SMARTBENCH

Quick Start Guide

EU Declaration of Conformity

We, **Yeti Tool Limited**

of **Unit 1 Westfield Court, Barnes Ground, Clevedon, Bristol. BS21 6FQ UK**

declare under our sole responsibility that the product(s):

Product Name	SmartBench
Model Number(s)	SmartBench V1.1
Part Number(s)	20731, 20732, 20733

to which this declaration relates is(are) in conformity with the essential requirements and other relevant requirements of EU Directive **2006/42/EC (MD)**, EU Directive **2014/53/EU (RED)** and EU Directive **2011/65/EU (RoHS2)**.

Type	Essential Requirements
Health & Safety (RED article 3.1a)	EN 62368-1:2014 EN 60950-1:2006+A1:2010+A12:2011+A2:2013 EN 62311:2008 EN 62061:2005 EN ISO 19085-1:2017
EMC (RED article 3.1b)	ETSI EN 301 489-1 V2.1.1 (2017-02) in accordance with the specific requirements of: ETSI EN 301 489-17 V3.1.1 (2017-02) EN 55032:2012/AC:2013 Class A EN 55035:2017 EN 61000-3-2:2014 EN 61000-3-3:2013
Spectrum (RED article 3.2)	ETSI EN 300 328 V2.1.1 (2016-11) ETSI EN 301 893 V1.8.1 (2015-03)
RoHS2	EN 50581:2012

United Kingdom 18th February 2019

Authorised signature for and on behalf of

Yeti Tool Limited

Ed Sells - Director

European Representative:

Yeti Tool Limited

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IMPORTANT

This is a class 1 machine: It's power supply MUST be earthed. Only use the power cable supplied. If you require a replacement, please contact your place of purchase.

Thank you for purchasing SmartBench!

Now that the large format, mobile CNC routing is unleashed, we hope you have a lot of fun with your future projects. Please let us know how you get on - we are always keen to receive feedback and follow what SmartBench creates!

What's in the box

Start by getting familiar with SmartBench's key components.

Check the contents. If any of the above items are damaged or missing, please contact your point of purchase immediately.

<table>
<tr><td>Box 1
1 x Z Head assembly
1 x Console</td><td rowspan="2">Box 3
2x Leg Set
1 x IEC Power lead
1 x Extraction power lead
1x USB Stick
1x Tool kit (17/22mm spanner and 6mm hex)
1x Wheel setting tool</td></tr>
<tr><td>Box 2
1x X Upper Beam
1x X Lower Beam</td></tr>
<tr><td colspan="2">1x Y Bench</td></tr>
</table>

Key components

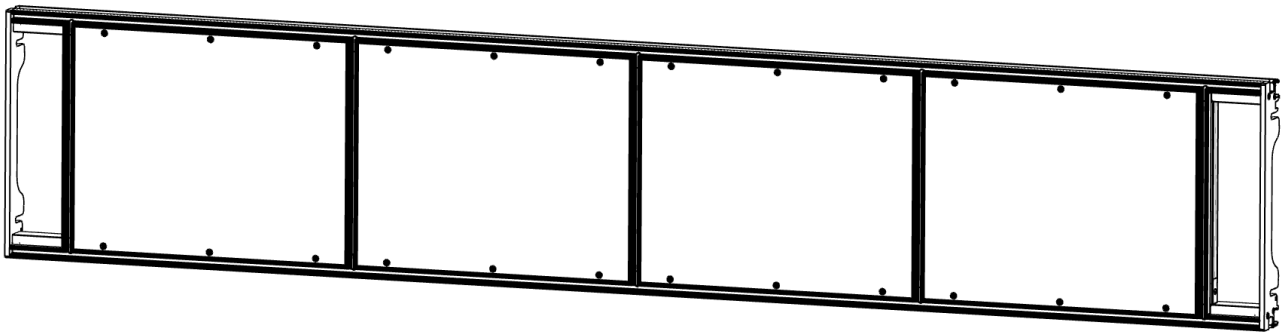


Figure 1: Y Bench

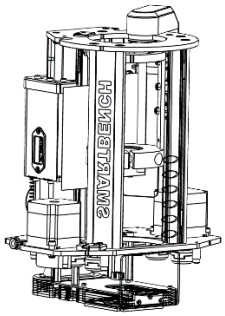


Figure 2: Z Head

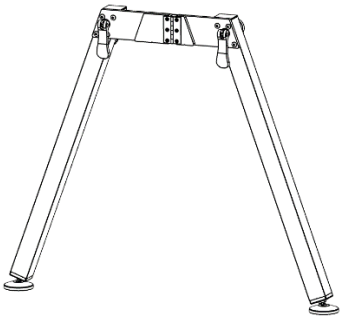


Figure 3: Leg Set (x2)

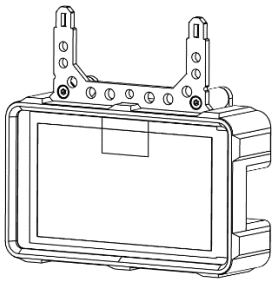


Figure 4: Console

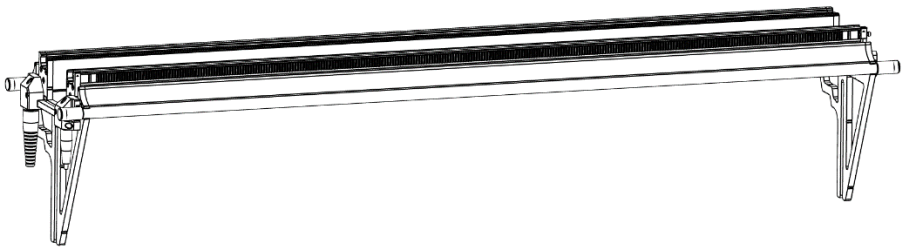


Figure 5: X Beam Upper

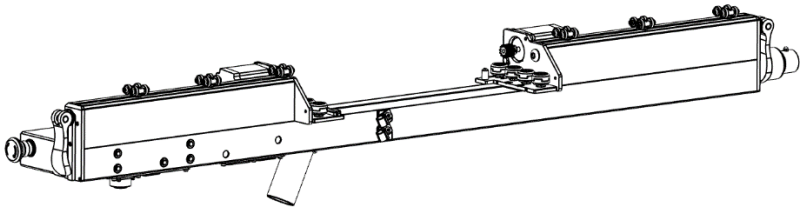
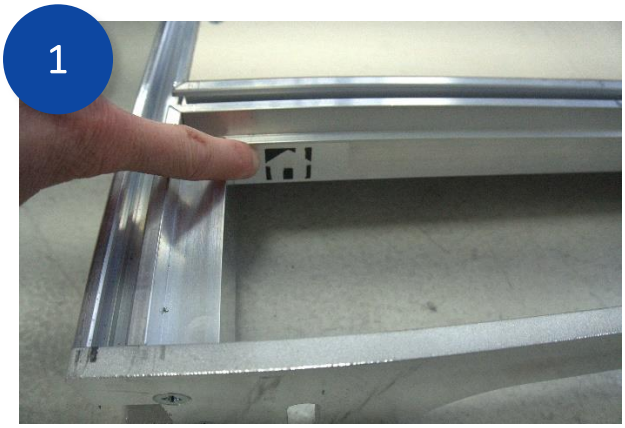


Figure 6: X Beam Lower

Fit *Leg Set 1 – Opposite from Home End*

1

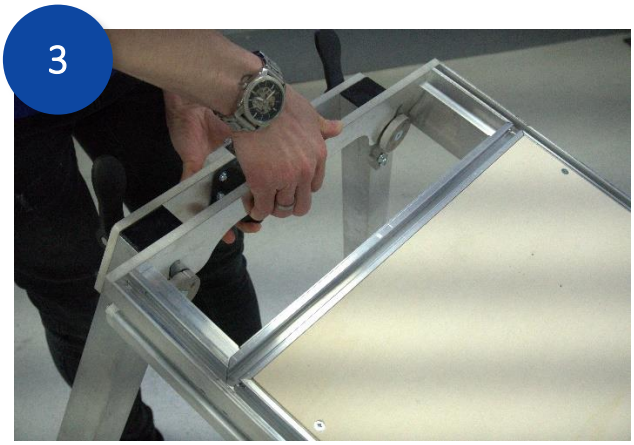


Identify the home end of the *Y Bench* (Figure 1, page 4) by looking for the Home Icon.

2

At the opposite end of the bench, fit *Leg Set 1* by first unfolding the legs.

3



Lift the *Y Bench* to accept the location pins of the *Leg Set*. Slide the leg clamp pins into the slots in the *Y Bench* end plate.

4

Push the clamp handles down flat to the *Y Bench* end plate to tighten.

Fit the *X Beam Lower*

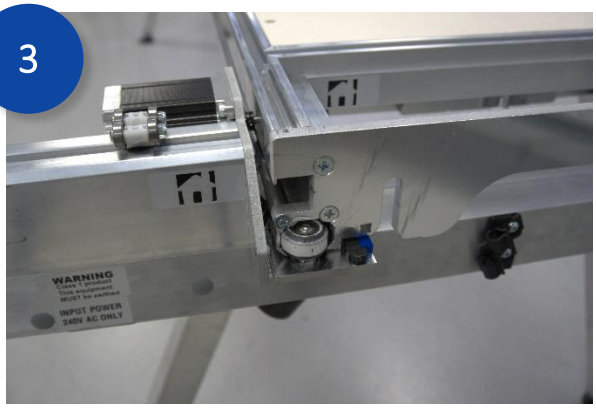
1

Unfold a *Leg Set*. Lift the *Y Bench* at the home end.

2

Use the leg set to support the Y bench. This should be just past the first crossbeam.

3

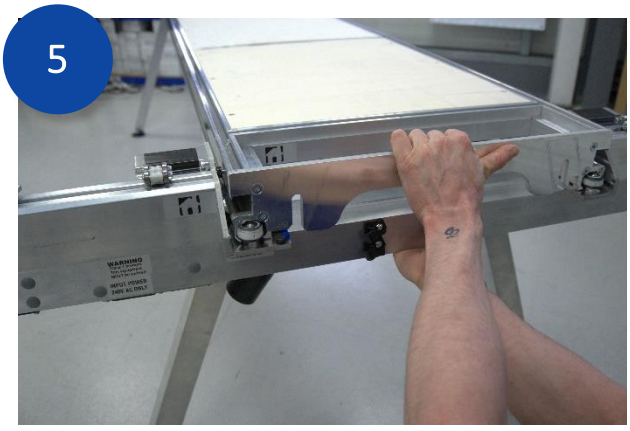


To fit the X Beam Lower, offer up the beam ensuring the home labels are aligned.

4

Ensuring the wheels are aligned with the channels, push the X Beam Lower onto the Y bench.

5



You should feel some preload on the wheels as they pop into place.

6

Push the X Beam Lower onto the Y Bench. The assembly should look like this.

Fit *Leg Set 2*

1

Lift the Y Bench by the end plate, and take Leg set 2 with the other hand.

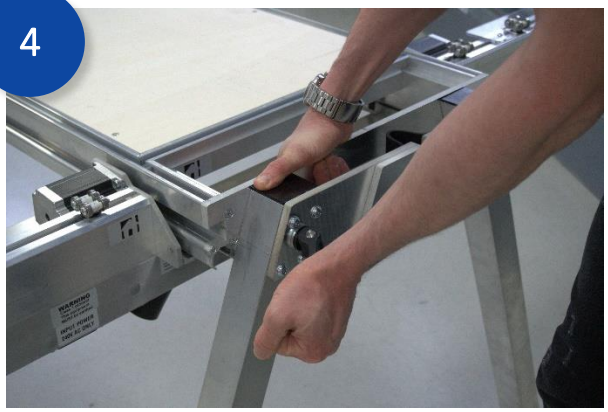
2

Lift the *Y Bench* to accept the location pins of the *Leg Set*. Slide the leg clamp pins into the slots in the *Y Bench* end plate.

3

Push the clamp handles down flat to the *Y Bench* end plate to tighten.

4



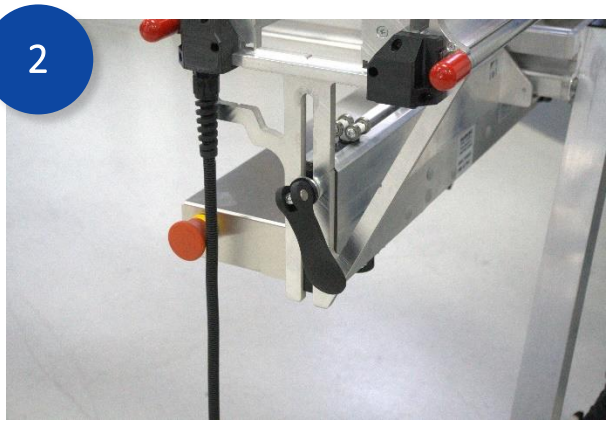
Push the clamp handles down flat to the *Y Bench* end plate to tighten.

Attach the *X Beam Upper*

1

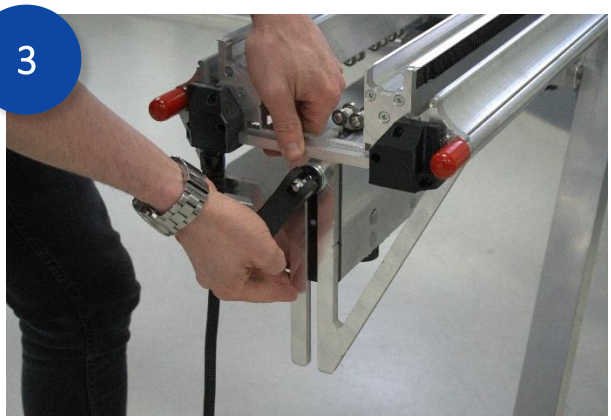
Slide the X Beam Upper onto the lower X Beam Lower as shown above.

2



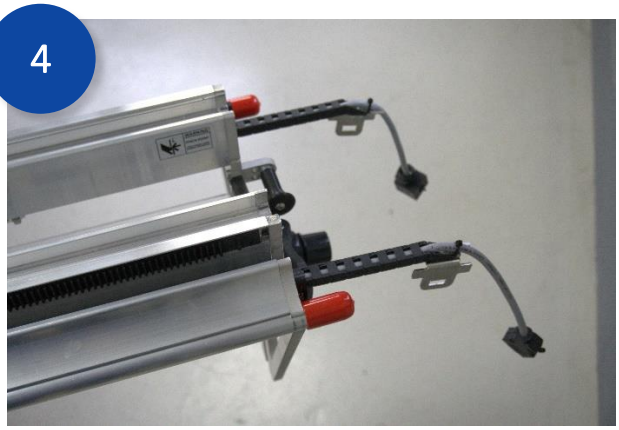
The forks on the end of the X Beam Upper should slide on the skids of the X Beam Lower with very little force.

3



Secure in place by tightening the clamps on each end of the beam.

4



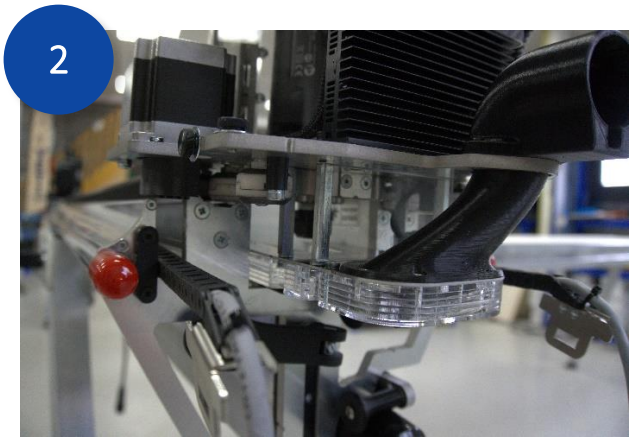
Slide the cables by the drag chain latch plate so that they are laid flat and extend from the end of the X Beam Upper

Fit the Z Head

1

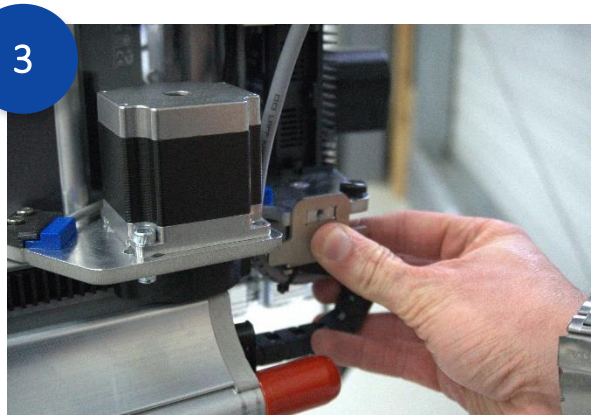
To Fit the Z Head, offer up the Z head ensuring the extraction elbow is facing towards you.

2



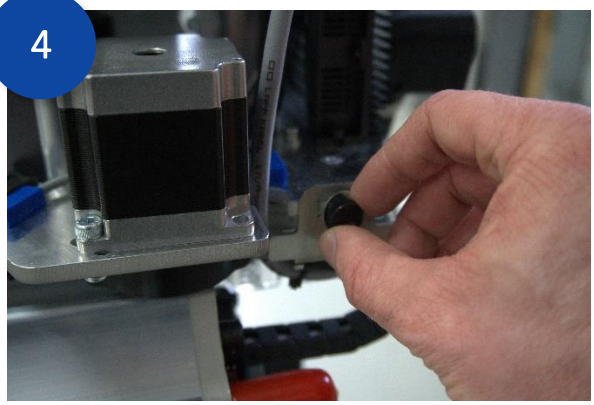
Load the Z head by inserting the wheels into the channels until the Z head holds onto the beam. This should be just passed the first wheel.

3



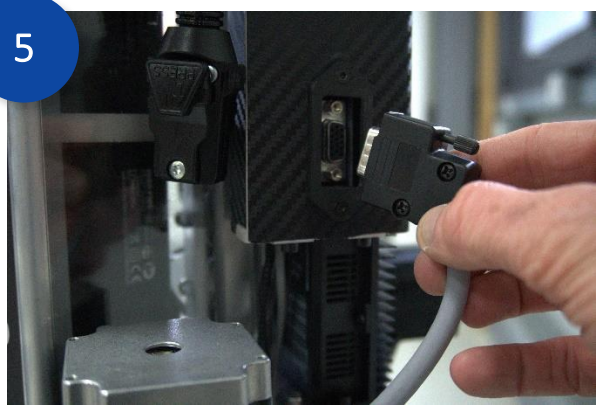
Place the drag chain latch plate over the protruding face on the side of the Z Head bottom plate ensuring the signal cable seats into the recess.

4



Secure this in place with the thrubmscrew provided.

5

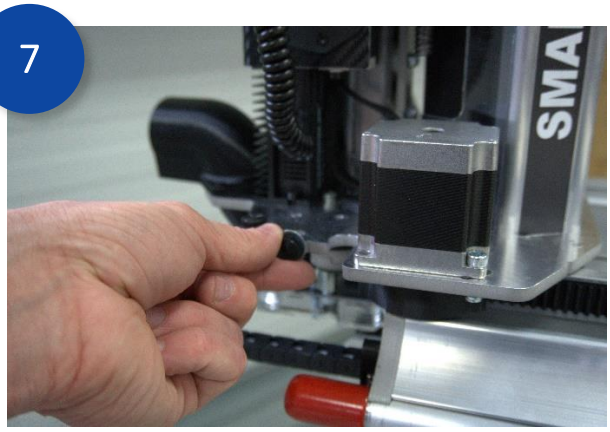


Plug in the signal cable and secrure with the thumbscrew.

6

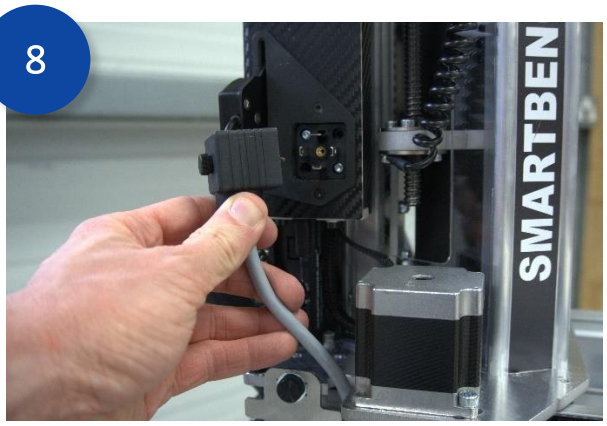
Place the drag chain latch plate over the protruding face on the side of the Z Head.

7



Secure this in place with the thrubmscrew provided.

8

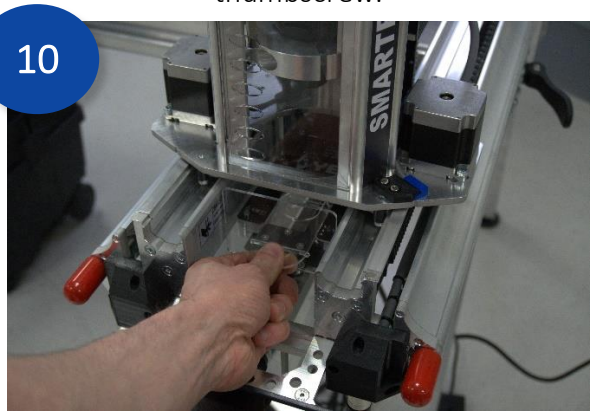


Plug in the power cable and secrure with the thumbscrew.

9

You can now push the Z head onto the X Beam Upper until all wheels are engaged.

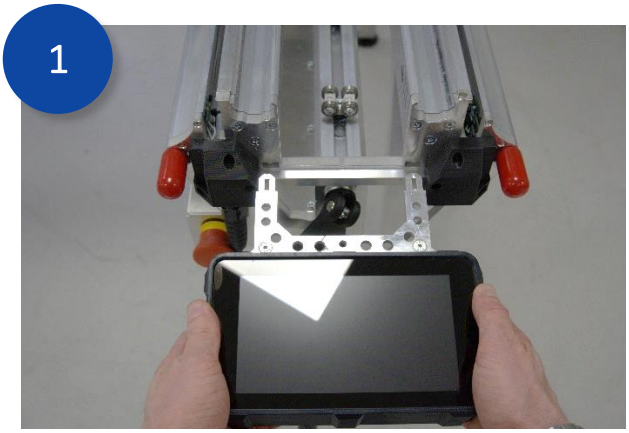
10



Fit the dust shoe plug into the front of the dust shoe.

Fit the *Console*

1



The Console attached to the end of the X Beam Upper my locating the 2 forks into the end plate.

2

Plug the console cable into the XLR connector as shown above.

Fit the *Amphenol Cable*

1

The Amphenol connector connects to the socket on the underside of the *X Beam Lower.*

2

Plug the cable into the connector and rotate the cuff clockwise to secure.

Fit the E*xtractor*

SmartBench has a dedicated power outlet for extractors, to enable auto-extraction, but the extractor must not draw more than 10 amps. If the extractor draws more than 10 amps, the extractor must be powered from a separate power outlet and operated manually.

1

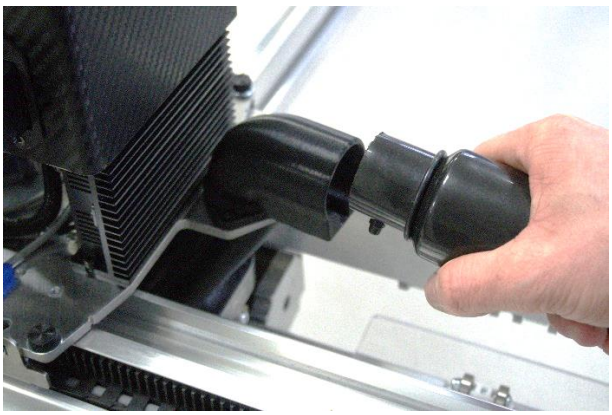
Attach the extraction hose to the underside of the *X Beam Lower*

2

Either: plug in your extractor to a separate power outlet…

3

Or: if the extractor does not exceed the power rating, plug in your extractor to SmartBench's extractor power outlet



Attach the extraction hose to the Z head by inserting the connector into the elbow and rotating cloockwise.

Fit the *Power Cable*

1

The Power cable input is on the underside of the X Beam Lower.

2

Plug the cable into the connector on the underside of the X Beam Lower

Check *cable connections*

Check that all cables are connected correctly:

1. Z Head Signal
2. Z Head Power
3. X Beam
4. Extraction power (if using the auto-extraction system)
5. Console
6. Mains Power

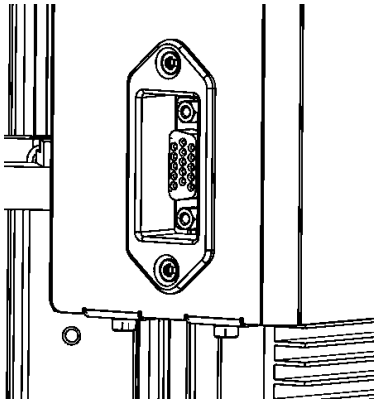


Figure 7: Z Head Signal

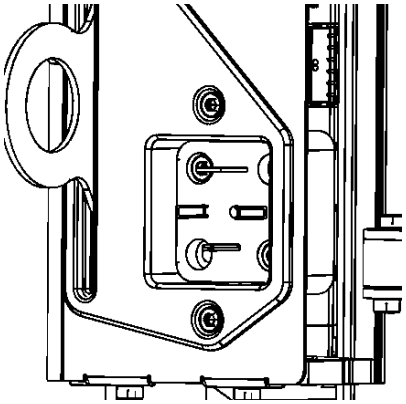


Figure 8: Z Head Power

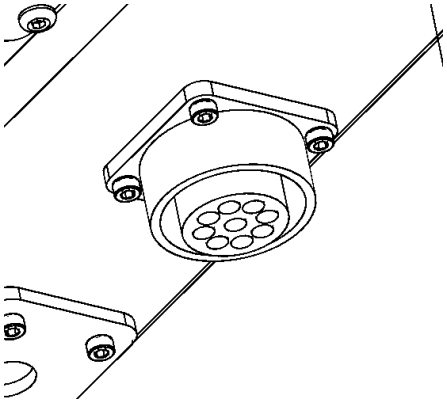


Figure 9: X Beam

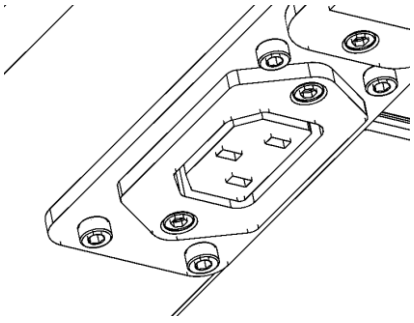


Figure 10: Extraction Power

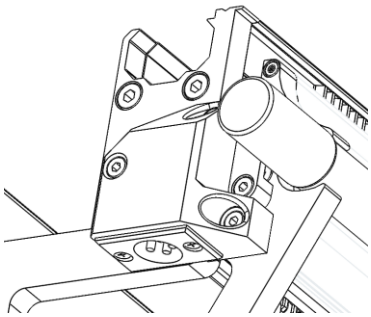


Figure 11: Console

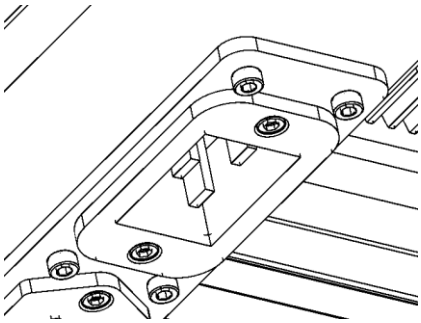


Figure 12: Mains Power

Turning on SmartBench

Assuming the above instructions have been followed correctly, SmartBench can now be powered on by releasing the Emergency stop button. To release the button, it must be twisted clockwise.

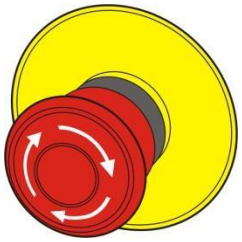
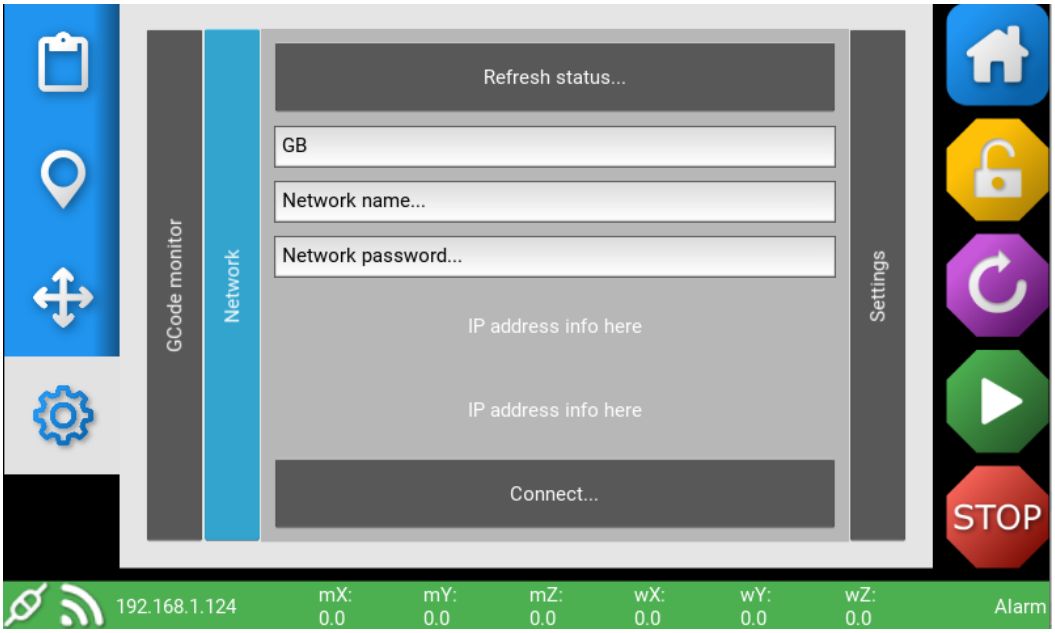


Figure 13: E-Stop Button

Connecting to Wi-fi

Connecting SmartBench your local network gives the following functionality:

- Software updates
- File transfer via your WiFi network



1. Location – **Important!** Leave location set as GB
2. Insert your Network name:
   - Touch on the network name box
   - Clear the text "**Network name…**" using the ⌫ on the pop-up keyboard
   - Once the Network name box is empty add your WiFi network name (SSID)
3. Network Password:
   - Touch on the Network password box
   - Clear the text "**Network password…**" using the ⌫ button on the pop-up keyboard
   - Once the Network password box is empty add your WiFi network password
4. Connect to W-iFi:
   - Close the keyboard using the ✕ button in the lower right corner

- Press the connect button.

Please note the system will then automatically reboot.

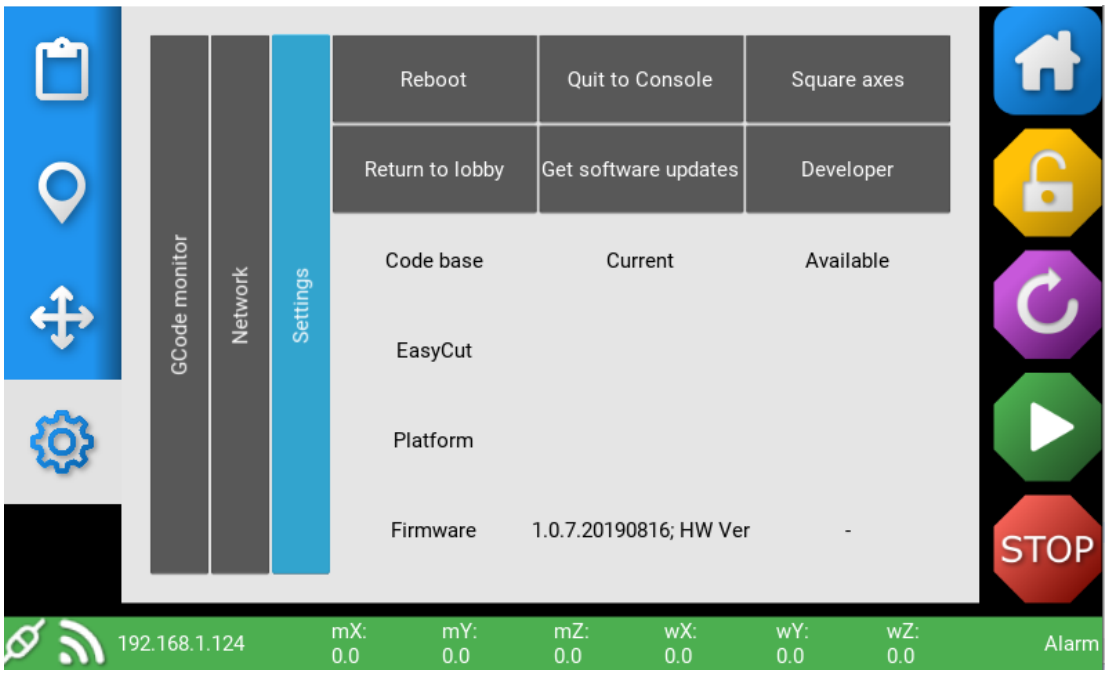
The console screen will go black as the console restarts – this is normal.

If you have problem connecting to Wi-Fi, please see our hints and tips guide here: https://www.yetitool.com/support/knowledge-base/software-easycut-setup-connecting-to-wifi

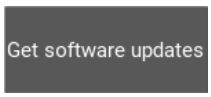
Update EasyCut software

To complete the EasyCut setup, update the software. In doing this you'll get the benefit of the following updates:

- Additional functionality to improve our customers user experience
- Cutting apps (from Q1 2020)
- Virtual jig (from Q3 2020)



You'll find the software update button in the Settings > Developer screen

- Press the Get SW update button 

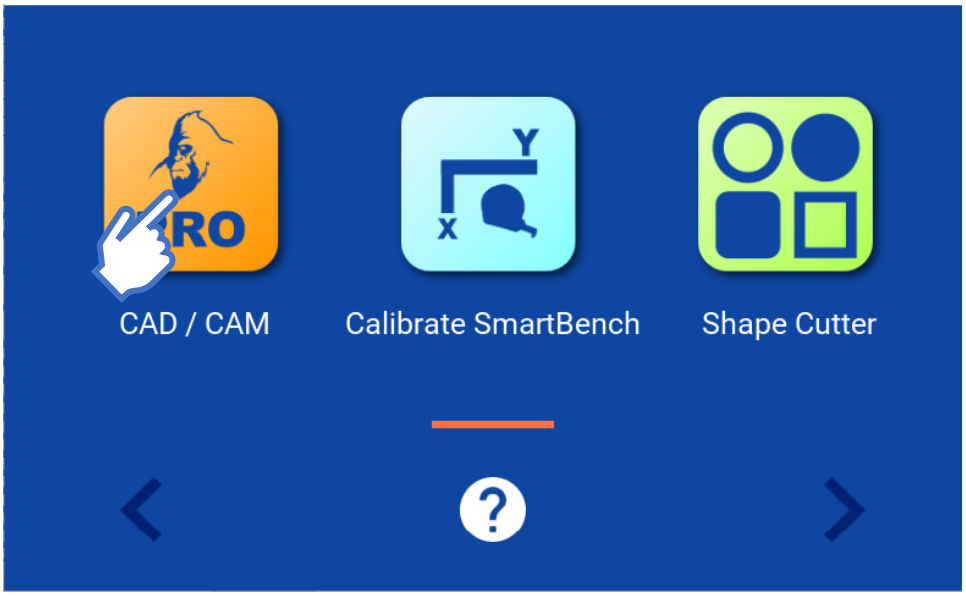
The system will automatically connect to our server, download and update the latest version of EasyCut, **and then reboot.**

It is important to note:

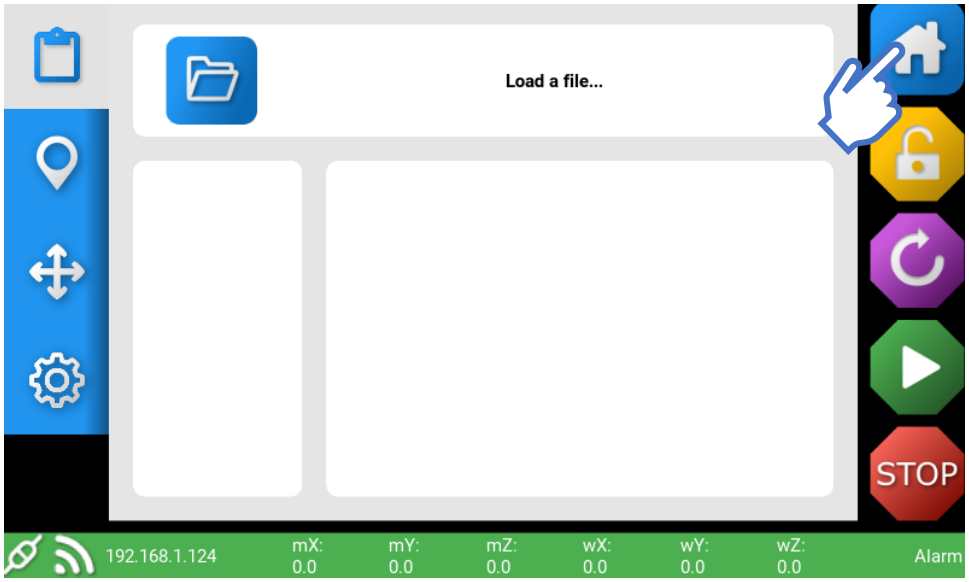
- None of your job files will be touched, and
- The last set datum or park points will be retained

Home SmartBench

- From the Lobby screen press to go to CAD/CAM operation



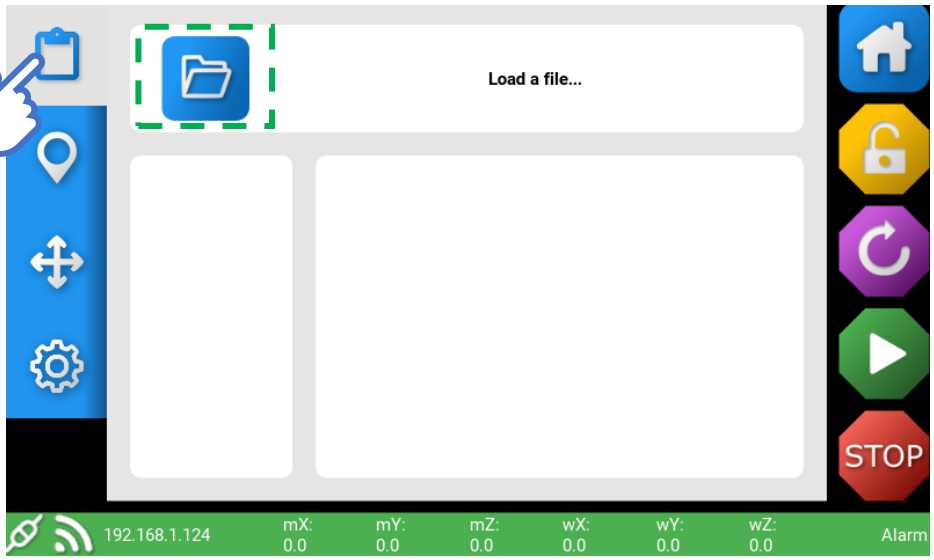
- Press the home button. The home button will appear on all screens



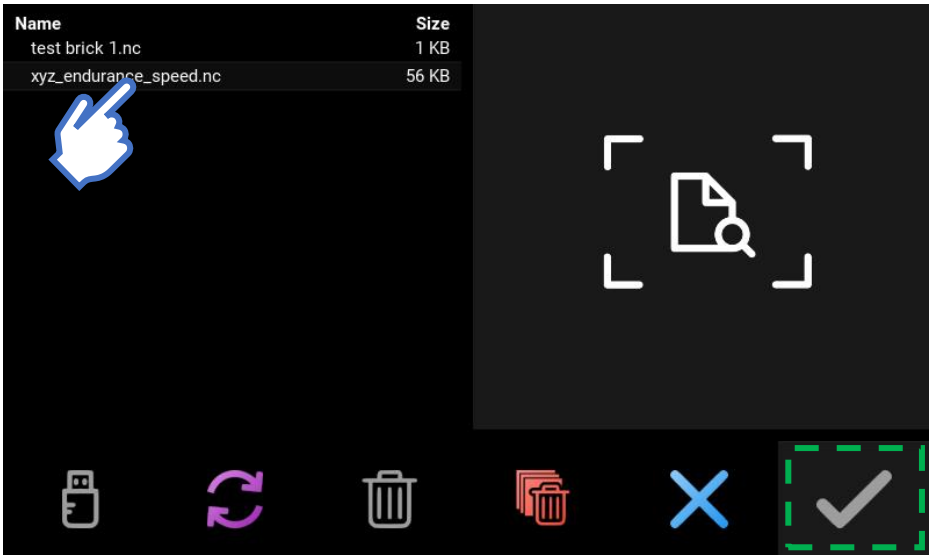
- Wait for SmartBench to home.

Step 12 – Open a file

- Go to Job screen
- Press the file explorer (Green)



- Choose your file
- Accept your file choice (Green)

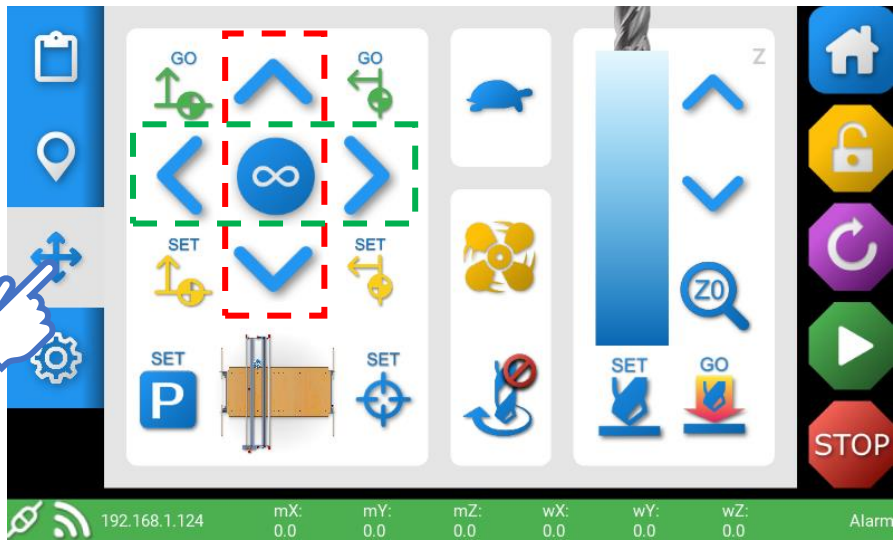


- For full details on file transfer/ loading go to the EasyCut user manual

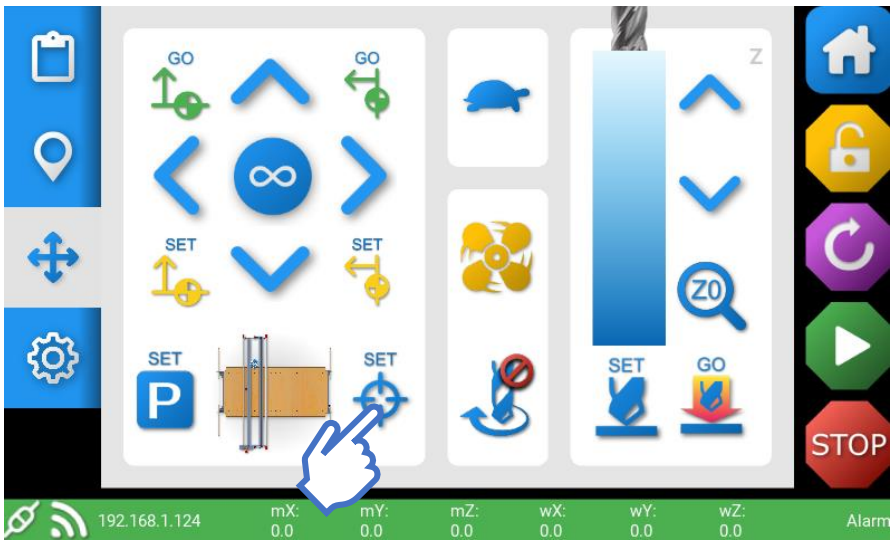
Set X/Y datum (start point for the job)

The X/Y datum refers to the point at which the job will start. This is set by moving the cutter to the intended point and telling EasyCut when you are happy with the position.

- Go to Move Screen
- Move the X Axis (Red)
- Move the Y axis (Green)

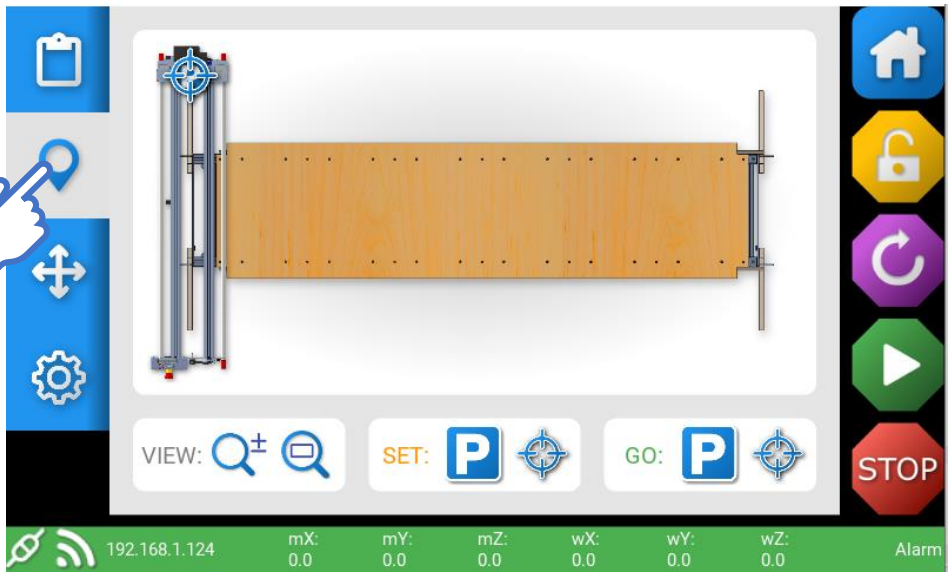


- Set the job start point



Now check that your job location fits within SmartBench's bounds:

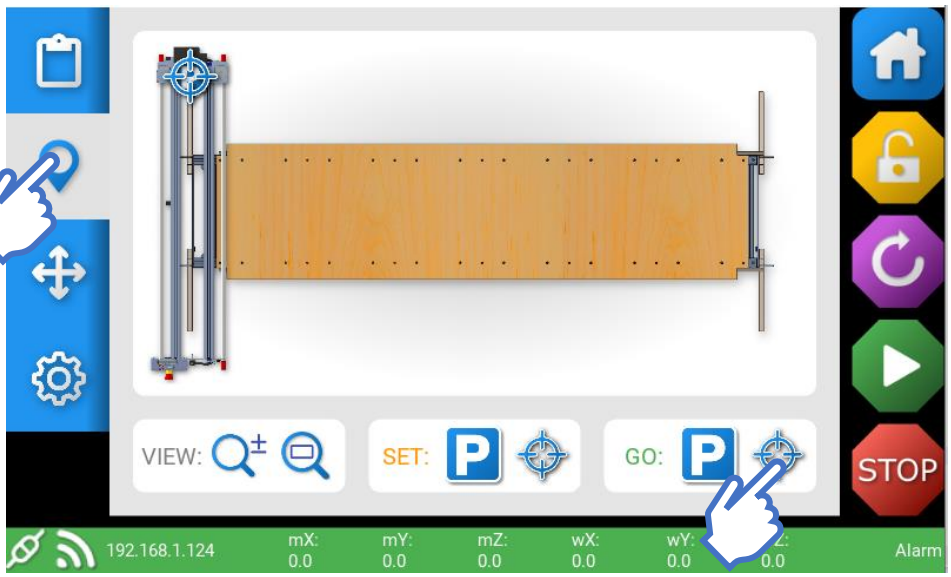
- Go to Map screen
- Make sure the X/Y Datum is in the right position and your job does not reach beyond the extents of the X/Y space.
- If not, repeat the previous steps to reposition the datum.



Set Z datum (start point for the job)

Once the X/Y datum is defined, the tip of the router cutter needs to be registered relative to the material. This is referred to as setting the Z datum and should be done near the X/Y datum. Start by going to the X/Y datum:

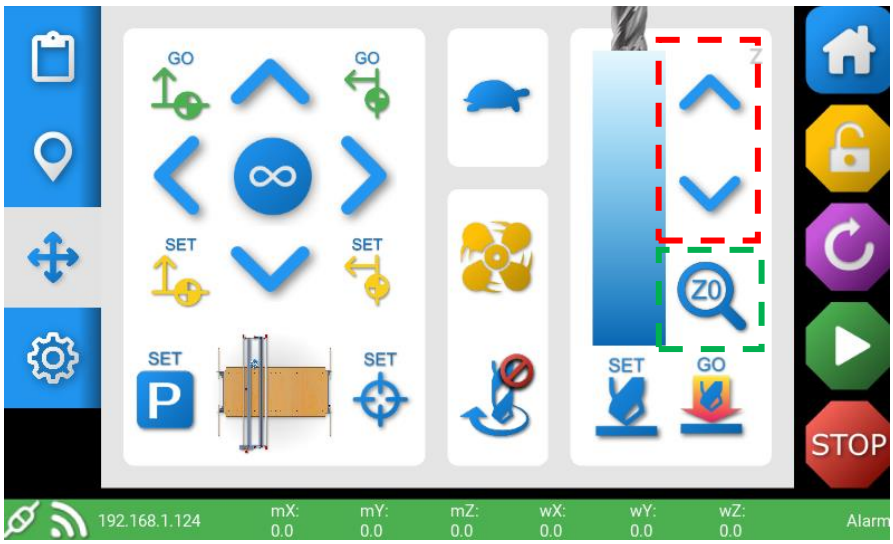
- Go to the Map Screen
- Press ‘Go to X/Y Datum’ to place the Z Head at the X/Y datum



Now you need to place the cutter at the height you want your Z datum (typically either the top or bottom surface of the material, depending on the job).

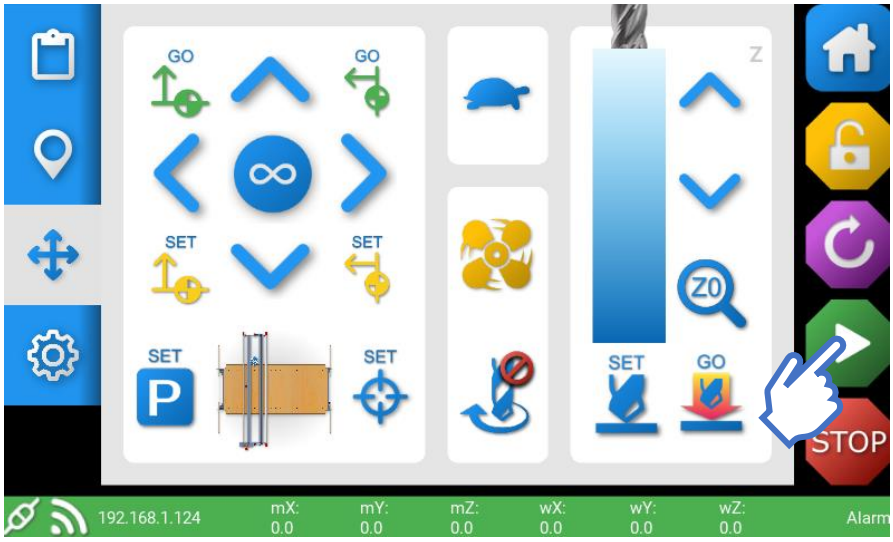
To set the Z height with the Z probe:

- Go to the Move screen.
- Take out the Z probe plate from its holder.
- Remove the front of the dust shoe.
- Place the Z probe plate directly below the cutter tip.
- Make sure the back of the probe plate lies flat on the surface you are trying to probe. The probe plate should be silver side up.
- If the tip of the cutter isn't close to the top of the stock, manually move it downwards to about 10mm (3/8'') away from the probe using the Z down button (Red). Take care not to overshoot!
- When close, press the 'Z0' button (Green). The Z head will automatically lower until the tool tip touches the probe plate (on touching, an electrical circuit is closed, the software remembers this position, and subtracts the thickness of the probe plate).
- When the cutter retracts, the Z datum is set.

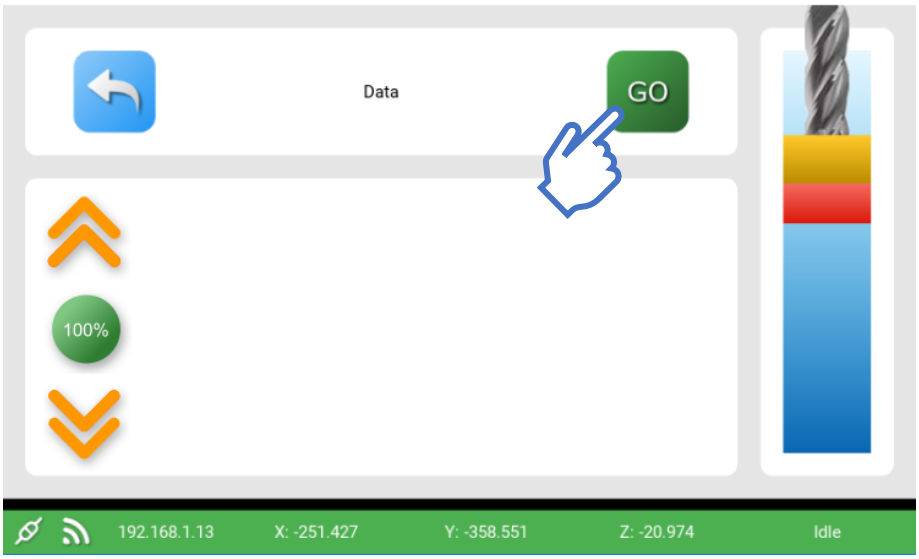


Run job

- To run your job, press the play button.



- Confirm you wish to run your file by pressing the 'GO' button

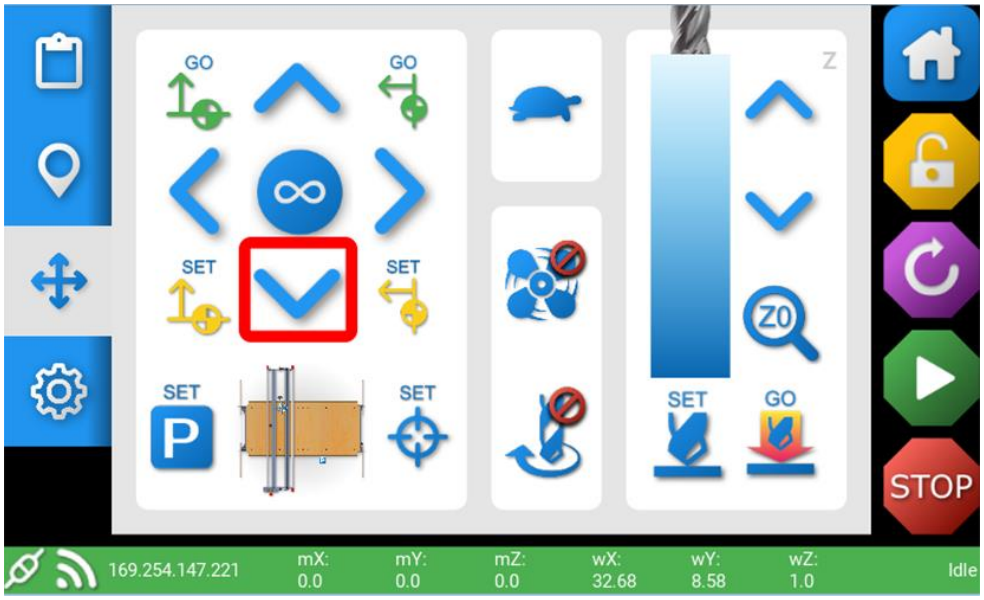


For more details on EasyCut, please download the full EasyCut user manual
www.yetitool.com/support/downloads

Removing and Replacing a Spindle

This guide uses the SmartBench Precision as an example, which includes a grey speed control cable as well as the power cable. You can ignore references to this wire if you have the Standard version of SmartBench.

In order to change the spindle, you will want to move the Z head closer to the X0(X home) position for easier access. To do this, use the arrows highlighted below to move the Z head along the X axis.



You will need:

6mm hex driver (this comes provided with your SmartBench)

Step 1:

Disconnect the spindle power cable and grey wire

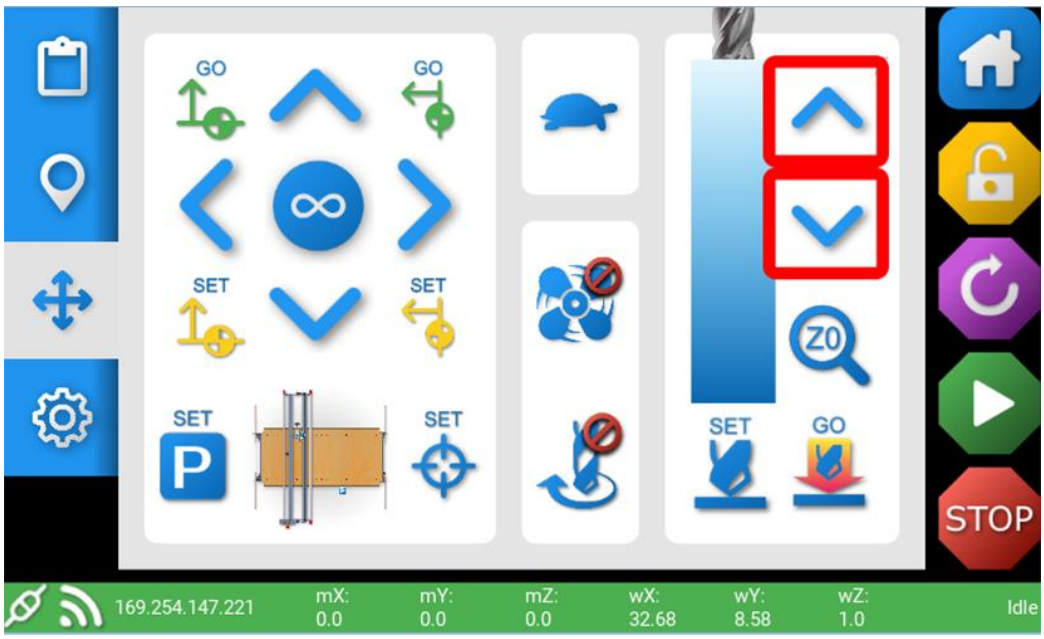
Disconnect the power cable by squeezing the clips together and pulling the cable upwards

Remove the grey speed control cable from the recess and pull to remove from the connector.

Step 2:

To access the spindle cage bolt, you may need to lower/raise the spindle cage to align with the holes in the protection window.

To do this, use the arrows highlighted below:



1

Insert the 6mm hex driver into the spindle cage bolt and rotate left to loosen the bolt. Then lift your spindle out of the top of the cage

2

The spindle may need to be rotated in order to remove it.

Step 3:

1

Once you have changed your router bit carefully replace your spindle in the cage with the spindle switch facing forward.

2

Tighten the spindle cage bolt by turning to the right.

Step 4:

Reconnect the speed control wire ensuring it is secured back into the recess.

Push the power cable back into the spindle

Support

If you require any support, please visit our website and raise a support ticket.

www.yetitool.com/support/submit-a-ticket