

SoCal Regional Video Preparation Requirements

for the 2020-2021 FIRST LEGO LEAGUE Challenge (last revised: [2/13/2021](#))

2/13/2021 Updates summary (changes are in blue text)

1. As discussed in the Coaches meetings, and/or with the Qualifying Tournament Directors, there are several important changes to how videos will be used in the SoCal Qualifying Tournaments. These changes are due to new guidance updates by FIRST, the SoCal decision to use fltournament.com as our online tournament dashboard, and the decision to not implement a “live-over-video-conferencing” Robot Game at the QTs.
2. Each team will now submit four videos, not three: Innovation Project Video, Robot Design Video, Robot Game Video #1, and Robot Game Video #2.
3. All videos must follow the FIRST video preparation guidelines, and the additional SoCal video preparation requirements. This includes wearing masks, due to privacy concerns.
4. A new document linked at the top of <https://socalfl.org/faq/> has guidance for coaches on how to upload videos and supporting documents to YouTube and Google Drive, and then enter their links into your tournament dashboard at fltournament.com.
5. For consistency and simplicity, the two-camera option for recording your Robot Game Video has been removed. All teams must record their Robot Game videos with a single camera, using the same method described previously and below.

Summary Checklist of the Key Video Requirements in this Document:

- Video file format is mp4 or m4v, in 1080p or 720p resolution
- Video file size, length, and filename follow the requirements below for that video type
- Announced team name and number at the start of the video
- Showed only team members, all of whom are wearing masks to protect their privacy
- Additionally, for each of the two Robot Game videos:
 - Followed both the FIRST video preparation guidelines and the additional SoCal video preparation requirements in this document
 - Included all four phases: Robot Inspection, Field Inspection, Robot Game, and Scoring
 - Included the audio of the Robot Game match, with no background music or other added noise
 - Showed and described the scoring conditions that your Robot successfully completed for M01-M14 (not M00 or M15), in numerical order, and following the mission-specific notes for M06, M08, and M11 if attempted.

General Requirements (see below for additional requirements for each video)

1. **Camera person.** It's OK for your coach or other [adult](#) to do some or all of your team's video recording and video file preparation. However, they cannot speak during any part of a video, except to announce the time remaining during the Robot Game (see details below).
2. **Equipment.** Video recording with a cell phone or tablet is recommended. Fancy cameras or digital camcorders or lighting are not required.
3. **Production and resolution.** Video recordings do not need to be professionally produced, but do need enough lighting and resolution to be clearly viewable:
 - a. 1080p ("Full HD") resolution is preferred, = 1920x1080 pixels.
 - b. 720p ("HD") resolution is also acceptable, = 1280x720 pixels.
 - c. Do not submit a video with more than Full HD resolution (such as 4K), or less than 720p resolution. [If this poses a problem, try to borrow a cell phone that can shoot video in 720p, or consult your Tournament Director.](#)
4. **Location and Social Distancing.** Video can be recorded inside or outside of a home, or any location of the team's choice, in compliance with local social distancing mandates. Masks may be worn, if voices can be clearly understood. Implementation details will be left to each team, and not enforced by the QT.
5. **Masks.** [Team members in each video should wear masks to protect their privacy. Because of privacy concerns, FIRST is mandating that we adhere to very strict guidelines about not allowing children's Personally Identifiable Information \(PII\) to get onto the internet/web, including full names and faces.](#)
6. **Participants.** Your video should only show team members, and nobody else.
7. **Copyrights:** Avoid using music or photos for which you don't have copyrights (note that background music is prohibited in the Robot Game videos).
8. **File types.** To support viewing by all Judges and Referees, the only two acceptable video file types are **mp4** and **m4v**. If your camera/software does not natively output video in either format, look for free online conversion tools.
9. **File naming and size.** Each video submission should follow the **file name convention**, **max file size**, and **max time limit** specified for Innovation Project, Robot Design, and Robot Game judging, as described below. Your videos will probably be far below the max size limits; if not, use a different compression setting when exporting your video.
10. **Uploading.** Your coach will upload your videos and supporting documents to YouTube and Google Drive, and then enter their links into flltournament.com, following the new guidance document at the top of <https://socalfll.org/faq/>.
11. **Practice.** Before you try to record a real presentation or Robot Game, practice by preparing a short test video, to verify that you can produce a final video file that meets the requirements (clearly viewable, with high enough resolution and acceptable file type, and for the Robot Game, acceptable camera placement).

Innovation Project Video Requirements

- Submit one video that is no longer than **5 minutes**, to showcase your project.
- The max file size is **2GB**.
- Use the following file name convention: **IP_team number_team name.file format**.
For example, IP_team2594_FuriousFalcons.mp4
- Simple editing is allowed to connect multiple video recordings and photos into one file, however video editing is not required.
- We encourage every team member to share their contribution to the Innovation Project, however it is OK if needed to not have every team member in the video.
- **Announce your team name, number, and project title at the very beginning of the video and follow rubrics to structure your presentation.**
- Your project is judged based on problem identification, innovative ideas, solution development, feedback collection, and effective presentation. The production quality of your video will not be judged. Music is not required.

Robot Design Video Requirements

- Submit one video that is no longer than **5 minutes**, to showcase your Robot's design and programming.
- The max file size is **2GB**.
- Use the following file name convention: **RD_team number_team name.file format**. For example RD_team2594_FuriousFalcons.m4v
- Simple editing is allowed to connect multiple video recordings and photos into one file, however video editing is not required.
- We encourage every team member to share their contribution to Robot Design, however it is OK if needed to not have every team member in the video.
- **Announce your team name and number at the very beginning of the video.**
- Your Robot Design is graded based on the mission strategy, innovative design, effective robot and code solution, iterative testing, and effective explanation. The production quality of your video will not be judged. Music is not required.

Core Values Video Requirements

- No video submission is required or allowed.

Robot Game Video Requirements

- The Robot Game video has special requirements, to allow accurate scoring.
 - Your Referee wants to give your team every Robot Game point that you earn...but will be relying entirely on your video.
 - Creating an effective Robot Game video will take some work. You are encouraged to practice, so that later you won't miss that "Best Run Ever!"
- Create your videos by following both the [FIRST video preparation guidelines \(February 2021\)](#) and the additional SoCal video preparation requirements below.
- Your Robot Game video must include all four of the following phases: Robot Inspection, Field Inspection, Robot Game, and Scoring.
 - Each phase provides information that your Referee needs.
 - You are encouraged to prepare a checklist and/or script, with items for each phase, to help you remember everything.
 - Note: the FIRST document and these video requirements do not change the rules (R01, R02, ...) or missions (M00, M01, ...) in the Robot Game Rulebook, or the [latest Robot Game Updates \(U01, U02, ...\)](#); [our events will follow the four additional Robot Game Updates that were released by FIRST on February 5th \(U09-U12\)](#).
- Submit two (2) videos, each of which is **3-9 minutes** long and shows a single 2.5-minute Robot Game Match (R07), by a single team (with no second team on a neighboring field).
- The max file size is **4GB**.
- Use the following file name convention: **RG_teamnumber_teamname.fileformat**. For example, RG_team2594_FuriousFalcons.mp4
- Your video must be continuous from start to finish (no pauses, breaks, cuts between clips, or switching between cameras or lenses). [Editing is prohibited](#).
- Your video must also [include the audio of the Robot Game match, with no background music or other added noise](#). Your Referee needs to be able to clearly hear the team member(s), the robot motors, and nobody else talking.
- BEFORE your video starts:
 - Download and print a copy of the [official FLL Challenge RePLAY Robot Game Scoresheet](#). Circle the missions that your Robot will attempt, to help yourself later during the Scoring phase.
 - Verify your Field Setup, including resetting all mission models (pp 4-6), with the six Precision Tokens on the field in the SE corner triangle (M15).
 - Optionally, do any sensor calibration with your Robot (R11).
 - Place all your equipment into EITHER the small inspection area OR the large inspection area (R09, M00). Place a ruler to show all is <12" tall.
 - Put a countdown timer in a place that can be seen well from your full-field video angle (see photos below), but won't interfere with your Robot, set to 2.5 minutes, with an alarm at 0:00 that's loud enough to be heard on the video. Two options are a cellphone app or digital kitchen timer, placed on

the table or table wall. Another is a large timer on a laptop (on a table wall corner, or a nearby stand at table height). Software options include:

- iPhone: [Speech Timer for Talks by Senzillo Inc.](#)
- Android: [Speaking Timer Voice Stopwatch by Comostudio](#)
- Laptop: [Online Stopwatch](#)

- **Phase 1: Robot Inspection**

- Say your team name and number.
- [CLOSEUP] Show that all your Equipment fits Completely In (R10) either the small or large inspection area (M00). Remove the ruler.
- [CLOSEUP] Pick up your Robot, and turn it to show its 2-4 motors (point to and very briefly describe each one).
- [CLOSEUP] Say something like “Here is our Innovation Project model,” then show it (M01). No need to describe it. Pause for 2 seconds, so your Referee can see that it meets the M01 color and size requirements.
- Ignore the pre-Match “Talk with the other team...” suggestion (M08).
- To save time, your Technician(s) should now begin arranging your equipment in Home and preparing your Robot for its first Launch, while the camera person proceeds with the Field Inspection.

- **Phase 2: Field Inspection**

- [SEMI-CLOSEUP] In about one minute or less, viewing from the South side of the field (see Field Setup, pg 4), silently and smoothly pan across the table so that your Referee can verify the correct Field Setup (R11) and see where the timer is. Pause for 1 second at each viewpoint, which can show more than one mission model (e.g., M03+M06+M09 at once).
- Use an S-shaped pattern: pan East from the SW corner to the SE corner (Launch Area, M02, M11, M15), then West down the middle to Home (M12, M09, M06, M03, M05), then East from the NW corner to the NE corner (M04, M08, M07, M10, M13).
- When finished showing the field, get into position for the Robot Game, and wait for the Technician(s) to finish preparing for the first Launch.

- **Phase 3: Robot Game**

- [Move your camera location far enough away that it has an unobstructed and unchanging view of the entire field \(see page 4 of the new FIRST guidance document\), for the entire 2.5 minutes of this Phase 3.](#)
- Note that R08 still applies (maximum of two technicians at the field at once). If a team member is holding the camera and not serving as a technician, they do not count against this maximum.
- Start the game and timer by saying, “3...2...1....LEGO!” (see R14).
- Leave the Precision Tokens (M15) in the SE corner throughout the Match.
- If your Robot strands Cargo, and the rules require that “the referee takes” it, just set it aside and don’t use it again (R18/R19).
- Optional: a non-team-member is allowed to announce the time remaining during the Robot Game, at 30-second intervals.
- When the 2.5 minutes are up, say “Time’s Up.”

- If you finish early, and your last mission is not M06 or M07 (be sure to see update U10), you may choose to say “We’re Done,” and then turn off your Robot without being penalized with the loss of a Precision Token (R16, End-of-match exception).

- **Phase 4: Scoring**

- Turn off your Robot, but do not move it, or touch anything else on the field.
 - Exception: If your Robot finished the Match with M06 or M07 (hanging or dancing), first show that (see next step below) and then turn off your Robot.
- Your camera location can now come closer again, as described below, and no longer has to show the entire field. Remember though that the video must still be continuous from start to finish (no pauses, breaks, cuts between clips, or switching between cameras or lenses).
- In 1-3 minutes, show and describe the scoring conditions that your Robot successfully completed for M01-M14 (not M00 or M15); **see also R22 and the mission-specific requirements below**. Here’s how:
 - Your Referee will be filling out a Robot Game Scoresheet just like the one that you prepared. Use yours to **describe the missions in numerical order** (not in the order that your Robot completed them).
 - [CLOSEUP] For each mission on which you scored any points, zoom in or hold the camera closer to the relevant parts of the field and mission models, to show scoring conditions to your Referee. You may need to pan around to show different angles, but **be sure to hold the camera still for 2-3 seconds per camera position, so they can see clearly what you’re talking about (and not get seasick!). Do not hold the camera so close that it’s difficult to see where on the field is being shown.** Pay particular attention to requirements like “over” and “completely in” (requiring a top-down camera view, unless obviously visible).
 - At each camera position, a technician (only) should **state the mission number, and describe the mission requirements that earn you points.**
 - Use the wording on the Scoresheet as much as possible, but don’t worry about the order of describing requirements within a mission.
 - You don’t need to add a “Yes” after describing a scoring condition, or to mention any scoring conditions that you did not complete.
 - When you’re finished, say “We’re Done” or “That’s Everything.”
 - **Mission-specific notes (disregard for any missions not attempted):**
 - **M00:** don’t describe this mission (you already did during Phase 1).
 - **M01:** don’t describe the size of the Innovation Project (since you already showed it during Phase 1).
 - **M06:** to demonstrate “off the mat,” hold the camera at mat level, and either a) briefly show that a piece of paper can slide freely

between the Robot and the mat, or b) nudge the Robot, to show that it swings back and forth freely.

- **M08**: if your boccia share model sent exactly one cube over the North wall, show that it only has the other cube left. Don't worry about mentioning "both share models" (U01).
- **M11**: view the dial close up and pause, so your Referee can clearly see the pointer position.
- **M15**: don't describe this mission (your Referee will count any Precision Tokens lost during the Match).
- Here are a few examples of good descriptions of scoring conditions:
 - "Mission 1, our innovation project is touching the RePLAY logo"
 - "Mission 2, the bottom of the pointer is on Yellow"
 - "Mission 3, one slide figure is off the slide, completely in Home"
 - "Mission 4, the bench is down flat, and there are cubes touching the mat inside two of the hopscotch spaces"
- No videos will be perfect, and that's OK. Just do your best, and remember that your Referee will be following R25, "Benefit of the Doubt."
- We look forward to seeing your two continuous Robot Game videos, each showing a single 2.5-minute match, 3-9 minutes long, with all four phases: Robot Inspection, Field Inspection, Robot Game, and Scoring.
- Good luck, and have fun!!

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