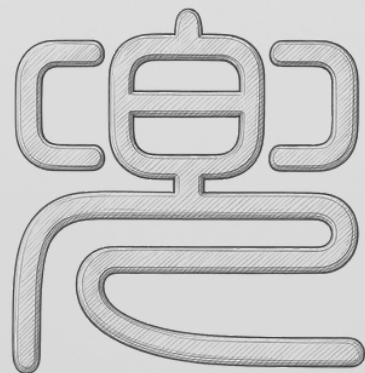




KABUTO®

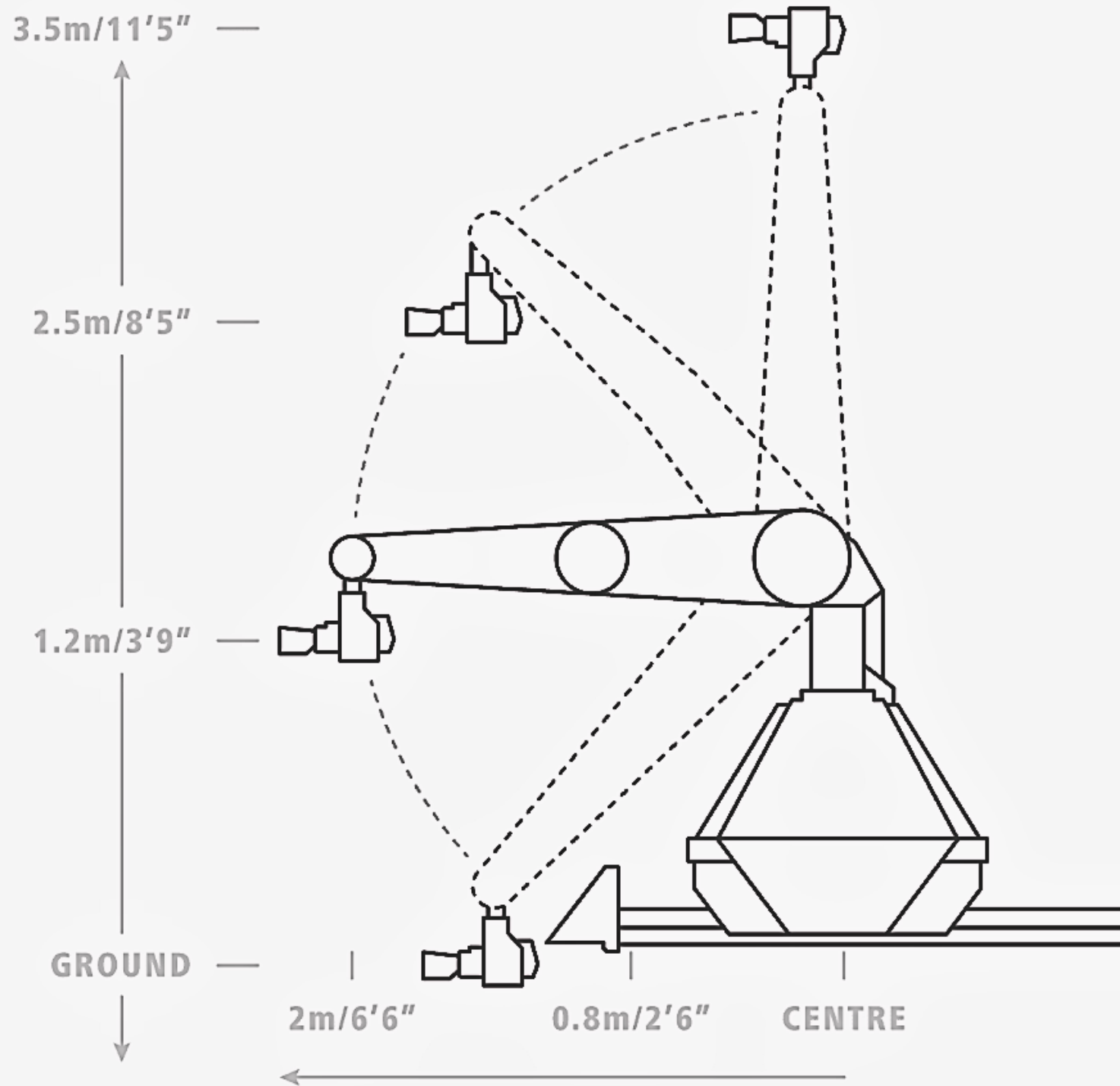
CAMERA / MOTION CONTROL / STUDIOS

BOLT KEY FEATURES & PRACTICAL IN STUDIO DEMONSTRATION

Key Features

- **Precise lens control:** Total control of zoom, iris and focus
- **Target tracking:** Capable of identifying objects in space for precise tracking paths
- **Repeatability:** Every camera move can be precisely repeated
- **Portability:** Cinebot can be transported to different locations
- **Sync:** Camera shutter sync to Cinebot for multiple pass accuracy
- **CGI:** Realtime Unreal Engine capabilities and extracting FBX files
- **Camera payload:** 20kg Maximum
- **Arm maximum height:** 3.5m
- **Arm reach:** 2m
- **Track speed:** Up to 5m/sec
- **Track Length:** 6m

RIG MODEL





OVERVIEW

Within this template, there is a collection of footage that we had shot and tested with the BOLT Motion Control Robot. The objective here is to provide you with greater perspective as to how this machine generally operates, its logistical measures/limits (arm height, length etc.) and more!

TO TAKE INTO CONSIDERATION

The operating software for the BOLT, “Flair”, is highly intuitive and all the programmed shot examples following this page are just the tip of the iceberg! All these moves can be executed with much more speed and velocity. For the purpose of a general demonstration, we had kept these more simple and fluid. The main take away from this beautiful piece of equipment is not only its ability to capture moments so precisely, however, the BOLT’s perfect repeatability factor. This introduces the possibility to create exotic camera paths multiple times and with basic masking efforts, you can create the impossible! Just imagine, 5 of you in one environment whilst the camera is flying through space, all in one image.

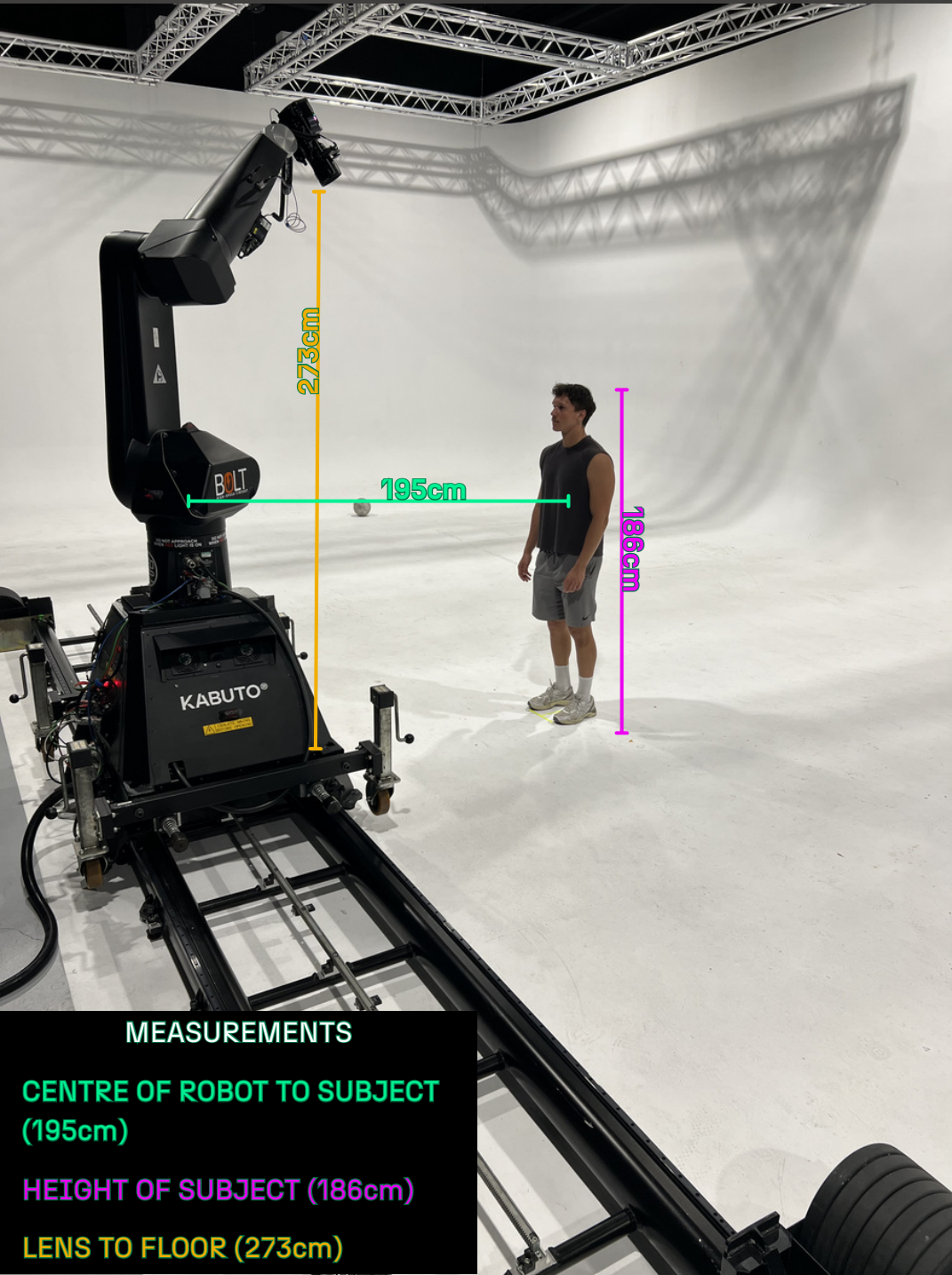


SHOT 1 (ALMOST TOP DOWN) - CAMERA PERSPECTIVE



[>> CLICK HERE TO WATCH VIDEO <<](#)

SHOT 1 - YOUR PERSPECTIVE



- TO NOTE:
- This is not a “true” and “semetrical” top down angle.
 - The difference is that we had tilted more diagonal in order to avoid getting the robot into rfame.
 - Additional benefits of having the robot in this position is that it offers the ability to execute much more aggressive and “crazy” moves. This is due to the axis’s being in a more suitable location for multiple destination sequences.
 - In the next shot, you will see a true senital frame as it is possible, however, with more limitations to creativity.

INFORMATION:

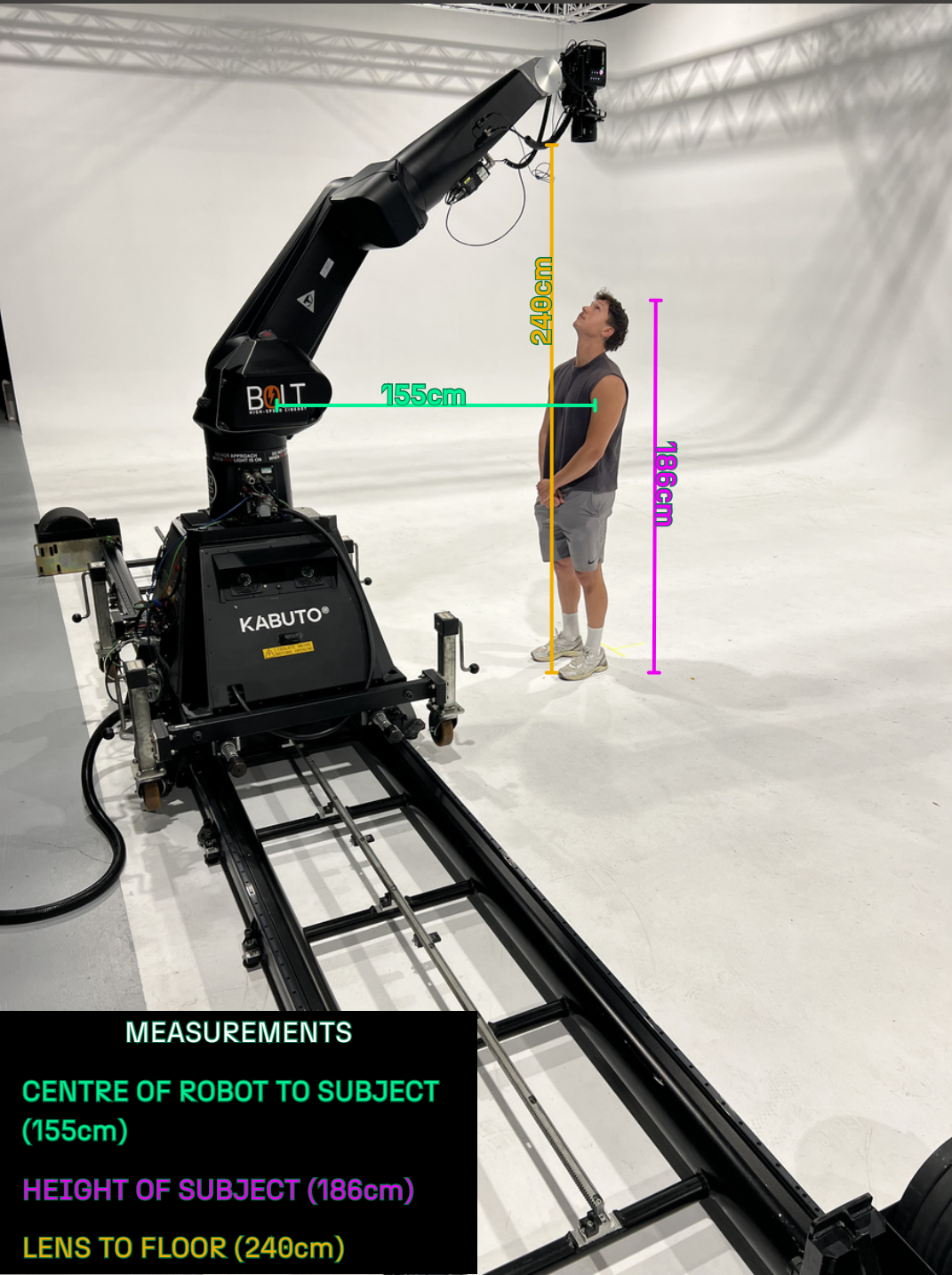
CAMERA: ARRI MINI LF (OPEN GATE)
LENS: 25mm SIGNATURE PRIME

SHOT 2 (TOP DOWN/SENITAL) - CAMERA PERSPECTIVE



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SHOT 2 - YOUR PERSPECTIVE



MEASUREMENTS

CENTRE OF ROBOT TO SUBJECT
(155cm)

HEIGHT OF SUBJECT (186cm)

LENS TO FLOOR (240cm)

TO NOTE:

- In this shot, the camera was positioned exactly sentinel. Hypothetically, we used this as a tripod to achieve this shot. Previously in “Shot 1”, within the frame you can see parts of the robot track on the edges as a result of the robot arm needing to be closer to its body to achieve this perspective. Therefore, evidently in “Shot 1” we had angled the camera slightly outwards to remove this issues or a second option would be to utilise VFX to remove the object in post production.
- Within this position you are still able to create moves such as push ins and slight rotations. However, given the state that this is a more complex and unusal position for the robot, you may be prohibitted in creating “more crazy” moves.

INFORMATION:

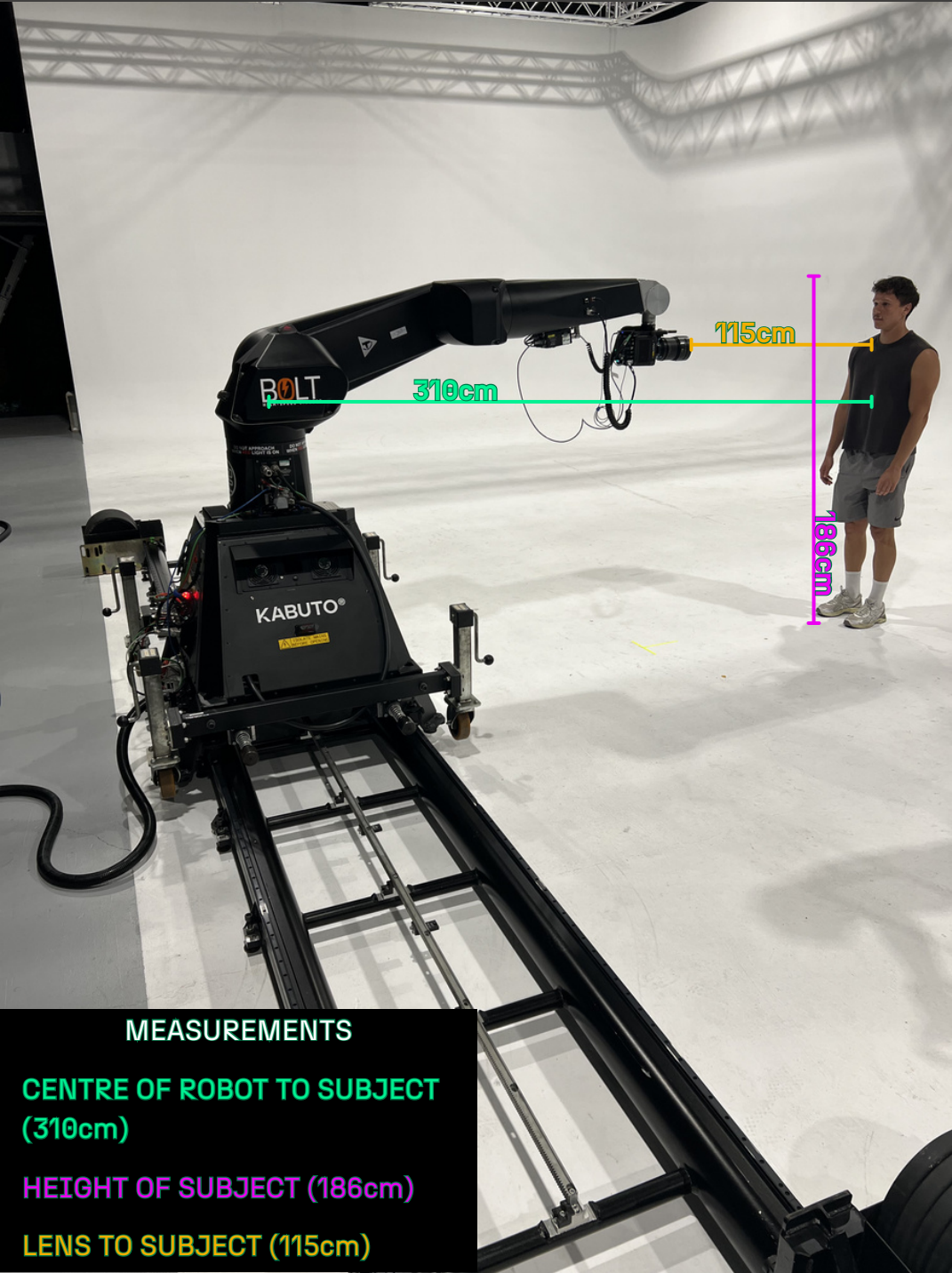
CAMERA: ARRI MINI LF (OPEN GATE)
LENS: 25mm SIGNATURE PRIME

SHOT 3 (PUSH OUT → ROTATION) - CAMERA PERSPECTIVE



[>> CLICK HERE TO WATCH VIDEO <<](#)

SHOT 3 - YOUR PERSPECTIVE



MEASUREMENTS

CENTRE OF ROBOT TO SUBJECT
(310cm)

HEIGHT OF SUBJECT (186cm)

LENS TO SUBJECT (115cm)



INFORMATION:

CAMERA: ARRI MINI LF (OPEN GATE)
LENS: 25mm SIGNATURE PRIME

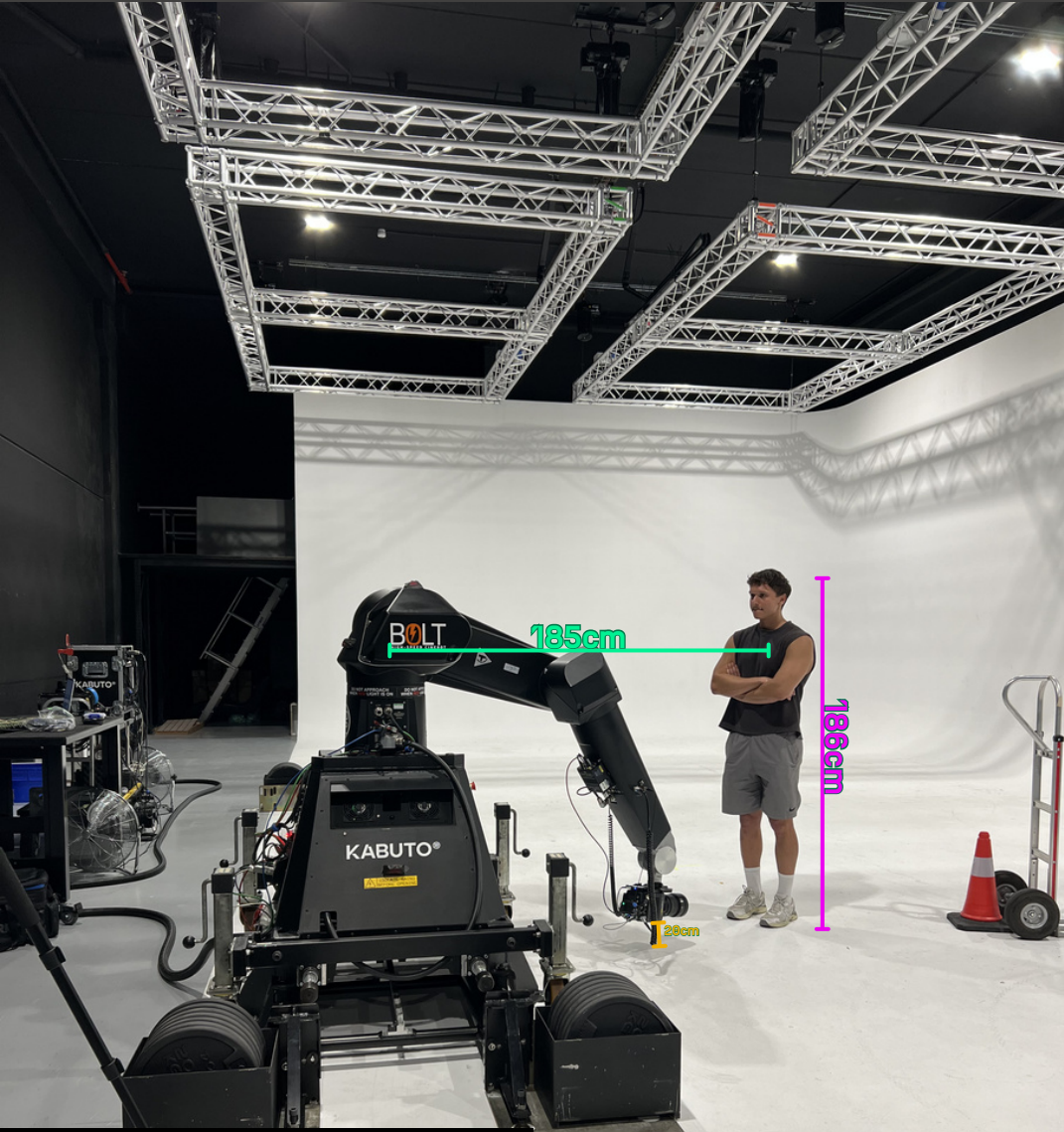
- TO NOTE:
- Here you can see the absolute limit of how far this robot can extend its arm (approx 200cm)
 - One thing to consider, when the arm is extended as speculated, you are unable to move around freely to achieve multiple frames when operating. Therefore the solution is to bring the subject closer to the robot and then you will be able to rotate, roll, lift etc.
 - I followed the push out from the extended arm to rapid rotations from one side of the subject all the way to the opposite direction using the robots tracks whilst rotating (Tracks: 6m).

SHOT 4 (TILT UP → TRACK UP) - CAMERA PERSPECTIVE



[>> CLICK HERE TO WATCH VIDEO <<](#)

SHOT 4 - YOUR PERSPECTIVE



MEASUREMENTS

CENTRE OF ROBOT TO SUBJECT
(185cm)

HEIGHT OF SUBJECT (186cm)

LENS TO SURFACE (20cm)



INFORMATION:

CAMERA: ARRI MINI LF (OPEN GATE)
LENS: 25mm SIGNATURE PRIME

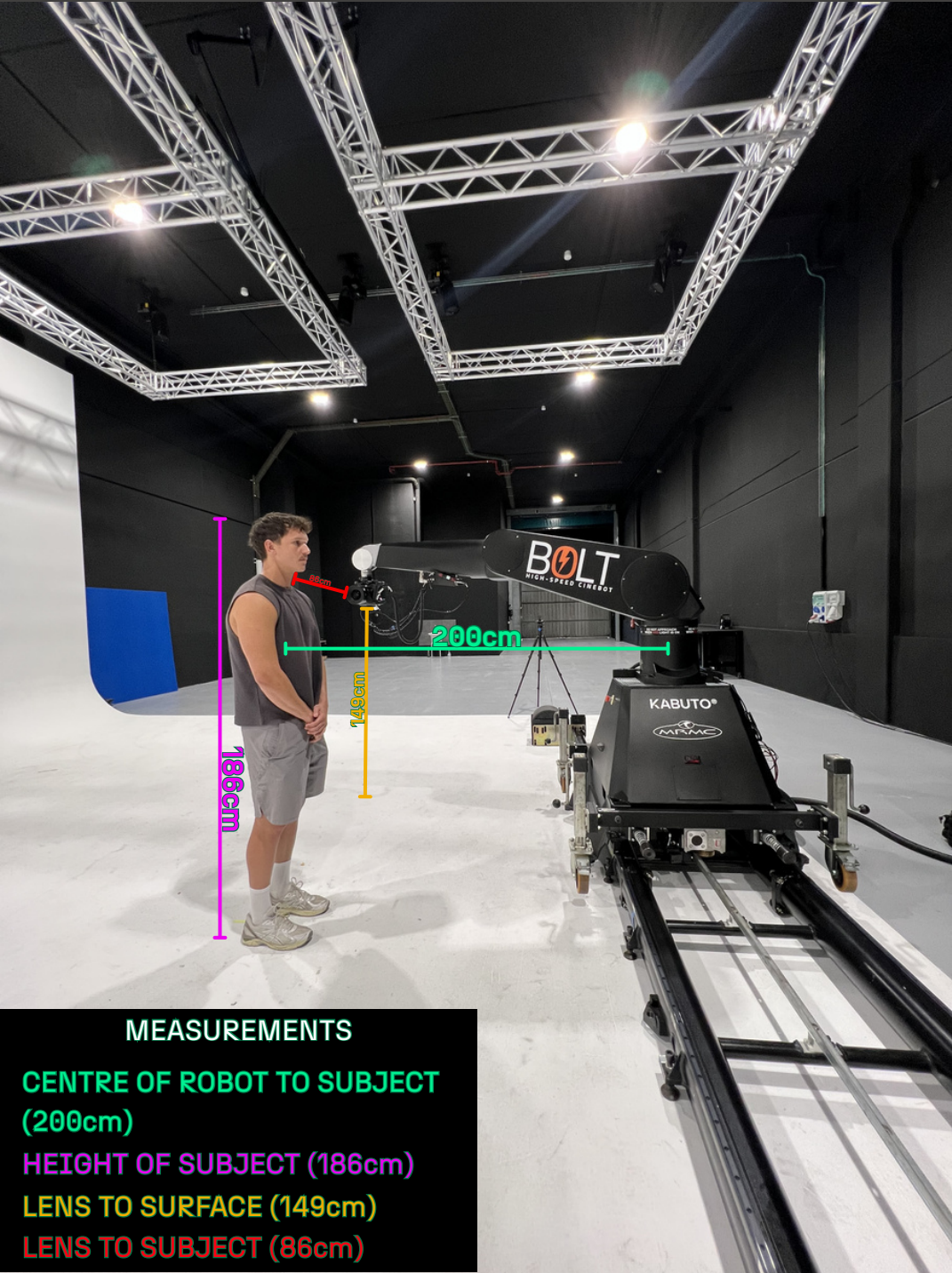
- TO NOTE:
- The camera begins 20cms above floor level, however, as the camera tilts up it merely reaches approximately 2cms. This shows you how precisely you can operate the robot.
 - You can only achieve this kind of “hero” frame with the camera close to the tracks regarding the length of the arm.

SHOT 5 (180 DEGREE PARALAX) - CAMERA PERSPECTIVE



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SHOT 5 - YOUR PERSPECTIVE



MEASUREMENTS
CENTRE OF ROBOT TO SUBJECT (200cm)
HEIGHT OF SUBJECT (186cm)
LENS TO SURFACE (149cm)
LENS TO SUBJECT (86cm)



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- TO NOTE:
- The distance from the subject to camera/lens will stay at an almost perfect distance whilst executing a full 180 rotation.
 - As you can see with the beginning and end frame, the arm is extended fully. This indicates that the subject must be 2 meters or closer for this move to be possible. (the further out, the less rotation)
 - The closer the subject is the more rotation you can produce, however, this increases the risk of seeing the robot.

INFORMATION:
CAMERA: ARRI MINI LF (OPEN GATE)
LENS: 25mm SIGNATURE PRIME