



# Robot Game Table Building Instructions

2021-22 CARGO CONNECT<sup>SM</sup> season



# Official Table

Place the field on an official robot game table if at all possible. Find one to share, or build one using the instructions below (basic tools and woodworking skills are required). If you cannot find or build a table, you could place your field on a clean smooth solid floor instead.

## SPECIFICATIONS

- Inside wall-to-wall dimensions must be:
  - **W** =  $93\pm\frac{1}{8}$ " (2362 $\pm$ 3mm)
  - **L** =  $45\pm\frac{1}{8}$ " (1143 $\pm$ 3mm)
- Border wall heights must fall within the range:
  - **H** = 2-1/2" (64mm) min to 4" (102mm) max
- All border walls on any table must have the same height **H** as each other.
- Border wall thickness must not exceed 2.0" (51mm).

## MATERIALS

Material	Quantity
Challenge set (mission model LEGO pieces, mat, Dual Lock™)	1
Sanded plywood (or other very smooth board), 96" x 48" x min. 3/8" (2438mm x 1219mm x min. 10mm)	1
Two-by-three, 8' (2438mm) [actual cross-section = 1-1/2" x 2-1/2" (38mm x 64mm)]	3
Flat black paint	1 qt. (1 L)
Drywall screws, 2-1/2" (64mm)	1/4 lb. (1/4 kg)
Optional: Saw horses, about *24" (610mm) high and 36" (914mm) wide	2

## NOTICE

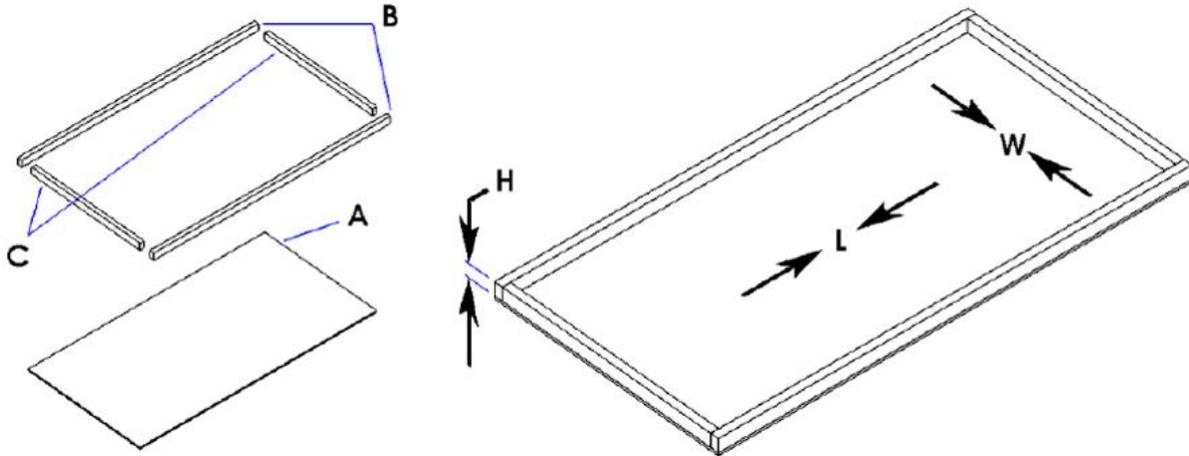
*Saw horses are an optional way to provide the height one might expect at a tournament. This is an optional purchase. "Two-by-four" border walls are allowed and common but are being phased out at tournaments. Teams need to be prepared to play on tables with border wall heights anywhere in the range of H and a wall thickness less than or equal to 2.0" (51mm).*

## PARTS

Part	Make From	Dimensions	Paint	Quantity
Table surface (A)	Plywood	96" (2438mm) x 48" (1219mm)	West of mat only	1
Long border wall (B)	Two-by-three	96" (2438mm)	Yes	2
Short border wall (C)	Two-by-three	45" (1143mm)	Yes	2
Saw horse	Purchase	H $\approx$ 24" (610mm) W $\approx$ 36" (914mm)	No	2

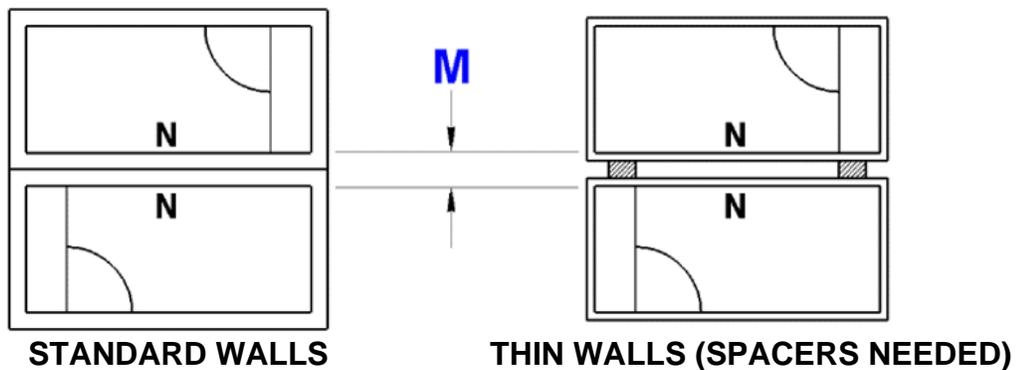
## ASSEMBLY

- On the smoothest face of the plywood (A), screw the border walls (B and C) around the perimeter, being sure the wall-to-wall dimensions **W** and **L** are accurate.
- Place the table top border walls up, on short saw horses (or anything else short, level, and solid).



## TOURNAMENT SETUP:

- At a tournament, two official tables are set North-to-North as shown in the diagram below.
- The full/total span "**M**" across both north border walls needs to measure between 3.0" (76mm) and 4.0" (102mm). Place spacers between the tables if needed to get **M** correct.
- All border walls on all tables at a tournament must have the same height **H** as each other.
- All pairs of tables at a tournament must have the same span **M** as each other.
- Do not attach things to the tops of border walls unless all teams coming to the event have been notified.



## FIELD MAT PLACEMENT

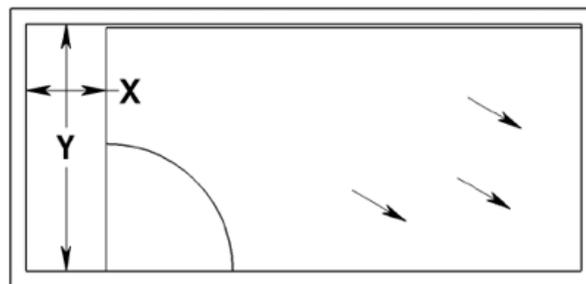
Make sure to follow the following steps when setting up your mat:

1. Check the table surface for bumps. Sand or file them away and then vacuum well.
2. On the vacuumed table only, unroll and place the mat as shown below. Never fold the mat, and never crush or bend a rolled mat.
3. Slide the mat against the south and east border walls as shown in the diagram below. When table size and mat placement are correct, the area west of the mat measures about:

$X = 13.5$  by  $Y = 45$  in. (343 mm by 1,143 mm).

There should be no gap at the south or east walls, but there should be a gap at the north wall of about 1/4 in. (6 mm).

4. Optional: To hold the mat in place, you can use thin strips of black tape, covering only the mat's east/west black borders.



SLIDE MAT SOUTHEAST

## LOW TABLE HEIGHT

- Some team members, referees, and other volunteers will very much appreciate low table heights, and some may even require it.
- Please do what you can to support your tables at or near 24" (610mm) above the floor, to help all people see and reach as much of the field as they can.