

· 2019 ·

MAKE X

MakeX Robotics Competition

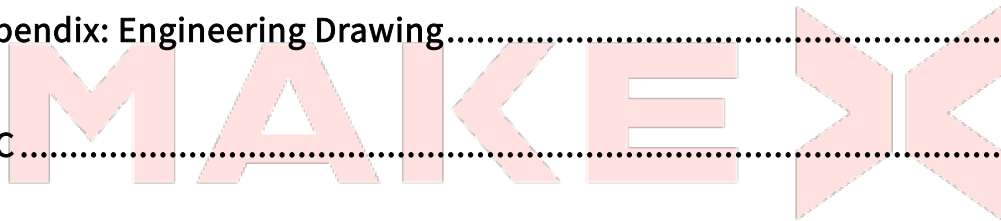
City Guardian

Instructions for the Competition Table Construction



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1. Explanation

The Table is the platform for the 2019 MakeX Robotics Competition Starter City Guardian. To facilitate the training and preparation of teams, this Instruction provides a simple, economical and feasible construction method for reference. To use this instruction, the person is required to have certain woodworking skills or with the help of professional carpenter. Please note that the Table used in MakeX Robotics Competitions Starter City Guardian may have difference with the given instruction.

2. Bill of Materials

Name	Number	Size	Recommended Materials
Surface (A)	2	2440mm (Length) *1220mm (Width) *15mm (Thickness) ¹	Black ² Plywood
Long Rim (B)	4	2440mm (Length) *30mm (Width) ³ *30mm (Height) ⁴	Square Wood Beam (Stick)
Short Rim (C)	4	1160mm (Long)*30mm (Wide)*30mm (Height)	Square Wood Beam (Stick)
MakeX Starter Arena Kit	1	\	\
Bottom Support	No Limit ⁵	Height around 500mm	\

¹ The thickness of the Surface is in the range of 10-20 mm. Stiffer required if thickness less than 10mm.

² It is recommended to use the black Plywood board. If you use material with other color, you can spray black paint or PVC black stickers.

³ The height of the Rim should in the range of 20-30 mm.

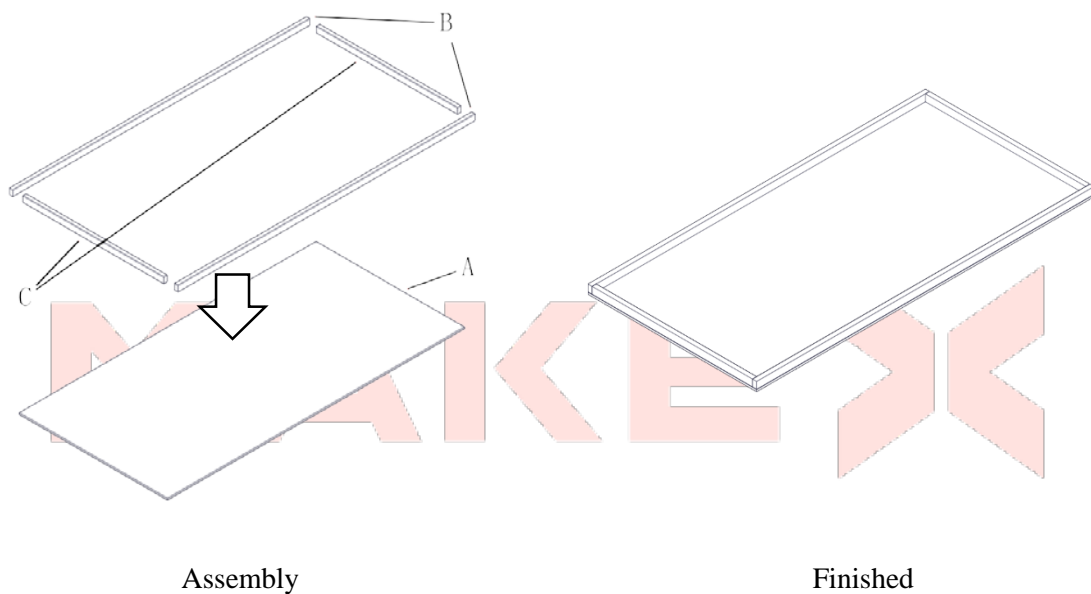
⁴ The width of the Rim should in the range of 20-30 mm.

⁵ Supporting the Table Surface and must ensure the stability of Table.

This list is a collection of all necessary materials and corresponding dimensions required for the construction. All those materials and related tools should be equipped by yourself.

3. Construction

3.1 Procedures



Step 1

Check if you have gathered all required materials and tools. Check the tools safety are and operator should wear the safety protection equipment.

Step 2

Choose a flat side of Surface (A) and that side will be the top which will be pasted with the competition mat after construction.

Step 3

On the top of the Surface (A), Find the right position for a pair of Long Rim (B) and Short Rim (C) along the edge, and clamp with fixtures.

Step 4

Use an air nail gun to fix Surface and Rims from the back of the Surface. Make sure

the nail cross both Surface and Rims. The spacing of nails is recommended to be 10 cm.

Step 5

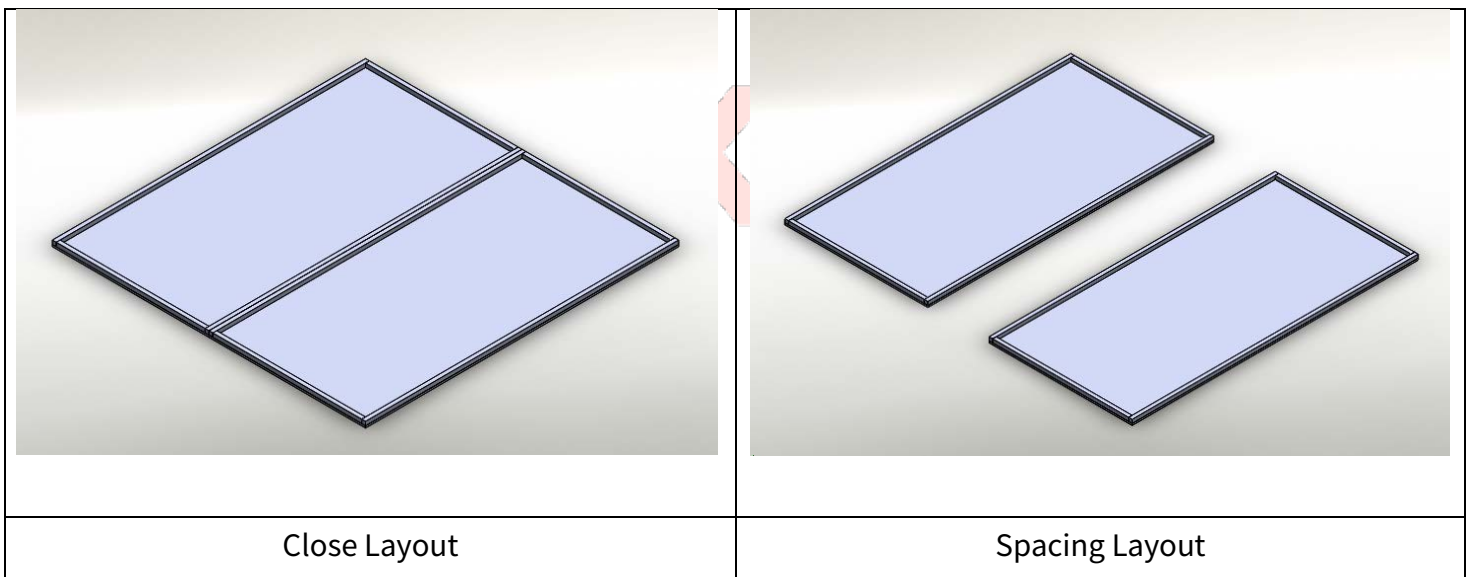
Repeat Step 3 and Step 4 for another pair of Rims and the first Table is finished. Repeat procedure to complete another Table.

Step 6

Place the Table on the Bottom Support and ensure its stability. Pasted the competition mat and props can be used for practice.


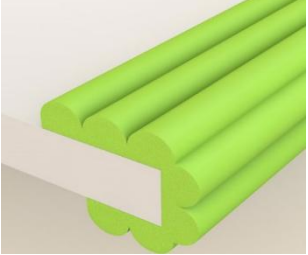
3.2 Table Layout

The Long Rim of the two Tables should be aligned and placed close to each other. According to the actual free space, there can have distance for referee (staff) to pass by.

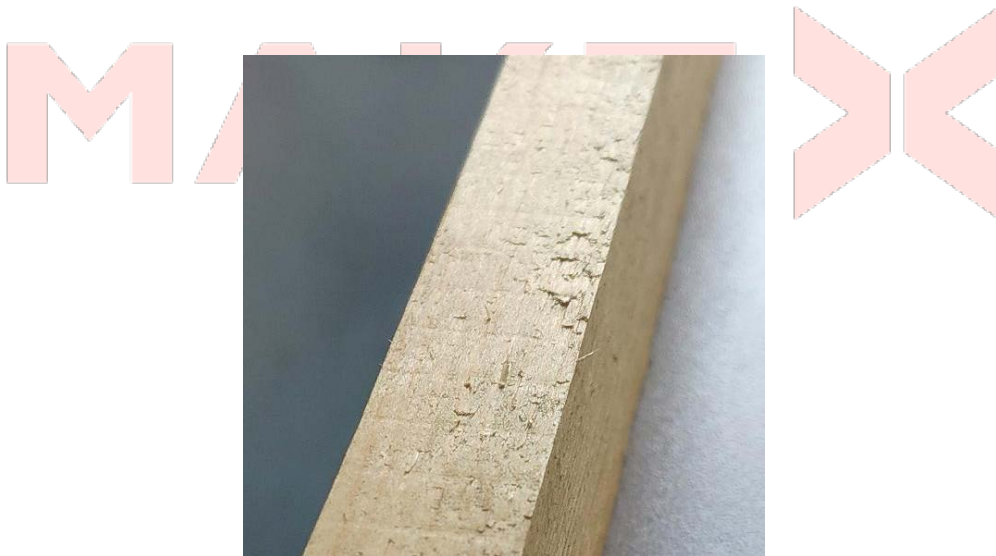


3.3 Safety Protection

Because the Table might have sharp edges in the Table, it is suggested to use sponge for protection.

	
Corner Protect	Edge Protect

For the variation of wood quality, the Table might have burrs or defects, it is suggested that the material should be inspected before use and polish the defective parts.



Burr

Appendix: Engineering Drawing

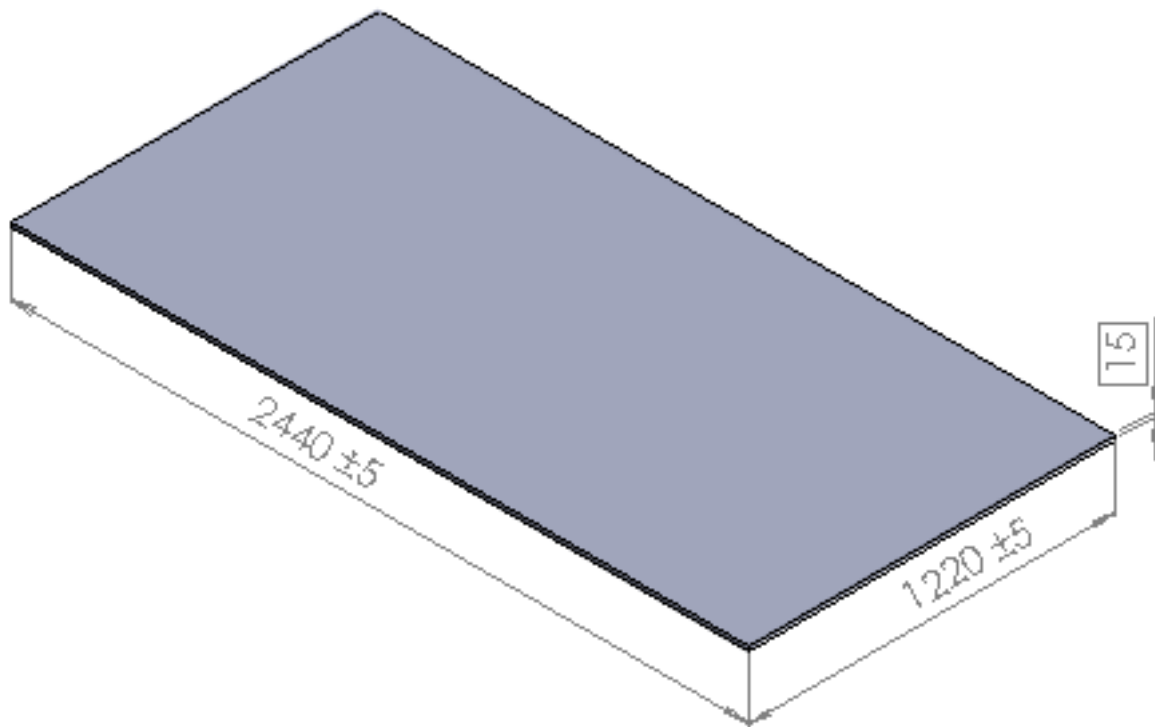


Fig. 1 Surface (A)

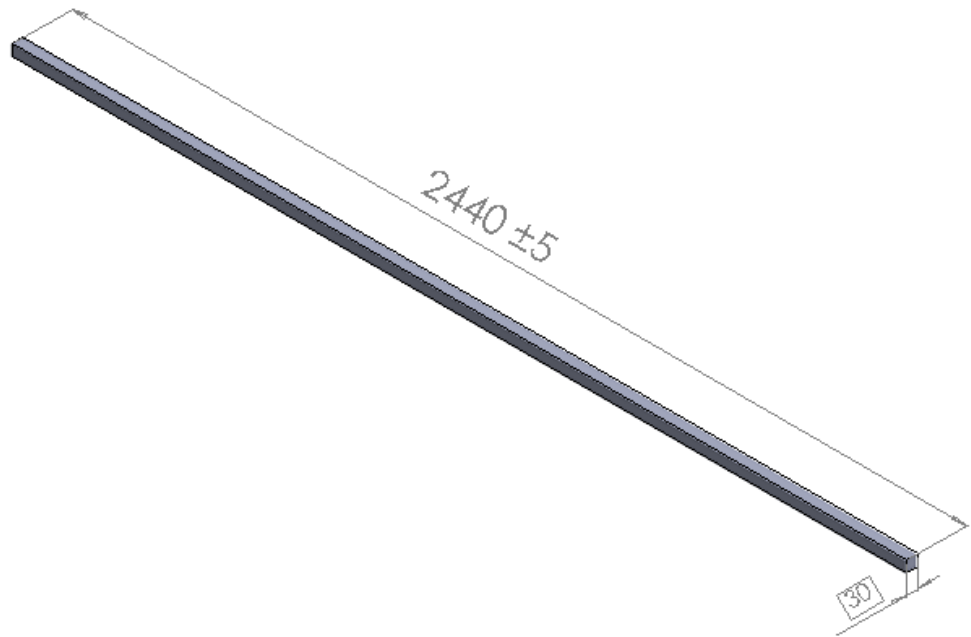


Fig 2. Long Rim (B)

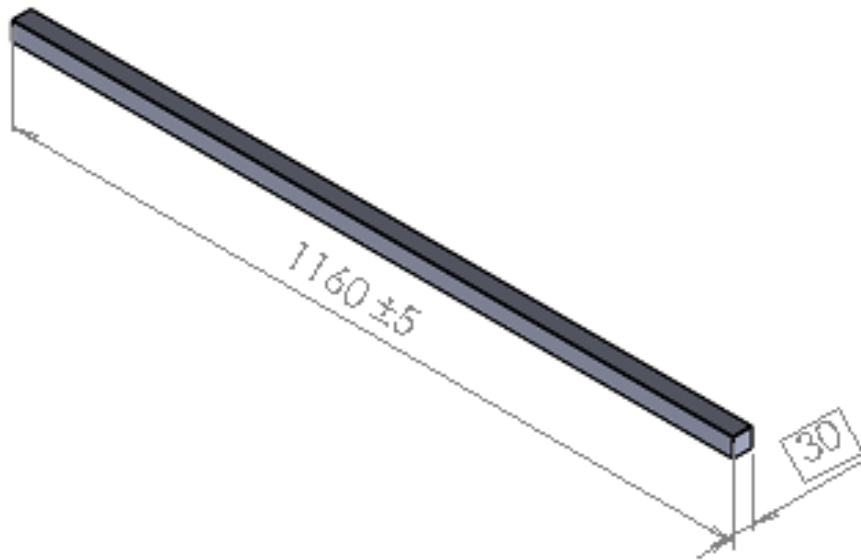


Fig 3. Short Rim (C)

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