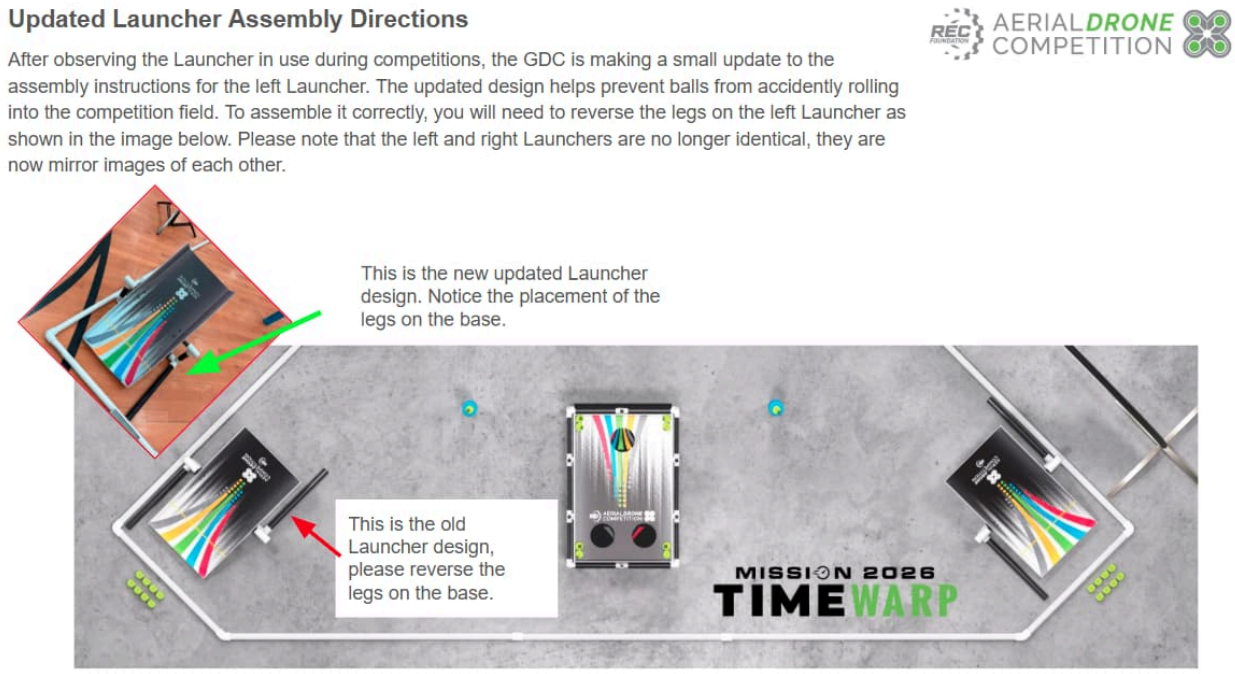
Last Updated December 1, 2025

Teamwork Mission

Updated Launcher Assembly Directions

Note from the GDC:

After observing the Launcher in use during competitions, we are making a small update to the assembly instructions for the left Launcher. The left Launcher's updated design that helps prevent balls from rolling into the competition field. To assemble it correctly, you will need to reverse the legs on the left Launcher as shown in the image. Please note that the left and right Launchers are no longer identical, they are now mirror images of each other.



Outer Zone PVC Pipe Placement

Question:
The 4-foot measurement will not allow for the 6 Inch gap for the ramps. The PVC must be placed closer. This also causes the Drop Zone to be much closer to the back PVC perimeter, which can cause the balls to drop through the single hole to bounce out of the field easily. I suggest after the correct measurement is known to push the drop zone forward into the inner zone to help the balls from dropping out.

Answer:
The GDC has found that if the middle of the field (where the mini arch gate is) is set to 37 inches, as shown in Appendix A of the Competition Manual, the 48-inch measurement of the outer zone can vary by +/- 3 inches, depending on how accurately the PVC is cut.

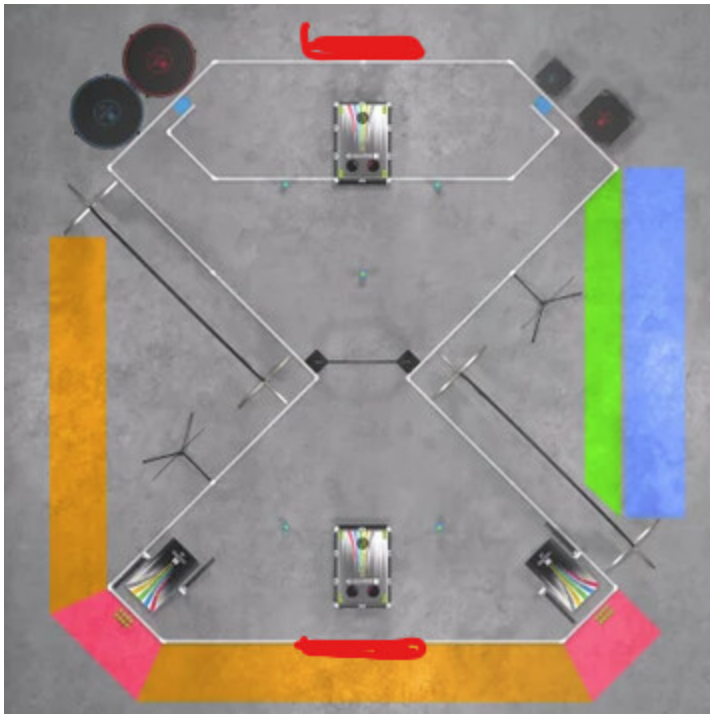
While the exact measurement of the outer zone is not critical, it is essential that the blue ramps are flush with the PVC to ensure that balls traveling from the inner zone to the outer zone must go over the ramp and not around it.

As long as the fields are consistent at your event, small variations in the outer zone depth will not impact gameplay.

Field Barrier to prevent balls from bouncing out of field perimeter

Question:
The green balls constantly bounces out of the field perimeter when rolling down from the drop zone. This is a problem for the head ref who has to keep chasing the balls mid-match and loading them into the field.

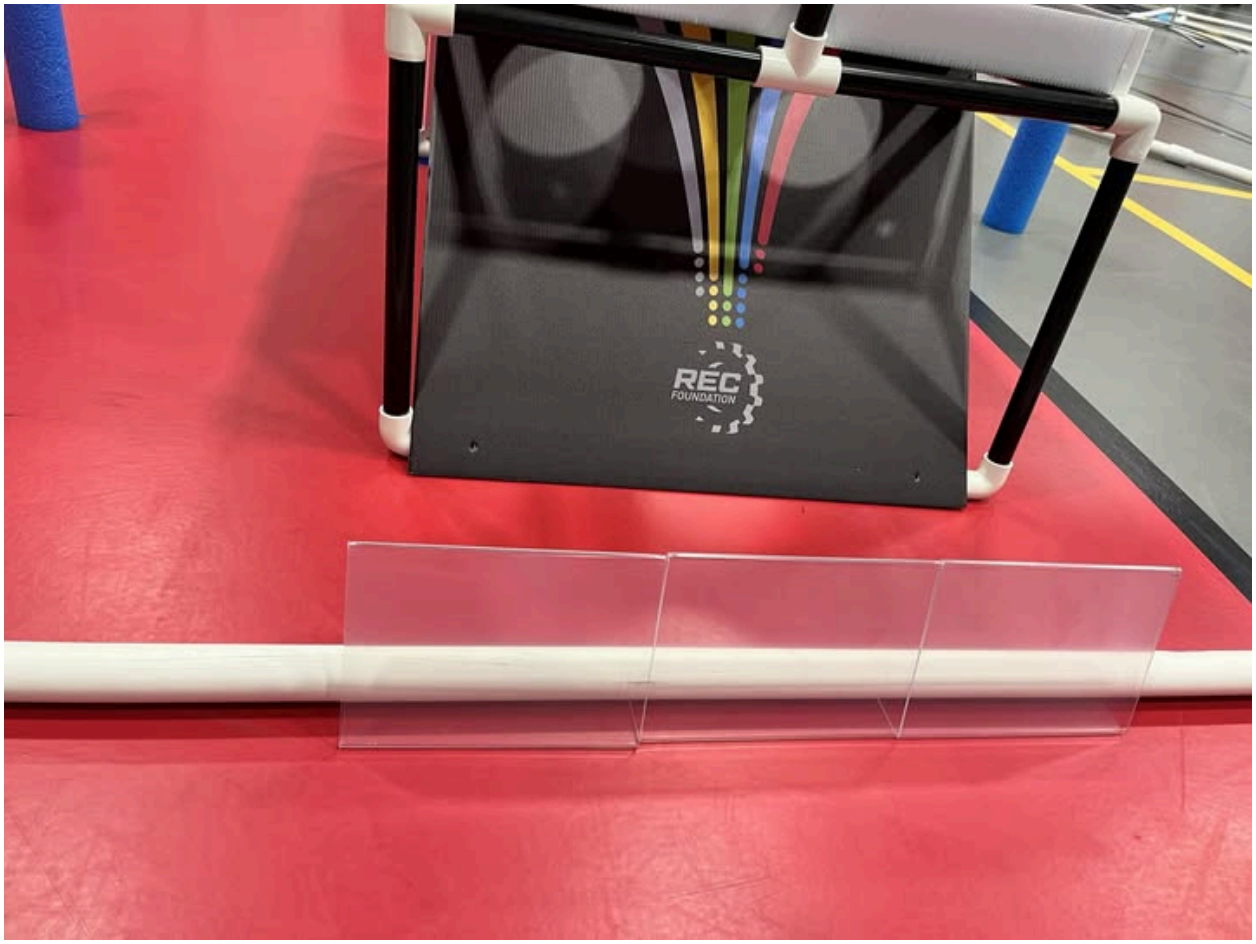
Is it acceptable to place a barrier on the outside of the field perimeter, flush against the PVC pipe as shown in the image below? The red mark represents the barrier that will be placed on the outside perimeter.



Answer:
Yes, it is acceptable to place a barrier along the outside perimeter of the field, provided that all Teamwork Fields in the competition have the same setup and options available.

The GDC recommends using a low barrier that will not obstruct the view of the referee or audience, nor interfere with the drone's movement. Clear materials, such as a clear box or acrylic frames, are preferred to maintain visibility.

Below is an example using 7X5 frames from the Dollar Store.



Removing a few balls from the loading station after loading, is it allowed?

Question:
The loader has loaded 8 balls at a time in the loading station. The drone is not able to move the balls. So the Loader decides to remove 3 balls from the loading station. Is that allowed? after the drone clears the 5 balls by tipping, can the loader reintroduce the remaining 3 balls again?

Answer:
A Loader may remove balls from the Launcher, place them back into the Loading Station if needed. A Loader may then reintroduce them at any time during the Match, in accordance with rule <TM3>.

<TM7> Rolling and Bouncing Balls

Question:
With this new rule, what is the consensus for balls that come off the drop zone on the left side of the field (assuming you're at the pilot station), and bounce out? Should they be placed in play against the pvc barrier pipe? Or tossed into the field?
The right side of the field the ball just comes back into play for the 3 point count correct?
(Link to Q&A)

Answer:
Regardless of which side of the field it occurs on, any ball that rolls or bounces out of the field from the drop zone should be placed back inside the field at the point where it exited.
It does not need to be placed directly against the PVC pipe, but it should be positioned close to it.
The ball should be placed gently, not rolled or tossed.

If the ball bounces out from the Drop Zone that is in the Outer Zone (right side if you are standing in the pilot station), the ball would be placed in the Outer Zone (3-point zone), since that's where it would have landed if it hadn't bounced out.

Loading Stations balls in play?

Question:
What is the official ruling on balls bouncing out of of the loading stations as caused by the drone? For example, if a player places balls into the loading station and a drone creates a current that pushes them out the back do theses ball count as being in play? Do the teams get the points for a clear launcher ?

Answer:
Please review the following to help answer the question.

- *Launcher Assembly Instructions (updated)*
- **Rule <TM7.2>** – Rolling and Bouncing Balls

- **Rule <TM2>** – Loading Station Cleared

If a Ball rolls or bounces out of the back of the Loading Station, the Visual Observer may return that Ball to the Loading Station. The Ball may then be reintroduced for another launch attempt.

- If the returned Ball(s) are reintroduced and result in all 8 Balls being correctly launched into the Field, then the Loading Station is considered Cleared, and the Alliance will earn the Cleared Loading Station Points.

- If the returned Ball(s) are not reintroduced, or if fewer than 8 Balls are correctly launched into the Field, then the Loading Station is NOT considered Cleared, and the Alliance will NOT earn the Cleared Loading Station Points.

Clarification: <TM8> Warp Loop Completed

Question:
When completing Warp Loop, is there a limit to the number of times the teams can complete the Time Warp Flight Path in the last 30 seconds?
For example if a drone completes two laps along the Time Warp Flight Path in the last 30 seconds of a match, will they receive 20 points (10 pts per lap completed) for “Flight Path Complete”?

Answer:
Each Team (Drone) is only permitted to complete the Time Warp Flight Path once per match.

This clarification will be added to Rule <TM8> in the first official competition manual update on October 14, 2025.

Maximum Teamwork score possible?

Question:
What is the maximum Teamwork match score possible in a match? Can you explain with scoring details? How many balls are included in the field element? Are there any spare ball(s) to cover any misplacement?

Answer:
There are 40 Balls included in the Game Element Kit. The Teamwork Mission uses 37 Balls. Therefore, there are 3 extra balls.

The Max Score is 266 Points.

2 Loading Zones Cleared (20 points each), 2 Drop Zones Cleared (20 points each), 5 Pillars Cleared (5 points each), 37 Balls in Outer Zone (3 points each), 2 Flight Paths Completed (10 points each), 2 Bullseye Drone Landings (15 points each)

How many points for small cube landing in a alliance match?

Question:
How many points for small cube landing in an alliance match?

Answer:
According to rule <TM9> and the Teamwork Mission Scoring chart, a Drone earns 10 points for the Alliance when it lands on the Cube that matches its Team's color (i.e., the red Drone on the red Cube, or the blue Drone on the blue Cube).

Drone upside-down on launcher

Question:
If a drone lands upside-down on a launcher when it's in the up position. Is it okay to push the launcher back down and cause the drone to flip off the end and turn right side up on the field?

Answer:

According to Rule TM3, Visual Observers are only allowed to touch the launcher when tilting it backwards so that the loading end touches the floor, allowing balls to be reloaded.

If tilting the launcher in this manner causes the drone to flip upright without excessive force, this would be acceptable.

However, if excessive force is used to tilt the launcher in a way that could potentially damage the game element for the purpose of flipping a drone, this action would not be allowed. In other words, the Visual Observer cannot use the Launcher as a catapult to forcefully flip a drone.

<TM7> Rolling and Bouncing Balls

Question:
With this new rule, what is the consensus for balls that come off the drop zone on the left side of the field (assuming you're at the pilot station), and bounce out? Should they be placed in play against the pvc barrier pipe? Or tossed into the field?

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Answer:
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If the ball bounces out from the Drop Zone that is in the Outer Zone (right side if you are standing in the pilot station), the ball would be placed in the Outer Zone (3-point zone), since that's where it would have landed if it hadn't bounced out.

Inner/Outer zone description in the manual

Question:
Something minor in the competition manual:
On pages 41 through 43 of the competition manual, where the inner & outer zones are defined, there might be either typo or missed figures. There is no figure 26, but got referred under part a. Figure 27 was mentioned on page 43 under part a, but the content does not match with the figure.

Answer:
This has been corrected in V1.1 of the Competition Manual which was released October 14, 2025.

Alliance Match Key Holes

Question:
The keyhole gates are very high at 6 feet, placing them over the arches. Given some of the other measurement discrepancies, just want to make sure that this is the correct height.

Answer:
The 6' height of the keyhole gates on the Teamwork Mission field is correct. While the measurements provided are correct, please note that the images and videos may not always be to scale.

Launcher Assembly

Question:
Instead of using four zip ties per copper clamp, is it ok to use one? Using one will allow the balls to have no obstruction as they roll into the field.

Answer:
Please use the provided instructions (using 4 zip ties) to attach the copper clamp to the Launcher. This ensures consistency and structural stability across all builds.

Launch and Drop Zone Piping

Question:
Hello! Can we glue the piping together on the Launch and Drop Zone piping? I don't want to compromise my materials for a tournament, but I have noticed that they are incredibly sensitive to movement and I don't want it to fall apart if we are hosting a tournament (but I also don't want to compromise a tournament in any way or our materials). Thank you!

Answer:
The use of glue or tape to reinforce the PVC frames of the Launcher or Drop Zone is permitted.

Loader Construction

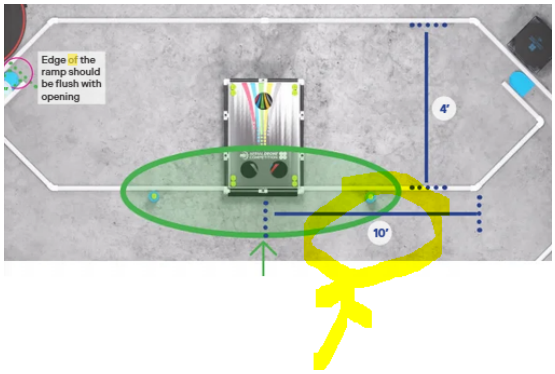
Question:
Instead of using four zip ties per copper clamp, is it ok to use one? Using one will allow the balls to have no obstruction as they roll into the field.

Answer:

Please use the provided instructions (using 4 zip ties) to attach the copper clamp to the Launcher. This ensures consistency and structural stability across all builds.

Teamwork Match Field Assembly

Question:
Is this length supposed to be 5ft instead of 10ft?



Answer:
You are correct, The circled measurement shown in the image should be 5'.
Thank you for pointing out the error. We will update the competition manual in the next release on October 14, 2025.

Piloting and Autonomous Flight Missions

Moving Remote to face the drone while in flight

Question:
Can the pilot for the Autonomous Flight Mission move the remote (while on the table) so that the antenna is pointing towards the drone while in flight to keep it from losing connection. Is it allowed?

Answer:
Yes, this is allowed.

Rule <AM9> prohibits teams from interacting with the controller during the Autonomous Flight Mission match to prevent direct control of the drone. However, the intent of this rule is not to restrict actions that maintain connectivity, such as repositioning the controller or adjusting the antenna to ensure the drone stays connected.

Therefore, moving the controller or adjusting the antenna during the match to maintain communication with the drone is permitted, as long as it does not involve direct control of the drone.

Piloting Mission Flight Path (Fly Through Panel and Yellow Key Hole)

Question:

Please clarify the required flight path for the Piloting Mission. Is it option A, B, or C?

- A. Follow the path as highlighted in Figure 48, illustrating that the drone must exit the holes of the fly-through panel on the side of the Pilot and exit the yellow keyhole on the side of the Pilot.
- B. Follow the path as highlighted in Figure 48, except for the fly-through panel, whereby the drone can exit through either side. However, the drone must exit the yellow keyhole on the Pilot's side.
- C. Follow the path as highlighted in Figure 48, except for the fly-through panel and the yellow keyhole, whereby the drone can exit through either side.

<PM2> Piloting Skills Mission Flight Path.

The Flight Path is divided into three phases, each consisting of specific tasks that must be completed in the listed order below and the direction, as shown in Figure 48.

b. Phase Two.

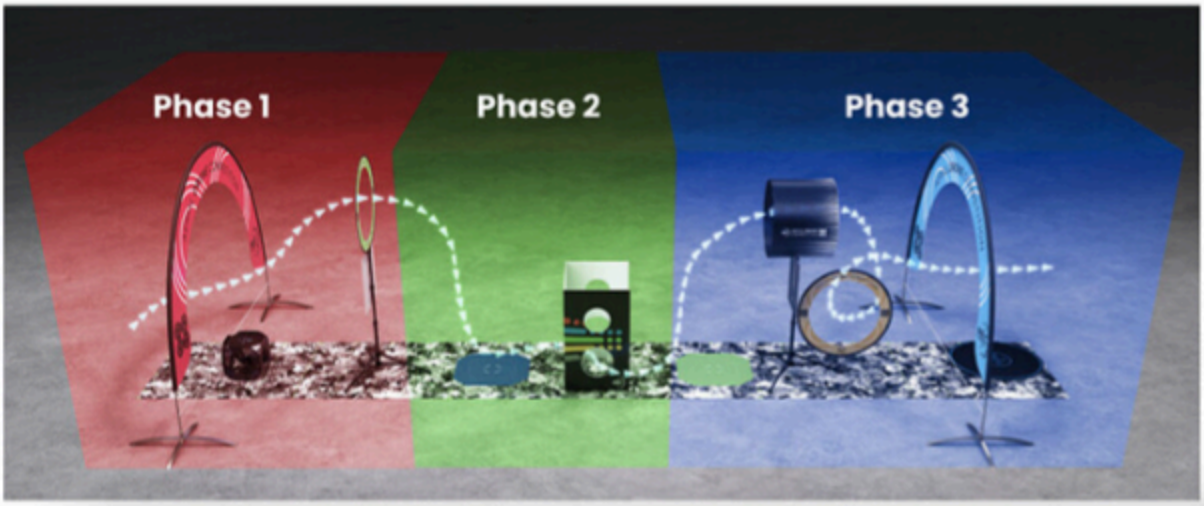
i. Fly through the Fly Through Panel (See <AM5>)

ii. Optional Small Hole Bonus:

During a **Phase 2 of a Piloting Skills Match**, a team will earn the Small Hole Bonus while completing <PM2bi>, Fly through the Fly Through Panel and the following conditions are met:

1. The Drone must fly into the small hole on the front of the Fly Through Panel.
2. The Drone must then fly out of a small hole on the side of the Fly Through Panel.

Points for the Small Hole Bonus cannot be earned unless the Drone is simultaneously completing Phase 2 <PM2b>.



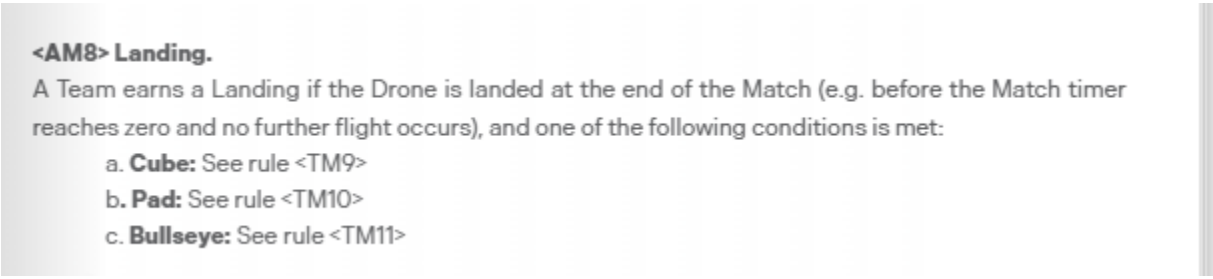
Answer:

The correct answer is B.

Per rules <AM6> and <AM7>, when flying through the Fly-Through Panel, the Drone may enter through either of the two circles on the front of the panel and exit through any of the two circles on the left or right side.

AM8 - Drone Landing Points

Question:
During the Autonomous Mission, the drone may land several times during the Reset process before the timer runs out. The drone may or may not be in an authorized point producing area. If it is, can this be counted for landing points if the team resets the drone flight, continues, or can landing points only count if no other flight occurs within the 3-minute window?



<AM8> Landing.
A Team earns a Landing if the Drone is landed at the end of the Match (e.g. before the Match timer reaches zero and no further flight occurs), and one of the following conditions is met:

a. **Cube:** See rule <TM9>
b. **Pad:** See rule <TM10>
c. **Bullseye:** See rule <TM11>

Answer:
The Drone may land as many times as necessary during a match; however, landing points are awarded only once, for the final landing at the end of the match, with no additional flight permitted afterward.

Skills : color detection

Question:
To detect the color of 2 color mats, does the drone has to land on mat and detect colors? If not a mandatory landing, is it possible for codrone edu to detect color from a distance in air?

Answer:
From Robolink:

The color sensor and the optical flow of the CoDrone EDU are set to disable when the drone enters its flight state and will only enable when the drone is flat on a surface and not moving, therefore the color sensor does not work when the drone is actively flying. You must land the drone on the surface you would like to detect and then call the color sensor.

Tethering Computer with Controller during Pilot Skills

Question:

We had a team last year use code in conjunction with controlling the drone during the flight skills last season. Rather than just having their controller and piloting the drone, they had their computer tethered to the controller and showed that they used code to modify how the controller inputs are used.
Is this allowed or not allowed?

Answer:
During the Piloting Mission, the controller must not be connected to a computer. The pilot is required to manually operate the drone using only the controller. Any code-assisted or computer-mediated control is not permitted during this Mission.

Skills Piloting - Small Hole Flight path clarification

Question:
To get the small hole bonus in skills piloting, do they need to fly through BOTH small hotels in entry and exit or just in through one and out any other?

Answer:
To earn the Small Hole Bonus in either Piloting or Autonomous Flight, the Drone must only use small holes while going through the Fly Through Panel. The Drone must fly into a small hole on the front of the panel AND out of a small hole on the side of the panel.
This clarification will be added to Rule <AM7> and <PM2b> in the first official competition manual update on October 14, 2025.

Piloting Skills Flight Path

Question:
At the top of Page 60 the manual states that “Teams may complete tasks in any order.”
Does this mean teams can skip phase 2 after phase 1 and go straight to phase 3?

Answer:
This is a typo and will be updated in the Competition Manual release on October 14, 2025 to the following:

During the Piloting Mission, teams must follow the Flight Path, which is divided into three phases, each with specific tasks. Phases and tasks must be completed in sequence.

Piloting Skills Mission Points earned for Fly Through Panel

Question:
I am referencing the following in the Game Manual:
MISSION 2026 TIME WARP COMPETITION MANUAL PILOTING SKILLS MISSION
b. Phase Two.
i. Fly through the Fly Through Panel (See)
ii. Optional Bonus: While completing Phase Two, fly through the Small Hole for additional points (See)
Note: The Small Hole Bonus can be earned each time Phase Two is completed.
Fly through Panel.
A Drone is considered to have flown through the Fly-Through Panel when:
a. The Drone enters through one of the circles on the front of the Fly-Through Panel.
b. The Drone has flown out of one of the circles on the right or left side and Cleared the Fly-Through Panel.
Earn Small Hole Bonus.
Answer:
Team earns the Small Hole Bonus when the Drone uses only the small holes of the Fly-Through Panel to complete the tasks of
Question: If going through the small holes in the fly through panels (front and side) during the flight path, does that count as:
Phase 2: 10pts
Small hole front: 10pts
Small hole side: 10pts
Or do you have to complete the flight path for Phase 2 in its entirety to then come back around the fly through panel to get points for the small hole?
Additionally, because you can go through the small hole for bonus points during phase 2 does that mean you can circle around to do as many small holes you can before moving on to Phase 3?

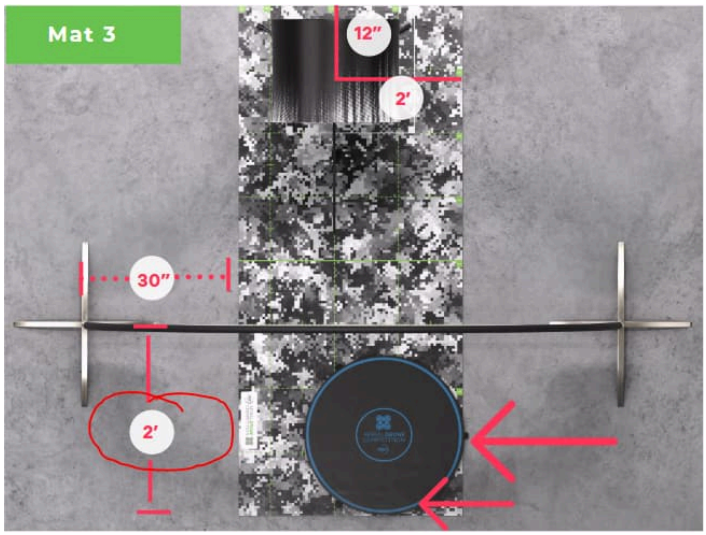
A. There are two parts to your question.
Part 1
To earn the Small Hole Bonus, you must complete the Fly Through Panel task using only the small holes.
A team will earn 10 bonus points*for flying through both small holes (this is not awarded per hole).

During piloting, you will earn 10 points for flying through the panel (Phase 2) and an additional 10 points if you complete the task using only the small holes.
Part 2
Per The Flight Path must be done in order; once Phase 2 is complete, you must proceed to Phase 3.

Possible skills field error

Question:

Should this measurement be 3 feet?



Answer:
You are correct, The circled measurement shown in the image should be 3'.
Thank you for pointing out the error. We will update the competition manual in the next release on October 14, 2025.

Other Questions

Can you etch numbers on the drones / controllers?

Question:
Hi, to keep our gear organized, and not going missing, just wondering if we're allowed to laser etch the school name or team number on the drone bodies? Could have minor weight differences. Can we etch the controllers?

Answer:
This is permitted and is not considered a modification to the drone or the controller.

Battery bank to power remotes in lieu of AA batteries

Question:

We have 3 CoDrone Edu remotes that do not hold the charge from a AA battery. However, these remotes will hold a charge if connected to an external power source such as a battery bank. Can a pilot, pilot with a remote during a competition whilst it is connected to an external power source?

Answer:

Visual Observer Fill in

Question:
I have a total of four teams. One team has only two members. Can a player on one of the teams act as a visual observer for them?

Answer:
Per Rule <G4> : Students may only belong to one team. Therefore, you are not permitted to "borrow" students from another team.

If a team has only two members, they may choose to operate as either:

- Pilot and Co-Pilot, or
- Pilot and Visual Observer (VO)

Additionally, during Teamwork Mission Matches, the Visual Observer from the alliance partner team may assist, as both teams are working together during these matches.

Skills : color detection

Question:

To detect the color of 2 color mats, does the drone has to land on mat and detect colors? If not a mandatory landing, is it possible for codrone edu to detect color from a distance in air?

Answer:
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