EzCad parameter setting and debugging

If the computer is not shut down in normal order, or is forced shut down, or encounters a sudden power outage, when the user runs the software again after booting on, users may encounter a parameter error. Below are how the users should redo the parameter setting.

Driver check-up

Step 1

Turn on the laser marking machine \rightarrow right-click on "My computer" \rightarrow Manage \rightarrow Device Manager, check if there is a driver named BJHBS Device/laser Mark Control BoardV2, if yes, it indicates that the board driver is working fine. In this case, please skip step2.



Step 2

If the driver BJHBS Device/laser Mark Control BoardV2 is not there, please find the uninstalled driver USBLMCV2 and right-click on it. Install the driver as below pictures demonstrate.





Step 3

Run EzCad and choose the preferred language and workspace/marking area.

Single-click on the System parameter icon. (the pointed one)

Choose your preferred language as below. Please note that you have to close and rerun EzCad to activate this setting.

*		系统参数			
	常规 颜色 工作空间 动动旋转 插件管理器 Language	English ⁱ 교의 Chinese(Simplified)-简体中文 Chinese(Traditional)-繁體中文 English USA Japanese-日本语 korean- 한국어 English			
		确定(0)	取消(C)		

To change WorkSpace/marking area, please follow below picture. (Here takes 110x110 as an example)

*		System parameter	×
Gene Colo Work Auto Move Plug User Lang	eral or Save e rotate g manager manager guage	 ✓ Show workspace Circle workspace ✓ Show center cross line Left bottom corner X -55.00 mm Y -55.00 mm Size Width 110.00 mm Height 110.00 mm 	
		Ok Cancel	

Step 4 Single-click on/Press F3 to change software parameters.



Below takes 110x110 lens as an example, please input or choose as the following pictures show. Please note: these two parameters right below are meant to correct a distortion.



Configuration Parameters r	markcfg0
Field Laser Control Port Other HardInfo	
Aspect Field Size 10.00 mm Galvo1=X Offset X 0.000 mm Galvo2=X Offset Y 0.000 Degree Use correct file Galvo 1 Galvo 1 Galvo 2 F Negate Scale 86.8960 >> 0.9800 1.0000 1.0000 1.0000 1.0000 1.0000	After Mark Goto No Move Galvo Center Left Up Right Up Right Bottom Left Bottom Special pos. X 0.000 Y 0.000 Password Password

Choose the right laser brand as below:

Laser Control \rightarrow Laser type \rightarrow Fiber \rightarrow Choose your laser brand in the dropdown menu. (In this case, it's RAYCUS)

Serial	RAYCUS	•
	IPG_YLP	
I Laser	IPG_YLPM	1
Open M	RAYCUS	
	QUANTEL_M20HF	
E Enabl	QUANTEL_M20	
IN LINDO	MANLIGHT_PL	
SPI	VGEN_YPFL	
	JPT	
Wave 0	FO	

d Laser Control Po	rt Other H	ardInfo
Laser type	• Fiber •	SPI_G3
PWM		QSwitch
🔽 Enable PWM Signal		🗖 Use Guilin stars company
Max PWM 80.000	KHz	C QSwitch Open When FPK end
Min PWM 20.000	KHz	FirstPulseKiller 40 us
Power Map	[☐ pulse width reverse
🔽 Enable Tickle	1	Fiber
Pulse Width 1	us	Serial RAYCUS
Pulse Period 5.000	- KHz	Laser Leak Handle
Enable CO2 FPK		Open MO Delay 8 ms
FPK Start power	10.0 %	🔽 Enable Pulse Width
FRIC I	10.0 %	SPI

Port settings

The following picture is for the laser marking machine without an enclosure.

Stop mark input port	Laser power IO
Stop prompt message	Port NULL - HIGH
지 0	Red Light Pointer IO
1 🖂	
2 🗸	Outort 0 I HIGH
3 🖾	
4 🖂	Inport NULL - HIGH
5 🕅	- Marking IO
ک ا 6	
√ 7	HGH
	Marking Finish IO
Door IO	Outort NULL - HIGH
Inport NULL THIGH	Pulse width 1000 ms
	- Start Mark IO
aser Ready IO	Inport 5
Inport NULL - HIGH	HIGH
	✓ Pulse Mode
Outport NULL -	

The following picture is for the laser marking machine with an enclosure.

Configuration raia	
Field Laser Control Port Other Har	dInfo
Stop mark input port	Laser power IO
Stop prompt message	Port NULL - HIGH
지 0	
1 🖂	
2 🕅	Outort 0 JL
3 🔽	
4 🖾	
5 🕅	Marking IO
6 🕅	Outort 6 V HIGH
7 🔽	
	Marking Finish IO
Door IO	Outort NULL - HIGH
Inport 7	Pulse width 1000 ms
- Jacar Paadu IO	Start Mark IO
	Inport 5 - HIGH
Inport NULL	E Pulse Mode
Outport NULL	

Don't forget to click on OK button to save the change you've made on the setting.

Step 5. Regulate the red-light square.

Draw an 80mmX80mm square on the software and press F2 to mark it on a board that's been put under the scanner. Make sure the board is larger than 80x80mm. Don't move the board after the marking and press F1.



As the above picture shows, the red-light square (AKA marking preview) doesn't coincide with the real marking. This is where regulation should be applied.

Click on or press F3 \rightarrow Other \rightarrow Red light pointer

Amend offset pos XY value and Size ScaleXY value.

Usually, input 1.02 for Size ScaleXY value.



Fine-tune offset pos XY according to the real deviation.

Offset	Pos	X	0.20	mm
Offset	Pos	¥	0.00	mm

- + 0.1X represents red light moves to the right by 0.1mm.
- 0.1X represents red light moves to the left by 0.1mm.
- + 0.1Y represents red light moves up by 0.1mm.
- 0.1Y represents red light moves down by 0.1mm.



Press F1 again after the modification of parameters. As below picture shows, the red-light square coincides with the real marking perfectly, if not, continue with the fine-tuning until it does.



Step 6 Regulate the marking size.

Draw an 80mmX80mm rectangle on the software.



Measure the actual marking with a ruler, in our case, as below picture shows, the size of the actual marking is 82mm(X)x81.5mm(Y).





Click on/Press F3→Field Operate as below pictures show. Please note:

Goal mark size value should be same as Position size value. Real mark size value should be same as the real measurement.







Please also note

Galvo2 stands for X axis and

Galvo1 stands for Y axis.

Click OK after modification, mark again and measure again, if the value is not accurate, continue the previous step until the requirements are met.

Step 7 Software backup.

In order to avoid parameter disorder again, we suggest backing up the currently set software. If parameter disorder happens, you can delete current software folder and the backup software could be substituted. Backup software can be stored on other computers or removable disks. The details are as follows.



1. Right-click on the EzCad2

shortcut and open file location.

(V	
	Open
16.	Sky wive Pro(S)
	Troubleshoot compatibility
	Open file location
	Run as administrator
0	使用 360 杀毒 扫描
	Pin to Taskbar
	Pin to Start Menu
	Restore previous versions
	Send to
	~ ·
	Cut
	Сору
	Create short cut

2. Compress this folder and store it elsewhere.

	Date moumed	Туре	
BurnInTest_4.0	06/07/2018 09:26	File folder	
→ 新科触摸驱动	06/07/2018 09:29	File folder	
ULAN_Realtek_PCIe_2010.4.0709.201	3 06/07/2018 09:29	File folder	
🎍 环境	06/07/2018 09:31	File folder	
🍌 MyDrivers	06/09/2018 13:24	File folder	
Win7 32系统语言包	01/11/2018 10:44	File folder	
Ezcad2.9.4(20130925)V2	14/01/2019 13:55	File folder	
Ezcad2.14.2(20160113)	14/01/2019 13:55	File folder	
USB-Device	14/01/2019 13:55	File folder	

3. When there is a problem with the software, delete this folder and unzip the backup folder to the same location.

4. Open the backup folder and create a shortcut on the desktop.

ze 🔻 🐻	Oper	New folder					
vorites		Open			Date modified	Туре	Size
Desktop	6	Run as administrator			14/01/2019 13:55	File folder	
Downloads	14	SkyDrive Pro(S)	+		14/01/2019 13:55	File folder	
Recent Places		Troubleshoot compatibility			14/01/2019 13:55	File folder	
	0	使用 360 杀毒 扫描			14/01/2019 13:55	File folder	
oraries		Pin to Taskbar			14/01/2019 13:55	File folder	
Documents		Pin to Start Menu			14/01/2019 13:55	File folder	
Music		Restore previous versions			14/01/2019 13:55	File folder	
Pictures /ideos		Send to	3		Compressed (zipped) folder Desktop (create shortcut)	File File	1,
mputer		Сору			Documents	lication	4
twork	Create shortcut			Fax recipient Mail recipient	lication figuration sett	4,	
	Delete				07/01/2016 14:24	Application extens	1,
	Kename				17/06/2019 16:03	Configuration sett	
		Properties			18/06/2019 11:18	CFG File	
	-	V Jest EzCad2			17/08/2016 15:06	Application	2
		J8			17/08/2016 15:04	Application	
		Lmc1.dll			13/01/2016 11:42	Application extens	
A Lington bell					18/12/2015 12:46	Application extens	
		mathlib.dll			09/10/2015 12:49	Application extens	
		mswlaser			06/06/2019 15:41	Configuration sett	
		MVAPI.dll			12/01/2006 16:40	Application extens	
		MVBaverDec.dll			04/01/2010 18:00	Application extens	
		MVCAPI.dll		THE	16/01/2014 10:46	Application extens	