CLOUDRAY
LASER SOLUTIONS

Laser Marking Machine
User Manual

I. Device Code Description (see device nameplate):

II. Device Features:

1. Metal and some plastic surface processing;
2. Support text, bar code, two-dimensional code, vector graphics, bitmaps, rules and irregular water processing;
3. Supporting process: general marking, frosting effect of metal material, sun-breaking oxygen, deep carving, black metal surface, rotating, dividing and marking, bitmap photo marking and marking, ultrathin material drilling and cutting;

III. Equipment Identification


CAUTION
LASER RADIATION WHEN OPEN
DO NOT STARE INTO
THE BEAM DIRECTLY


WARNING
ELECTRIC SHOCK
Keep ground wire
connected

IV. Equipment parameters

1, equipment power supply: AC220V50 ~ 60Hz (export model special note 110V except);
2, cooling method: forced air cooling;
3, equipment power consumption: machine ≤800VA;
4, grounding: more ground;
5, laser power: 24V / 15A (MW);
6, galvanometer power: ± 15V / 3A (MW); 7,
control card power supply: 5V / 3A (MW);
8, the laser control system: Bjjcz (customers require otherwise);
9, computer (industrial PC);
10, operating system: Windows 7 or Windows 10 (random, usually Windows 7);
11, communication: USB (optional PCI-E);
12, cabinet: standard (can be customized);
13, workbench: aluminum or manual two-dimensional workbench; (optional);
14, indicating light: red (single red or double red optional);
15, software support formats: PLT, DXF, BMP, JPG, AI and other file formats, common formats: PLT, BMP, JPG several;
16, focal length adjustment method: manual adjustment or electric adjustment (optional);
17, repeat frequency adjustment range: 20W ~ 30W 30 ~ 60KHz (IPG laser and part of 20 ~ 80KHz); 50W ~ 100W is 50 ~ 200KHz;
18, power adjustment range: 10 ~ 100%;
19, the speed of scheduling range: 1 ~ 10000mm / s (general model is recommended in 1 ~ 3000mm / s);
20, marking range: 110mmX110mm, 150mmX150mm, 175mmX175mm, 200mmX200mm, 300mmX300mm; (according to field mirror to decide), generally 110mmX110mm;
21, the lifting adjustment range: 550mm, 750mm, 1200mm (optional);
22, Interface: the total power interface, foot switch interface, rotary table interface (optional);
23, the switch: the total power (manual), laser (manual), galvanometer (manual), emergency stop (some models have), rotary table (manual, optional);

V. Preparation before use

1, power supply: AC220V50 ~ 60Hz (except export model special note 110V);
2, it is recommended to use 1200VA and above regulated power supply;
3, Preparation of direct grounding tools; copper or iron and other conductive profiles 1m and above, in the outdoor wet landlords into the soil; and cited multi-core copper wire to the room as a device ground interface; and equipment Ground mark connected to the place;
4, Environmental requirements: Temperature: 1 ~ 35 degrees; Humidity: 30% to 80% non-condensing; Ventilation equipment, no strong vibration; No heating around; Clean and dust-
5, carefully read the relevant manuals and related information for the first time to use equipment to prepare;

VI. Equipment related accessories connection

1, the total power cord, foot switch and equipment connected to the rear of the device below the location;
2, the three-phase power plug into the external power supply socket (with regulator regulator

inserted into the AC220 output port);
3, the monitor is not connected, connect the monitor's power and signal lines; device connection is completed;

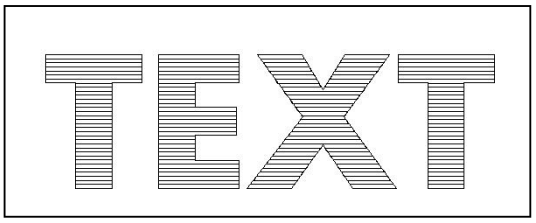
VII. The device is turned on

1, open the main power switch and emergency stop button (some of the machine emergency stop button is the total power switch);
2, open the "galvanometer" logo button switch;
3, open the "laser" logo button switch;
4, open the cabinet door (front right), press the power button on the computer;
5, the computer boot is complete, open the marking software, double-click on the desktop "EzCad2.exe" icon; boot completed;

VIII. Simple equipment instructions

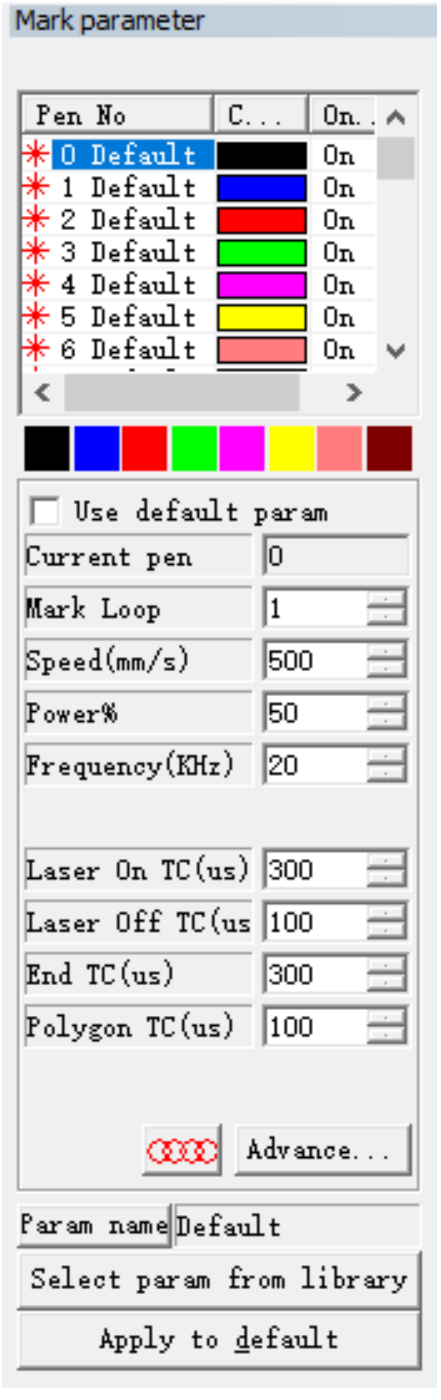
1, import graphics (can be imported vector or bitmap), you can also use the text tool to create a text;
2, using the filling tool to fill the object created in the first step;

Fill the page

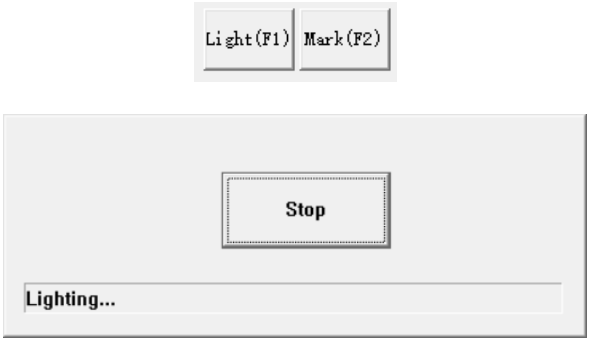


Result

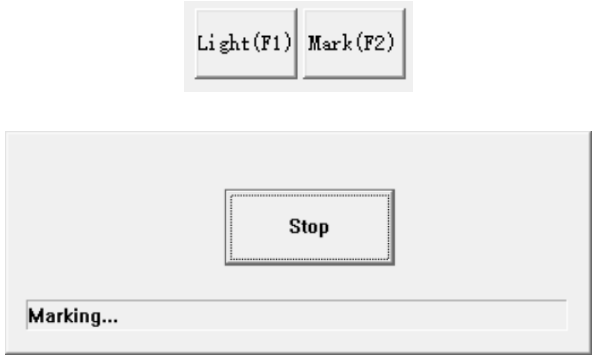
3, set the speed, frequency, power;


Mark parameter
Pen No
C...
On..
0 Default
1 Default
2 Default
3 Default
4 Default
5 Default
6 Default
On
Use default param
Current pen
0
Mark Loop
1
Speed(mm/s)
500
Power%
50
Frequency(KHz)
20
Laser On TC(us)
300
Laser Off TC(us
100
End TC(us)
300
Polygon TC(us)
100
Advance...
Param name
Default
Select param from library
Apply to default

4, click the "Red Light" button or press the F1 key to preview the graphics will mark the location; see the following figure;



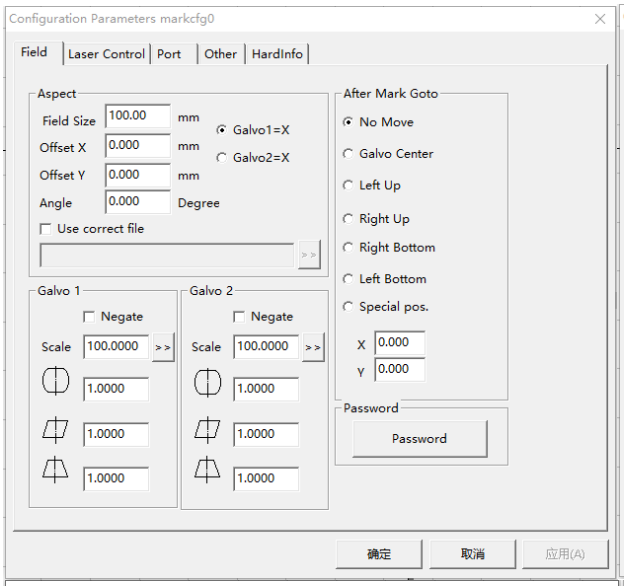
5, click the "stop" button to stop the preview, and then click "mark button" or press the F2 key to start marking graphics

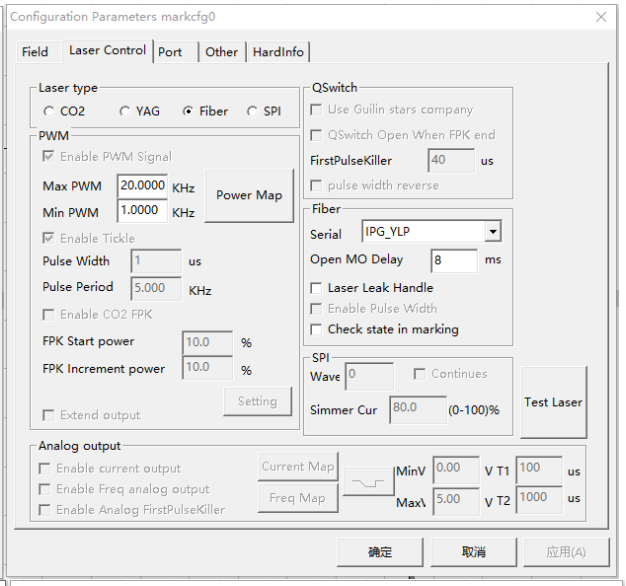


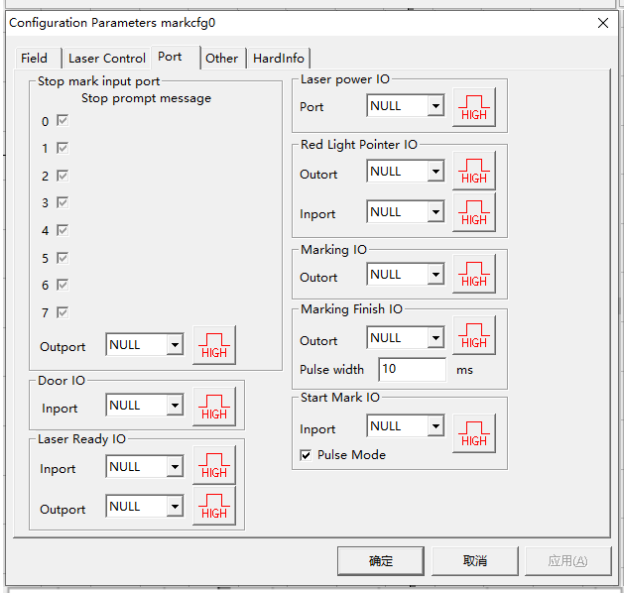
Specific process parameters, please contact the dealer or manufacturer or after-sales staff! We will be happy to serve you!

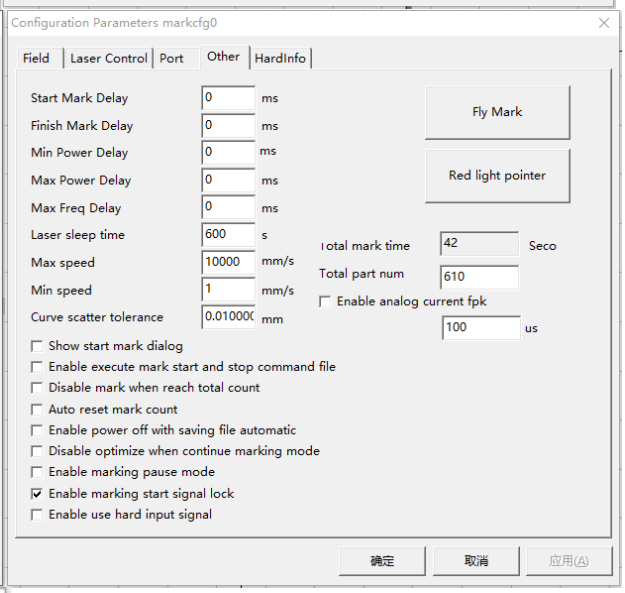
IX. Importance of Parameter F3

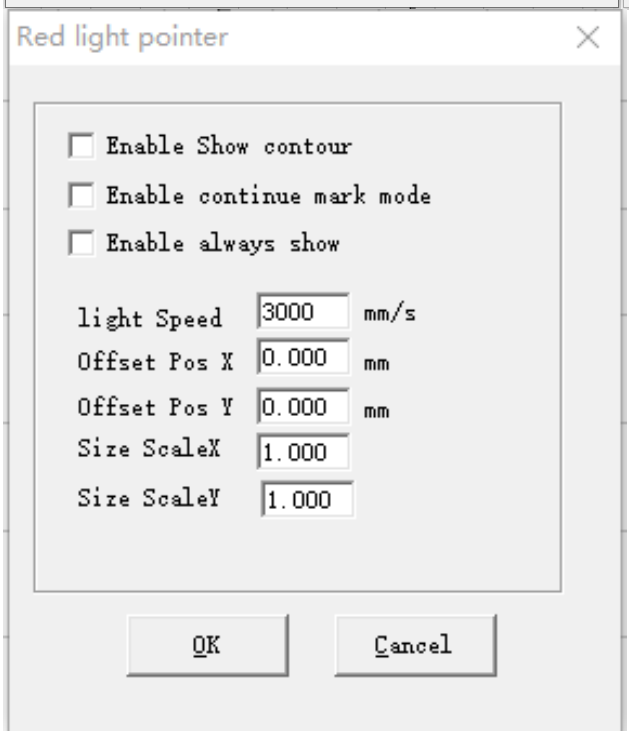
All parameters of the laser device are basically saved in the bottom of the "Parameter F3" button inside, there are areas after the point open, laser control, port, the other four parameters; when our after-sales staff asked you to view this parameter, please Pay attention to see and follow the prompts; thank you for your cooperation;


Configuration Parameters markcfg0
Field
Laser Control
Port
Other
HardInfo
Aspect
Field Size
100.00
mm
Offset X
0.000
mm
Offset Y
0.000
mm
Angle
0.000
Degree
Galvo1=X
Galvo2=X
Use correct file
Galvo 1
Negate
Scale
100.0000
1.0000
1.0000
1.0000
Galvo 2
Negate
Scale
100.0000
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
确定
取消
应用(A)


Configuration Parameters markcfg0
Field
Laser Control
Port
Other
HardInfo
Laser type
CO2
YAG
Fiber
SPI
PWM
Enable PWM Signal
Max PWM
20.0000
KHz
Min PWM
1.0000
KHz
Power Map
Enable Tickle
Pulse Width
1
us
Pulse Period
5.000
KHz
Enable CO2 FPK
FPK Start power
10.0
%
FPK Increment power
10.0
%
Setting
Extend output
QSwitch
Use Guilin stars company
QSwitch Open When FPK end
FirstPulseKiller
40
us
pulse width reverse
Fiber
Serial
IPG_YLP
Open MO Delay
8
ms
Laser Leak Handle
Enable Pulse Width
Check state in marking
SPI
Wave
0
Continues
Simmer Cur
80.0
(0-100)%
Test Laser
Analog output
Enable current output
Enable Freq analog output
Enable Analog FirstPulseKiller
Current Map
Freq Map
MinV
0.00
V T1
100
us
Max\
5.00
V T2
1000
us
确定
取消
应用(A)


Configuration Parameters markcfg0
Field
Laser Control
Port
Other
HardInfo
Stop mark input port
Stop prompt message
0
1
2
3
4
5
6
7
Outport
NULL
HIGH
Door IO
Inport
NULL
HIGH
Laser Ready IO
Inport
NULL
HIGH
Outport
NULL
HIGH
Laser power IO
Port
NULL
HIGH
Red Light Pointer IO
Outort
NULL
HIGH
Inport
NULL
HIGH
Marking IO
Outort
NULL
HIGH
Marking Finish IO
Outort
NULL
HIGH
Pulse width
10
ms
Start Mark IO
Inport
NULL
HIGH
Pulse Mode
确定
取消
应用(A)


Configuration Parameters markcfg0
Field
Laser Control
Port
Other
HardInfo
Start Mark Delay
0
ms
Finish Mark Delay
0
ms
Min Power Delay
0
ms
Max Power Delay
0
ms
Max Freq Delay
0
ms
Laser sleep time
600
s
Max speed
10000
mm/s
Min speed
1
mm/s
Curve scatter tolerance
mm
Fly Mark
Red light pointer
Total mark time
42
Seco
Total part num
610
Enable analog current fpk
100
us
Show start mark dialog
Enable execute mark start and stop command file
Disable mark when reach total count
Auto reset mark count
Enable power off with saving file automatic
Disable optimize when continue marking mode
Enable marking pause mode
Enable marking start signal lock
Enable use hard input signal
确定
取消
应用(A)


Red light pointer
Enable Show contour
Enable continue mark mode
Enable always show
light Speed
3000
mm/s
Offset Pos X
0.000
mm
Offset Pos Y
0.000
mm
Size ScaleX
1.000
Size ScaleY
1.000
OK
Cancel

X. Common equipment failure and solution instructions

1, the device is not powered;

Failure reason: the power cord is not connected or damaged electrical parts; approach: connect the power cord or replace the electrical components;

2, no response to laser scanning;

Fault reasons:

1, galvanometer power is not powered;
2, lens cap did not unload;
3, galvanometer signal line did not take good;
4, computer software or system failure;

approach:

1, check the electrical circuit;
2, remove the lens cover lens;
3, check the galvanometer signal line;
4, restart the computer or reinstall the software;

3, marking somewhere clear, some places are not clear;

Failure reasons:

1, the printing surface and field mirror is not parallel;
2, the mirror surface or galvanometer pollution;
3, the workpiece is not clean or uneven;
4, field mirror or galvanometer damage;

treatment methods:

1, leveling the workpiece printing surface;
2, cleaning the lens surface and galvanometer lens;
3, cleaning the workpiece, to avoid uneven;
4, replace the field lens or galvanometer lenses;

4, print depth is not enough;
Fault reason:
1, the power percentage setting is too small;
2, the frequency is set too large;
3, the work surface is not in focus;
4, marking too fast;
5, the laser power output power, voltage drop;

Treatment:
1, adjust the power percentage;
2, adjust the frequency to fit;
3, adjust the focus;
4, reduce the marking speed
5, replace the power;

5, the software can not find the control card or dongle;
Failure reasons:
1, the card is not connected to the computer;
2, the driver is not installed or has been deleted;
3, the control card power supply is not normal;
Approach:
1, check the card and the computer connection is normal;
2, install the driver;
3, check the control card 5V power supply is normal;

6, click the mark when the following alarm;

Failure reason: the control card is not connected to the computer or not powered;
Approach: check the control card and the computer connection or power supply status;

7, click the mark when the following alarm;

Fault reason: the laser is not connected or not powered;
Approach: Check the control card and the laser connection or laser power supply conditions;

XI. Device Shutdown:

1, turn off the laser marking control software (click "File - Save" before closing to save the file), and then turn off the computer;
2, turn off the "controller" logo button switch;
3, turn off the "laser" logo button switch;
4, turn off the main power switch and emergency stop button (some machines emergency stop button is the total power switch);
5, with a regulated power supply off the power supply and related switches;

Shut down

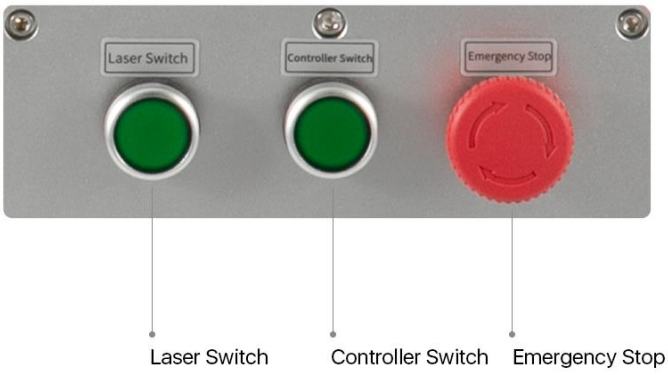
XII. Equipment sales and maintenance:

When the equipment fails, after the treatment according to the tenth method still can not solve the problem, please follow the following procedure to repair:

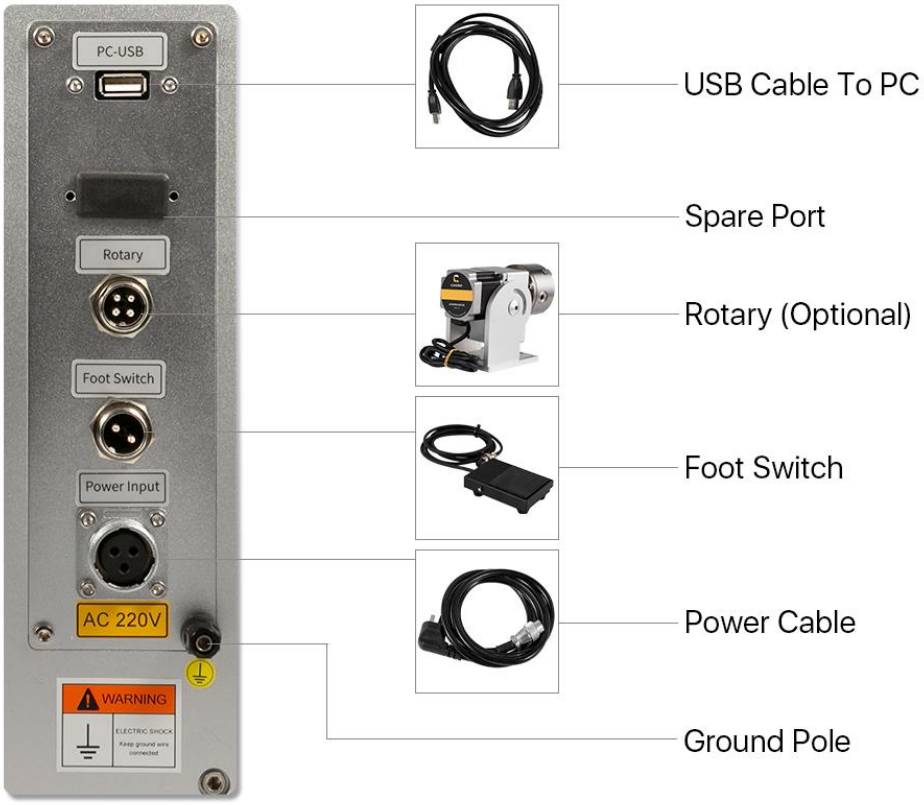
1, dial the words of the manufacturer or distributor, telephone communication with after-sales staff;
2, telephone communication can not solve the problem, telephone repair (unless otherwise provided);
3, under normal circumstances, the after-sales staff will contact you within 24 hours;
4, under normal circumstances, after contact with you, the after-sales staff will be home maintenance within 48 hours;
(Except in special cases or as otherwise provided);
5, when you are not satisfied with the service, you can dial the company complaints complaints;
6, such as after-sales can not solve the problem, you can negotiate with the dealer or manufacturer replacement or return refund;
7, during the warranty period, the equipment in the environment to meet the standards, the use of preparatory work in place, not illegal illegal operation, the operator has operational qualifications, does not exceed the warranty period, under normal use, the failure occurred, to be free repair service ;
8, does not provide free service range:
(1) equipment damage or breakdown caused by irresistible factors such as war, natural disasters, etc .;
(2) due to equipment use environment is not up to standard, preparation before use is not in place, the illegal illegal operation, the operator does not operate the qualification;
(3) equipment over the warranty period;
(4) without the consent of the distributor or manufacturer demolished equipment;
(5) with the customer agreement or rule does not include free after sale;
(6) During the warranty period, customers who have not been approved by the company have been repaired by personnel other than our company;
(7) Unauthorized modification of equipment by customer (including appearance or function);
9, the above terms, except as otherwise provided in the contract and the agreement;

Reminder: Terms of sale related to your immediate interests, please read the relevant provisions carefully;

Control Switch

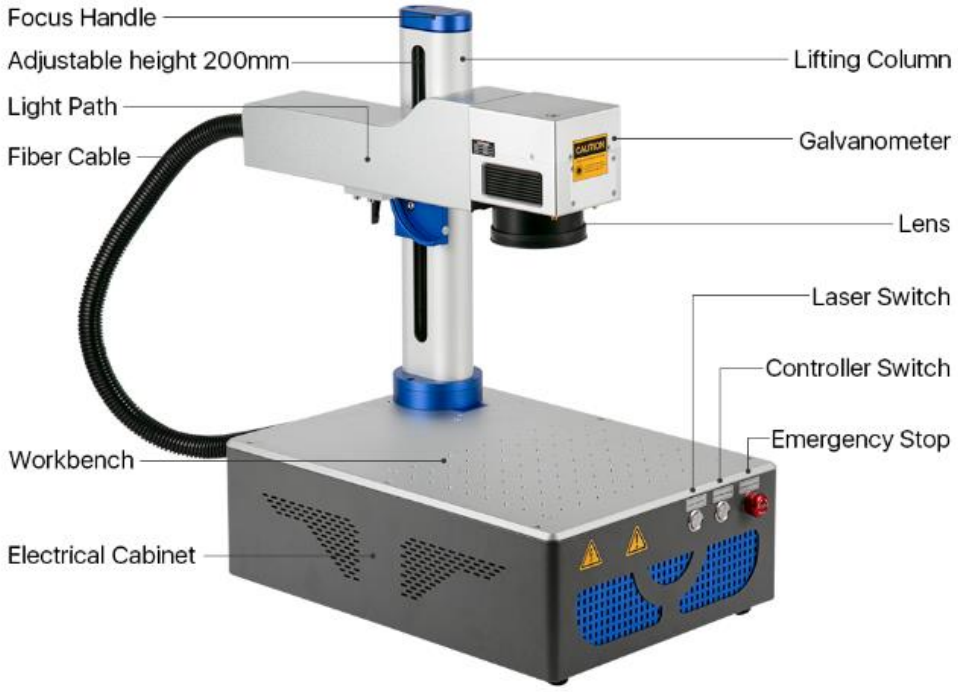


Connection diagram

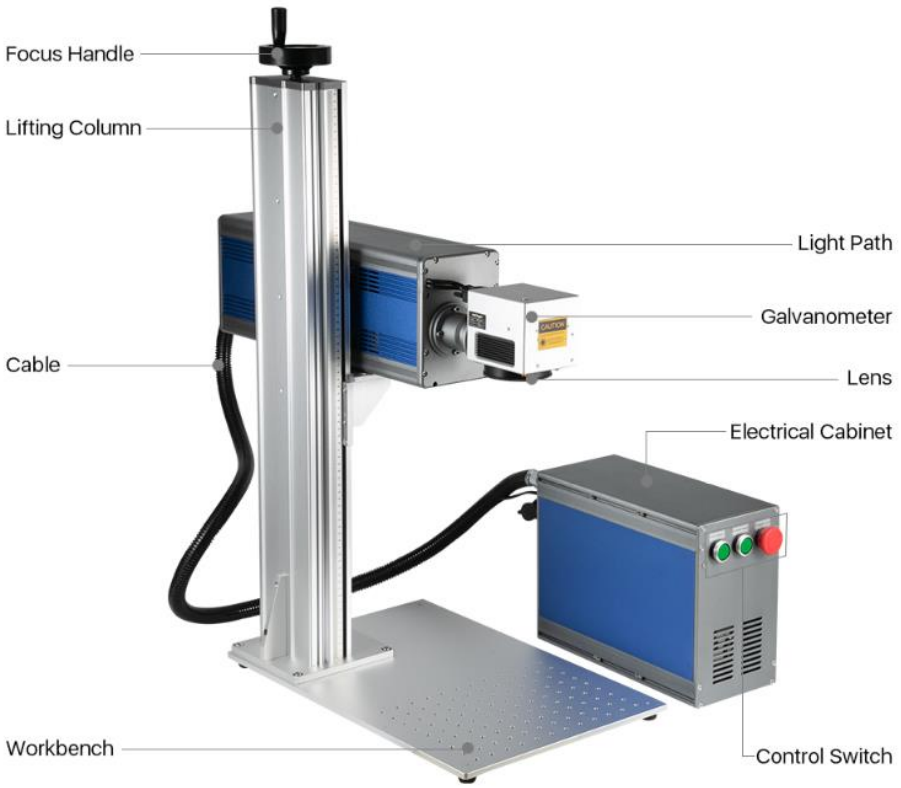


LiteMarker Series

AirMarker Series

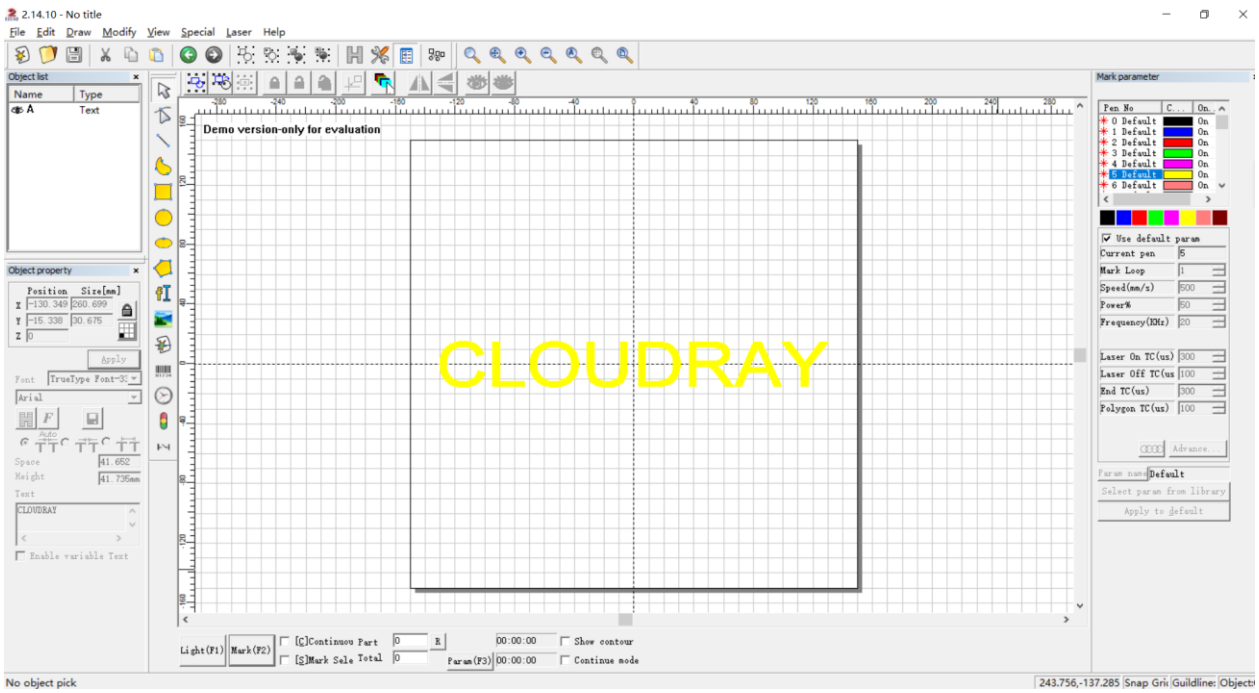


CO2 LiteMarker Series



*The pictures is for reference only, the actual product shall prevail.

Software（EZCad）



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