



## Game Q&A

**NOTE: Rulings not needed by referees (#7, 10, 15, 20, 23) have been placed at the bottom of the list.**

### **RULING 45 – HOUSEKEEPING 2**

For those of you who want to store objects off the table: The new Housekeeping rule does NOT rule out the use of TV trays/folding stands, carts, etc., which most tournaments have allowed for a decade. Re-stated: You don't HAVE to dedicate one of your drivers to holding a box of stuff all the time, but that is an option. A suitable stand is probably allowed, but the final say on that rests with the people running your event, so check with them in advance, as they may have unique space or safety concerns. Also: "Partially" in Base could mean barely or mostly. "IN" itself can mean totally, barely, or mostly. In fact, it really doesn't matter if you store something on the mat OUTSIDE Base, as long as the only strategy for doing that is STORAGE. Please, everyone, the bottom line is that teams need room and the referees need to see everything. Housekeeping is one of our "softer" rules, written to help teams and referees both. Surely a community of people dealing with robotics can wrap their minds around this one. (Veterans: I'm avoiding a parking lot here; work with me!)

### **RULING 44 – LAPTOP ANGLE**

Your hands are allowed to change the angle of the laptop's screen, but only if the robot can bring the laptop to Base first. The robot is allowed to change that angle wherever it can.

### **RULING 43 – THICK GREEN LINE**

The thick green line around the green grid area is NOT part of the green grid area. That line is a "Low-Lying Shore." The "Scoring Diagrams" under the Missions were drawn specifically to define these areas.

### **RULING 42 – MAT IN SOUTHWEST CORNER**

The mat is always smaller than the table. This year, the mat is to be shifted into the southwest corner of the table, and dead space will end up at north and east edges. There was a typo in a version somewhere which said southeast, but the mat definitely goes in the southWEST.

### **RULING 41 – YELLOW GRID AND NORTH WALL**

If a robot is touching the yellow grid area when the match ends, and it's not touching the mat outside that area, 10 points will be awarded even if the robot is also touching other objects, including models, strategic objects, and the north border wall. This is a benefit-of-the-doubt ruling due to the inconsistent way this mission was worded compared to all the others like it.

### **RULING 40 – STRATEGICALLY MOVED 2**

As soon as an object encountered out of Base reaches Base, it's "IN" Base, and you're allowed to handle it (Rulings 18, 21, 24, and hint in 37). So there's no strategic benefit for the robot to move that object any farther into Base, right? It is for this reason that the Active Robot Touched rule does not require an object that has reached Base to be taken from you.

### **RULING 39 – HOUSE 1**

If your robot uses a strategic object to raise the house, do not worry about the referee removing it as described in the "ON" rule, since "ON" is not required here. "Raised" is required, whether a strategic object is present or not. Also: Since the mission does not say how much "raised" is needed for points, the requirement is set here as "more than half-way" as determined when the red lever leans east by any amount.

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### **RULING 38 – YELLOW GRID OVERHANG**

For the Beat The Clock mission, it's okay if your robot is not "completely in" the yellow grid area, because that's not a requirement. The whole robot does not need to be in the yellow grid area, but its CONTACT WITH THE FIELD does.

### **RULING 37 – STRATEGICALLY MOVED 1**

Regarding the Active Robot Touched rule: The robot doesn't need to actually be in motion to be "strategically moving" an object. An object is being "strategically moved" whenever an active robot has control of it, even if one or both happen to be motionless. Significance: If your robot captures an object out of Base and gets stuck while that object is still not in Base, the object is taken off the field out of play.

### **RULING 36 – "IN" = BARELY IN**

A robot returning to Base only BARELY needs to cross a Base line before you can touch it without losing a levee. Stated a different way: Even though the robot has to be completely in Base for starts, a returning robot can be grabbed the instant any molecule of it reaches Base. One caution though: Be sure to let any OBJECTS with the robot ALSO reach Base before you touch anything, due to the "Active Robot Touched" rule.

### **RULING 35 – HITTING THE ICE BERGS**

It is not considered field damage when the robot tramples the ice bergs. It doesn't mean anything.

### **RULING 34 – USED STORM WHEEL IS STRAY**

After the storm wheel has done whatever it's going to do, yes, it is a "stray object" and you can ask to have it removed.

### **RULING 33 – BALLS ROLLING TO BASE**

It is unclear in the Loss Of Contact rule if the object should remain where it was when contact was lost, or if it should remain where it is when it comes to rest. Clarification: The object remains where it is when it comes to rest. This means the robot is allowed to roll or throw objects strategically. Example: If the robot causes a ball to roll into Base, it's exactly as if the robot carried it to Base. Two cautions: 1) If your robot rolls objects as a strategy, be sure it will work on a table that may or may not be level. 2) If your robot throws objects as a strategy, understand that only SAFE throws will be allowed.

### **RULING 32 – ACTIVE ROBOT TOUCHED**

For purposes of the Active Robot Touched rule, an object is being moved "from Base" if that object has been in contact with the robot since the last time the robot was in Base, no matter where that object was when the match began. Otherwise the object was "encountered out of Base."

### **RULING 31 – LEAVING AND COMING BACK TO BASE**

The robot does not need to leave Base at all. This means an active robot may activate the wheel roller from anywhere. Also: The robot does not have to "return" to Base to make a mission "count" --- Results count if they're still present at the end of the match. The robot only has to reach/be in Base if you'd like to handle it without getting a touch penalty.

### **RULING 30 – COLOR SENSOR**

The "color sensor" is different than the "light" sensor, and is not allowed.

### **RULING 29 – ONE ROBOT PER MATCH**

The Materials rule limit of one controller per match means that whatever robot you start a match with, you have to use that same robot for the rest of that match. You may use a different robot in the next match, but again, only the robot you start that match with.

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### **RULING 28 – HOUSEKEEPING/COMPETITION OBJECTS**

This is a reminder to veteran teams that the Housekeeping rule now requires all “Competition Objects” to be kept where the referee can see them, and not held by team members other than the two at the table. This includes the robot, its attachments & accessories, strategic objects, and all mission models.

### **RULING 27 – VERTICAL & UPRIGHT**

The decision has been made to give you a certain amount of leniency with respect to mission requirements containing the words “vertical” and “upright.” They do not have to be perfectly so. For example, the drill rig might be half on ice, half on the mat, and this would result in a drill assembly that was “mostly” vertical---That will still score. Maybe the drill rig sits flat, but the drill was raised 82.6 degrees---That will still score. The flood barrier’s lever may not go all the way down---No problem. The referee will be looking to see if results are MOSTLY upright & vertical.

### **RULING 26 – DRILL ASSEMBLY VERTICAL**

The word “vertical” in the drill assembly mission does not have any special definition with it, so we honor the dictionary’s definition, which is perpendicular to the horizon. This means the robot could simply stand the drill rig on its end and earn points for a vertical drill assembly.

### **RULING 25 – TEST LEVEES-TIMING**

No matter what we might think it means to “test levees,” the robot earns points by activating the wheel roller. If the activation follows the requirements of the mission, and Rulings 17 and 19, it doesn’t matter if any levees get hit; in fact, it doesn’t matter if there are any levees anywhere.

### **RULING 24 – HELPING WITH MISSIONS IN BASE**

Building on the freedom expressed to you in Ruling 18, YES, you can raise the drill assembly by hand if the robot is able to get the drill rig to Base.

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### **RULING 22 – SOLID-BOTTOM CONTAINER TROUBLE**

Many of you are placing models for delivery loosely in strategic containers (with 5 sides or less), and that's fine. And you're certainly allowed to leave containers out in the field with their contents... But this post is to remind/warn you that almost every mission this year that involves a delivery that requires the delivered model to be TOUCHING = MAKING DIRECT CONTACT with the mat or models in the scoring areas at the end of the match. Be sure you understand the definition of TOUCHING in the rules, particularly the difference between the two pics on the right, and then ask yourself if your container's design is going to be okay.

### **RULING 21 – LOADING THE ROBOT**

Although the "Pre-Match Preparation" rule was written about the time before a match, the freedoms and restrictions listed there apply during the match as well (sorry for mis-naming the rule). This post is to expand on what it means for you to be allowed to "prepare and arrange your inactive robot and any objects it will be moving or using." This means that any time your robot is inactive in Base, you may (yes, by hand) load/unload models and/or strategic objects onto it, add or remove attachments, etc. This is all part of normal allowable preparation prior to any start or restart.

### **RULING 19 – LEVEE BLOCKING 2**

A strategic object in the pink grid area is not a problem if the wheel never hits it. So if you're reinforcing your delivered levies with a strategic object, make sure the levies themselves are still what the storm would hit, and you'll be all set.

### **RULING 18 – HANDLING MODELS IN BASE**

Confirmation: The robot is allowed to go get a model from the field and bring it back to Base, where you're allowed to handle it. Then you can send the robot out to put it in its final placement.

### **RULING 17 – LEVEE BLOCKING 1**

Nothing new here; just re-stating based on questions: 1) The storm wheel must be allowed to "hit or miss" levies, so the robot can't tamper with the thrower's operation (If I throw a baseball at the moon, of course it won't hit the moon, but did I miss? No!---My arm was too wimpy to give me the chance to miss), and 2) The only levee blocks allowed to block the wheel are those far enough away from the thrower as to be considered "near" the shores by the referee. Make them obviously closer than half way if you want a favorable call from the ref.

### **RULING 16 – BEAR UPSIDE DOWN**

There are six ways the bear can balance: One on all 4 feet, two on her side, one with her nose in the air, one with her nose in the dirt, and one where she looks like a dead bug. The two positions where she's on her side count as her "sleeping" and all others count as "upright."

### **RULING 14 - LEASHING ROBOTS**

If you touch your robot while the only part of it in Base is the end of some long [whatever] that was left there like the end of a dog's leash for the obvious purpose of avoiding a touch penalty, you'll still get the penalty. I don't want to go back to ruling that the robot must leave base before it can do anything, so instead you get this post.

### **RULING 13 - LOCKED/ATTACHED-2**

The restrictions against locking/attaching objects to the mission models apply at all handling/preparation times before and DURING each match (sorry for their confusing placement). Remember that these restrictions on what YOU may do by hand do not apply to the ROBOT, once it's active. Example: While preparing to start the robot, YOU may not clamp a mission model to the robot, but once you start the robot, the ROBOT may clamp onto a mission model (autonomously).

### **RULING 12 - WIND-UP MOTORS**

You are allowed to build wind-up motors, such as those that might store energy. The restriction in the "Materials" rule applies only to stand-alone LEGO elements that function as wind-up or pull-back motors.

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### **RULING 11 - RINGS ARE STRAY**

Any black ring (the ones that keep the balls in place) should be removed by \*you\* or the referee as soon as it is exposed. This is important in the area of the storm and levees. If a ring blocks the storm (wheel) you will not get points for that mission. \*This is an exception to the rules (normally you're not allowed to move stray objects yourself).

### **RULING 9 - LOCKED/ATTACHED-1**

The restriction against locking/attaching objects is contained in the "Pre-Match Preparation" rule, so that restriction, and the rule below it do not apply to active robots. Once started, the robot is allowed to grab things and/or pick them up. ALSO: Some people are missing the "Or instead" in the "Locked Or Attached" test... When considering two objects, only one of them needs to pass the pick-up-freely test. Example: Yes, it would take special work to move your desk without moving your keyboard, but that doesn't mean they're attached, since it's easy to lift the keyboard off the desk.

### **RULING 8 - YELLOW GRID AREA**

For the "Beat The Clock" mission, it's okay if the robot touches objects, but it will not score if it's making direct contact with the mat outside the yellow grid area.

### **RULING 6 - OPEN WINDOW**

The window held open by its white beam latch is considered "all the way" open, even though it's not opened to its extreme.

### **RULING 5 - RED/WHITE PEOPLE**

The pre-placed red and white people on the underground reservoir ARE touching the pink grid area, and could score there at the end of the match, since the little patch of real estate they're stuck to IS shown in the diagram defining that area. They do not need to touch the mat in the scoring area, but they could score like that too.

### **RULING 4 - INSULATION VIDEO**

Both insulation blocks must touch the mat in the green grid area for any points to be earned in that mission. The action shown in the mission video would NOT score at all (sorry for the confusion).

### **RULING 3 - DRILL ASSEMBLY ALONE**

Raising the drill assembly is worth points as a stand-alone task, even if the rig does not get delivered.

### **RULING 2 - PRE-PLACED LEVEES**

The pre-placed levee blocks set up on the thin red rectangles when the match starts are understood to be upright, touching red shores, and could score that way. If they're moved during the match, even out of scoring position, but then returned to scoring position by the end of the match, they will score. The warning against "damaging" them only applies at the end of the match. The Required Methods rule does not apply here.

### **RULING 1 - ICE BERGS**

Three white 1X4 LEGO bricks belong on their outlines near the big ice sheet. We missed mentioning them on the Field Setup page, but they are obstacles associated with the Research Area, and they may NOT be considered "Stray Objects" (see the Stray Objects rule).

### **RULING 0 - MODEL DAMAGE**

You're not allowed to break models or defeat Dual Lock at tournaments, but if a model does break, and that could affect your score, the referee gives you the benefit of the doubt unless it was obvious your robot went nuts. The tournaments have the option to glue their models based on their assessment of the need for that.

----- Field/Background rulings not needed by referees on next page -----

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**Field/Background Rulings** (*The previously marked \*temporary rulings, not needed by referees*)

### **RULING 23 – ICE CORE LOOP ORIENTATION**

The red loop of the little ice core model is set parallel to the short border walls of the table. This detail, missed by many, is under the Field Setup tab, under Model Details, Ice Sheet.

### **RULING 20 – RCX BONUS GONE**

Confirmation: There is no RCX bonus any more. It was used for two years to take the some of the shock away from those of you who were caught off guard and unable to switch to NXT. The transition is over, and we observe that those of you who still have the RCX generally like it and can be very competitive with it!

### **RULING 15 – FIRST ICE SEGMENT**

When placing your Research Area model onto the mat, there's no spec on which end to place first for the same reason you wouldn't need to tell a pair of movers which end of your couch to place down first---As long as it's where it belongs, it doesn't matter.

### **RULING 10 - ARROW LOCATION**

If you're trying to see where to place the arrow model by looking at pictures, chances are you have not read the Field Setup page, where the measurements are given.

### **RULING 7 - MAT LOCATION MARKS**

If you're struggling with a model that doesn't match its location mark on the mat, chances are you have not read the Field Setup page, where that issue is talked about (except if you're noticing the yellow/black striped piece on the drill rig doesn't line up---I forgot to mention that---ignore this difference, and align the model with its other marks).

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