

Robofest Game – AtBC (Autonomous tennis Ball Collector)

Procedures and Setup for Site Host

1/3/2018 V 1.0

Robofest is dedicated to ensuring that each qualifying event is consistent, professional and most importantly, fun for the students who participate. Thank you for hosting a Robofest Game Qualifying Site.

A. 1 – 2 weeks Prior to Event

1. Recruit Volunteers

- a) Robofest will create an initial Volunteer list in the Robofest.net registration system based on the number of teams requested. Site Host can edit the list accordingly. (Using the Site Management User Name and Password).
- b) Site Host should recruit Volunteers and make sure they are registered on the Site's Volunteer Registration page.
- c) Robofest will print name badges and send volunteer T-Shirts for **registered** volunteers.

2. Team Registration

- a) Any team can register for any site, unless prior arrangements are made to host an "organization only" event.
- b) Registration is open until the division is full or 10 days prior to the event date (freeze date) – This date may be adjusted for cross-country or international sites to allow for longer shipping times. Coaches are notified several times of freeze date.
- c) Any division that does not have at least 5 teams registered by the freeze date will be canceled. Teams will be moved to another qualifying site, or Video Qualifier.

3. Official Event Program

- a) Robofest will email a template program to the Site Host 1 week before the event date to include Robofest sponsors, team list and sample schedule
- b) Edit schedule, add any announcements and include local sponsor information.
- c) Print copies of the program and send a pdf version to Robofest.net for uploading to the site webpage.

4. Game Materials

- a) Robofest will ship Game Materials, Registration Materials and Awards based on the numbers of teams and coaches registered for the division within 1 week prior to competition date.
- b) Packing slip will indicate the quantity of each item

5. Judge Training

- a) Send judges a copy or links to the Robofest Game Rules and General Rules prior to event date
- b) Review Judge Training video/PowerPoint
- c) Provide judges a hard copy of the Game Rules at the competition
- d) Chief Game Judge should conduct a Judge Training session the day before or the day of the competition

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B. Official Venue Setup – All areas should be set up prior to team arrival

1. Registration Area

- a) Table near entry door for Registration Materials and laptop (if using Robofest Check-In function).
- b) Robofest will send Team Registration packets to include a Team Check-In List, Coach Name Tags, Player Name Tags and Volunteer Name Tags.
- c) Coaches should check in for the team – Indicate on the check-in list that the team has checked in and turned in all Media Release forms (can also be managed on the robofest.net site admin page).
- d) Teams must wear nametags so they can be seen by the volunteers.
- e) Collect Site Check-In Fee, if applicable. Receipts can be printed from the robofest.net site admin page.
- f) Notify Chief Judge of any no-shows before Opening Ceremony.

2. Pit Area (Team Tables)

- a) Each team is designated one 6 or 8 foot table with 4 ~ 5 chairs in the Pit Area.
- b) Electrical power should be accessible for each table.
- c) Team Signs with Team ID Number, Name and Organization will be included in the Site Host materials. (2 copies for each table)
- d) Place team signs on team tables so they are visible when teams enter. (book ends or table tents work best).
- e) Pit area should have limited access points for teams to enter and exit.
- f) Pit Area Guidelines:
 - i. The Pit Area should be open when the site is open for teams to bring in their items.
 - ii. Coaches and parents should only be allowed into the pit area to assist with dropping off competition materials and should then leave the area while teams are practicing before the opening ceremony.
 - iii. Every effort should be made to keep the area secure, but teams should not leave unattended valuables in the Pit Area. Volunteers should watch the pit area during breaks.
 - iv. Coaches/Parents/Volunteers can help deliver materials to the team table but must then vacate the Pit Area.
 - v. During the competition, Coaches and Parents MUST BE restricted from entering the Pit Area, possibly to another area in the venue.
 - vi. During the 30-Minute Work Time, the ideal situation is for the spectators to be cleared from the competition area into another room if possible.
 - vii. During Game Rounds, the teams may not access the Pit Area (team members should be in the spectator area).

3. Robot Impound Area

- a) Impound area table(s) should be set up away from the Pit and Spectator Areas to secure the robots during impound time (from the end of the Work Time to the End of each Game Round).
- b) Team Placemats with Team ID Number, Name and Organization will be included in the Site Host materials. (1 copy per team).

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- c) Measure boards (included in SH Materials) will be used to inspect robots – provide space for the use of measure boards.
- d) Place team placements on the impound table in numerical order for each robot.
- e) Impound Table(s) area should be restricted to allow only one team to approach at a time.
- f) Area should be carefully supervised at all times.
- g) See Event Schedule for Impound Procedure

4. Official Game Area (see Game Field setup for measurement and placement of unknown tasks/factors)

- a) Tables are to be set up on the flat floor, or slightly elevated.
- b) Tables should be set up with minimum 1 meter of space around the entire field.
- c) A 1-meter perimeter can be marked with masking tape on the floor.
- d) If the Site has multiple official Game Fields, the setup should be as identical as possible with the orientation of all the fields the same (not back to back).
- e) Playing Field Initial Setup document with dimensions for each division will be included in Site Host Materials. (Confidential Site Host Setup Documents must be kept secure.)
- f) Coaches/parents should not access the official tables at any time.

5. Practice Table(s)

- a) Practice fields should also be set up before teams arrive.
- b) A proctor should monitor practice tables.
- c) Teams can use practice fields before Opening Ceremony, and during each Work Time.
- d) It is recommended to open official fields for practice too.
- e) Limit time to two (2) runs per turn if other teams are waiting to use the practice field.
- f) Coaches/parents should not access the practice tables at any time.

6. Scoring Area

- a) Game Score Sheets (1 per team per round plus extras) will be included in the Site Host Materials
- b) Robofest will email an excel scoring file to the Site Host 1 week before the event date to include team list and calculations to determine winners.
- c) A computer with the file should be accessible and a person should be assigned to data enter the score sheets that are completed during the rounds.
- d) The Scoring File (Team score section only) should be displayed on the screen after each round for teams to validate the data entry of the scores.

7. Spectator Area

- a) Chairs, bleachers for expected spectators.
- b) Projector screen for Countdown Timer and Unknown Tasks/Factors/Score Sheet (toggle between items or use 2 screens).

8. Award Table

- a) Site Host Materials will include: Personalized coach bags (1 per coach) with Participant Certificates and Participant Medals.
- b) Site Host Materials will include winner’s trophies for each category (approximately 20% of teams).
- c) Set up Awards table in an area to be presented at the end of the even during the award ceremony.

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C. Game Day - Game Field and Practice Field (Table) Setup

1. Two (2) tables are required for each Official Game and Practice Field; a Tennis Court Table and a Ball Box table.
2. Use the **Game Rules** and **Playing Field Initial Setup Document** to prepare the Official Game Fields and Practice Fields. (Confidential Site Host Setup Documents must be kept secure.)
3. Site Host Materials will include (per official game table and practice table)

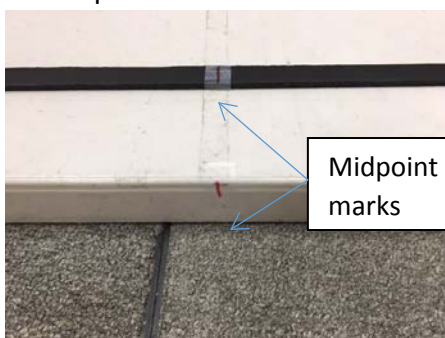
- 1 - Paper Measuring Tape – for the long side of the Tennis Court Table
- 1 - Metal Measuring Tape
- 1 - Box Fence – (4 pieces) Black Foam Board Pieces to tape together
- 2 - Foil Tape for water bottles
- 6 -8 Tennis Balls
- 1 – Strip of ball/trash object markers (Reinforcement stickers for 3-hole punch paper)
- Ball Box – 1 for Jr. or OR
 1 Practice Ball Box and 2 Official Ball Boxes (1 per round) for Sr.

4. Affix foil tape to water bottles.
5. Using Scotch Tape, affix the Paper Tape Measure to the long edge of the Tennis Court Table. This provides 35cm starting location (DO NOT MARK STARTING LOCATION ON TABLE) and X axis points for balls and trash objects.



Tape paper measuring tape to side of tennis ball table

6. Place the Tennis Court Table perpendicular to the ball box table – Refer to Unknown Factors for the d-3 measurement which remains the same throughout the day for Junior but is set for practice and 2 rounds for Senior.
7. Put tape on floor to mark the location of the tables, to use in case they move
8. Use Scotch tape and pen to mark the midpoints of the tennis court table and the fence sides



Midpoint marks

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9. Tape the fence to the table with Scotch tape at the four corners and the mid points.
10. After Impound, Using the Paper Tape measure and the Metal Tape Measure, locate and mark the axis points for the balls and trash objects with the reinforcement stickers.



11. After Impound, For Sr. Official Tables only, replace the practice boxes with the Official Game Boxes.

D. Day of Event Schedule/Process:

1. Opening Ceremony

- a) National Anthem – Sung live or play a recording
- b) Review announcements and violations

2. Unveiling of Unknown Factors Just Before Work Time

- a) Before the start of the work time, communication devices of players must be turned off at this time.
- b) All Unveiled Factors will be projected onto the screen AND/OR hard copy provided to all the teams. (Electronic version sent to Site Host and hard copies included in Site Host materials).
- c) One hardcopy of the unknown per team.

3. Work Time

- a) Set Countdown Timer to 30 Minutes for teams to adjust programs to and practice.
- b) Announce when 10 Minutes and 5 Minutes remain until the end of the Work Time.
- c) If any non-game related communication is necessary during the 30-minute work time, Coaches/Parents may speak with team members away from the Pit Area under the supervision of a judge or proctor. No additional time will be granted for teams who have been interrupted in this manner.
- d) Proctor Responsibilities List and Violation Report are available for Site Hosts to use.

4. Impound Procedure

- a) Teams can present the robot to the Impound Table at any time before the end of the Work Time if they are ready.
- b) Official Impound process at the end of the Work Time should **take** no more than 5 to 10 minutes, based on number of teams at the site.

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- c) One member of each team should line up to present their Robot to the impound area. All other team members should remain at the Team Table.
- d) **Judges should handle the robot as little as possible**, but direct the team member where to place for inspection and on the table.
 1. Judge will inspect robot for legal parts (number of controllers for Jr. Teams)
 2. Judge will inspect robot for the “TEAM #” and “FRONT” label.
 3. Judge will measure Robot (L x W x H) using two (2) 50cm x 50cm boards with a 35cm line (included in Site host Materials). Robot must measure 35cm x 35 cm before expanding and 50cm x 50cm after FULL expansion (ask team to expand).
 4. If robot passes inspection, Team places on the proper Team Placemat on the Impound Table.
 5. If not passed, team may return to the Pit Area and make changes until the end of impounding time.
 6. Team may NOT charge their robot batteries during impound.
 7. Robots not presented for impound at the end of announced impounding period are automatically disqualified for the round.
 8. Teams are not to touch/remove robots from the impound table for any reason once the robot has been impounded.

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5. Placing the Tables and Objects after Impound (each round):

a) Jr Division

1. Verify gap between tables (3-5mm wall to wall)
2. Verify that D3 distance is set correctly, according to the Site Host Unknown Factors document
3. Mark locations for Balls and Trash Objects according to the Site Host Unknown Factors document

b) Sr. Division

1. Verify gap between tables (3-5mm wall to wall)
2. Set Table to the D3 distance specified in the Site Host Unknown Factors document
3. Mark locations for Balls and Trash Objects according to the Site Host Unknown Factors document
4. Place the Official box on the table

6. Robot Starting Location and Placing the Objects

- a) Robot starting orientation (North, South, East, West) for each round will be indicated on the **Playing Field Initial Setup** document sent to the Site Host and the Unknown Factors projected on the screen and provided to the teams.
- b) Place balls and trash objects on marks

7. Game Rounds

- a) Judges should have score sheets, clipboard and a pencil – 2 Judges per official field.
- b) When the Game Round begins, the Announcer calls the first team to the Game Field, in the order determined by the Site Host.
- c) When a Team is called, maximum of TWO members should approach the impound table and access their robot from the impound supervisor. Robots should not be removed without permission.
- d) The Next team(s) in order will be called to be ready “on deck” once the team ahead of them has retrieved their robot from the Impound Area, and so on.
- e) If the Site has multiple official Game Fields, it will be announced which game field to report to.
- f) All other team members should remain in the Spectator Area. (no teams in the pit)
- g) Impound Supervisor will verify the team’s robot, based on Team Name Tags and Robot Label.
- h) When the team retrieves their robot, they should TURN ON THE ROBOT (if it had been turned off) and wait for instructions to move to appropriate Game Field.
- i) Judge will instruct the team to select their program and place the robot at the starting position.
- j) **Starting the Round**
 1. Announcer should request “Judges Ready?”, “Teams Ready?” and “Timekeeper Ready?” when all are ready state: **“3, 2, 1, GO”**.
 2. Timekeeper will start the 2 minute Count Down and the team member starts the robot on “GO”.
 3. Both team members and Judges at the Game Field will move to the outside of the 1-meter line until the end of the game round.
- k) Judges should check for **violations** carefully during the run.
 1. If a violation occurs, the Judge should ask **the team** if a reset is requested. If yes, Judges must reset the playing fields as quickly as possible during the run since time will not stop during resets.
 2. The team can also request a reset even if there is no violation.

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- l) Judges should enter the “Time Remaining” carefully (near the end of the run, one judge should watch the timer while the second watches for the robot to reach home base).
- m) If the robot does not complete the end task, the “time remaining” is recorded as “None.”
- n) Team should wait for the Judge to enter the score on the scoresheet, and then validate the score and sign the scoresheet if in agreement with the score. Any discrepancies in scoring should be addressed at this time.
- o) Judges should bring score sheets to the scorekeeper prior to the next game.
- p) Team should remove the robot from the Game Field and return it to the impound table.
- q) Team members should return to the Spectator area.

8. Scoring Each Round

- a) Scorekeeper should carefully enter score AND time remaining as he/she receives them during each round.
- b) After each round, project the entered scores on the screen so the teams can validate data entry. Do not display additional columns.
- c) The Best Average Score of two rounds wins the game. Score Sheet will calculate rank automatically.
- d) Tie breakers are (1) Best final score of two rounds (2) Highest Time Remaining from Best Score
- e) If a tie still exists, ties teams will Rerun.
- f) Chief Judge at individual Sites has the authority to interpret all questions that may arise during the competitions.

9. Closing Ceremony

- a) Recognize Volunteers – Present with small gift included with Site Host Materials
- b) Recognize Coaches – Coaches come forward and volunteers present the coach bags to the coaches
- c) Recognize Teams – Team members come forward and Coaches present medals to each team member
- d) **Take Official Group Photo** to submit to Robofest Headquarters
- e) Have all teams return to spectator area

10. Trophy Presentation

- a) Announce Winners of the Game and present trophies. (20% of teams win trophies – if no shows reduce the number of teams dramatically, do not present all the trophies)
- b) Trophy Winners advance to Robofest World Championship. Review General Rules for additional advancement opportunities

E. Follow Up – After Event

1. **Forward** the following documents/files to the Robofest Office within one week of the event:
 - o Official Scores – Excel File
 - o Group Photograph
2. Sent thank you email to volunteers