

RobotStudio® Masters Competition Guide



Introduction

This is a manual for the social media RobotStudio® Masters Competition in 2023. You will find all the steps to create a simulation on RobotStudio. After you have successfully created a recording of your simulation, please share it on LinkedIn with the hashtag #RobotStudioMasters for ABB to find you and include you in the competition. The most creative video will receive a ABB FORMULA-E lightweight jacket worth 100 Euros.

Competition steps

Step 1 - Create your simulation on RobotStudio

To create your simulation, you need to have a RobotStudio Premium license. If you don't have one yet you can use the free 30-day trial license:

1. Go on <https://new.abb.com/products/robotics/robotstudio> and click on **"Download it now"**.
2. Fill in the form and click on **"Submit"**. You will receive a link via the email that you entered.
3. Install and start RobotStudio.
4. Open **"Help"** and then **"Manage Licenses"** and go to the **"Activation Wizard"** where you can request your trial license.
5. You can now start to create your simulation.

If you already have used the trial license, you need to purchase a new license.

If you don't have one yet, follow the below process to request your license:

1. Visit <https://new.abb.com/products/robotics/robotstudio> and click on **"Request license"**.
2. Complete the form and click on **"Submit"**. Your request will be managed by an ABB employee who will contact you.
3. When you have the key, visit <https://new.abb.com/products/robotics/robotstudio/downloads> and download the latest version of RobotStudio.
4. Install it and enter the key.
5. You now can start to create your simulation.

If you need help to create your simulation, you will find lots of useful tutorials to start to use RobotStudio at <https://new.abb.com/products/robotics/robotstudio/tutorials>.

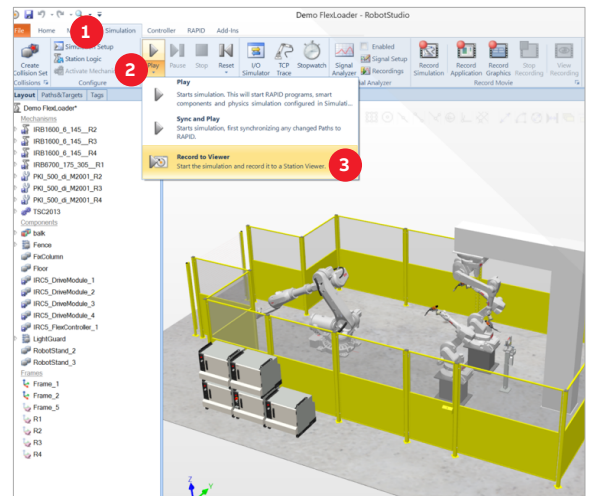
Step 2 - Export your simulation to your Cloud

When your simulation is ready, the next step is to export it from RobotStudio to your Cloud as a GLB file. The GLB format is the only format supported by Augmented Reality mobile applications, so, it's very important to export in this format before proceeding to the next step.

How to export a simulation as GLB file

To export a simulation (with animations) designed in the ABB RobotStudio desktop app, use **“Record to Viewer”** feature.

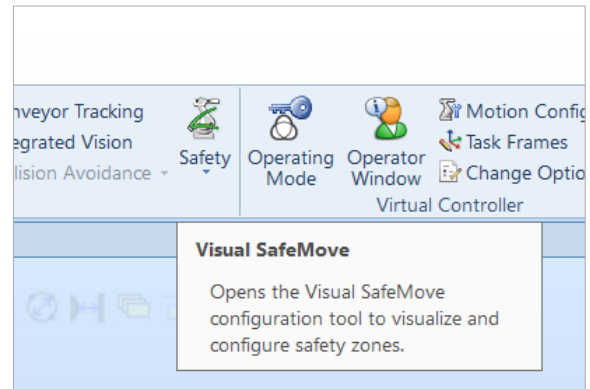
- Open or create a station with a virtual controller, and program a path.
- Click on **“Simulation”** tab **1** and click the down arrow under the Play button **2** to access the drop-down menu. Select **“Record to Viewer”** option from the drop-down menu **3**.
- After playing a simulation, in the **“Save As”** dialog set **“Save as type”** option (1) to **“glTF files (*.glb)”**. Confirm by clicking **“Save”** button (2).



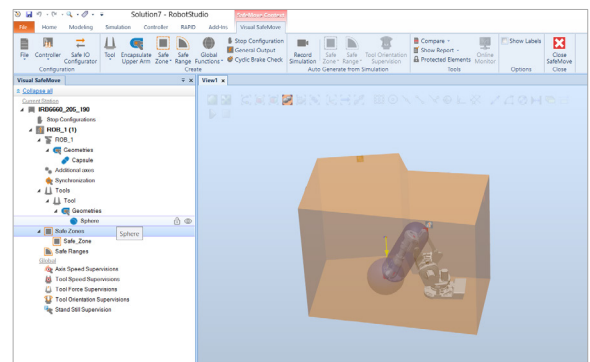
How to export a simulation as a GLB file including SafeMove geometries

Steps to export a simulation as a GLB file including SafeMove geometries:

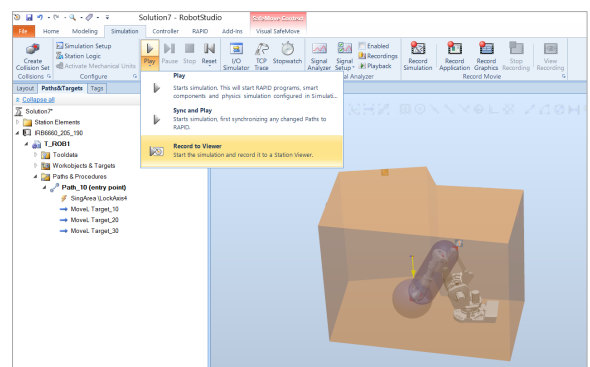
- Open or create a station with virtual controller and SafeMove 2 option.
- Click on **“Controller”** tab and click **“Safety”** button to open **“Visual SafeMove”** tab.



- Configure the safety volumes.

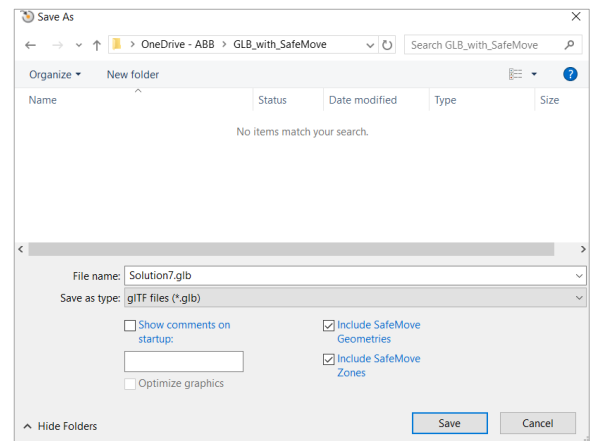


- Keeping the **“Visual SafeMove”** tab open, go to **“Simulation”** tab and click the down arrow under the Play button to access the drop-down menu. Select **“Record to Viewer”** option from the drop-down menu.



- After playing a simulation, in “Save As” dialog set “**Save as type**” option (1) to “**glTF files (*.glb)**”.
- Check the options “**Include SafeMove Geometries**” and “**Include SafeMove Zones**”. Confirm by clicking “**Save**” button (2).

Note: The “**SafeMove zone**” button is supported only for GLB files made with RS2021.3 and higher.

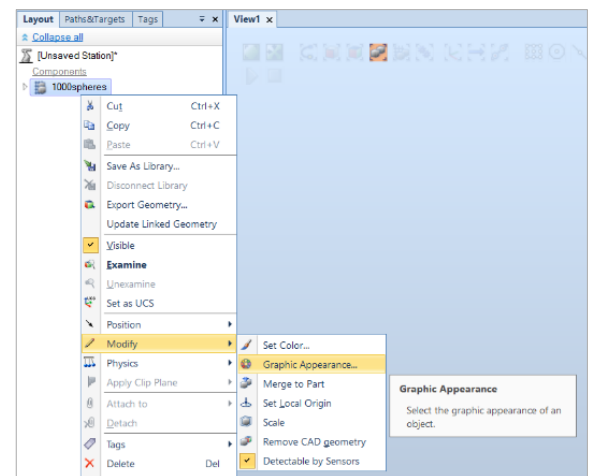


Tip: Optimize your GLB file

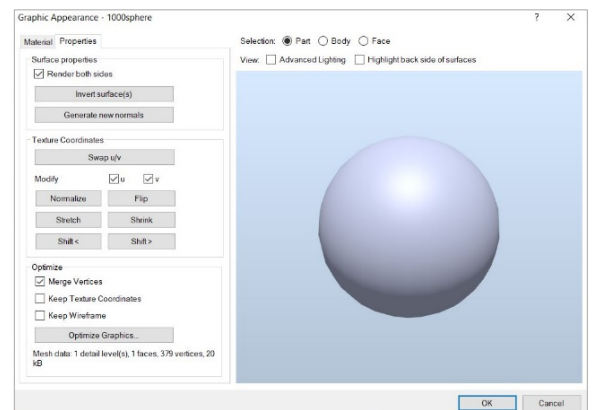
Optimize your GLB file, so it imports faster and displays more smoothly in the app. Optimization can be achieved by reducing 3D graphics (number of triangles), reducing textures, shortening cycle time, and removing invisible graphic components.

Optimization should be done in the RobotStudio desktop app before exporting the file in GLB format.

- In the “**Home**” tab, right click on a graphic component object of the station layout and click “**Modify**” and “**Graphic Appearance**”.



- In the “**Graphic Appearance**” window, click “**Properties**” and “**Optimize Graphics**”. The number of faces, vertices, and the size should reduce.
- This operation can be repeated with all graphic components of the station.



Step 3 – record your simulation in your chosen environment with RobotStudio AR Viewer

Now your simulation is ready, and you have exported it in GLB format to your Cloud, it's time to visualize it in augmented reality in your chosen environment and record it. We remind you that the scenario is one of the criteria to select the winner so, don't forget to be creative!

How do I get RobotStudio AR Viewer mobile app?

You can download the RobotStudio AR Viewer mobile app for free from Apple App Store and Google Play Store.

Apple App Store	https://apps.apple.com/app/id1514364084
Google Play Store	https://play.google.com/store/apps/details?id=com.abb.hayes



Which devices does RobotStudio AR Viewer support?

You can install RobotStudio AR Viewer on a mobile device that has an iOS/iPadOS or Android operating system. The minimum operating system version supported by the app is 13.0 and higher for iOS and iPadOS; 9.0 and higher for Android.

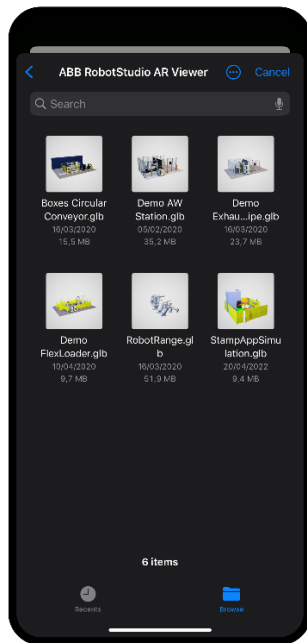
To be able to view robots and robot solutions in augmented reality, your mobile device should support ARCore (for iOS/iPadOS) or ARKit (for Android) services. The table below presents more specific device requirements. If your phone does not support ARCore or ARKit services, you will have only 3D mode visible by default.

iOS, iPadOS	
Minimum system version	13.0
Devices	iPhone, iPad
ARKit-enabled devices	https://www.apple.com/augmented-reality/
Android	
Minimum system version	9.0 (Pie)
Devices	phone, tablet
ARCore-enabled devices	https://developers.google.com/ar/discover/supported-devices#google_play_devices


Visualize your simulation in AR and record it

1

Open RobotStudio AR Viewer on your mobile device.



2

Click on “My Solutions” and then tap on the red plus button  to import it from your cloud.



3

Once the solution is imported, tap on it to display it in augmented reality.



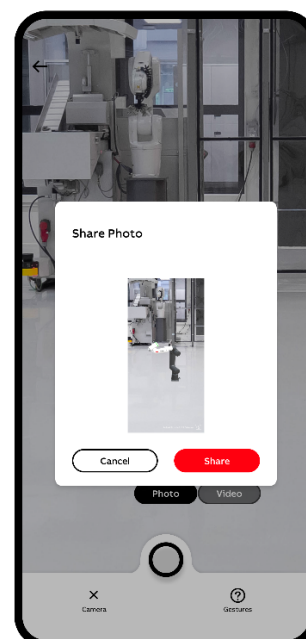
4

When your simulation is well placed in the environment and the application is running and ready to be recorded as a video, tap on the camera icon in the bottom panel of the screen to switch to camera mode. To close the camera mode, tap the close button in the bottom panel of the screen.










5

Select the camera mode and click on the “Video” button to start recording. The video recorder captures the full screen. Tap on the screen to finish video recording. After processing, the video system share panel is displayed. You can share the video using a social media app or save it to any cloud drive provider (e.g., OneDrive).



Solution display options

After loading a solution, the additional buttons are displayed at the bottom of the screen.

Button	What it means	What it does
	Add a robot, a solution or my solution	Allows you to add a new robot or a solution or your solution to the scene
	Player	Opens player to play animation/close player
	Play/Pause animation	Allows you to play/pause animation in a visualized solution
	Replay animation	Allows you to play the animation again
	Camera	Allows you to take a photo or record a video of the solution placed on the scene
	Available touch gestures	Shows the available touch gestures to interact with a solution. You can move, resize, rotate and lift a solution
	Model options	Allows you to see if there is an option of SafeMove geometries available

Step 4 – publish your video on social media

Publish your video on Instagram

If you want to publish your video on Instagram, you can do it directly from the RobotStudio AR Viewer app.

1. To stop the recording, tap on the screen and a new pop up appears with a preview of your video. Click on the **“Share”** button and tap on the Instagram icon.
2. Select Story or Reels and tag **@ABBRobotics**. You should also include our hashtag **#RobotStudioMasters** so we can find your post.
3. Click on **“Share”**. Your video is now published on Instagram.

Publish your video on LinkedIn

If you want to publish your video on LinkedIn, you will need to save it first.

1. To stop the recording, tap on the screen and a new pop up appears with a preview of your video. Click on the **“Share”** button and tap on save the video.
2. Go to LinkedIn directly via your mobile device and start to create a new post.
3. Add the video and in your post tag **@ABBRobotics** and add the hashtag **#RobotStudioMasters** so we can find your post.

Publish your video on TikTok

If you want to publish your video on TikTok, you will need to save it first.

4. To stop the recording, tap on the screen and a new pop up appears with a preview of your video. Click on the **“Share”** button and tap on save the video.

5. Go to TikTok directly via your mobile device and start to create a new post.
6. Add the video and in your post tag **@ABBRobotics** and add the hashtag **#RobotStudioMasters** so we can find your post.

Thank you for participating in the RobotStudio Masters Competition! We'll be announcing the results of the competition in May 2023, so stay tuned.

Competition conditions

The winner will be picked by a jury in the Communications and Product department at ABB Robotics. The winner's creation will be reshared on ABB Robotics LinkedIn page. Any posts sent after the 30th of April 2023 will not be considered.

All entries should conform to the spirit of the competition. No abusive, insensitive, defamatory, offensive, or inappropriate content will be tolerated. ABB reserves the right to respond to such entries as it sees fit, including legal action.

Need help or support?

If you need help or support, here some useful links:

- [RobotStudio tutorials](#)
- [RobotStudio AR Viewer User Manual](#)
- [RobotStudio Forum](#)
- [RobotStudio AR Viewer Forum](#)

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