

ONE CLOCK. ONE RULEBOOK. TEN ARENAS.

Everything a team needs to know before Tel Aviv, in plain language: how every run is timed and scored, who wins each arena, what ends a run, and how declared teleoperation adds time to your result.

EVERY RUN STARTS THE SAME WAY



Five lights on, all lights out: the official clock starts. Your control mode is already declared.

GO

01 // THE RULES IN ONE MINUTE

SIX THINGS EVERY TEAM MUST KNOW.

01

SAME CLOCK FOR EVERYONE

Every robot runs the same course under the same rules, timed and scored automatically and checked by officials.

02

UP TO 12 PER SEMI-FINAL

Each arena takes up to 12 teams on May 18. The top 4 to 6 reach the Grand Final on May 19.

03

MISTAKES COST TIME, NOT THE RUN

Under the Adaptive Standard most errors add a time penalty and precision earns a time bonus, so the run carries on.

04

TELEOPERATION IS ALLOWED

Declare it and you can use it. Each use of active human assistance adds +60 seconds to your result.

05

FIVE CREW ON THE FLOOR

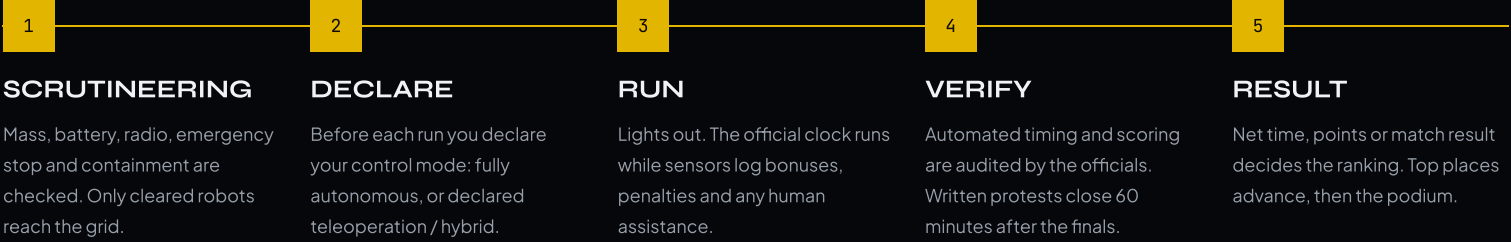
Up to five credentialed crew inside the live arena. Each extra person adds +10 seconds to that run.

06

SAFETY STOPS EVERYTHING

Officials can pause or stop any run for an uncontained hazard, loss of control, fire risk or a spectator-safety risk.

FROM THE PADDOCK TO THE RESULT.



YOUR RESULT IS YOUR NET TIME.

In time-based arenas the clock decides. Penalties add seconds, precision bonuses take seconds off, and every use of declared teleoperation adds +60 seconds. The lowest net time wins.

- Points arenas** (A-08 The Waiter Run, A-09 The Pinbreaker Strike, A-10 The Burst Circuit): the highest score wins.
- Race arena** (A-03 The Kinetic Overdrive): the Grand Final is decided by finishing order, with time penalties applied.
- Chess arena** (A-06 The Grandmaster Gambit): match points decide; teleoperation costs 60 seconds from the robot's own clock.

EXAMPLE RUN · TIME-BASED ARENA



NET TIME

5:32

Illustrative numbers. Each arena's own bonuses and penalties are listed below.

KNOW WHICH FLAG YOU ARE UNDER.



PENALTY — THE RUN CONTINUES

Most mistakes under the Adaptive Standard: a dropped item, a collision, a boundary breach, an extra crew member. Seconds are added, the robot keeps going.

- Published time or point penalties
- +10s for each crew member above five
- +60s for each use of declared teleoperation



RED FLAG — THE RUN ENDS

Some arenas end a run on a specific failure, and officials stop any run that becomes unsafe.

- The arena-specific conditions listed below (for example a cracked egg in A-08)
- Uncontained hazard, loss of control, fire risk or structural failure
- Any spectator-safety risk



NOT ALLOWED — RULES VIOLATION

These are not penalties you can choose to take. The stewards rule on them using the telemetry and video record.

- Undisclosed human input (hidden teleoperation)
- Running without passing scrutineering
- A-06: a second illegal move loses the game

ALLOWED. DECLARED. +60 SECONDS.

The inaugural Games welcome teams whose autonomy is still growing. You may use teleoperation or hybrid control — as long as you declare it before the run. It is never hidden from the result: each active human intervention adds a fixed fine to your timeline.

+60 DECLARE BEFORE EVERY RUN

Your control mode is declared at the start line: fully autonomous, or declared teleoperation / hybrid.

+60 +60 SECONDS PER USE

Each active human intervention adds +60 seconds to the run time. In A-06 chess, 60 seconds come off that robot's own clock instead.

+60 WATCHING IS NOT DRIVING

Read-only telemetry — watching your robot's data — is not teleoperation and costs nothing.

+60 HIDDEN INPUT IS A VIOLATION

Undisclosed human input is a rules violation, ruled on by the stewards from the telemetry record.

TWELVE START. THREE STAND ON THE PODIUM.

Each arena is its own world title. Enter one arena or all ten — every arena pays its own podium. There is no overall or aggregate cash prize.

1ST PLACE	2ND PLACE	3RD PLACE
US\$100,000	US\$10,000	US\$2,500

MAY 18 · SEMI-FINAL

Up to 12 teams per arena

MAY 19 · GRAND FINAL

Top 4 to 6 advance

PODIUM

1st · 2nd · 3rd

THE RULES OF ALL TEN ARENAS.

The task, the format, who wins, every bonus and penalty, what ends a run and what you need to bring — for each arena.

<div>A-01</div> <div>THE PORCELAIN PROTOCOL</div> <div>Load ten oily plates, glasses and cutlery into a dishwasher in eight minutes.</div> <div>WINS: LOWEST NET TIME</div> <div>ADAPTIVE</div>	<div>A-02</div> <div>THE RELAY SYNC</div> <div>Pass a baton between two moving robots over a 20-metre sprint.</div> <div>WINS: LOWEST NET SPRINT TIME</div> <div>ADAPTIVE</div>
<div>A-03</div> <div>THE KINETIC OVERDRIVE</div> <div>Race autonomous vehicles wheel to wheel on a closed-loop circuit.</div> <div>WINS: FINISHING ORDER + PENALTIES</div> <div>RED FLAG</div>	<div>A-04</div> <div>THE THRESHOLD BREACH</div> <div>Open three unfamiliar doors and cross a sealed corridor.</div> <div>WINS: LOWEST NET BREACH TIME</div> <div>ADAPTIVE</div>
<div>A-05</div> <div>PRECISION COATING</div> <div>Paint a geometric wall precisely without touching the glass or fixtures.</div> <div>WINS: NET TIME WITH ARTISAN BONUS</div> <div>ADAPTIVE</div>	<div>A-06</div> <div>THE GRANDMASTER GAMBIT</div> <div>Two robots face off over a real chessboard — move the pieces, hit the clock, checkmate.</div> <div>WINS: MATCH POINTS + TIEBREAKS</div> <div>CLOCK-TIME PENALTIES</div>
<div>A-07</div> <div>THE UNSEEN LABYRINTH</div> <div>Map an unseen maze and find the exit as the walls change.</div> <div>WINS: LOWEST ESCAPE TIME</div> <div>RED FLAG</div>	<div>A-08</div> <div>THE WAITER RUN</div> <div>Carry a tray of water and an egg across ramps without spilling.</div> <div>WINS: SPEED + WATER RETAINED</div> <div>RED FLAG</div>
<div>A-09</div> <div>THE PINBREAKER STRIKE</div> <div>Roll a heavy bowling ball toward ten pins under spotlights.</div> <div>WINS: PINFALL + SPEED BONUS</div> <div>FRAME VOID</div>	<div>A-10</div> <div>THE BURST CIRCUIT</div> <div>Strike moving balloons on a rotating carousel in sixty seconds.</div> <div>WINS: POPS + COMBO BONUS</div> <div>RED FLAG</div>

THE PORCELAIN PROTOCOL

Load ten oily plates, glasses and cutlery into a dishwasher in eight minutes.

8 MIN CEILING

TOP 6 REACH THE GRAND FINAL

SCORED BY TACTILE FINGERTIPS + MICRO-SLIP



THE TASK

Fine-grain tactile loading of ten fragile, oil-slicked items — 4 porcelain plates, 2 long-stem crystal glasses and 4 metal cutlery pieces — from a chaotic bussing cart into a commercial dishwasher.

THE ARENA

Commercial multi-rack under-counter dishwasher with lower and upper racks extended, a stainless bussing cart of 10 vegetable-oil-coated items and acoustic floor sensors around the cell.

FORMAT

MAY 18 · SEMI-FINAL

Load all 10 items within an 8-minute maximum ceiling. Top 6 advance.

MAY 19 · GRAND FINAL

Full load against an accelerated clock under variable soapy surface spray. Lowest net time wins.

WHO WINS

LOWEST NET TIME

Lowest net time wins. Podium: 1st US\$100,000 · 2nd US\$10,000 · 3rd US\$2,500.

SCORING, BONUSES AND PENALTIES

BONUS -5s

-5s time bonus for each item securely seated in its tines, allowing smooth unobstructed closure of racks and door

PENALTY +5s

+5s penalty for a misaligned item blocking the drawer, a cracked plate or glass, an acoustic spike above 85dB, or a dropped item

WHAT ENDS A RUN

ADAPTIVE — NO AUTOMATIC STOP IN THE HEATS

None in the heats — under the Adaptive Standard a cracked plate costs +5s, not the run. A red flag is reserved for a catastrophic, uncontained arena hazard.

TELEOPERATION

+60s penalty for any active teleoperation assistance. Declare it before the run; hidden input is a rules violation.

WHAT YOU NEED

- 4 thin porcelain plates (24cm), 2 long-stem crystal glasses (22cm) and 4 stainless forks and spoons, all oil-slicked
- Tactile fingertips and micro-slip recovery permitted
- Acoustic floor sensors flag any impulse above 85dB

START

-5s

HOW A RUN IS SCORED

+5s

+60s

FINISH

THE RELAY SYNC

Pass a baton between two moving robots over a 20-metre sprint.

20M SPRINT

TOP 4 REACH THE GRAND FINAL

SCORED BY STEREO VISION + RELATIVE POSE TRACKING



THE TASK

A 20m high-speed indoor sprint in two 10m sectors. Sprinter Alpha launches with an anodized gold baton and hands it to Sprinter Beta inside a 6m dynamic exchange zone (meters 7–13) — with both machines in forward motion.

THE ARENA

20m indoor straightaway split into two 10m running sectors, a laser-gated 6m exchange zone (m 7.00–13.00), 2.5m lanes and electronic timing gates.

FORMAT

MAY 18 · SEMI-FINAL

Individual timed sprints with the moving handover. Top 4 advance.

MAY 19 · GRAND FINAL

Head-to-head dual-lane sprint duel with a continuous 35 km/h lateral crosswind fan buffeting the exchange zone.

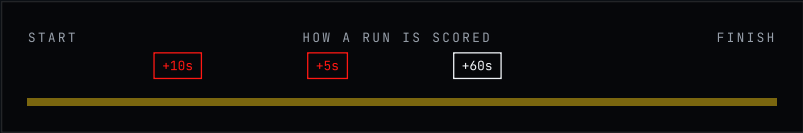
WHO WINS

LOWEST NET SPRINT TIME

Lowest net time wins. Podium: 1st US\$100,000 · 2nd US\$10,000 · 3rd US\$2,500.

SCORING, BONUSES AND PENALTIES

RULE	Net elapsed sprint time from the starting siren to Beta crossing the finish threshold, timed to 0.001s
PENALTY +10s	+10s penalty for a handover initiated or completed outside the 6m exchange zone
PENALTY +5s	+5s penalty for a dropped baton (retrieval permitted), a chassis collision or a lane boundary breach



WHAT ENDS A RUN

ADAPTIVE — NO AUTOMATIC STOP IN THE HEATS

None in the heats — a dropped baton is a +5s penalty and the sprint stays alive. Red flags are reserved for uncontained hazards.

TELEOPERATION

+60s penalty for any active teleoperation assistance. Declare it before the run; hidden input is a rules violation.

WHAT YOU NEED

- Two machines per team: Sprinter Alpha (starter) and Sprinter Beta (receiver)
- Aerospace anodized gold baton: 30cm long, 3.5cm diameter, 200g
- The physical handover must occur while both machines move forward

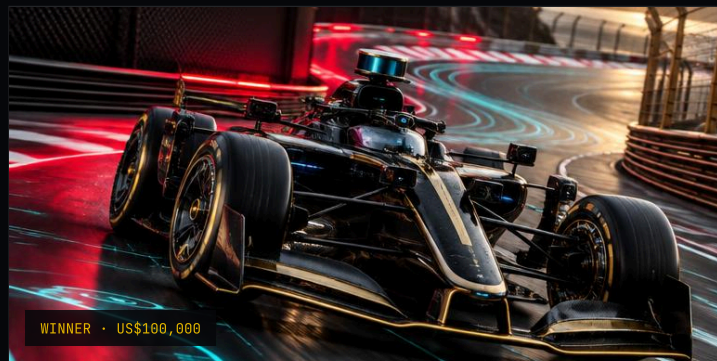
THE KINETIC OVERDRIVE

Race autonomous vehicles wheel to wheel on a closed-loop circuit.

FLYING LAP - 5 LAPS

TOP 6 REACH THE GRAND FINAL

SCORED BY LIDAR + IMU + WHEEL ODOMETRY



THE TASK

An autonomous crazy-car grand prix on an 80m indoor closed-loop asphalt circuit with high-friction stretches and a narrow chicane lined with illuminated, energy-absorbing barriers. 1:4 scale platforms or electric karts capped at 15kW.

THE ARENA

80m indoor closed-loop asphalt circuit (4.0m wide) with dry high-friction asphalt, a neon-lined transition chicane, energy-absorbing barriers and pneumatic pop-up ramps.

FORMAT

MAY 18 · SEMI-FINAL

The Flying Lap: one warm-up lap, then a single official flying lap against the clock. Top 6 advance.

MAY 19 · GRAND FINAL

Six-car simultaneous grid start for a 5-lap sprint race with pop-up obstacles deploying at randomized intervals.

WHO WINS

FINISHING ORDER + PENALTIES

First across the line wins, after penalties.

Podium: 1st US\$100,000 · 2nd US\$10,000 · 3rd US\$2,500.

SCORING, BONUSES AND PENALTIES

RULE

Grand Final ranking by order of finish across the transponder line

PENALTY +10s

+10s penalty for an unrecovered spin-out or track obstruction exceeding 10 seconds

START

+10s

HOW A RUN IS SCORED

+60s

FINISH

WHAT ENDS A RUN

RED FLAG – THE RUN ENDS

An uncontrolled boundary impact registering above 4G deceleration, or an uncontained electrical fire hazard.

TELEOPERATION

+60s penalty for any active teleoperation assistance. Declare it before the run; hidden input is a rules violation.

WHAT YOU NEED

- 1:4 scale autonomous platforms or custom electric racing chassis, power capped at 15kW
- Fully onboard driving during the race
- Optical transponder fitted by race control

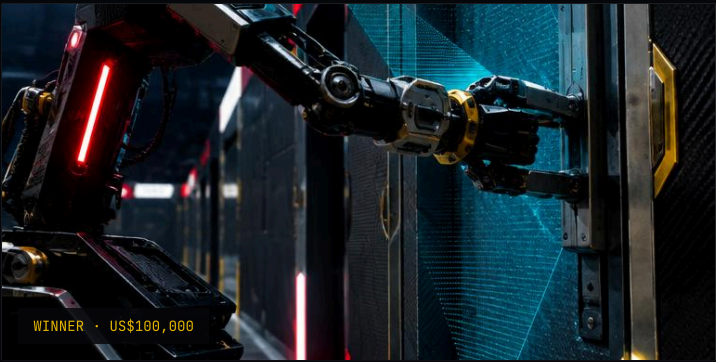
THE THRESHOLD BREACH

Open three unfamiliar doors and cross a sealed corridor.

6 MIN CEILING

TOP 6 REACH THE GRAND FINAL

SCORED BY TORQUE FEEDBACK + 3D KINEMATICS



THE TASK

A 15m sealed corridor gated by three full-height doors: a hydraulic commercial-glass door with 45N push-bar resistance, an armored steel deadbolt door with a 90-degree rotary handle and unmapped upper slide-bolt, and a 60kg track-mounted sliding panel with a recessed finger pocket.

THE ARENA

15m sealed tunnel partitioned by three full-height (2.1m) doors — hydraulic glass, armored deadbolt, 60kg slider — with strain gauges on every handle and an exit boundary optical beam.

FORMAT

MAY 18 · SEMI-FINAL

Breach and traverse all three doors within a 6-minute ceiling. Top 6 fastest machines advance.

MAY 19 · GRAND FINAL

Consecutive rapid breach through all three doors under live randomized latch tension and an unmapped secondary resistance.

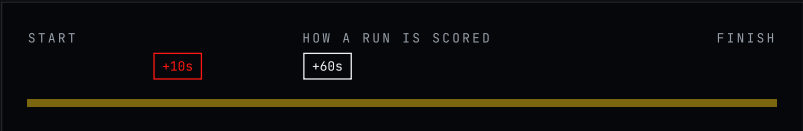
WHO WINS

LOWEST NET BREACH TIME

Lowest net time wins. Podium: 1st US\$100,000 · 2nd US\$10,000 · 3rd US\$2,500.

SCORING, BONUSES AND PENALTIES

RULE	Net elapsed time from the start line to tripping the exit boundary optical beam
PENALTY +10s	+10s penalty for cracked glass, structural damage to a door or handle, or a stationary stall beyond 90 seconds



WHAT ENDS A RUN

ADAPTIVE — NO AUTOMATIC STOP IN THE HEATS

None in the heats — cracked glass and damaged latches cost +10s while the breach continues. Red flags are reserved for uncontained hazards.

TELEOPERATION

+60s penalty for any active teleoperation assistance. Declare it before the run; hidden input is a rules violation.

WHAT YOU NEED

- Door 1: hydraulic glass with a 45N continuous spring-hydraulic push bar
- Door 2: 90-degree rotary deadbolt plus an unmapped upper slide-bolt
- Door 3: 60kg lateral sliding panel with a narrow recessed finger pocket

PRECISION COATING

Paint a geometric wall precisely without touching the glass or fixtures.

TIME + ARTISAN BONUS

TOP 6 REACH THE GRAND FINAL

SCORED BY VISCOSITY FLOW + EDGE SEGMENTATION



THE TASK

Paint a 2.0m x 2.5m architectural drywall carrying an intricate colorful geometric mandala layout, one de-energized sealed socket mock-up, a de-energized toggle-switch mock-up and a 50x50cm frameless glass pane — with open tooling: airless spray, 9-inch rollers or 2-inch angle brushes.

THE ARENA

2.0m x 2.5m matte-white pre-primed drywall with an outlined mandala, de-energized sealed socket and switch mock-ups, a flush 50x50cm frameless glass pane and an overhead spectrophotometer. No live electrical conductors are present in the competition cell.

FORMAT

MAY 18 · SEMI-FINAL

Clean coating of the central base pattern. Top 6 fastest machines with uniform layer distribution advance.

MAY 19 · GRAND FINAL

100% coverage of the full intricate mandala, including micro-edge cutting around the socket, switch and glass.

WHO WINS

NET TIME WITH ARTISAN BONUS

Lowest net time wins. Podium: 1st US\$100,000 · 2nd US\$10,000 · 3rd US\$2,500.

SCORING, BONUSES AND PENALTIES

BONUS -10s

-10s time bonus for uniform coverage above 95% of the target area with zero unpainted dry patches (spectrophotometer verified)

PENALTY +10s

+10s penalty for any paint droplet on the bare glass pane or paint intrusion into the sealed socket mock-up

START

-10s

HOW A RUN IS SCORED

+10s

+60s

FINISH

WHAT ENDS A RUN

ADAPTIVE — NO AUTOMATIC STOP IN THE HEATS

None in the heats — a speck on the glass costs +10s, not the run. Red flags are reserved for uncontained hazards.

TELEOPERATION

+60s penalty for any active teleoperation assistance. Declare it before the run; hidden input is a rules violation.

WHAT YOU NEED

- Any autonomous tooling: airless sprayers, 9-inch micro-rollers, 2-inch angled trim brushes
- Vibrant water-based acrylic pigments supplied by race control
- No masking tape, stencils or shields

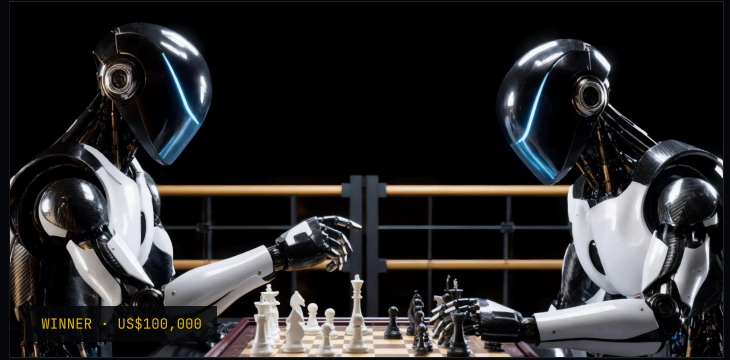
THE GRANDMASTER GAMBIT

Two robots face off over a real chessboard — move the pieces, hit the clock, checkmate.

10+5 RAPID · 3+2 BLITZ

TOP 6 REACH THE GRAND FINAL

SCORED BY OVERHEAD + WRIST VISION · PIECE RECOGNITION



THE TASK

Robot versus robot over a real tournament chessboard. Each machine reads the position with its own cameras, picks up weighted Staunton pieces, captures, castles, promotes — and hits its own clock. No screens, no digital board: every move is a physical act, and every second on the clock is real.

THE ARENA

Centre-stage chess table between two facing robot cells, a regulation tournament board (55mm squares), weighted Staunton pieces (95mm king), a physical digital chess clock and overhead cameras driving the giant live board on the jumbotrons.

FORMAT

MAY 18 · SEMI-FINAL

Up to 12 robots play three Swiss-system rapid rounds (10 min + 5 s per move). Win 1 · draw ½ · loss 0. Top 6 on points advance.

MAY 19 · GRAND FINAL

The top 6 meet in a blitz round-robin (3 min + 2 s) on the centre-stage board. A tie for first is settled by an Armageddon decider — white must win, a draw crowns black.

WHO WINS

MATCH POINTS + TIEBREAKS

Most match points wins, then tiebreaks.

Podium: 1st US\$100,000 · 2nd US\$10,000 · 3rd US\$2,500.

SCORING, BONUSES AND PENALTIES

RULE

Match points: win 1 · draw ½ · loss 0, with Buchholz and head-to-head tiebreaks

PENALTY +1 min

Touch-move applies. A knocked-over piece must be restored by the robot on its own clock; a first illegal move gives the opponent +1 minute, a second illegal move loses the game

START

+1 min

HOW A RUN IS SCORED

-60s own clock

FINISH

WHAT ENDS A RUN

CLOCK-TIME PENALTIES — THE GAME GOES ON

None for a fumble — a toppled piece costs clock time, not the game. Flag fall loses on time. Red flags are reserved for uncontained hazards or a robot reaching into the opponent's cell.

TELEOPERATION

Declared teleoperation: 60 seconds deducted from that robot's own clock each time it is used. Declare it before the run; hidden input is a rules violation.

WHAT YOU NEED

- The robot moves every piece itself — pick, place, capture, castle and promote — and presses its own clock
- Board perception from onboard cameras only; no electronic board or digital move feed
- Any chess intelligence the team brings — its own engine or model — must be declared at scrutineering

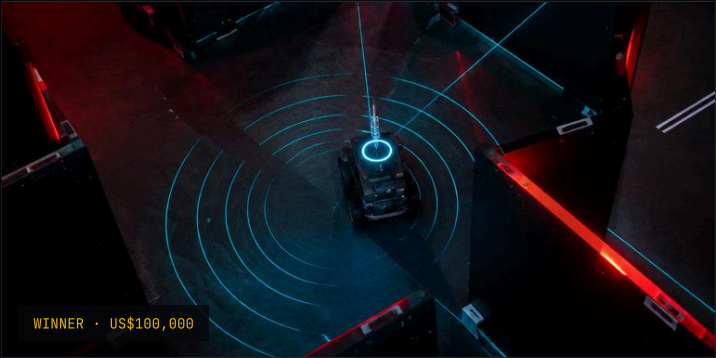
THE UNSEEN LABYRINTH

Map an unseen maze and find the exit as the walls change.

3 MIN - 2.5 MIN

TOP 6 REACH THE GRAND FINAL

SCORED BY LIDAR SLAM + DEPTH + IMU



THE TASK

A 100m² enclosed maze built from motorized modular partitions. The layout is scrambled 60 seconds before launch, and once the robot is inside, selected corridors shift to create sudden dead-ends under strobe interference.

THE ARENA

100m² enclosed sector (10m × 10m) of 1.8m modular partitions on motorized ceiling tracks, rubber traction ramps, cobblestone pavers, low foam baffles, strobe lighting and an optical IR beacon exit.

FORMAT

MAY 18 · SEMI-FINAL

The static layout is randomized 60 seconds before launch; navigate to the IR beacon within 3 minutes. Top 6 advance.

MAY 19 · GRAND FINAL

Live dynamic rerouting: motorized partitions shift mid-run to close the primary corridor, forcing autonomous retreat and recalculation under a 2.5-minute clock.

WHO WINS

LOWEST ESCAPE TIME

Lowest net time wins. Podium: 1st US\$100,000 · 2nd US\$10,000 · 3rd US\$2,500.

SCORING, BONUSES AND PENALTIES

RULE Lowest net escape time from the entrance gate to the exit beacon

PENALTY +10s +10s penalty for a physical collision or abrasive scrape against a boundary wall

START

+10s

HOW A RUN IS SCORED

+60s

FINISH

WHAT ENDS A RUN

RED FLAG – THE RUN ENDS

A continuous stall beyond 45 seconds in a dead-end without attempting recovery, or structural collapse of a partition panel.

TELEOPERATION

+60s penalty for any active teleoperation assistance. Declare it before the run; hidden input is a rules violation.

WHAT YOU NEED

- No prior map, fiducials or GPS
- Onboard LiDAR, depth and IMU mapping
- Layout scrambled 60 seconds before launch; walls shift live in the final

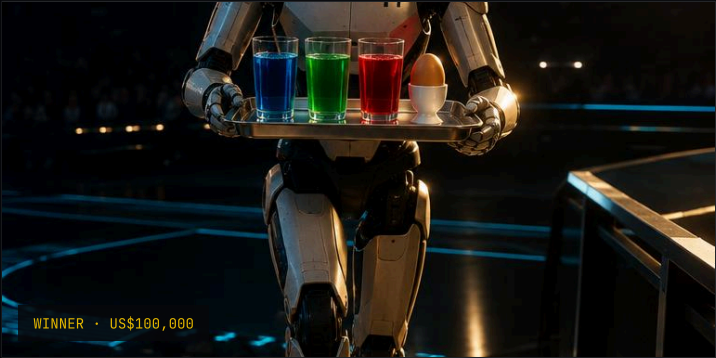
THE WAITER RUN

Carry a tray of water and an egg across ramps without spilling.

90 SEC WINDOW

TOP 6 REACH THE GRAND FINAL

SCORED BY IMU + FORCE-TORQUE WRIST



THE TASK

The classic catering nightmare: carry an aluminum tray holding 3 brim-full cups of fluorescent blue water (300ml each) and one raw egg in a 5mm shallow cup across a 12m course — 4m of flat track, then a 15° ramp up and down.

THE ARENA

12m course: 4m flat track plus a 15° inclined/declined bridge ramp, a 15cm curb step in the final, arena subwoofer floor rumble and a precision digital scale at the finish line.

FORMAT

MAY 18 · SEMI-FINAL

Negotiate the flat track and the ramp within a 90-second window. Top 6 advance.

MAY 19 · GRAND FINAL

Full course including the added 15cm urban curb step while subwoofers emit low-frequency floor vibrations.

WHO WINS

SPEED + WATER RETAINED

Highest score wins. Podium: 1st US\$100,000 · 2nd US\$10,000 · 3rd US\$2,500.

SCORING, BONUSES AND PENALTIES

BONUS +10pts

+10 pts per 10ml of retained fluid, weighed on the finish-line precision scale

BONUS +1pt

+1 pt per full second remaining on the master clock

START

+10pts

HOW A RUN IS SCORED

+1pt

+60s

FINISH

WHAT ENDS A RUN

RED FLAG — THE RUN ENDS

The egg rolls off the tray and cracks on the floor, or a total drop of the service tray.

TELEOPERATION

+60s penalty for any active teleoperation assistance. Declare it before the run; hidden input is a rules violation.

WHAT YOU NEED

- 35cm circular aluminum tray, 3 glass tumblers (300ml each) and a fresh raw egg supplied by race control
- Any walking, wheeled or mixed platform
- Water measured on the finish-line precision digital scale

THE PINBREAKER STRIKE

Roll a heavy bowling ball toward ten pins under spotlights.

2 → 3 FRAMES

TOP 6 REACH THE GRAND FINAL

SCORED BY VISION + JOINT TORQUE



THE TASK

A regulation 15m USBC-grade oiled hardwood bowling lane with 10 solid maple tournament pins. The machine grasps a slick 14 lb (6.35kg) smooth urethane ball with no finger holes, advances to the foul line and releases a fluid pendulum swing.

THE ARENA

15m regulation oiled hardwood lane (1.05m wide) with side gutters, 10 maple tournament pins, a foul-line sensor and arena radar speed guns.

FORMAT

MAY 18 · SEMI-FINAL

Two frames (up to four ball deliveries). Top 6 cumulative pinfall totals advance.

MAY 19 · GRAND FINAL

Three full frames under focused theatrical spotlights and amplified crowd audio.

WHO WINS

PINFALL + SPEED BONUS

Highest score wins. Podium: 1st US\$100,000 · 2nd US\$10,000 · 3rd US\$2,500.

SCORING, BONUSSES AND PENALTIES

RULE

Standard international bowling scoring — strike up to 30 pts per frame, spare up to 20

BONUS +15pts

+15 pts radar bonus for any legal delivery launching above 25.0 km/h

START

+15pts

HOW A RUN IS SCORED

+60s

FINISH

WHAT ENDS A RUN

FRAME VOID — THAT DELIVERY SCORES NOTHING

The chassis crosses the foul line during release, or the ball is lofted more than 1.0m into the air — the frame is voided.

TELEOPERATION

+60s penalty for any active teleoperation assistance. Declare it before the run; hidden input is a rules violation.

WHAT YOU NEED

- Regulation 14 lb (6.35kg) smooth urethane ball with no pre-drilled finger holes
- Robot must grasp and release the ball itself — no ramps or launchers
- Radar guns and a foul-line sensor judge every delivery

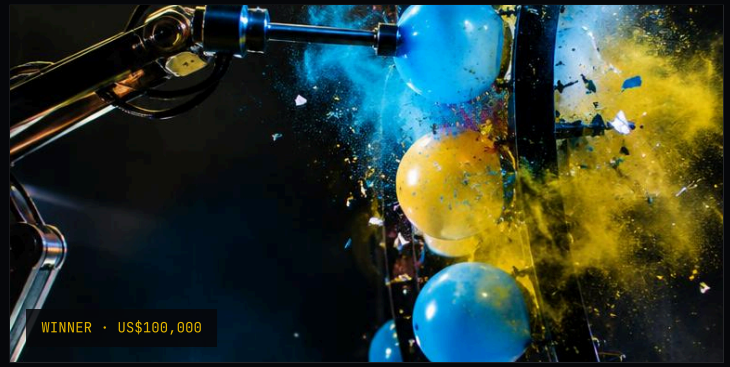
THE BURST CIRCUIT

Strike moving balloons on a rotating carousel in sixty seconds.

60 SEC

TOP 6 REACH THE GRAND FINAL

SCORED BY HIGH-SPEED VISION + TARGET PREDICTION



THE TASK

A 2.5m rotating vertical carousel driven between 5 and 25 RPM carries 12 heavy-duty balloons: 6 filled with fluorescent dyed water and 6 with metallic foil confetti. The robot intercepts them with an approved 15cm blunt-tip wand.

THE ARENA

2.5m vertical circular carousel on an industrial servo drive (5–25 RPM) with 12 balloon mounts, strobe lighting and optical + acoustic pop sensors.

FORMAT

MAY 18 · SEMI-FINAL

Fixed 8 RPM single-direction rotation: burst a minimum of 6 balloons within 60 seconds. Top 6 advance.

MAY 19 · GRAND FINAL

Random variable speed with forward/reverse rotation alternation under strobe lighting.

WHO WINS

POPS + COMBO BONUS

Highest score wins. Podium: 1st US\$100,000 · 2nd US\$10,000 · 3rd US\$2,500.

SCORING, BONUSES AND PENALTIES

BONUS +25pts

+25 pts per verified burst target, confirmed optically and acoustically

BONUS +50pts

+50 pts combo bonus for intercepting 3 consecutive targets in under 10 seconds

START

HOW A RUN IS SCORED

FINISH

+25pts

+50pts

+60s

WHAT ENDS A RUN

RED FLAG – THE RUN ENDS

Mechanical jamming of the wand into the rotating hub mechanism, or 4 consecutive missed strikes impacting the steel structural frame.

TELEOPERATION

+60s penalty for any active teleoperation assistance. Declare it before the run; hidden input is a rules violation.

WHAT YOU NEED

- Robotic arm fitted with an approved 15cm rigid blunt-tip puncture wand
- 12 heavy-duty 12-inch balloons: exactly 6 fluorescent-water and 6 metallic-confetti targets; no airborne pigment powder
- Every pop is confirmed optically and acoustically

THE SMALL PRINT, MADE PLAIN.

FIVE CREW ON THE FLOOR <p>A maximum of five credentialed crew may be inside the live arena or staging bay during a heat, including a designated safety and emergency-stop lead. Each person above five adds +10 seconds to that run.</p>	SCRUTINEERING FIRST <p>Every robot completes mass, battery, radio, emergency-stop and containment inspection before it is cleared for the grid.</p>
WHO CAN ENTER <p>Not only robotics companies: makers, students, independent builders and labs can form a group with their own hardware or a third-party robot. Software-only teams can run their stack on an accredited platform.</p>	YOUR IP STAYS YOURS <p>Taking part does not transfer ownership of your software, models, hardware or designs.</p>
OFFICIAL RECORDS DECIDE <p>Official timing, scoring and steward records govern results; automated measurements remain subject to an auditable official review.</p>	PROTESTS <p>Written protests can be filed until the protest window closes on May 19; the steward tribunal publishes all rulings before the closing ceremony.</p>
SAFETY CORRECTIONS <p>A-05 uses only de-energized, sealed dummy electrical fixtures. A-10 uses exactly 6 water and 6 confetti balloons — no airborne pigment powders.</p>	COMMITTEE UPDATES <p>The committee may revise dimensions, apparatus, schedules or procedures for safety, fairness or venue operations. Registered teams receive an official bulletin before any change takes effect.</p>

Edition 1.9 of the Adaptive Standard. This public competition draft is under continuing technical and legal review; the committee will inform registered teams of any update. Prize terms remain subject to the official event rules.