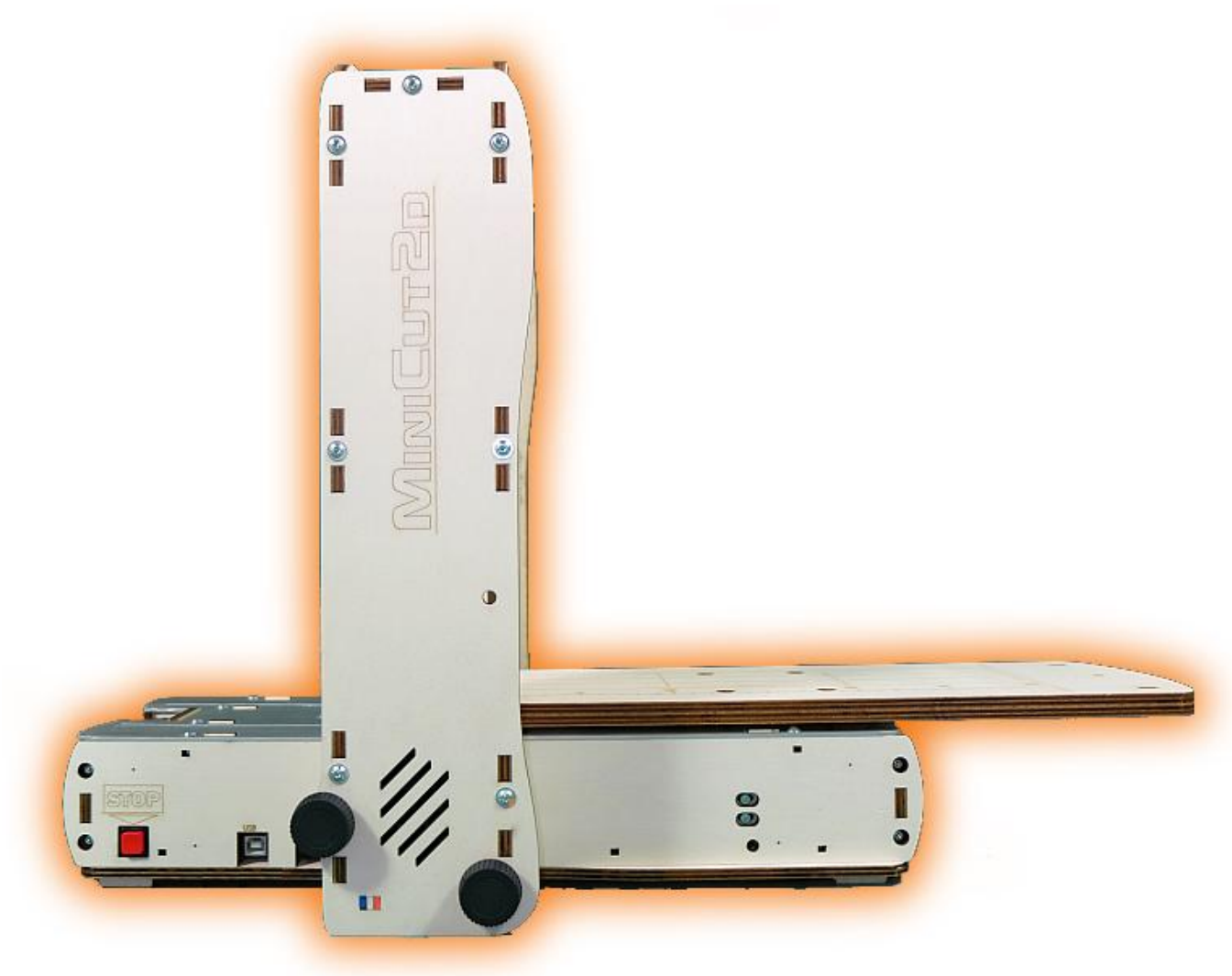
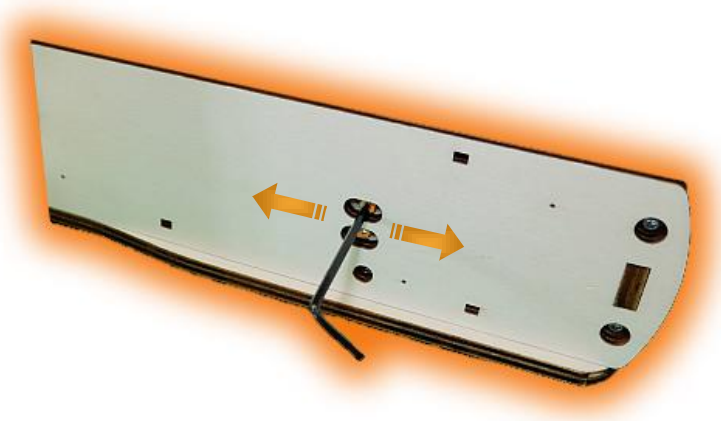
MiniCut2D

The machine for projects



Adjustment instructions

Renaud ILTIS – English version – 18/12/2014



Summary

1. Principles

It should be checked and two things need to be set:

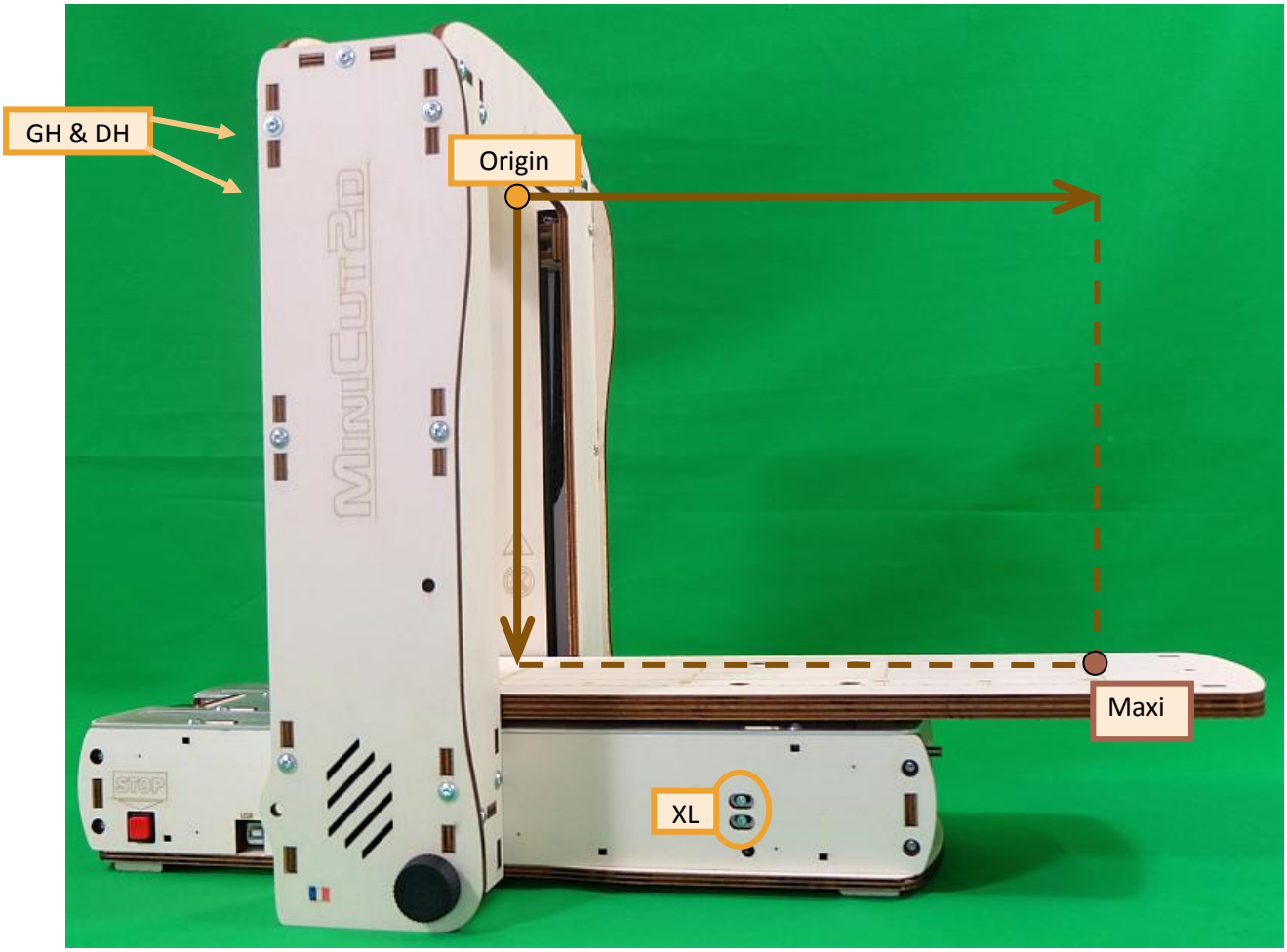
• The positions of the switches that define the origin of the wire.

• The positions of the switches that define the maximum displacements.

Indeed, before each cut the MiniCut2d will move the wire to the origin, using the XL, GH and DH switches.

The position of the XL switch will determine the origin horizontally, at the mobile plate (for precise positioning of the foam before the cut).

The position of GH and DH switches will determine the origin vertically, for the wire (so the wire is parallel to and at the right distance from the shelf).



XC, GB and DB Switches determine the maximum (Maxi) movement of the plate and wire. They help maintain the mechanics of MiniCut2d for exceeding displacement during manual control.

2. Settings

1.

Start Windows PC. The MiniCut2d runs on XP, Vista, Seven, and 8, in 32 or 64 bits.

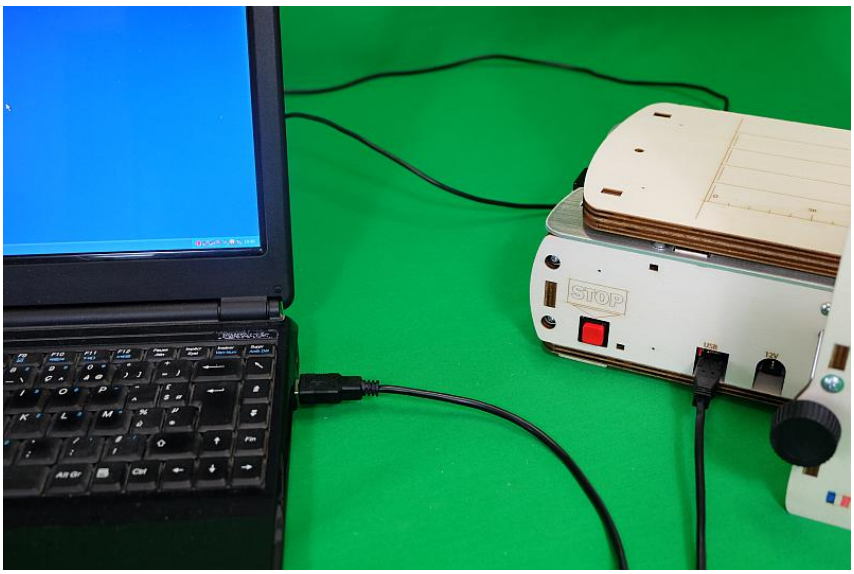
Wait for the complete boot until the USB driver is fully functional.

2.

Connect the USB cable between the PC and the MiniCut2d.

The MiniCut2d requires no driver, it is recognized as a HID device, just like a mouse, for example.

If the PC's speakers are turned on, you will hear the typical small sound of the connection of an USB device.

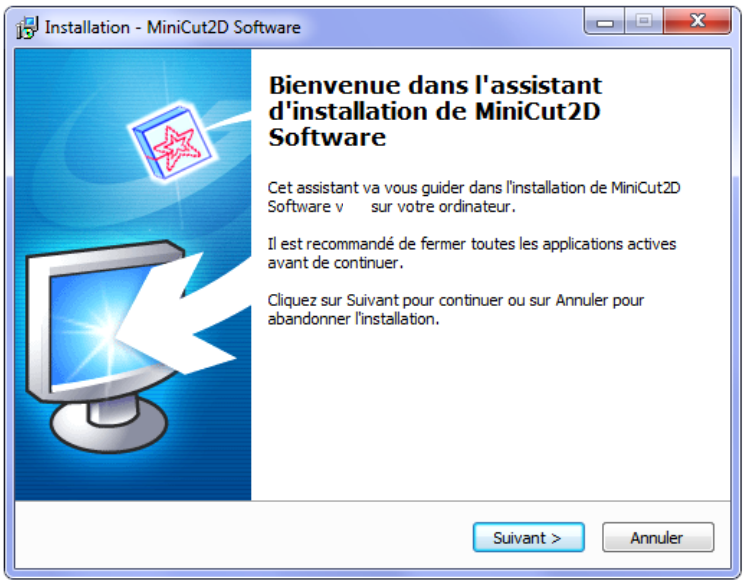


3.

If it's not already installed, install the MiniCut2d Software that is downloadable on the website www.minicut2d.com

Start the software.

IMPORTANT: when you want to use the software for a cut, it is best to connect the USB cable before running the software.



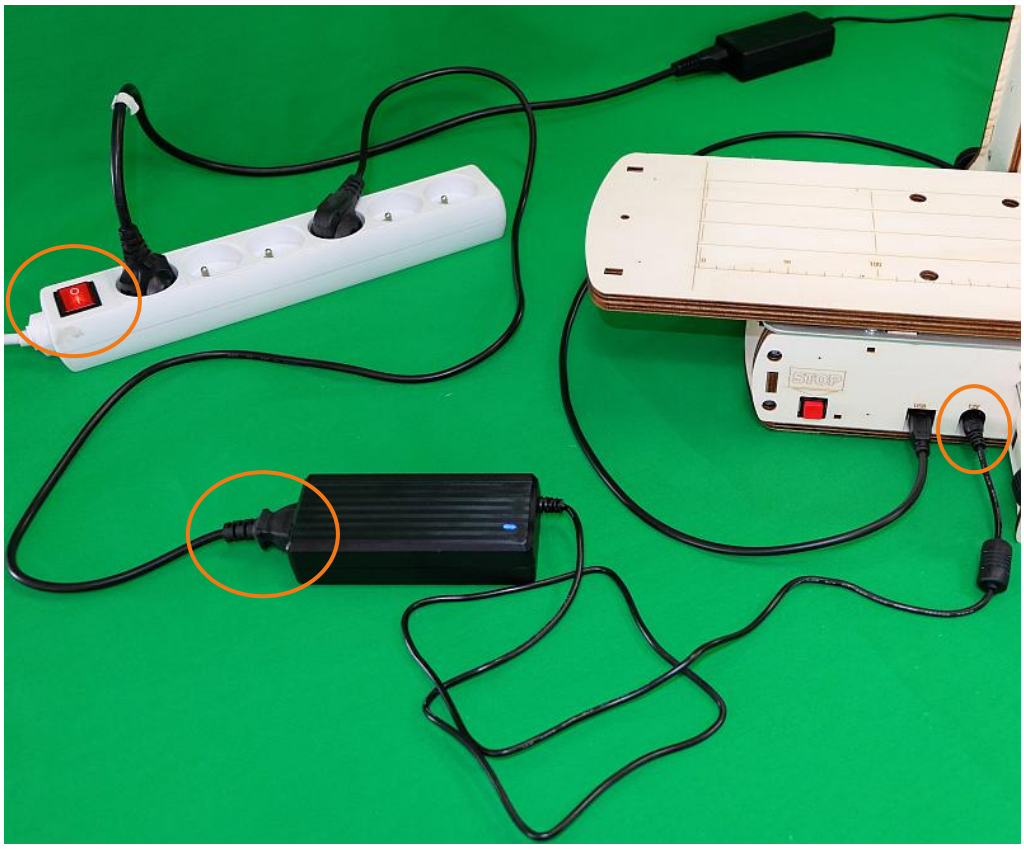
4.

Now connect the 12V power supply:

First, connect the cylindrical plug on the MiniCut2d's Jack, well in front of the connector, then the 110-220V cord on a bar with a fast cut-off switch of the power.

Make sure the 110V-220V cord is strongly plugged into the power supply.

IMPORTANT: At any time, pressing the STOP button cuts off the heating wire and stops the movement, but it does not cut off the power to the MiniCut2d.



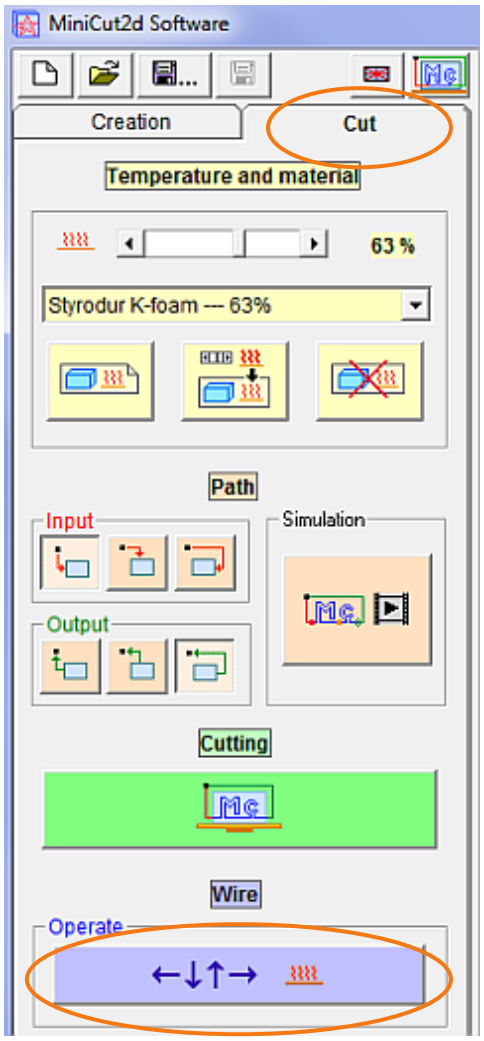
5.

In the MiniCut2d Software, click on the "Cut" tab, then down on the big button in the "Operate" frame.

This gives access to the "Wire driver" : heater of the wire and movements of the wire and the plate.

Before any test :

- **ensure that the wire or plate are not in an extreme position (no limit switch roller should be in contact with a wire holder or with the plate),**
- **ensure that the MiniCut2d is supplied with 12V (blue LED lights to the power box), otherwise the software will send the orders but nothing will happen.**



Features «Wire driver » frame

- **« Heat up » :**

Turns the wire heater. To do this, set the desired value with the horizontal slider, then click on the "ON" button. The wire turns in temperature. Any movement is impossible until the small preheating is complete.

Heating is expressed as a percentage. 100% corresponds to the maximum heat possible with MiniCut2d.

Once the heater is ON, you can change its value without cut-off.

When the heater is on, the ON button changes to "OFF"

To cut-off the heater, press the OFF button

- **« Information » :**

Tells the user what is happening and if the wire is heating up.

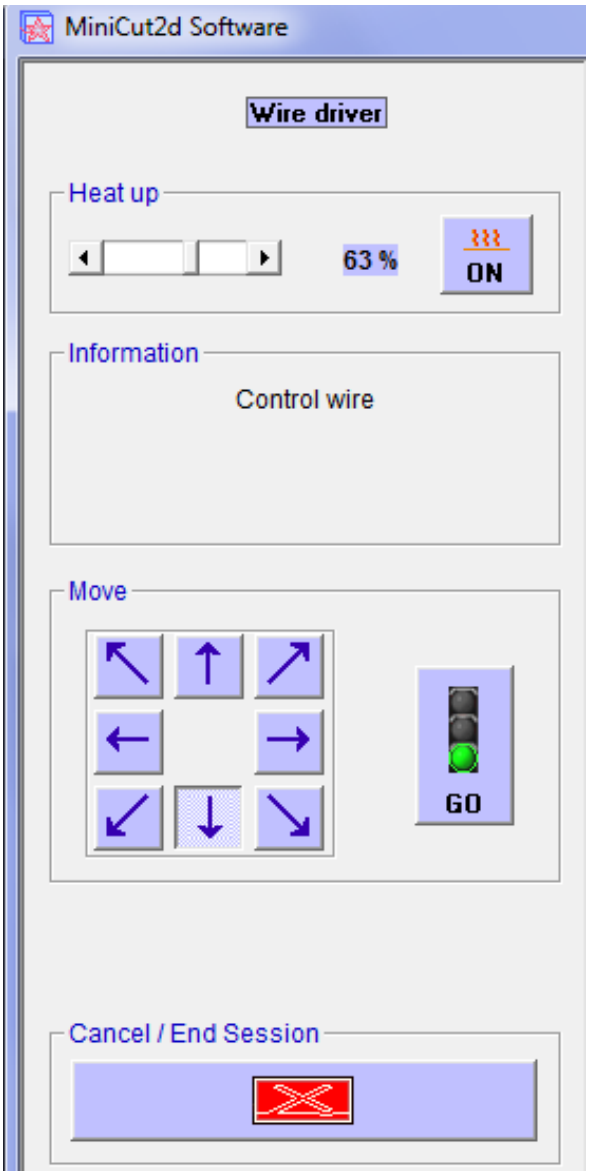
- **« Move » :**

This is used to move the wire to the cutting speed. Warning, this is the plate that moves as if it was cutting, so if asked to go right, the plate (which is placed on the foam block) will go to the left.

Using the arrows to choose the direction of the wire, the green light is for starting the movement. A red light appears to stop the movement.

- **« Cancel / End Session » :**

Button contained in this frame can exit the manual control of the wire. Heating and movements are automatically cut.



6.

First, test the heat: set the cursor to 80% and click on the "ON" button.

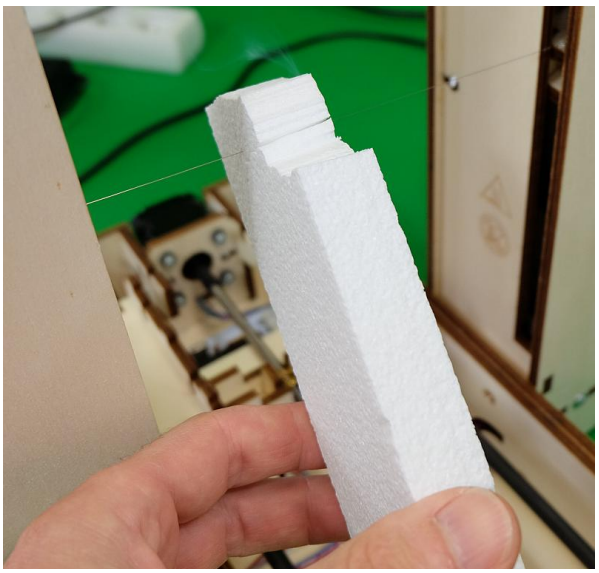
CAUTION: Never touch the wire when it is heated.

Use a piece of polystyrene to ensure that the wire is really hot. To do this, place the polystyrene on the wire and slowly move down. The wire must easily cut the polystyrene.

Then start some diagonal movements, some horizontal movements and some vertical movements.

The direction can be changed during movement.

Exit the "Wire driver" frame ("End Session" button).



7.

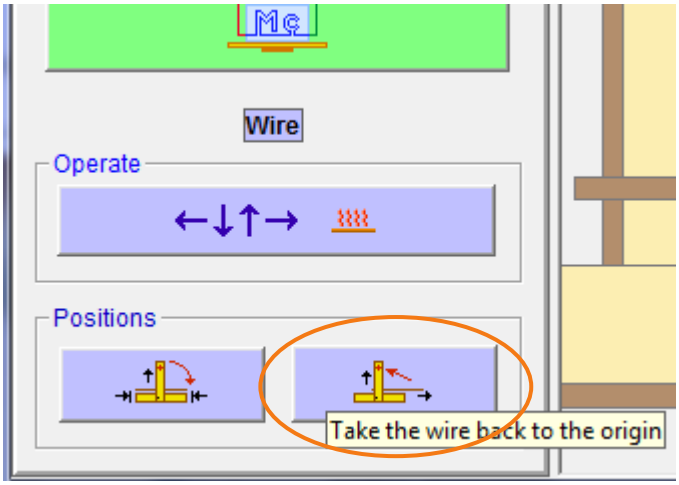
We will now adjust the position of the plate switches (switches XL and XC).

Make sure it has 20cm clearance in front of the plate of the MiniCut2d.

Click the button that launches the homing wire (= the wire goes alone to the origin, sometimes referred to as the sleep position between two cuts).

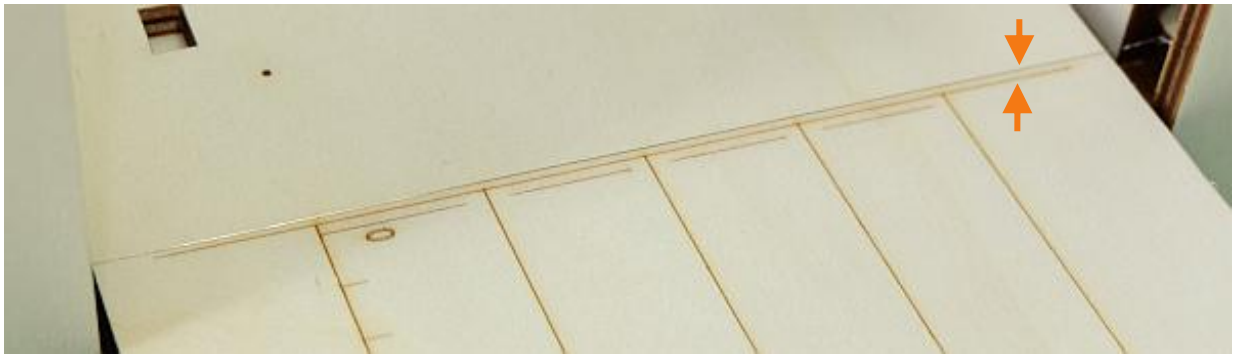
Please note, the movement played at high speed and uses the switches.

Allow the process to complete (message appears). The wire is now at the top and the plate is at the full right position.



8.

Now use the manual control of the wire to move it down to about 1 or 2 mm of the plate (stop it by clicking on the red light). Be careful not to heat the wire.



View the wire from above the MiniCut2d. The correct position is when the wire is (about) on the baseline. In the example below, it was about 1mm offset. If the wire is through, you can drag it to the springs, or rotate the springs, or realign the board.

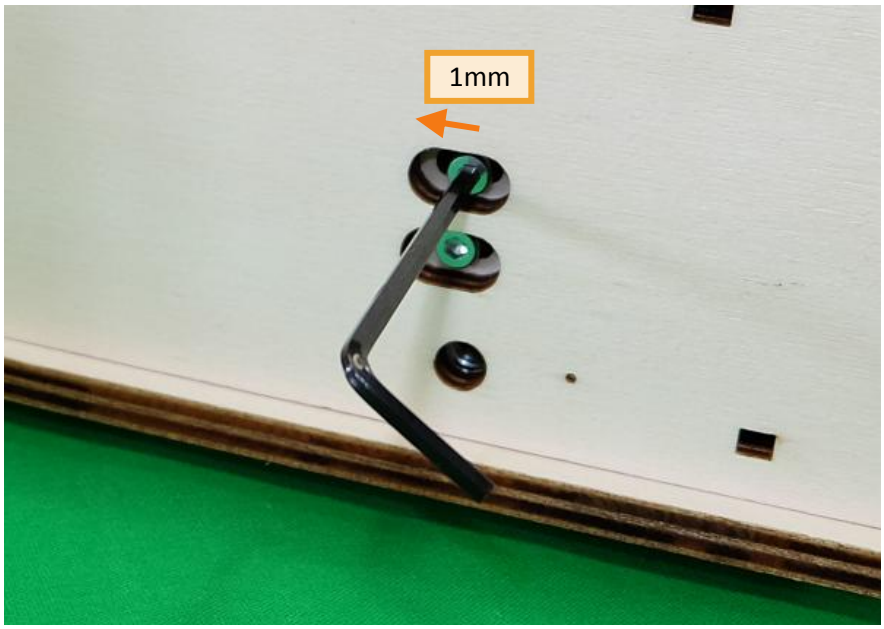
Move the plate back slightly by turning the threaded rod by hand (by the end of the rod, who exceed under the plate).

Unscrew the screws holding the switch XL and move it to correct the position of the plate, and then gently tighten the screws.

Repeat the test procedure 7 and 8 above.

CAUTION: The switch must stop the plate before the plate's truck touches the end of the base.

When the origin of the plate is good, gently tighten the screws XL.



9.

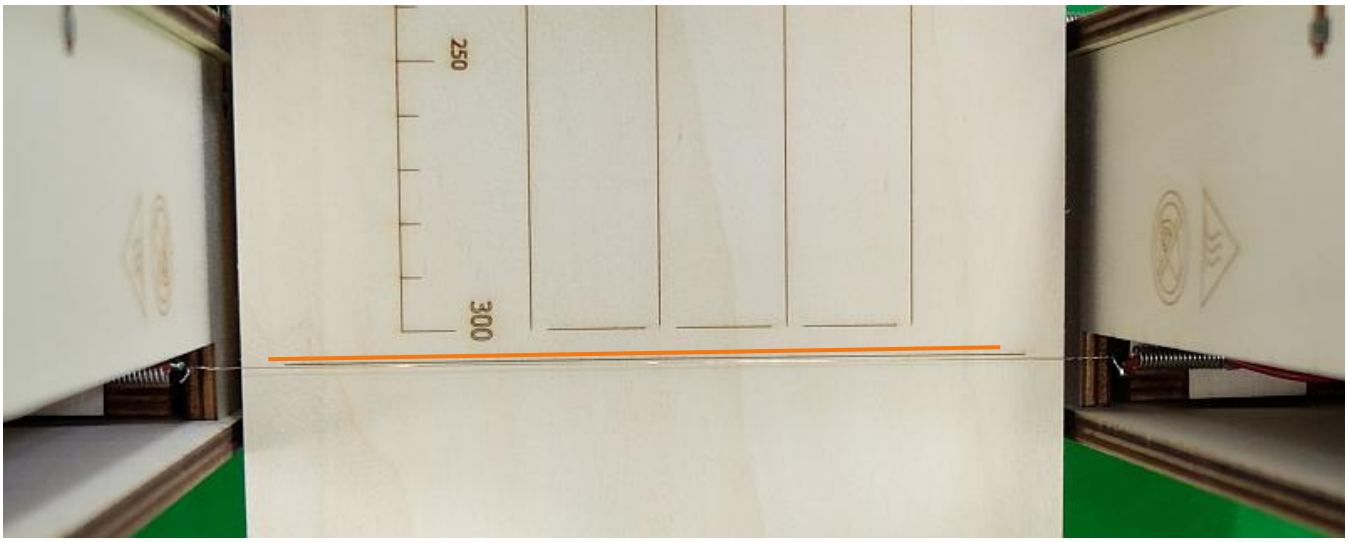
With manual the "Wire driver", start moving the plate to the left (so clicking on the right arrow and then the green light). Let the movement continue until the software detects the opening of a switch (it will be here XC).

The movement is automatically stopped and a message appears on the screen: "The loop of the limit switches is open" ... "It is necessary to release the switches by turning the threaded rods manually."

This means that the software can no longer act as a switch is on.

The wire must be between the number "300" and the next line. Correct the position of the XC switch.

CAUTION: The switch must stop the plate before the plate's truck touches the end of the base.



Should be super accurate?

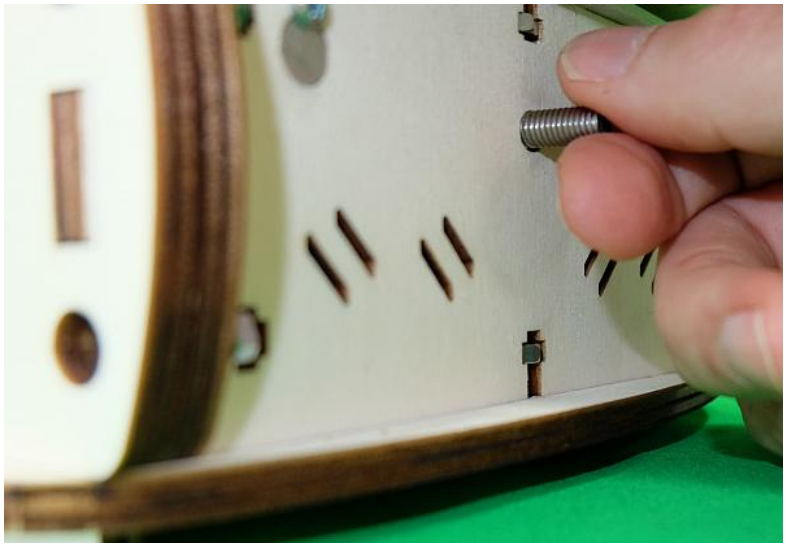
XL switches, DH and GH are used to find the origin at the beginning of each cutting cycle. They are used regularly and their position should be reasonably accurate (about 0.5mm +/-).

Switches XC, GB and DB are safety switches to avoid going too far in a manual control of the wire. They are never used on a cutting cycle (because the software removes the routes that are beyond the possibilities). Their position does not need to be very precise (+/- about 1mm).

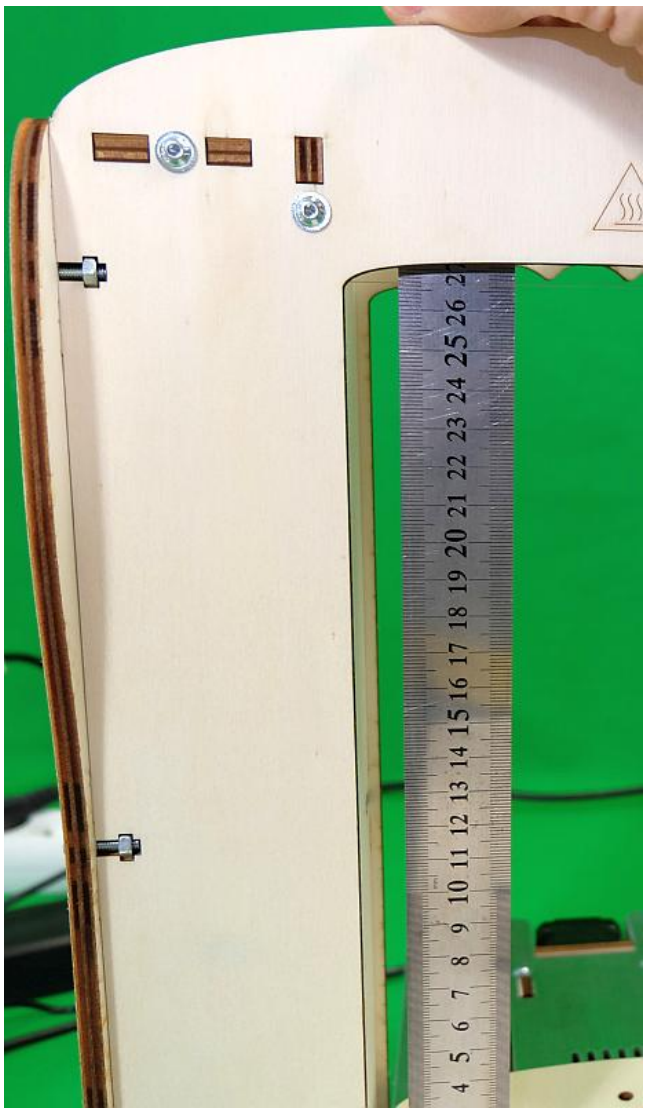
10.

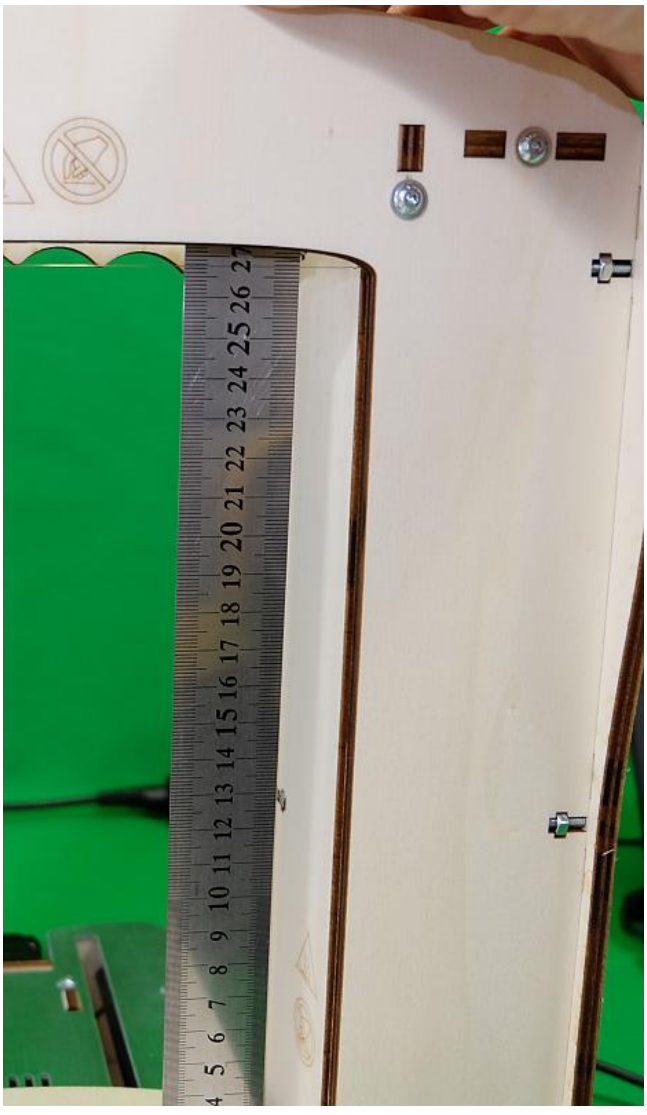
Then move the plate turning the threaded rod by hand in order to regain control of the machine, then press the move-to-origin button.

The wire goes back and the plate shifts to the right.



Measure the height of the wire on both sides of the plate. It should be between 266 and 267mm and be equal on both sides.



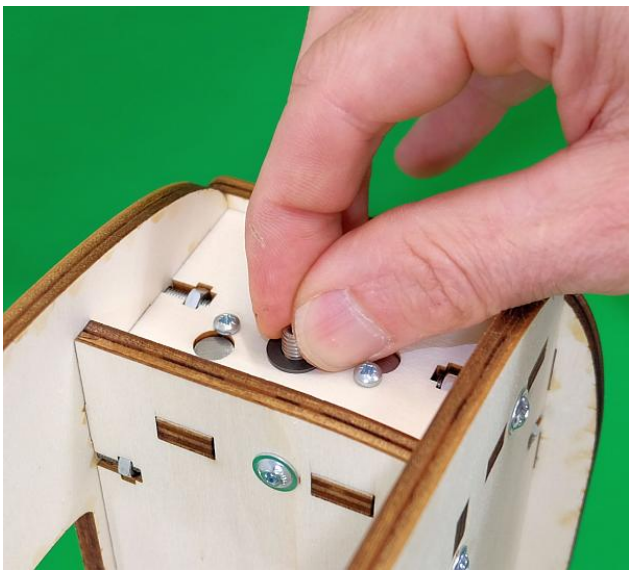


If there is a correction to do, slightly release the wire down by turning the threaded rods with hand.

Then correct the position of the switches GH and DH.

Again press the move-to-origin button at and take measurements.

Once the wire is parallel to the plate, gently tighten the screws of GH and DH.

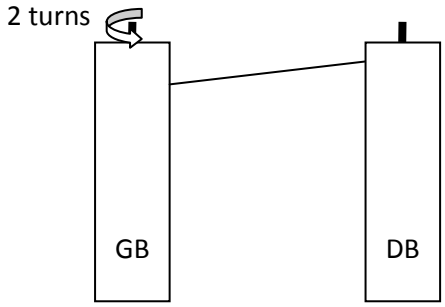


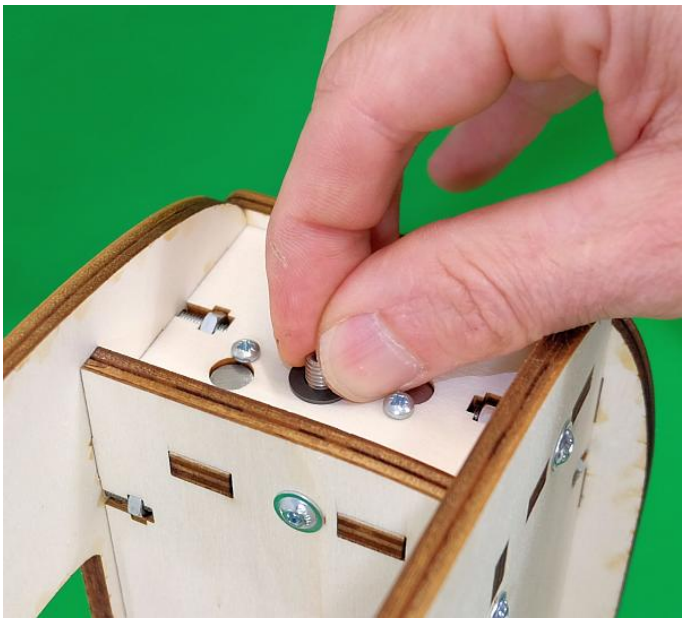
11.

Last setting, the switches GB and DB.

The wire is at the origin. We will give it a slight angle to be sure to activate GB.

Lower the wire 2mm at GB side : turn exactly twice the threaded rod.

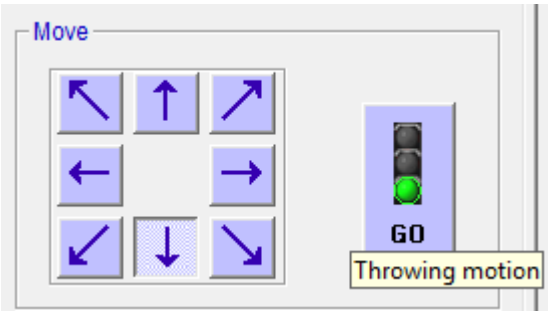




Use the "Wire driver" frame to the way down the wire.
Please note that the wire should not be heated.

Allow the movement to continue until the automatic shutdown by GB switch.

The movement is automatically stopped and a message appears on the screen: "The loop of the limit switches is open" ... "It is necessary to release the switches by turning the threaded rods manually."



The wire should just get close to the plate without touching it, or slightly above (0.5mm). In the photo below, we see that the wire touches the plate: we must move up the GB switch, but we will first move up the wire in GB side 4mm (exactly 4 turns) by turning the threaded rod by hand, reversing the slope of the wire.

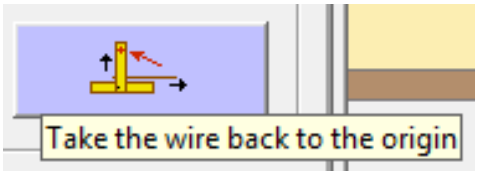
Move the GB switch if it's necessary, then repeat the procedure to switch DB: downward movement to the automatic stop (due to GB), then switch setting for the wire close to the plate on the side of DB.

12.

Move up the wire by turning the threaded rods by hand (4-5 turns) to clear the switches and press the reset move-to- origin button.

YEAH! Settings are complete!

You can do your first cut (for this, see the User Guide of the MiniCut2d).

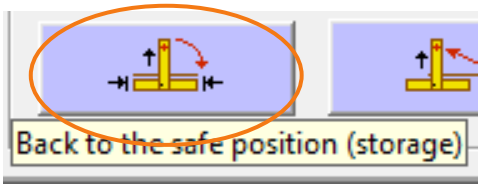


13.

When MiniCut2d is not used, it must move the plate to the center position to protect him.

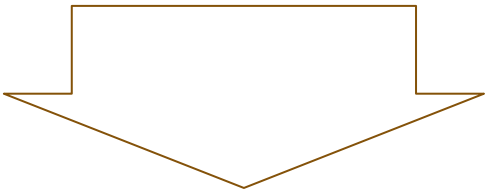
To do this, press the storage button.

The machine moves to origin then move the plate to the center position.



3. And now...

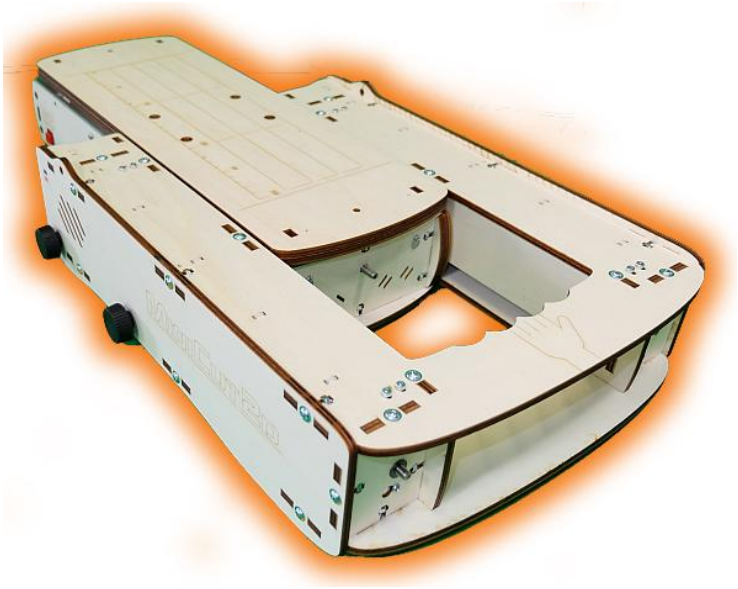
Switches of MiniCut2d are set



Download the **User Guide** at www.minicut2d.com.

Cut a simple first project with letter from MiniCut2d Software Library

Use MiniCut2d, download, create and share projects on www.filchaud.com.



MiniCut2D

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