Guide Document: LongMill Table Preparation

Hey all, it's Chris.

I've been getting many questions recently about how to approach preparing a table space for the LongMill. I'm very excited that many of you can't wait to get your machines up and running as soon as they arrive. Due to this interest, I though I'd take the time to put together a document which should summarize all the information that you'll need to get your table build started.

Here's some disclaimers I'd like to provide right away:

- This document will have general **size and mounting locations** for each LongMill configuration.
- Until the LongMill design has been finalized for production each of these measurements **will not be completely accurate**.
- Once the machine design has been finalized, we'll be releasing all the **3D files** for anyone to access and those files will be an exact CAD recreation of the machine.
- If you're planning to create a table setup that's accurate within 1-2 inches, it would be best to **wait for the 3D model**.
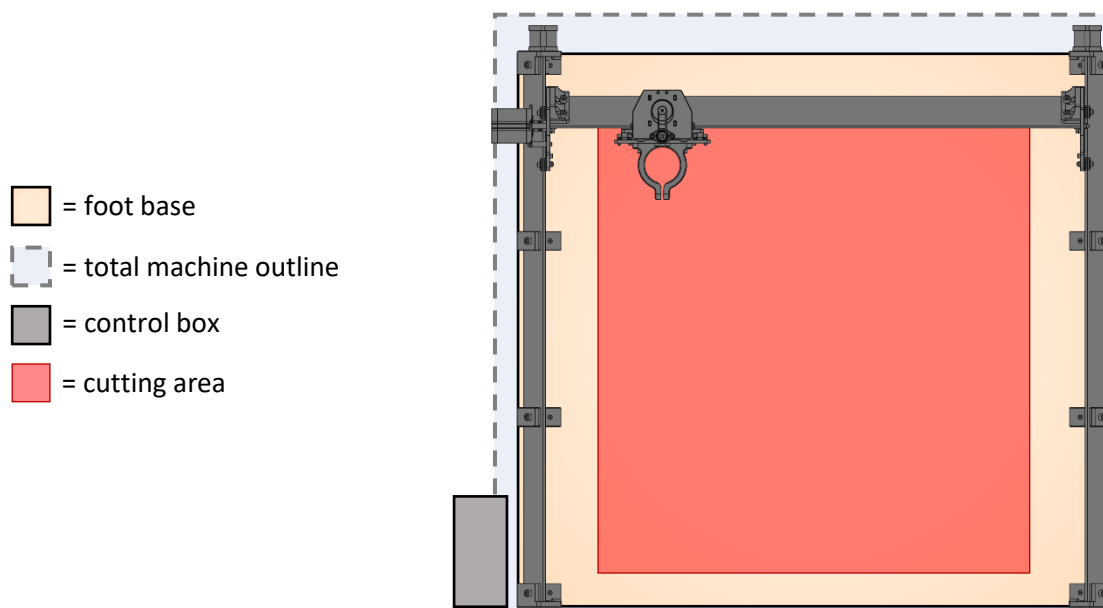
We do this because we want to keep the design variable until we're fully happy with the production version of the machine.

Dimensions

The LongMill comes in three different size configurations and was designed to be mounted to a wooden base. Because of this, we built the three designs to approximately fit sheet material:

- **LongMill 12x12**: Fits on a 2ft x 2ft surface
- **LongMill 12x30**: Fits on a 2ft x 4ft surface
- **LongMill 30x30**: Fits on a 4ft x 4ft surface

Below is a visual which should give a better visual of where all the machine components lie. This diagram shows the LongMill 30x30, but the layout is similar for every machine configuration:
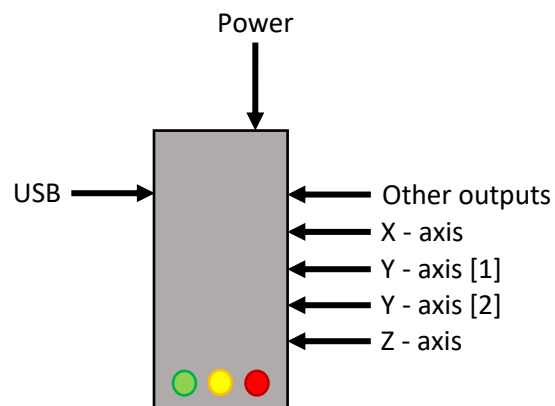

☐ = foot base

⌐ = total machine outline

▨ = control box

▨ = cutting area

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These are the dimensions for the areas above:

Area Name	Configuration	Width [mm]	Length [mm]	Width [in]	Length [in]
Foot Base	12 x 12	610	525	24	20 $^{11}/_{16}$"
	12 x 30	1100	525	43 $^{5}/_{16}$"	20 $^{11}/_{16}$"
	30 x 30	1100	1024	43 $^{5}/_{16}$"	40.31
Total Outline	All	+ 40	+ 88	+ 1 $^{5}/_{8}$"	+ 3 $^{1}/_{2}$"
Control Box	All	100	204	4	8

Some things to be mindful of:

1. As I mentioned previously, these measurements are not exact until we finalize the machine
2. The total machine outline is a constant amount, no matter which machine configuration you have. For example, the 30 x 30 with the added stickout of certain components will be:
   o Width = 1100 + 40 = 1140mm
   o Length = 1024 + 88 = 1112mm
   *This can be applied in imperial units too.
3. The control box has buttons on the top which can Play, Pause, and Stop the machines motion so it's a good idea to keep it mounted near your CNC. It also will have a USB input on the left side, motor and other outputs on the right side, and the power input on the back side, so make sure to keep some space around it for cable management.

Power

USB → ← Other outputs
← X - axis
← Y - axis [1]
← Y - axis [2]
← Z - axis

Base Material Recommendations

The LongMill is unique in that it is designed to be mounted directly to any flat surface of your preference. 3/4" MDF is convenient to use since it's readily available from most local hardware or lumber stores such as Home Depot and Lowes (and you can even get them to cut it to size).

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Other Base Configurations

T-track: Keith is one of our Beta testers who made a really cool T-track table design for his LongMill Beta unit. By spacing 7 t-track slots between 6 MDF strips, he's able create a surface which is both consumable but also easy to mount to when using t-track clamps. The ¾" thick MDF strips were approximately 5.25" wide by 38" long for his particular setup:

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