

2021年度通訊博物館電子裝置製作比賽

Museu das Comunicações – Concurso de Construção de Dispositivos Electrónicos, 2021 Communications Museum - Electronic Device Construction Competition, 2021

Supplementary Rules – Junior Secondary and Senior Secondary Group

<u>Construction requirements</u>: There is no restriction on the materials used, but **ready-made device is not** allowed. The device should consist of two parts: the "control unit" and "device".

Functions:

- 1. The "control unit" has to control the "device" to hang a number of specific items up on the hanging rack in an assigned area in a non-linear movement.
- 2. In Senior Secondary group, before the start of the competition, participants can decide to place the "device" anywhere within the assigned area and it is not allowed to move the "device" afterwards.
- 3. In Senior Secondary group, during the competition, each team can use two "devices" maximum at the same time. Each device has to be controlled by two different individual "control units".
- 4. Junior Secondary group only allow one "device" in each competition.

<u>Dimensions</u>: The "device" should not exceed **30cm x 25cm**, no restriction on the height; there is no restriction on the "control unit".

Weight: There is no restriction on the weight of the "device" and the "control unit"

Power Supply Restriction: The device must use direct current of **24V** or below. The organizer will not provide any power supply.

<u>Competition System</u>: The competition is composed of two stages: "competition" and "presentation". Due to the COVID-19 pandemic, crowded situation will be avoided as much as possible during the competition.

- Competition stage: Two different dates will be arranged for each team to join the competition in the museum. Participants are suggested to leave the venue as soon as possible after the competition. The whole process of the competition will be recorded and the best result will be selected as the final result. <u>The top eight teams with the highest scores will proceed to the presentation stage.</u> Further information please refers to later passage.
- 2. **Presentation stage:** Eight teams that proceed to the presentation stage will be invited to elaborate their work such as design concepts or features to the judges on a specific date in the museum. Further information please refers to later passage.

<u>Timeout and Maintenance</u>: No timeout is allowed during the game. If the "device" fails during the competition, the team can repair their "device" on spot or outside of the pitch area after the referee's permission. The maintenance process will be recorded and the "device" should be placed back on its original position after finish repairing, and continue the competition with the approval of referee.

Violation of rules: Teams will be disqualified depending on the severity of violations, as regulated below-

- 1. Intentionally causing damage to the pitch or objects during the competition.
- 2. Touching the "device" or target during the competition without pre-approval.
- 3. Dimensions of the "device" do not meet the specifications listed in the rules and regulations.
- 4. Using "devices" that have not been inspected by the organizer.
- 5. Using a qualified battery that has not been inspected by the organizer.
- 6. Team members enter the restricted pitch area during competition without permission.



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- 7. Disobeying the instruction of the staff, interfering or stalling the competition.
- 8. Violations, insulting or abusive words of participating teams.
- 9. Violation of the principles of fair play.

Others:

- 1. All teams should pay attention to electrical safety.
- 2. Maintenance tools shall be prepared by the participating teams. The organizer shall not provide them.
- 3. Participants are allowed to use the test pitch at the museum during opening hours before the competition.
- 4. Should any dispute arise, the decision of the organizer shall be final.
- 5. Final decisions shall be made by organizer should any unexpected situations happen during the competition.
- 6. In case of any discrepancy in the different language versions of the regulation, the Chinese version shall prevail.

Competition Method – Junior Secondary Group

<u>Pitch:</u> Dimensions of the storage shelf: **34cm x 16cm x 16cm** (Height), the shelf is divided into four compartments with each about **7cm** (Wide).

Target Objects:

- Four books of different sizes (Length of each book is shorter than 14cm with width is shorter than 10cm.)
- Five CD cases (Each of them is 14cm x 12.5cm x 0.8cm in dimension, approximately 32g in weight. There will be one CD case among five labeled as "Function box".)

Competition System:

- 1. **Competition stage:** The competition time is **6 minutes**. Participants have to hang the target objects using their "device" on the storage shelf with a non-wireless control unit, within the time limit and there is no specific compartment that the target objects have to placed.
- 2. **Presentaion stage:** The top eight teams that score the highest in the competition stage will proceed to the presentation stage. The time limit for the presentation is **6 minutes**. Following the presentation will be a Q&A session with the judges. The judges will evaluate and score the work of each team.
- 3. **Final result:** When the competition is finished, the ranks of the "Competition" and "Presentation" are combined as the final rank.

Scoring method:

The team will score **50 points** for each book successfully placed on the shelf, and **30 points** for each CD case (except "Function Box"). If the "Function box" is successfully placed in the compartment that contains an object, the score of the object in that compartment will **be doubled**.

Competition Method – Senior Secondary Group

Pitch:

- 1. Dimensions of the hanging rack: **79cm x 40cm x 82cm** (Height).
- 2. A platform of **76cm** height is set next to the hanging rack. A number of specific items are placed at the center of the platform and the "device" can be placed at any area on the platform. Participants can



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use any object as a raised board for the "device" if necessary. The object used is not counted as part of the "device" and does not exert any other functions apart from being a raised board.

<u>Target Objects:</u> Two towels (approximately 30cm x 30cm, 27cm x 50cm respectively), one baby size top T-shirt, one pair of baby size shorts and one pair of baby size shoes.

Competition process:

- 1. **Competition stage:** The competition time is **6 minutes**. Participants have to hang the target objects using their "device" on the hanging rack with a non-wireless control unit, within the time limit. There is no specific location that the objects have to be placed; items should be placed neatly and evenly. The objects should not be piled one above another or folded.
- 2. **Presentation stage:** The top eight teams that score the highest in the competition stage will proceed to the presentation stage. The time limit for the presentation is **6 minutes**. Following the presentation will be a Q&A session with the judges. The judges will evaluate and score the work of each team.
- 3. **Final result:** When the competition is finished, the ranks of the "Competition" and "Presentation" are combined as the final rank.

Scoring method:

- 1. **50 points** will be awarded for each object successfully hung up on the hanging rack, but the score will be **deducted by 20%** if the object hung is folded or not in order.
- 2. 5 points will be deducted for each object piled above another, regardless of the type of the objects.

