b. **Bot** – A single competing Mini Class Bot. It can also refer to the collection of MultiBot segments that compete as one (see "MultiSeg").
- c. **Bout** – The standard Match format used for Competition eliminations, where two Bots battle in one-on-one combat.
- d. **Bye** – A Bot does not have to compete in a Match and is automatically advanced to the next Round. Byes occur in an Elimination Competition when it is not possible to schedule a competitor in the current Round.
- e. **Eliminations** – The standard Competition format composed of successive Rounds of competition. Two formats are Single Eliminations and Double Eliminations.
- f. **Grudge Match** – A Match format where two Bots battle one-on-one, but the combat is not part of the standard Competition Eliminations.
- g. **Match** – Any competition between Bots in an Arena. The three Match formats are: the "Bout", the "Rumble" and the "Grudge Match".
- h. **MultiSeg** – Refers to any single segment of a MultiBot.
- i. **Pit Area** – The area where the maintenance and the service of the bot is preformed.
- j. **Platform** – The area adjacent to the arena where the teams control their bot during the competition.
- k. **Rounds** – One set of Matches, where all remaining competitors are paired off and compete (or receive Byes), in order to advance in the Eliminations.
- l. **Rumble** – A Match format where more than two Bots battle each other in an Arena at the same time. May also be referred to as a "Rumble".

### 6.2.2 Match-Specific Definitions

The terms below describe situations that can occur during Match competition

- a. **Disqualification** – A Bot is no longer permitted to compete in the current SWPA BotsIQ Competition.
- b. **Fault** – Occurs when a Bot 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 Bot loses a Match, either because it was not ready to compete at the scheduled time, or because of some specific Team or Bot action during a Match.
- d. **Incapacitated** – In a Referee's opinion, a Bot 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 Bot causes its opponent to become Incapacitated.
- f. **Lifting** – Occurs when one Bot 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 opposing Bots do not make any contact with each other.
- h. **Pinning** – Occurs when one Bot, through sheer force, holds an opponent Bot stationary in order to Incapacitate it. Also referred to as a "Stationary Pin".
- i. **Postponement** – Occurs when a specific Bout is delayed from the originally scheduled time.
- j. **Radio Interference** – Refers to the situation where at least one Bot becomes non-Responsive or non-controllable due to the effect of the other Bot's radio-control signal.
- k. **Responsive** – Means that, as determined by a Referee, the Bot can display some kind of controlled movement along the Arena floor. A moving Bot 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 Bots are ready to continue.
- m. **Stuck** – A Bot is entrapped on a part of the Arena or on another Bot, such that it is not Responsive or cannot otherwise move independently.
- n. **Tap-Out** – Occurs in a Bout or Grudge Match when a Bot's Operators/Drivers decide that they no longer want to continue the Match, and concede the win to the opponent Bot.
- o. **Technical Knock-Out** – Occurs when a Bot wins due to Incapacitation of its opponent even though, in the Judges' opinion, no action of the winning Bot caused the opponent's Incapacitation.
- p. **Timeout** – A temporary halting of a Match. Timeouts are usually called to separate or free stuck Bots, 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 or a SWPA 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 Bot against any opponent. If a Bot appears to have accidentally attacked an opponent, that act will not be considered Aggression.
- b. **Control** – The ability of the Bot's Operators to move the Bot in a specific and deliberate manner. Control means a Bot 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 Bot either directly or indirectly, reduces the functionality, effectiveness or defensibility of an opponent. Damage is not considered relevant if a Bot inadvertently harms itself. Also, if a pressure vessel or a rapidly spinning device on a Bot fragments, any damage to the opposing Bot will not be considered "deliberate".
- d. **Strategy** – The Bot exhibits a combat plan that exploits the Bot's strengths against the weaknesses of its opponent. Strategy is also defined as a Bot exhibiting a deliberate defense plan that guards its weaknesses against the strengths of the opponent.

## 6.3 Team Members near the Arena during a Bout

### 6.3.1 Operator/Driver

"Operator/Driver" refers to the Competitor(s) who remotely control the Bot during a Match. Up to **two** people may control a Mini Class Bot during a Match. The plural form ("Operators/Drivers") may be used to refer to a single person who is the only one controlling the Bot. When the singular form is used ("Operator/Driver"), it always refers to one person. All Operators must be Competitors from the Bot's Team; Adult Supervisors and Tech Advisors cannot operate a SWPA BotsIQ Bot in competition.

### 6.3.3 Strategists

Team "**Strategists**" are those people who do not directly control the Bot, but advise the Operator(s)/Driver(s).

## 6.4 Bout Matches

### 6.4.1 Bout Format

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

### 6.4.2 Bout Time Limits

Unless a Bout 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 Bouts may have a shorter time limit if such is decided by SWPA BotsIQ Officials, and the affected Teams are notified in advance.

### 6.4.3 Stuck Bots

If both Bots become Stuck, the Referees may declare a Timeout to free the Bots. Each team gets **ONE** Unstuck per Competition.

#### 6.4.4 Early Termination

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

#### 6.4.5 Time Between Bouts

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

*Note: As the Competition 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 Bout as scheduled, it may request that the Match be postponed. Postponement may be granted by SWPA BotsIQ Officials, subject to all of the following:

- a. A Team can request **ONE** Postponement during the Preliminary Competition. However, no postponements will be allowed during the Finals Competition.
- b. The opponent Team agrees to the Postponement.
- c. SWPA BotsIQ Officials agree to the Postponement.
- d. SWPA 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 Bots to fight in a demonstration Match that is not part of the Competition elimination. The format for a Grudge Match is the same as for a regular Bout Match. The requirements for a Grudge Match are:

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

### 6.6 Rumbles

#### 6.6.1 Selection of Competitors

Only Bots that have been eliminated from regular Competition Matches can compete in a Rumble. Based on various factors, SWPA BotsIQ Officials will decide which Bots, and the number of Bots that can compete in any given Rumble.

#### 6.6.2 Rumble Format

Bot Rumbles are started with multiple Bots arranged around the edge of the Arena. Before the start, all Bots must be motionless in their positions. After the official start, the Bots fight in an attempt to incapacitate their opponents. If any Bots 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 SWPA BotsIQ Officials. A Rumble will be terminated early for safety reasons only.



#### **6.6.4 Time In Between Rumbles and Bouts**

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

#### **6.6.5 Executive Officer Authority**

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

### **6.7 Judges**

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

#### **6.7.1 Number of Judges**

There will be a minimum of **three** Judges for the competition.

#### **6.7.2 Judges' Duties**

Specific duties and actions of Judges in specific situations are defined in the section: "7.0 MATCH PROCEDURES". Their general duties are:

- a. Deciding the outcome of Matches when neither Bot is Incapacitated.
- b. Watching for technical or safety violations.
- c. Deciding if a Bot is to be Disqualified will be the Head Referee's decision.

#### **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 Bots.

#### **6.7.4 Consulting Others**

To resolve ambiguous situations, Judges may individually or collectively discuss rules interpretation issues with SWPA BotsIQ Officials. If necessary, the Judges may also consult with one or more Operators or Team members.

### **6.8 Referees**

Referees supervise the Area and the Bouts.

#### **6.8.1 Referee Assignment**

There are **two** Referees for each BOUT

#### **6.8.2 Referees' Duties**

Specific duties and actions of Referees in specific situations are defined in the section: "7.0 MATCH PROCEDURES". The general duties of Referees include:

- a. Starting Matches.
- b. Stopping Matches early.
- c. Declaring Timeouts.
- d. Watching for safety violations.
- e. Determines disqualifying matches.
- f. Coordinate the movement and safety of Bots near and inside the Arena.

### **6.8.3 Prior to Match**

Prior to the Match, Referees escort the Bots and Team members into place within the Arena. They then supervise and coordinate the Activation of the Bots and the exit of the Team members. When the Referees are satisfied that everything is ready, they secure the Arena doors.

### **6.8.4 Timeout**

If a Timeout is declared, Referees may enter the Arena to escort a Team member to their Bot, to assist in the Team member in separating a Stuck Bot from the Arena or from another Bot. Referees may also enter the Arena for other reasons related to the safety or functioning of a Match.

### **6.8.5 After the Match**

At the end of the Match, a Referee will open the Arena doors when they deem it safe. Referees then supervise the Deactivation and damage-checking of the Bots. After Deactivation, the Referees coordinate the exit of the Bots and Team members out of the Arena. Time permitting, Referees will pick up any large pieces of debris from the floor of the Arena.

### **6.8.6 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, the Referee has the authority to call a Timeout, as necessary, to instruct any member of the Team to leave the Arena platform immediately.

## 7.0 Match Procedures

### 7.1 Application of Procedures

Match procedures in this section apply to Bouts, Grudge Matches and Rumbles. There may be some differences during the Rumbles due to the larger number of Bots and Operators.

### 7.2 Prior to Match Start

#### 7.2.1 Arena Team Members

During Match competition:

- a. A maximum of **one** Team member may be used to transport the Bot into and out of the Arena.
- b. During Activation and Deactivation of the Bot, only **one** Team member may be present in the Arena.

#### 7.2.2 Initial Bot State

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

- a. For a Bout or Grudge Match, Bots must be completely inside their respective starting squares.
- b. For a Rumble, Bots must be at their assigned starting positions.
- c. All Bots must be motionless.
- d. Any Bot rotary weapons must be motionless.
- e. Any Flywheel devices, whether internal or external, must be motionless.
- f. Spring-powered devices are allowed to have been set by remote control.
- g. Autonomous functions may have been remotely enabled.

#### 7.2.3 Match Delay

Teams are allowed ONE delay during the Preliminary competition. No delays will be allowed during the Final competition.

### 7.3 Start of Battle

#### 7.3.1 Countdown to Start

The referee will either start the match with a light or a verbal countdown

#### 7.3.2 Fault

If a Referee notices premature Bot movement or any other violation of starting procedure, he or she may declare a Fault, and require a Restart. Operators must cease Bot movement and follow the instructions of the Referees for a Restart. If a Bot Faults more than **two times** in a Bout, it will Forfeit the Match. If a Bot Faults during a Rumble, the Match will not be restarted, but the faulting Bot will not be eligible to be the Rumble winner.

#### 7.3.3 Restart After a Fault

A Restart begins with the Bots back in their starting positions and complying with all the requirements of "7.2.2 INITIAL BOT STATE".

## 7.4 During a Match

### 7.4.1 Referee Decisions

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

- a. Tap-Out
- b. Pinning or Lifting
- c. Single Bot Stuck
- d. Both Bots Stuck
- e. Incapacitation
- f. No Contact
- g. Radio Interference
- h. Safety Issues

### 7.4.2 Tap-Out

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

- a. A Team 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. The members must respond with "YES", or the request will not be considered confirmed.
- c. Once Tap-Out is confirmed, the Bot has lost the Match. The Team cannot revoke their decision and are required to stop controlling their Bot.
- d. The opposing Bot's Team members will be advised of the Tap-Out and be instructed to refrain from attacking during the count out, as their Bot has now been awarded a win

*Note: Tap-Out is not allowed during a Rumble.*

### 7.4.3 Pinning or Lifting

Bots may not win by pinning or lifting their opponents. Referees will allow pinning or lifting 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 Bot may be Disqualified as specified in "7.7.1 COMPLYING WITH OFFICIALS". A weapon that is designed to completely cover (smother) an opponent Bot is allowed. However, covering a Bot may be considered Pinning, depending upon which Bot is in control.

### 7.4.4 Single Bot Stuck

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

- a. During a Bout or Grudge Match, if a Bot or MultiSeg becomes Stuck to any part of the Arena, the Operators must be able to remotely free the Bot or MultiSeg in **10 seconds** or less. Otherwise, the Bot or MultiSeg will be declared Incapacitated.
- b. During a Rumble, no Timeout will be declared if any Bots and/or MultiSegs become Stuck.

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

#### **7.4.5 Both Bots Stuck**

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

- a. If the Bots, or a Bot and a MultiSeg are stuck together, or are both stuck on the Arena, the Referees will declare a Timeout for him or her to separate the Bots.
- b. If two Bots are stuck together, and one Bot is also stuck on a part of the Arena, the Referees will declare a Timeout and the Bots will be separated. Each team is allowed only ONE Unstuck per competition.
- 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 Bots and/or MultiSegs become stuck together.

#### **7.4.6 Incapacitation**

During a Bout or Grudge Match, a Bot 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 Bot or MultiSeg is Responsive.
- b. The Referee will allow a maximum of **10 seconds** (the final 10 seconds of which will be verbally counted down) for the Operators to demonstrate that the Bot or MultiSeg is Responsive.
- c. If the Bot or MultiSeg cannot demonstrate that it is Responsive within the required time, it will be declared Incapacitated.
- d. If **50.0% or more** of a MultiBot's segments become Incapacitated, then the Bot (entire MultiBot cluster) is considered to be Incapacitated.

#### **7.4.7 No Contact**

During the Finals if two bots cannot engage with each other, then both teams will be issued a loss, move into the losers bracket and compete again for a spot in the losers bracket. If this happens within the losers bracket, then both teams are out.

Please note that if this happens during the prelims then teams are allowed to use their delays if they still have them so they do not have to forfeit. Both teams are not allowed to use their delays one after another.

### **7.5 Bout or Grudge Match Winner**

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

#### **7.5.1 Rules Violation**

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

### **7.5.2 Incapacitation**

If one Bot becomes Incapacitated, then the opposing Bot will be declared the winner. If both Bots become Incapacitated, the Bot that became Incapacitated last will be declared the winner. If necessary, the determination of which Bot was last-Incapacitated will be decided by the Referee. If declared by the Referee that the Incapacitation was due at least in part to some action of the opposing Bot, then the opposing Bot will be declared the winner by a KnockOut.

### **7.5.3. Simultaneous Incapacitation**

If the Judges cannot determine the order in which the Bots became Incapacitated, then the Bots will be declared to be Simultaneously Incapacitated. For any questions concerning this, please refer to the Judge's score card.

### **7.5.4 Both Bots Responsive**

If both Bots 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.

## **7.6 Rumbles**

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

### **7.6.1 Single Bot Responsive**

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

### **7.6.2 Multiple Responsive Bots**

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

- a. Each Judge, based on his/her subjective evaluations of Aggression, Control, Damage and Strategy, will vote for the Bot they think won the Rumble.
- b. If one Bot 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 Bots, a SWPA 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 instruction will automatically have his/her Team and Bot Disqualified.

### **7.7.2 Disqualification**

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

### **7.7.3 Operators/Drivers**

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

## **7.8 Head Referee Decisions**

Head Referee may at any time, including during a Match, disqualify any Bot that he or she believes to have committed a safety or technical violation.

## 8.0 Rules Enforcement

### 8.1 Rules Compliance

In all matters of compliance with these Competition Rules and Procedures, and any applicable civil or criminal laws, SWPA BotsIQ Inc. and its Executive Officers reserve the right to Disqualify a Bot 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 Bot. If a Bot is Disqualified, the Bot can no longer compete at the Competition. The Team must vacate its Pit Table and must also turn in all their Team ID cards.

*Note: SWPA BotsIQ Inc. will endeavor to modify the Competition 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 Competition premises for the duration of the Competition. In addition, any expelled Team member will not be eligible to compete in any SWPA BotsIQ Competition 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 Bot(s) may be Disqualified.

#### 8.1.5 Team Expulsion

If an entire Team is Expelled, team members must turn in their Pit Packet and Name Tags and leave the Competition premises for the duration of the Competition. In addition, the Team's Bot will be barred from any future SWPA BotsIQ competition, and all Team members will not be eligible to compete in any SWPA BotsIQ Competition for a period of **one year** from the date of Expulsion.

### 8.2 Serious Offenses

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

#### 8.2.1 Criminal Activity

If a person at a SWPA BotsIQ Competition 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 Bot without the specific authorization of that Bot'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 Name Tag or any other SWPA 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 SWPA 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 Bot(s) may be Disqualified.

## **9.0 Appeals**

### **9.1 Appeals**

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

#### **9.1.1 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 Appeal Procedure**

The Appeal requirements and procedures are as follows:

- a. The Appeal must be presented to a SWPA BotsIQ Official or directly to a SWPA BotsIQ Executive Officer.
- b. The written Appeal should state the case of the appealing party in concise and direct terms.
- c. After receiving the Appeal, the SWPA BotsIQ Executive Officer may consult other parties in the matter, and will render a final decision after the time the Appeal was received.

### **9.3 Final Decision**

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

## Part 2: Competition Procedures

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## **A. Competition Entry**

### **A.1 Registering for the Competition**

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

**A.1.1 Complete this year's Competition Application** – Fill out the online registration application that is provided on the SWPA BotsIQ website and submit the information to the SWPA BotsIQ Staff either electronically, mail or fax (see “PART 1: 1.6 CONTACTING SWPA BOTSIQ”).

**A.1.2 Participant's Liability Forms** – Each SWPA BotsIQ Participant is required to submit the following documents to a SWPA BotsIQ Executive member:

- a. **Event Liability Form**
- b. **Social Media, Video and Photo Consent Form**

**A.2 Special Requests** – If you want a Pit Table next to another Team or would like some other special accommodation, contact an SWPA BotsIQ Staff member as soon as possible. SWPA BotsIQ will try to accommodate reasonable requests but makes no guarantees.

### **A.3 Pre-Event Notification**

Exact details of Competition procedures (seeding, byes, etc.) will be announced prior to the event, either by posting on the SWPA BotsIQ website, and/or by direct e-mail to the Teams. If a Team has entered a SWPA BotsIQ Competition and has been accepted, the Team must check its e-mail and the SWPA BotsIQ website often.

### **A.4 Proof of Bot Viability**

If a Team's Bot has not previously competed in a previous SWPA BotsIQ Competition, SWPA BotsIQ may require that the Team prove, one month in advance of the Competition, that the Bot in fact exists and is capable of competing. This proof may be in the form of a video, a QuickTime file, photographs or other methods of demonstrating the existence and viability of the Bot.

## B. Registration Check-in and Set-up Procedures

### B.1 Arrival and Parking

For all Team members:

- a. 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.
- b. Park in designated areas only. Be aware that a Team may have to move its' vehicle(s) at the direction of a SWPA BotsIQ Official, a Security officer or the Fire Marshal.
- c. Please do not unload the Bot 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.

- a. One Team representative and a Team Advisor will go to the Check-In location and be ready to provide information about the Team and Bot.
- b. During check-in, the SWPA BotsIQ person will confirm that the Team's entry information is in good order. The Bot's name, Team member names, Team Liability forms and other information will be verified.
- c. During Preliminary competition, Team's documentation is required to be turned in for review and will be checked for completion at the Check-In table. If the Team's documentation is not turned in for review, the Team will not be allowed to compete. If the documentation is not complete, the Team will be asked to complete the documentation before they are allowed to compete. The SWPA BotsIQ person will use the "Go/No-Go" document, which can be found on [www.botsiqpa.com](http://www.botsiqpa.com), to confirm the Team's documentation completion.
- d. A Team's final documentation will be submitted at the Final competition.
- e. When all the information has been confirmed, the attendant will present the Team's Pit Package.
- f. A Team is required to have an extra copy of its' Bill of Materials and Safety Plan available upon inspection at its' Pit Table.

### B.3 Pit Package

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

- a. **Pit Table Number** -- This is the number of the Team's assigned Pit Table. Once this number has been assigned, it cannot be changed.
- b. **Pit Map** -- A map to help the Team locate its Pit Table and other important areas.
- c. **Team Name Tags** -- All members of a Team must wear their green Name Tags at all times while in the Pit at the Competition.
- d. **Voting Sheet** -- This form allows the Team to cast their vote for their favorite Bots. Submit the voting sheet to the Information Table no later than the time specified on the sheet. Only one sheet can be submitted per Bot Team.
- e. **Parking Passes** -- Depending upon the event location, the Team may need parking passes for its vehicle(s) for use during the Competition. Vehicles without passes may be turned away or towed.
- f. **Safety Checklist** -- 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 Moving Bots to Pit Area**

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

**At all times, and especially when transporting the Bot, all sharp edges and motion hazards must be protected with Safety Covers and Restraints as defined in the SWPA BotsIQ Technical Regulations. The covers/restraints must remain attached except when the Bot is inside the Arena or Test Box, or during specific servicing of the covered/blocked component.**

#### **B.5 Volunteer Registration/Information Table**

An Information table will be set up for the following:

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

## C. The Pit Area

### C.1 Pit Layout

The Pit Area is set up with rows of worktables. Pit tables come equipped with 110v AC power outlets, and the Pit Area has overhead lighting. Each Team may need to supply its' own power strips and any additional work lights that they require.

Teams are responsible for bringing all tools necessary to maintain and repair their Bot. However, if the Team brings any large industrial tools, it 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":

- a. Safety glasses must be worn by all people standing near or working on a Bot.
- b. All Bots must be supported off their wheels or legs, for runaway protection.
- c. All Safety Covers and Restraints must be installed.
- d. An Adult Supervisor must be present when any work is done on the Bot
- e. No flammable liquids.
- f. Pressure tanks must be installed in a Bot or else stored in a container.
- g. Hydraulic systems must be unpressurized.
- h. No welding or grinding.
- i. No Bot Activation or testing.
- j. No smoking, drinking, drugs or unruly behavior.

### C.3 Pit Hours and Security

SWPA BotsIQ will endeavor to keep the Pit Area open as long as possible. However, the Pit Area may close at opening ceremonies and at night. The Pit Area hours of operation will be announced by SWPA BotsIQ prior to the Competition.

Teams are responsible for the safekeeping of their own equipment. SWPA BotsIQ will not be responsible for any Team items lost or stolen from the Pit Area, the parking lot or anywhere else in the Competition venue.

### C.4 Fire Extinguishers

Fire extinguishers are located at each Arena. 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 Referee or other SWPA 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, damaged batteries and metal clippings.

**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 Bot(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 green Name Tags 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, SWPA BotsIQ asks each Team's cooperation in limiting their Team members to no more than 6 people at any given time. If someone on the Team has nothing to do, they should move outside the Pit Area.

### **C.9 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.



## **D. Safety/Technical Information**

### **D.1 Preparing for Safety/Technical Inspection**

Prior to arriving at the competition, the team must read and review all safety and technical documents distributed by SWPA BotsIQ. After the Team has settled into its pit space, the Pit Crew should next prepare the Bot for Safety/Technical Inspection. The specific rules regarding Safety/Technical Inspection are described in "5.1 THE SAFETY/TECHNICAL INSPECTION". Note that:

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

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

### **D.2 Safety/Technical Inspection Procedure**

The Safety/Technical Inspection is typically performed in two stages: The Internal Inspection and the Functional Test. A general description is given below. A more detailed Safety/Technical Inspection description is given in section "5.0 BOT SAFETY RULES" and Part 3 of this document.

### **D.3 Internal Inspection**

The Team members remove the Bot's outside covers to expose all of the internal systems. For this stage of the inspection:

- a. Where necessary, safety covers and restraints must be installed.
- b. The Bot drive and weapons systems must be completely Deactivated.
- c. Any fuel tanks should be completely empty.

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

### **D.4 Functional Testing**

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

- a. Installing all components, covers and armor.
- b. Adding fuel, oil and/or hydraulic fluid, as necessary.

When the Bot is ready for Functional Testing, the Team notifies the Safety Administrator. Functional Testing usually takes place in a special Test Box.

### **D.5 Team and Bot Photos**

At any time when your Bot is completely assembled, take it and the rest of your Team to the photography area to have your Team and Bot photos taken. Note that you must have your Team and Bot photos taken.

## D.6 Weighing

When the Bot has been configured for battle, it is weighed using the requirements defined in "PART 1: 5.5 BOT WEIGHING". The covers and Restraints may be temporarily removed at the direction of a Safety/Technical Inspector, when necessary for weighing.

The Bot can be weighed at any time during the Inspection, but it is usually weighed just prior to the Functional Testing. Safety/Technical Inspection always has priority on using the scales. However, the SWPA BotsIQ scales may be used for checking your Bot's weight anytime that they are not being used for a Safety/Technical Inspection.

## D.7 If the Bot Fails Inspection

If the Bot 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/Technical Inspection, be aware of the following:

- a. The Safety/Technical Inspection is intended to determine if the Bot, as initially entered, appears to comply with the Technical Regulations. It does not protect the Bot from later being inspected and disqualified for a rules infraction.
- b. If there are any features or modifications on the Bot that any Team members suspect may not be allowed, he/she should point them out to a Safety/Technical Inspector.
- c. Avoid wasting time by making sure that the Bot will comply with the Safety/Technical Inspection procedures before having it inspected. If the Bot 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 Bot was allowed at a previous Competition does not mean it will be allowed this time. If a Bot does not comply with the requirements of the latest revision of the SWPA BotsIQ Technical Regulations, it will not be allowed to pass Safety/Technical Inspection.**

## D.9 Welding/Grinding Area

No Welding or grinding can take place in the designated working Pit Area. If you are using this area:

- a. Always wear approved safety glasses or a full face-shield. This is not optional.
- b. When grinding, position yourself such that no sparks are thrown in the direction of other people, or outside the Welding/Grinding Area.
- c. 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.

## **D.10 Bot Testing**

Specific areas, called Test Boxes, will be provided to test your Bot when they are not in use by a team completing Safety Inspection. When using such a Test Boxes, always abide by the following:

- a. You must at all times be accompanied by an authorized SWPA BotsIQ Official, and comply with all of his or her instructions.
- b. When transporting the Bot, all Safety Covers and Restraints must be installed.
- c. Do not activate the Bot until it is in the Test Box.
- d. Completely Deactivate the Bot before removing it from the Test Box.
- e. Comply with all radio-use procedures.
- f. Comply with any requests of SWPA BotsIQ Officials.

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

## F. General Match Procedures

### Overview

This section describes the general Match procedures used at SWPA BotsIQ Competitions. Various factors may require changes to the procedures described below. Consult the SWPA BotsIQ website for any Competition information. Also, during the course of the current Competition year there will be one or more mandatory-attendance meetings to describe any procedural changes, and to reiterate the important existing procedures.

#### F.1 Instruction of Officials

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

#### F.2 Know the Team's Schedule

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

- a. Individual Match schedules will be posted at the beginning of each Competition session. SWPA BotsIQ will post Bout schedules on both paper and computer displays.
- b. 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.
- c. During the Competition, 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 Bot to the Queuing Area. Every Team should have at least one Team 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 Team members can be found.
- d. If a Team's Bot is scheduled to fight and a SWPA BotsIQ Official cannot find key Team members, the Team Forfeits the Match. Please keep the Bot's fight times in mind and remain visible to SWPA BotsIQ staff.

#### F.3 Time In Between Bouts

Always be aware of the following:

- a. In Bouts, Bots 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 Bot should take no longer than 20 minutes (especially battery charging and/or replacement).
- b. If the Bot 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 "PART 1: 6.4.6 MATCH POSTPONEMENT" for more information on this.
- c. There is no guarantee of a minimum time between Bouts and Rumbles.
- d. As the Competition moves into the final eliminations, the time between Matches will generally become shorter.

#### F.4 Unable To Compete

If the Bot is non-functional and the Team knows it will be unable to compete in a Match, notify a SWPA BotsIQ Official. This will help the scheduling and spare your opponent unnecessary effort.

#### F.5 Team Members on the Platform

There can be a maximum of 5 people from one Team present on the Arena platform during a Match. This would include any adults, Operators/Drivers and Strategists from the team.

## **F.6 Pre-Match Queuing Area**

As the Match time approaches, Pit Runners will escort Team members and the Bot from the Pit Area to the Arena Queuing Area. Be aware of the following:

- a. The Bot must be fully Deactivated when moving it from the Pit Area to the pre-Match queue.
- b. All Safety Covers and Restraints must be installed on the Bot while moving it from the Pit Area to the Queuing Area.
- c. There may be mandatory or random weighing of Bots either as they exit the Pit Area, or prior to the staging for battles.

## **F.7 Pre-Match Staging Area**

Just prior to the Match, the Bot will be moved from the Queuing Area to the Staging Area just outside the Arena. There, the Team members and Platform Crew will wait until it is time for the actual Match.

Note that:

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

## **F.8 Entry to the Arena**

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

- a. Move the Bot up the steps and into the Arena. Watch your footing inside the Arena.
- b. Place the Bot in either the Red or the Blue square as instructed by the Referee.
- c. Remove any Safety Covers and Restraints and make sure that all non-essential personnel are outside the Arena.
- d. Activate the Bot, as you should have practiced many times before.
- e. If you cannot Activate your Bot, or if there is some other problem, you may be able to Postpone your Match (if allowed), or else compete with a non-functioning Bot part.
- f. Once the Bot is Activated, exit the Arena. If you are part of the Team members proceed to your respective driving platform outside the Arena. Otherwise exit the immediate Arena area.

## F.9 Referee Preparations

While the Bot is being setup in the Arena, the Referee should be taking its' place on the platform just outside the Arena. If you are an Operator/Driver, proceed as follows:

- a. Go to the platform on the side of the Arena where your Bot is being started.
- b. Turn on your transmitter when requested by a Referee or other SWPA BotsIQ Official.
- c. Do not test any part of the Bot until the Referees have locked the Arena doors, and have given the all-clear signal.
- d. After you have confirmed mobility, the Bot should be completely motionless.
- e. Your Referee will ask if you are ready. When you are, respond "Yes" or "Ready".
- f. When both Team Operators/Drivers have affirmed their readiness, the Referees will start the countdown.
- g. The Bot must remain motionless while the Red light is turned on.
- h. The Match begins when the Red light turns off and the Green light turns on, or on the Referees' verbal signal that the Match has begun.

## F.10 The Match

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

- a. **Fault** – If either Bot 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.
- b. **Restart** – A Restart begins with the Bots back in their starting positions and motionless. Usually, the Referees will verbally restart a Match.
- c. **Pinning/Lifting** – If your Bot is pinning or lifting the opponent Bot, the Referee will ask your Operators to release it after 20 seconds. They must comply or your Team can Forfeit the Match.
- d. **Tap-Out** -- If the Bot 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 Bot loses and your Team's Operators must release their controls.
- e. **Opponent Tap-Out** – If a Referee reports that your opponent has confirmed a Tap-Out, show good sportsmanship and refrain from any further attack.
- f. **Incapacitation** – Your Bot must show that it is Responsive at least every 20 seconds, or it may be declared Incapacitated.
- g. **No Contact** – If your Bot does not make physical contact with the other Bot the Referees can stop the Match, and you could lose.
- h. **Bot Stuck** – If your Team's Bot is stuck on the Arena, your Operators have 20 seconds to get it unstuck, unless the Match ends sooner. A Team is allowed ONE unstuck from the Referees per competition.
- i. **Opponent's Bot Stuck** – If the opponent Bot is stuck on the Arena, you are not prohibited from using your Bot to free it, if you want to keep fighting.
- j. **Both Bots Stuck** -- Matches will be paused to free Bots if they become stuck together, or are simultaneously stuck on the Arena.
- k. **Disqualification** – If any SWPA BotsIQ Official, Referee or Judge observes the Team members or the Bot violating a SWPA BotsIQ rule, your Team and Bot(s) may be Disqualified.
- l. **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 Bot(s) may be Disqualified.

### **F.11 Match Conclusion**

At the conclusion of the Match, the Team members should stay on the driving platform and turn off their transmitter. The Team members must wait until the Referees have determined that the Arena is safe for reentry. When the Referees indicate that it is safe, the Team members may:

- a. Enter the Arena and immediately perform the Deactivation sequence to safely turn off the Bot.
- b. Install all Safety Covers and Restraints.
- c. Check for any damage that may render the Bot unsafe. If they find such damage, they must notify a Referee immediately.
- d. Remove the Bot through the exit door, as directed by the Referees.
- e. If possible, you should remain near the Arena for the winner announcement and post-match interview.

### **F.12 Winner Announcement**

The winner will be announced by the Judges holding up either red or blue paddles to indicate which Bot won the Match.

### **F.13 Return Bot to the Pit Area**

Before taking the Bot back to the Pit Area:

- a. Team members should check that any sharp edges or corners caused by battle damage are temporarily covered using tape, cloth or other makeshift means.
- b. If a SWPA BotsIQ Official suspects that your Bot may be unsafe as a result of combat damage or incomplete Deactivation, they may ask to immediately inspect the Bot before you move it back to the Pit Area.
- c. Place the Bot on its carrier before moving it back to the Team's Pit Table.

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

## Part 3: Safety and Technical Inspection

Safety and Technical Inspection is done in three steps: The weighing of the Bot, Internal Inspection and Functional Testing.

### Internal Inspection

#### 1. Check-in and Set Up Your Pit Table

- a. When you arrive, check in at the registration table and bring along your team's Pit Package
- b. Unpack and/or check over your Bot for any shipping damage and set up your Pit Table. **Have an extra copy of your Bill of Materials and your team's Safety Plan, as it is required to be on your table in the pits.**

#### 2. Test-Weigh your Bot

- a. It is a good idea to weigh your Bot (or all its parts) on an official Bots scale to verify that it's not overweight. Use the designated testing scales to test your Bot's weight.

#### 3. Prepare your Bot for Inspection

- a. Next, prep your Bot for Inspection at your Pit Table.
- b. You'll need to remove some or all of the external panels to expose the interior components. You don't necessarily need to completely disassemble the Bot, but the Inspector has to be able to clearly see all the components.
- c. If the Bot has a pneumatic system, completely depressurize all your tanks, including any spare tanks.
- d. Keep all safety covers and restraints on, if possible.

#### 4. Proceed to the Safety Inspector Tables for Inspection

- a. Step One: Weighing
  - i. If your Bot is over the 15.000 lbs requirement proceed to either your Pit Table or the working pit to make your bot underweight.
  - ii. If your Bot meets the weight specifications, you will be moved to Step Two: Internal Inspection
- b. Step Two: Internal Inspection
  - i. If items need to be corrected, proceed back to your Pit Table to fix the problems and get back in line to begin safety inspection at Step One.
  - ii. If your Bot passes Internal Inspection, you will be moved to Step Three: Functional Testing.
- c. Step Three: Functional Testing
  - i. For the Functional Test, your Bot should be configured as it will be at the start of the match.
  - ii. Check/charge the primary power batteries. Check/charge any secondary power batteries. If the Bot has a pneumatic system, go to the Refill Area and get the pressure tank(s) filled.
  - iii. Be sure to attach all safety covers and restraints.
  - iv. If items need to be corrected, proceed back to your Pit Table to fix the problems and get back in line to begin safety inspection at Step One.
  - v. Once you pass the Functional Testing, you are now eligible for the competition matches. Your Bot must go through Steps One through Three of the Safety/Technical Inspection before every match.

**ONCE YOUR BOT HAS PASSED INSPECTION, WORK CAN NO LONGER BE DONE ON YOUR BOT.**



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Ver. 1.0 Original Issue

Ver. 1.1 a.Addition of the paragraph "The student Team members are responsible..." to section "3.2.2 Adult Supervision"

b.Deletion of section "5.7.4 Hydraulics Systems"