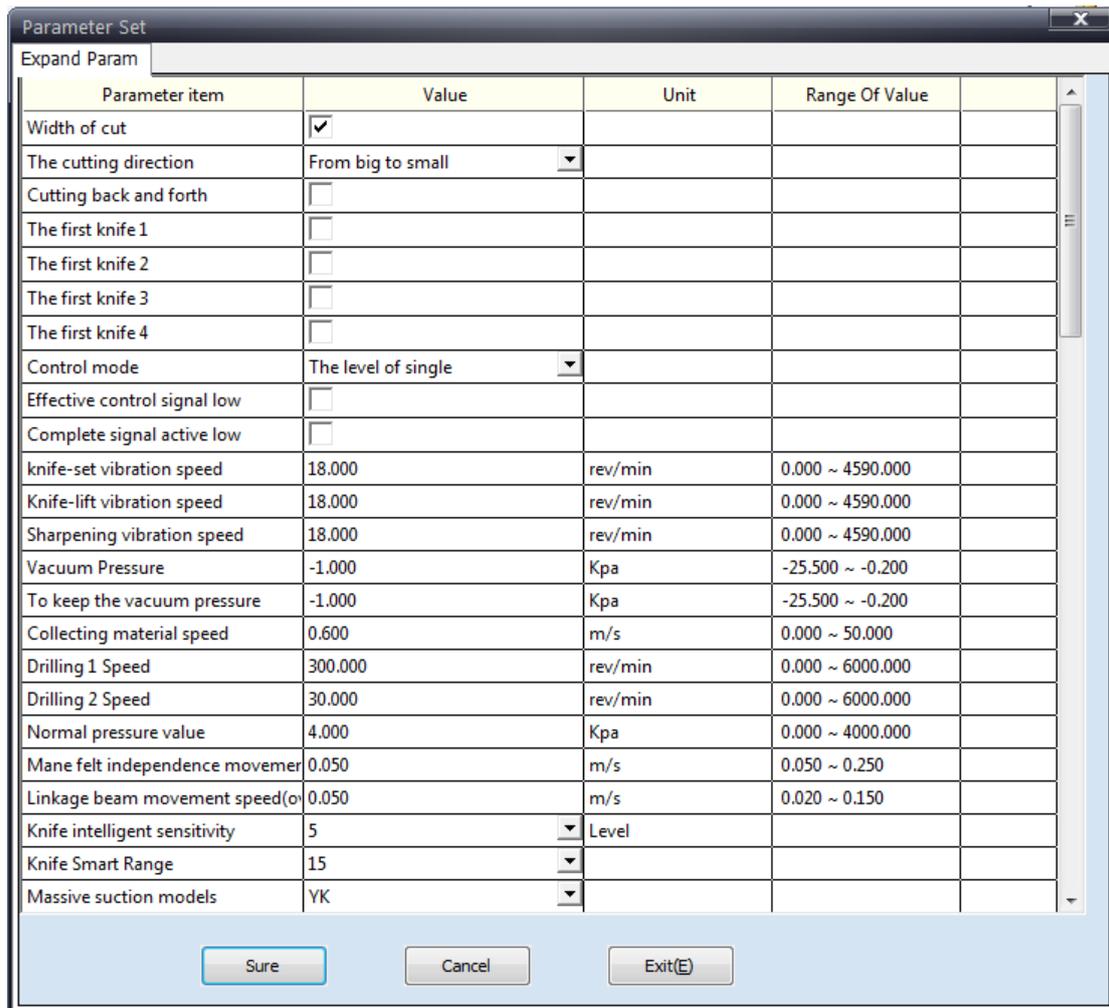# AKI Setting (Optical Sensor/Mechanical shock)

## 1. Software setting:

Press ctrl+alt+shift+e, go into machine parameter

Select "Expand parameter"

| Parameter item | Value | Unit | Range Of Value | |
|---|---|---|---|---|
| Width of cut | ☑ | | | |
| The cutting direction | From big to small ▼ | | | |
| Cutting back and forth | ☐ | | | |
| The first knife 1 | ☐ | | | |
| The first knife 2 | ☐ | | | |
| The first knife 3 | ☐ | | | |
| The first knife 4 | ☐ | | | |
| Control mode | The level of single ▼ | | | |
| Effective control signal low | ☐ | | | |
| Complete signal active low | ☐ | | | |
| knife-set vibration speed | 18.000 | rev/min | 0.000 ~ 4590.000 | |
| Knife-lift vibration speed | 18.000 | rev/min | 0.000 ~ 4590.000 | |
| Sharpening vibration speed | 18.000 | rev/min | 0.000 ~ 4590.000 | |
| Vacuum Pressure | -1.000 | Kpa | -25.500 ~ -0.200 | |
| To keep the vacuum pressure | -1.000 | Kpa | -25.500 ~ -0.200 | |
| Collecting material speed | 0.600 | m/s | 0.000 ~ 50.000 | |
| Drilling 1 Speed | 300.000 | rev/min | 0.000 ~ 6000.000 | |
| Drilling 2 Speed | 30.000 | rev/min | 0.000 ~ 6000.000 | |
| Normal pressure value | 4.000 | Kpa | 0.000 ~ 4000.000 | |
| Mane felt independence movemer | 0.050 | m/s | 0.050 ~ 0.250 | |
| Linkage beam movement speed(o\| | 0.050 | m/s | 0.020 ~ 0.150 | |
| Knife intelligent sensitivity | 5 ▼ | Level | | |
| Knife Smart Range | 15 ▼ | | | |
| Massive suction models | YK ▼ | | | |

Sure    Cancel    Exit(E)

BK3 Automatic knife initialization: Optronic Sensor (If your machine is mechanical AKI, you need select mechanical shock)

Whether on both sides of the knife: ×

Both sides of the knife: Unilateral knife.

**Parameter Set**

Expand Param

| Parameter item | Value | Unit | Range Of Value | |
|---|---|---|---|---|
| Router3 speed | 1.000 | kilo rev/min | 1.000 ~ 60.000 | |
| Vibration blade start time | 0.000 | s | 0.000 ~ 2.550 | |
| Rotate blade start time | 0.000 | s | 0.000 ~ 2.550 | |
| Use Absolute Origin | ☐ | | | |
| Drilling 2 Speed | 30.000 | rev/min | 30.000 ~ 6000.000 | |
| Vacuum Pressure AD value when z | 0.000 | | -128.000 ~ 127.000 | |
| Vacuum Pressure Ratio | 0.000 | | 0.000 ~ 2.550 | |
| Compressor Pressure AD value wh | 0.000 | | -128.000 ~ 127.000 | |
| Compressor Pressure Ratio | 0.000 | | 0.000 ~ 2.550 | |
| FZ Auxiliary Plate Model | GLK | | | |
| Vacuum Pressure start time | 0.000 | s | 0.000 ~ 25.500 | |
| FZ1 Board Warning Lights Flash | ☑ | | | |
| The percentage of the upper limit | 0.000 | | 0.000 ~ 100.000 | |
| Automatic Knife Initialization | Optronic Sensor | | | |
| Grinding Compensation Angle | 0.000 | degrees | 0.000 ~ 360.000 | |
| V-notch Compensation | 0.000 | mm | 0.000 ~ 2.550 | |
| Grinding Indent | 0.000 | micrometer | 0.000 ~ 255.000 | |
| Use PN Feeding Length | ☐ | | | |
| After Over Window Wait Time | 0.000 | s | 0.000 ~ 127.000 | |
| before Over Window Wait Time | 0.000 | s | 0.000 ~ 127.000 | |
| Is PT3 rotate | ☐ | | | |
| PT3 rotate speed | 1.000 | rev/s | 0.000 ~ 255.000 | |
| Splint 1 High 1 | 0.000 | mm | 0.000 ~ 655.000 | |
| Splint 2 High 1 | 0.000 | mm | 0.000 ~ 655.000 | |

Sure          Cancel          Exit(E)

| The IO function redefines 1 | Custom machine XK | | |
|---|---|---|---|
| Both sides of the knife | Both sides of the knife(1 + 1 wa | | |
| beam zone | Unilateral knife | m | 2.000 ~ 500.0 |
| Select Tracks | Both sides of the knife(2 + 2 way) | | |
| | Both sides of the knife(1 + 1 way) | | |
| Motor to track down | Do not track down | | |
| A slant cruising altitude | ☐ | | |
| Enable tool changing speed | ☐ | | |
| Turn on automatic tool change | ☐ | | |
| Brush drop depth | 0.000 | mm | 0.000 ~ 60.00 |
| Cleaning plate brush fine tuning h | 0.000 | mm | 0.000 ~ 6.300 |

## 2. Preparation

Make sure that every head can cut in same point ,no matter which head you select they always lower down in same position.
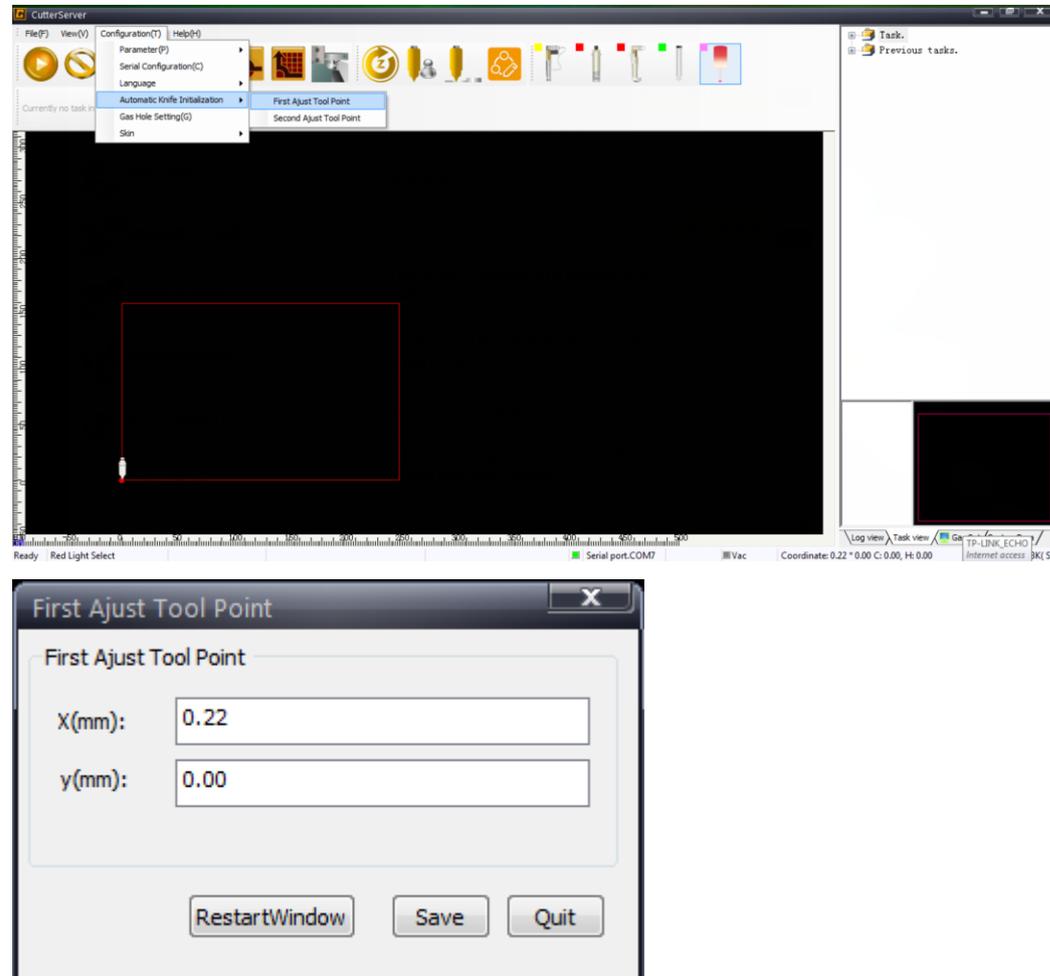
## 3.Set AKI coordinate

Open cutterserver, configuration → Automatic knife Initialization →

First Adjust Tool Point

Tips:

First adjust tool point: used for set first(right) AKI device coordinate.

For BK3 machine, only need set first adjust tool point.





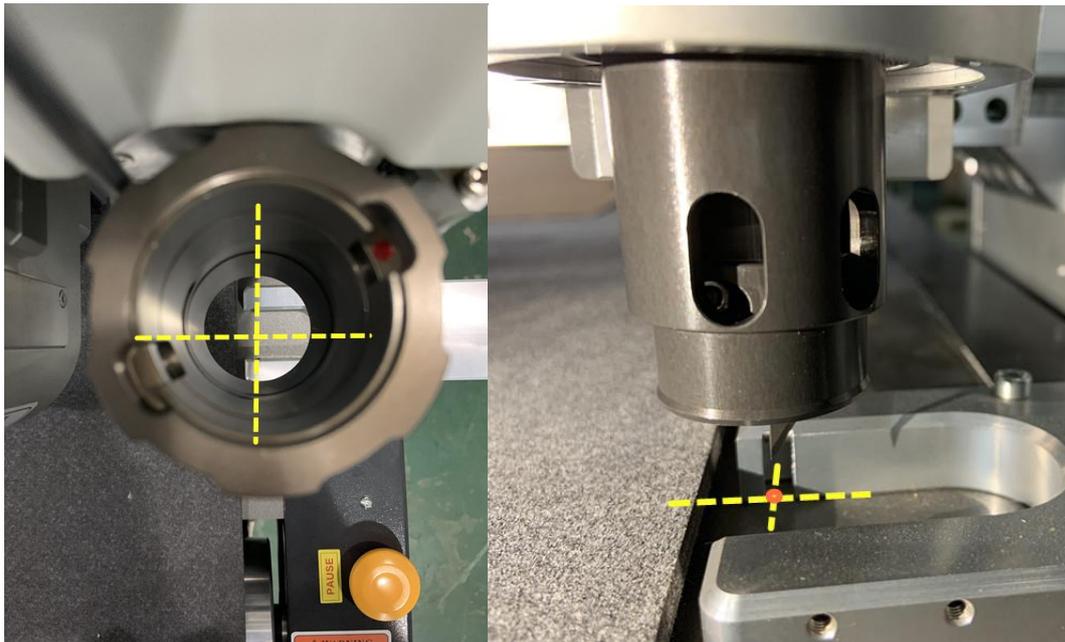Select "first adjust tool point"

Use keyboard to move the first cutting head toward to AKI device (right side)

Make sure the head center at the center of AKI device, if a cutting tool installed on the head ,when the head lower down the blade can shield the red light.(If your AKI device is mechanical model ,just make sure tools can down to the center of AKI device )

Click "save" to save the parameter.

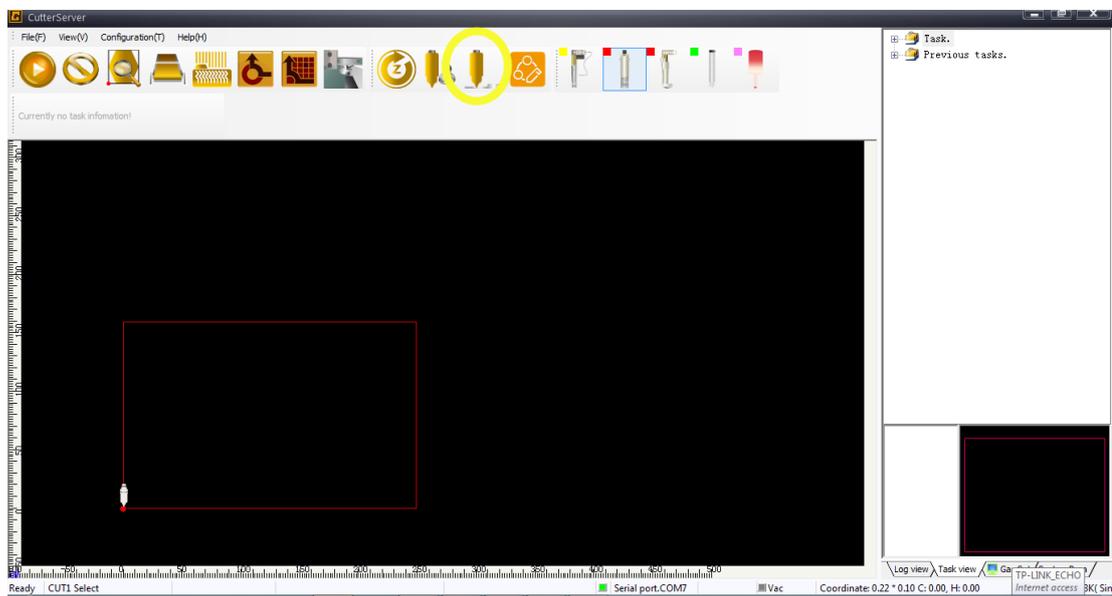So when you want calibrate tool automatic ,the tool will move this point

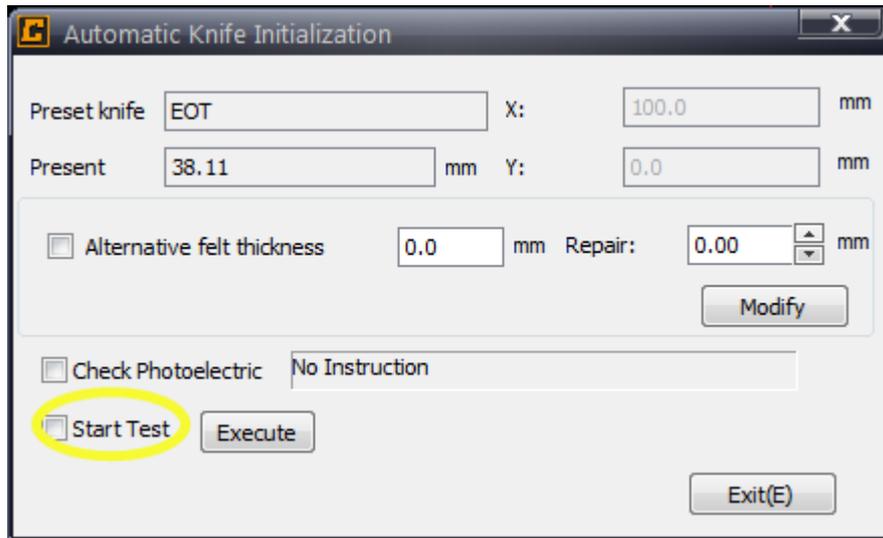to start calibrate.



## 4. Test

Select one tool which one you want calibrate

Click AKI icon

Check positon:



Before first use, select "start test", then press any direction key, head will move to AKI device, after it done, check the position if it is correct.
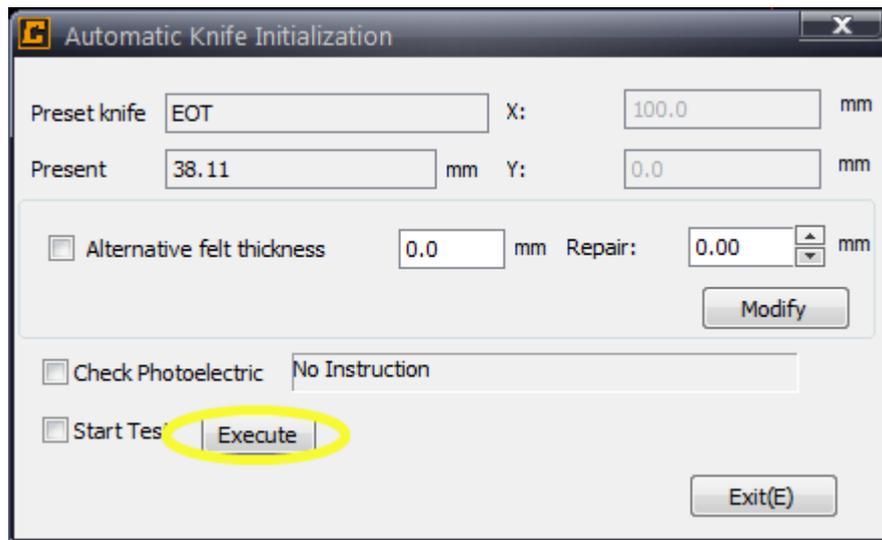
If position is good, cancel "start test"

Check sensor:

Select "check photoelectric"

Use something to shield the sensor, if sensor has problem there will has a error.

If sensor is good, cancel "check photoelectric"

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Tel: +86-571-8660 9560
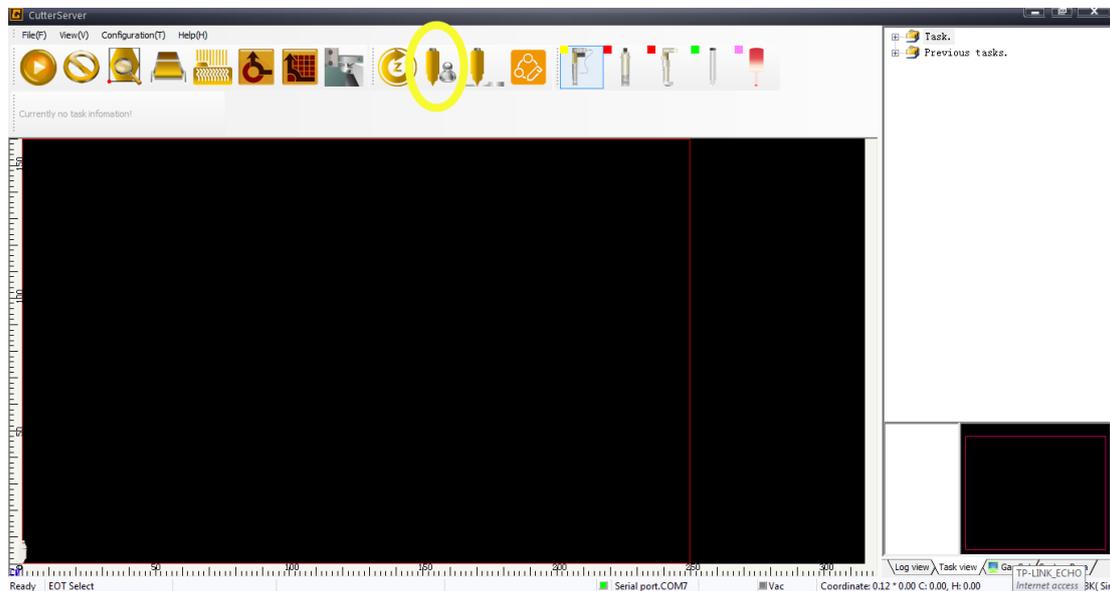Fax: +86-571-8669 8923

## 5.Start

**Press the emergency stop button if anything goes wrong when machine calibrate cutting depth automatic.**

Select one tool which one you want calibrate

Click "Execute" to start automatic calibrate. You can get a cutting depth value A.

Click "manual adjust" icon

Use up and down key to calibrate cutting depth manually, get a cutting depth value B.

Calculate B-A = C , C is the value which you need set in "repair"

![Automatic Knife Initialization dialog]

**Automatic Knife Initialization**

| Preset knife | EOT | X: | 100.0 | mm |
| Present | 38.11 mm | Y: | 0.0 | mm |

☐ Alternative felt thickness    0.0  mm   Repair:  0.00 ▲▼ mm

Modify

☐ Check Photoelectric    No Instruction

☐ Start Test   Execute

Exit(E)

If you need cut on the alternative felt, you need set "alternative felt thickness",this value depend on your actual situation.