Wheel Balancer Manual

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Warning

- This manual is a necessary part of the product. Please read carefully.
- Keep the manual for later use when maintaining the machine.
- This machine can only be used for the designated purposes. Never use it for any other purpose.
- The manufacturer is not responsible for the damage incurred by improper use or use other than the intended purpose.

Precaution

- The equipment can only be operated by qualified personnel with special training. Modification to any components or parts, or use the machine for other purpose without either obtaining the agreement from the producer, or observing the requirement of the instructions may lead to direct or indirect damage to the equipment.

★ The equipment should be installed on the stable ground, not wooden pallet, otherwise not accurate.

- Keep the back panel 0.6M away from the wall for good ventilation. Enough room should be left on both sides for convenient operation.
- Do not put the equipment a place with high temperature or moisture, or near the heating system, water tap, air-humidifier or chimney.
- Avoid lots of dust, ammonia, alcohol, thinner or spraying binder.
- People who are no operating the machines should be kept away when it is used.
- Use appropriate equipment and tools, protective and safety equipment, including eyeglasses, earplugs and working boots.
- Pay special attention to the marks on the machine.
- Do not touch or approach the moving parts by hand during operating.
- Do not remove the safety device or keep it from working properly.

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Contents

1. General

1.1. Technical data:

- Max wheel weight: 70kg
- Power: 0.2kw;0.37kw
- Power supply: 220v;230v;240v;110v;50hz;60hz
- Balancing accuracy: ±1g
- 8balancing modes: DYN, ALU1, ALU2, ALU3, ALU4, ALU5, ALUS, ST
- Balancing speed: 200r/min
- Cycle time: 8s
- Rim diameter: 10〃~24〃(256mm~610mm)
- Sound pressure level during work cycle: <70db

1.2. Features:

- ALU balancing mode may choose 9 o'clock or 12 o'clock position to add weight
- Statistic and dynamic balancing, ALU-programs for alloy rims or special shaped
- Self diagnoses, easy to find the problem
- Apply to steel and aluminum alloy rim

1.3. Working environment:

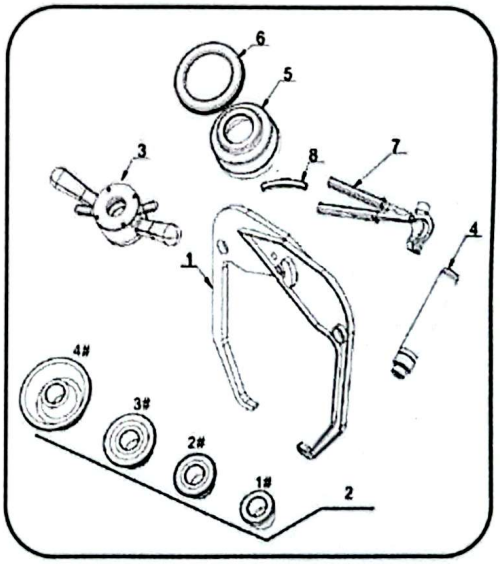
- Temperature: 5~50℃
- Height: ≤4000m

2. Machine assembly

2.1. Unpack

Unpack the carton, check if missing any spare parts.

No.	Item	Qty
1	Width gauge	1
2	Conic No.1	1
	Conic No.2	1
	Conic No.3	1
	Conic No.4	1
3	Quick relase nut	1
4	Thread hub	1
5	Cap	1
6	Pad for cap	1
7	Balancing hammer	1
8	100g weight	1



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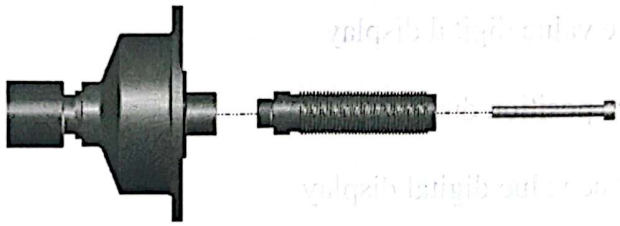
2.2. **Install**

- The equipment should be installed on the stable ground, not wooden pallet, otherwise not accurate.
- Keep the back panel 0.6M away from the wall for good ventilation. Enough room should be left on both sides for convenient operation.

2.3. Fix balancer to floor with screws on the bottom.

2.4. Install adaptor

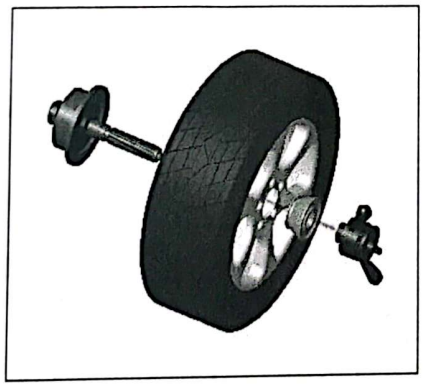
The wheel balancer is supplied complete with cone type adaptor for fastening wheel with central bore. (see below picture)



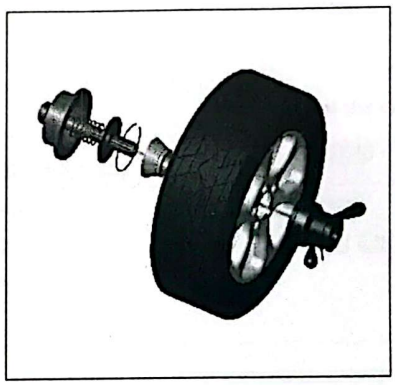
2.5. Install wheel

Clean wheel, take off counterweights, check pressure of wheel.

Choose the way of installation according to the type of wheel.



Main shaft-wheel—suitable cone(small head towards inside)—quick handle nut



Main shaft-suitable cone(big head towards inside) —wheel—quick handle nut

Attention: May add a wheel, and hold the wheel to help install the thread hub. When installing or taking off wheel, do not let wheel move on the shaft, to avoid scratching shaft.

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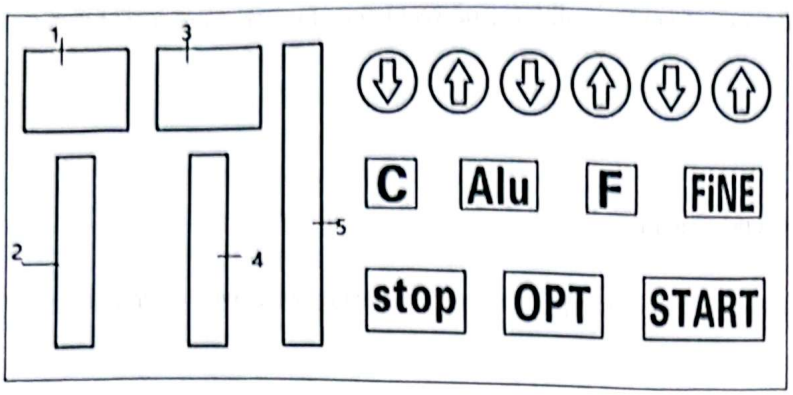
Display plate (G)



1.Inside unbalance value digital display

2.Inside unbalance position display

3.Outside unbalance value digital display

4.Outside unbalance position display

5.Displays showing type of correction chosen.

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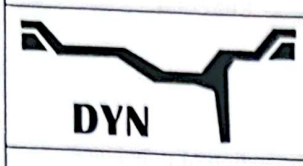
3 Eight balancing modes

Icon	Balancing mode	Operation	Add weights
	Standard/Default	1. Turn on machine 2. Input a,b,d value 3. Start spin, after spin stop	Clip on weights on both sides of rim edge
	ALU1	1. Turn on machine 2. Input a,b,d value 3. Press ALU button, indicator lit up 4. Start spin, after spin stop	Add adhesive weights on the rim shoulder both sides
	ALU2	1. Turn on machine 2. Input a,b,d value 3. Press ALU button, indicator lit up 4. Start spin, after spin stop	Clip on weight on inside rim edge, add adhesive weight on outside rim shoulder
	ALU3	1. Turn on machine 2. Input a,b,d value 3. Press ALU button, indicator lit up 4. Start spin, after spin stop	Add adhesive weights on the rim shoulder both sides
	ALU4	1. Turn on machine 2. Input a,b,d value 3. Press ALU button, indicator lit up 4. Start spin, after spin stop	Clip on weight on inside rim edge, add adhesive weight on outside rim shoulder
	ALUS	1. Turn on machine 2. Press ALU button, indicator lit up 3. Input aI,aE,d value 4. Start spin, after spin stop	Add adhesive weights on the two positions gauge head touch
	Static mode, for motorcycle wheels	1. Turn on machine 2. Input a,b,d value 3. Press ALU button 4. Start spin, after spin stop	Add adhesive weight

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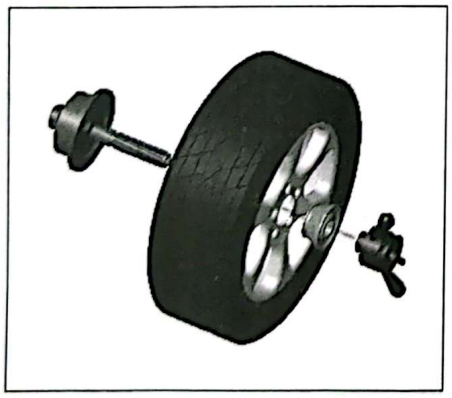
Key board (H)

Icon	Function	Icon	Function
a+ a−	Set distance	OPT	Optimization of unbalance
b+ b−	Set rim width	ALU	Selection of "ALU" modes
d+ d−	Set rim diameter	F	Static mode, for motorcycle wheels
C	Recalculation	FINE	Unbalance display pitch and threshold
START	Start	STOP	Stop/Cancel

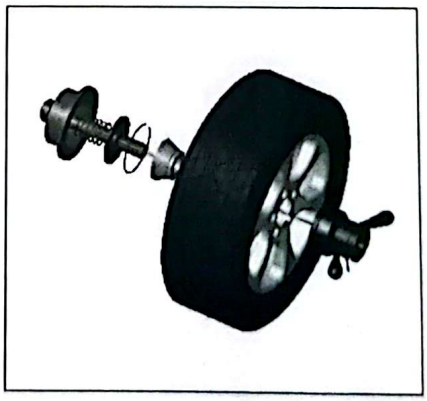
4. Indication and use of wheel balancer

4.1. DYN (Standard/Default) mode

4.1.1. Clean wheel, take off counterweights, check pressure of wheel.Choose the way of installation according to the type of wheel.



Main shaft-wheel—suitable cone(small head towards inside)—quick handle nut



Main shaft-suitable cone(big head towards inside)—wheel—quick handle nut

Attention: May add a wheel, and hold the wheel to help install the thread hub. When installing or taking off wheel, do not let wheel move on the shaft, to avoid scratching shaft.

4.1.2. Turn on machine

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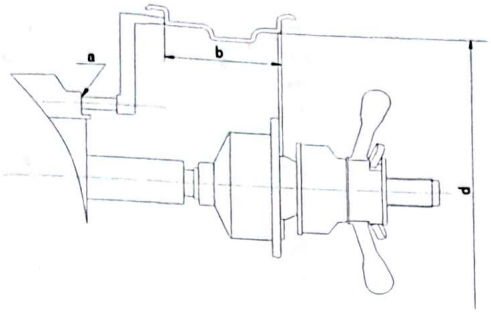
4.1.3. Input a b d value



- Move gauge to touch edge of rim (Fig.1), read the value of distance, press **a+** and **a-** to change, set "a" value.
- Use width gauge to read the value of width (Fig. 2), press **b+** and **b-** to change, set "b" value.
- Read the value of diameter (marked on the wheel), press **d+** and **d-** set "d" value.

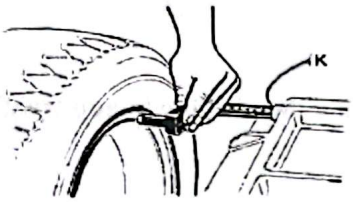


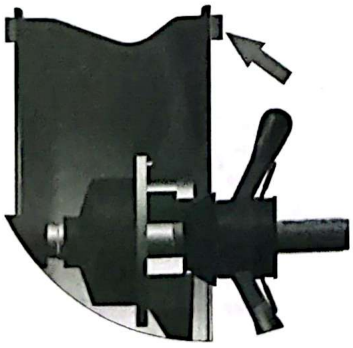
Fig.1

Fig.2

4.1.4. Put down the guard or press START to perform a measuring spin.

4.1.5. In a few seconds the wheel is brought to operating speed and begin measuring unbalance, the unbalance values remain on instruments 1 and 3 when the wheel stopped. Press FINE may check the real unbalance value under threshold.

4.1.6. Anticlockwise moving wheel slowly, the displays with right LED's lit up full indicate the correct angular position where to mount the counterweights (12 o'clock position) outside, as Fig.3, clip the counterweight.



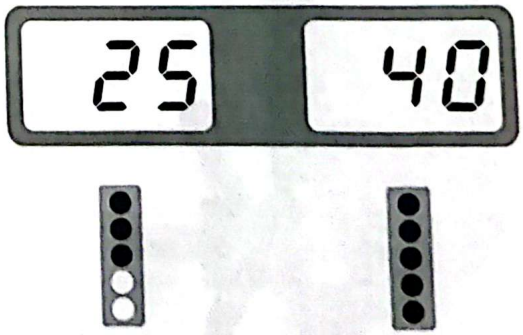


Fig. 3

4.1.7. Anticlockwise moving wheel slowly, the displays with left LED's lit up full indicate the correct angular position where to mount the counterweights (12 o'clock position) inside, as Fig.4, clip the counterweight.

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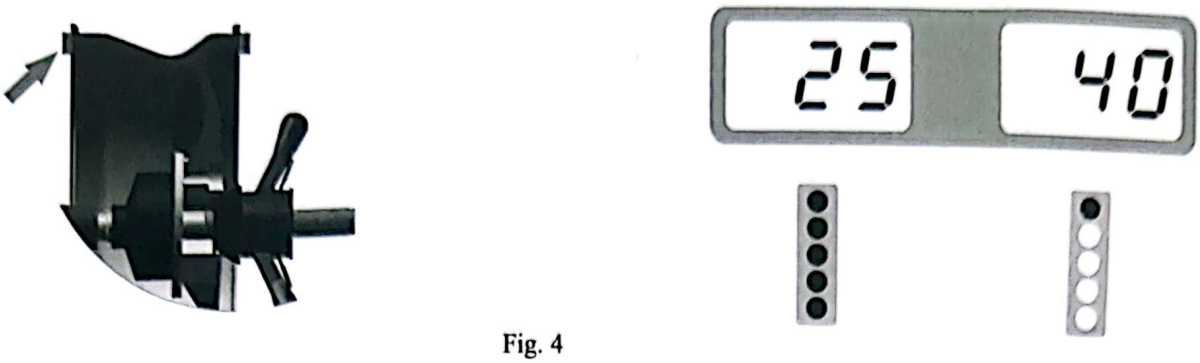

Fig. 4

4.1.8. After finishing cliping the counterweights, put down the guard or press START , to perform balancing spin again, if comes out 00 00, means balancing succeed. (Fig.5)

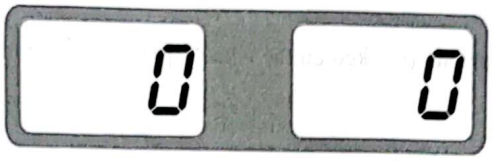

Fig. 5

4.2. ALU-2 mode (ALU-1, ALU3 same operation, only the position to add weights different)

4.2.1. Set "a" "d" "b" values

4.2.2. Press ALU until ALU2 indicator lit up

4.2.3. Put down the guard or press START to perform a measuring spin.

4.2.4. In a few seconds the wheel is brought to operating speed and begin measuring unbalance, the unbalance values remain on instruments 1 and 3 when the wheel stopped. Press FINE may check the real unbalance value under threshold.

4.2.5. Anticlockwise moving wheel slowly, the displays with right LED's lit up full indicate the correct angular position where to mount the counterweights, 12 o'clock position (9H=Off) or 9 o'clock (9H=On) position outside, as Fig.6, add the counterweight.

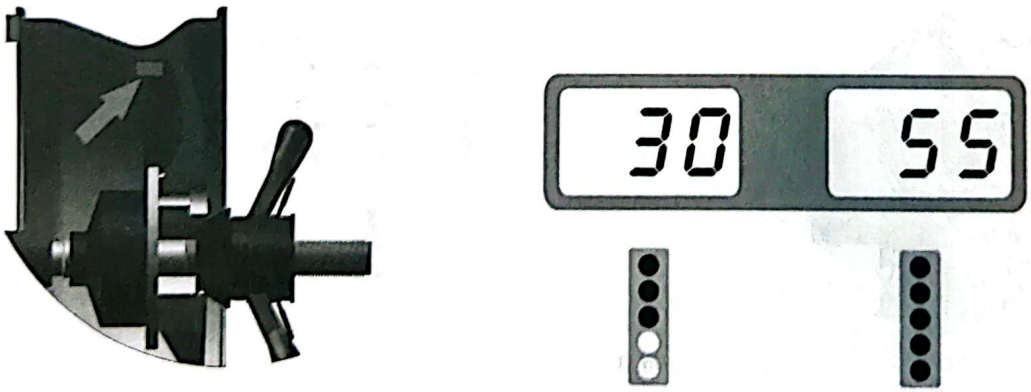

Fig. 6

4.2.6. Anticlockwise moving wheel slowly, the displays with left LED's lit up full indicate the correct angular position

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where to mount the counterweights, 12 o'clock position (9H=Off) or 9 o'clock (9H=On) position inside, as Fig.7, add the counterweight.

Fig. 7

4.2.7. After finishing mounting the counterweights, put down the guard or press START, to perform balancing spin again, if comes out 00 00, means balancing succeed. (Fig.8)

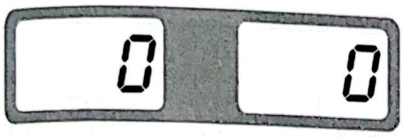

Fig. 8

3. 4 ALUS split function

Note: Only ALU-S mode can use this function. And Operator must be experienced.

Step 1	In the ALU-S mode, the results of the case, after the F	comes>	nr. 3
Step 2	Through d+ d- input wheel number, and then press F	comes>	SPL 12H
Step 3	Keep any one of spoke on the position of 12 o'clock, press F	comes>	30
Step 4	Anticlockwise rotate wheel by hand slowly, until the right SP1 LED lit up full, add the adhesive weight (to stick the weights on position of 12 o'clock or 9 o'clock depends SLC=On or Off)	comes>	30 25
Step 5	Anticlockwise rotate wheel by hand slowly, until the outside SP1 lit right SP2 LED lit up full, add the adhesive weight (to stick the weights on position of 12 o'clock or 9 o'clock depends SLC=On or Off)	comes>	30 35
Step 6	Put down safe guard and press START, after spin stop	comes>	0 0
Operation completed			

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5. Self-calibration of wheel balancer

Do the self-calibration whenever you think the balancer is not accurate. The 100g weight must be accurate.

Turn on balancer, install a medium size wheel (13"-15")which can use clip-on weight, set "a b d" value, then

Step 1	Press C and hold, then press F	comes	CAL. CAL.
Step 2	Put down safe guard or press START start spin, after spin stop	comes	Add 100
Step 3	Open the safe guard and clip a 100 gram weight on the outside 12 o'clock position, put down safe guard and press START to start spin, after spin stop	comes	100 Add
Step 4	Open the safe guard and clip a 100 gram weight on the inside 12 o'clock position, put down safe guard and press START to start spin, after spin stop	comes	CAL. End
self-calibration finished			

6. Errors

Various abnormal conditions can arise during machined operation by the microprocessor, if comes the errors, must stop operation, find the reason and the solution according, if the error persists, consult the supplier.

No.	Errors	Reasons	Solution
1	Err. -1-	1. No spin 2. Shaft spin	1. If no spin, check or change power board 2. If spin, check or change position pick up board and computer board 3. Adjust position pick up board support
2	Err. -2-	1. No wheel or wheel not locked tightly 2. Position pick up board problem	1. Lock tightly 2. check or change position pick up board
3	Err. -3-	1. No enough pressure in wheel 2. Wheel distortion	1. Add proper pressure in wheel 2. Check wheel
4	Err. -4-	1. Position pick up board problem 2. Computer board problem	1. Check or change position pick up board 2. Check or change computer board

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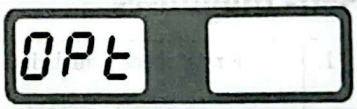
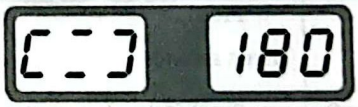
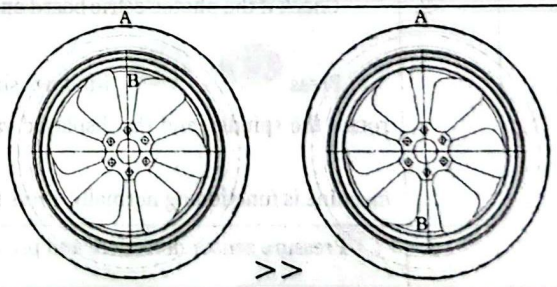
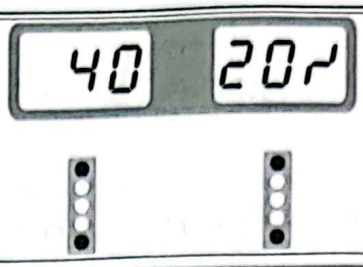
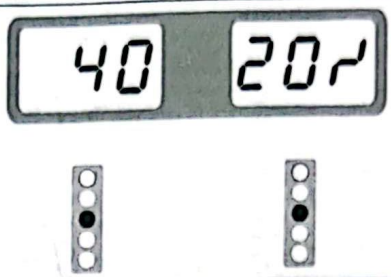
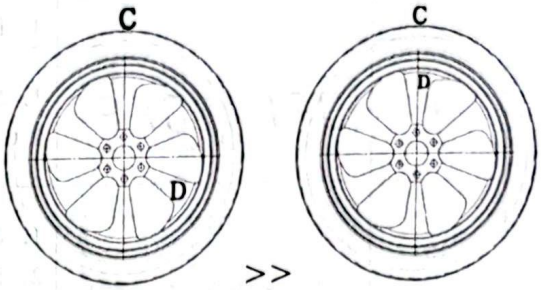
5		1. Micro switch problem 2. Computer board problem	1.Check or change Micro switch 2.Check or change computer board
6		1. Power board problem 2. Computer board problem	1.Check or change power board 2.Check or change computer board
7		1. Program lost 2. Computer board problem	1.Self calibration 2. Check or change computer board
8		1. No add 100g weight during self calibration 2. Computer board problem 3. Power board problem	1. Add 100g weight 2.Check or change computer board 3.Check or change power board
9		1. Micro switch problem 2. Computer board problem	1.Check or change micro switch 2.Check or change computer board
10		1. Computer board problem 2. Power board problem	1.Check or change computer board 2.Check or change Power board

7. OPT function

Note: When unbalance value is too much, choose OPT, and operator must be experienced.

Install wheel, input a b d value

1	Press 	comes>	
2	Put down safe guard and press 	comes>	
3	With the help of tire changer, change the rim and rubber 180 degree	reference >	
4	Then put down safe guard and press 	comes>	

5	Rotate wheel until four indicators lit up (two on both sides, the dark spot in the right side picture), mark the positon C with chalk on rubber	reference >	
6	Rotate wheel until two indicators lit up (one on both sides, the dark spot in the right side picture), mark the positon D with chalk on rim	reference >	
7	With the help of tire changer, change the rim and rubber to make C and D match	reference >	
8	Put down safe guard and press START	comes>	If unbalance is less than before, OPT succeed

8. Self- diagnoses

1.	Firstly check if all digital displays are functioning properly, and processd as follows: Press F + FINE together inter self-diagnoses system, now all the windows light work, automatically quit after 5 seconds
2.	Check if the photoelectric board and spindle teeth are normal and proceed as follows: Press C + F windows show CAL. CAL. Press the a- key to enter the setting program. Gently rotate the spindle, and the displayed value on the right gradually changes from 0 to 127 cycles, indicating that the machine is functioning normally. Press the C key to exit
3.	Pressure sensor detection, and proceed as follows: Press C + F windows show CAL. CAL., Press a+ the values displayed on both sides are similar to 54 and 55 54 55. After lightly pressing the spindle, there will be a significant change in the values on both sides (with a range of about 50). Press the C button to exit
4.	The function of the protect hood open/close, and proceed as follows:

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	Press C + F, windows showing  , press a- to enter the setting program. Rotating the spindle, the right window displays 57  , press the START key to enter the protect hood setting,press b+ to select ON or OFF, and press C to exit
5.	Laser light function settings, and proceed as follows: Press C + F windows show  , Press the a- key, when the right window displays 74  , press the START key to enter the laser light setting, press the b+ to select ON or OFF, and press the C key to exit
6.	Conversion of Gram and Ounces, and proceed as follows: First press the keys C + F, the display board displays  . Press the a- to enter the setting program. Rotate the spindle to 29  on the right window, then press START to enter the system. Press b+ select G or Ouce press the C key to Save and exit.
7.	Inch and millimeter conversion settings, and proceed as follows: Press C + F windows show  , Press the a- key. Rotate the spindle to 17  , press the START key to enter the settings, select IN or MM, and press the C key to exit
8.	Hidden 5g setting: Press C + F windows show  , Press the a- key. Rotate the spindle to 5  , Press b+ select 5g, 10g or 15g, and press the C key to exit

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